Respiratory Protection Newsletter - December 2023

Featured Courses:

Respirator Overview & Fit Testing Workshop:	April 16-18, 2024
Respirator Selection & Change Out Schedules:	May 14-15, 2024
Fit Testing Refresher & Advanced Topics:	May 16, 2024

In this issue:

2024 Respirator Training Schedule

Respirator training dates for calendar year 2024 have set as follows. Class size is limited. If interested, submit a registration request early. Payment is not required to submit a registration request, but space is assigned when payment is received. To submit a request or for additional information, go to: www.DrMcKay.com

Apr 16:	Overview of Respiratory Protection
Apr 17-18:	Fit Testing Workshop (2-days)
May 14:	Comprehensive Respirator Selection
May 15:	Development of Change Out Schedules
May 16:	Fit Testing Refresher & Advanced topics
Oct 22:	Overview of Respiratory Protection
Oct 23-24	Fit Testing Workshop (2-days)

Presenteeism and Respiratory Protection

In an *Idea and Opinion* article published in the *Annals of Internal Medicine*, the authors discuss from a patient's safety perspective, if it is an appropriate time to take off masks in health care settings. In brief, the authors support the continued use of masking and N95 filtering facepiece respirators (FFRs) to limit the spread of aerosols and droplets from individuals infected with influenza, corona viruses, and other respiratory viruses. They also point out that hospitals serving elderly and immune-compromised patients, such as oncology patients, stem-cell and organ transplant recipients, will face challenges if they choose to de-escalate measures that protect these patient populations.

Respirator program administrators are responsible for proper use of respiratory protective devices used in their workplace. Program administrators should be

familiar with the concepts of "wear time" and "effective protection factors". My purpose for this newsletter, is to share their comments and findings on **presenteeism**. Because, presenteeism goes beyond health care facilities, understanding presenteeism can be of value in other workplaces.

Presenteeism is the name given for health care workers who come to work while ill. I suspect many of my readers have witnessed this behavior at their own workplaces and elsewhere. Take "gym rats" for example. Some gym rats can be coughing, sneezing, hacking and appear to have a fever, yet won't miss a daily workout. They don't consider the risk posed to others. From my perspective, presenteeism also confounds our ability to properly analyze and understand the effectiveness of face masks and respiratory protective devices (e.g., N95 FFRs).

The opinion article by Palmore and Henderson (see citation below), not only discuss presenteeism, but provide data of value to respirator program administrators. For example:

> During the recent COVID-19 pandemic, half to two thirds of health care personnel acknowledged working with symptoms of respiratory illness [(5)].
>
> Presenteeism was also well documented in a large nosocomial "Influenza A" outbreak [(6)].

At a prominent NIH Clinical Center they reported the following during COVID-19:

> Among staff who chose an asymptomatic rather than a symptomatic testing pathway and tested positive:
>
> > "more than 50% subsequently acknowledged having had some symptoms characteristic of COVID-19 at the time of testing."

The authors offer the following reasons to explain this behavior, which include:

> An unwillingness to place a burden on colleagues.
> A belief that some respiratory infections may be trivial.
> Fear of reprisal for absenteeism.
> A moral imperative to provide patient care.
> In some cases, a lack of paid sick leave.

I would include the following reasons:

> Not wanting to use vacation time, and
> Inadequate staffing.

Protecting others, in this case patients in health care settings, will continue to be a problem, unless the above reasons for this behavior are addressed. Again, keep in mind that presenteeism also confounds our ability to properly analyze and understand the effectiveness of face masks and respiratory protective devices (e.g., N95 FFRs).

Source: Tara Palmore and David K. Henderson. For Patient Safety, It Is Not Time to Take Off Masks in Health CareSettings. Pages 1-3, 2023. *Ann Intern Med*. doi:10.7326/M23-1190

$480,000 for Exposing Workers to Toxic Gases

The following information was taken from the Washington State Department of Labor & Industries *News Communication Services* . Aug. 31, 2023; #23-22. https://lni.wa.gov/news-events

A manufacturing company that works with dangerous chemicals in Moses Lake, Washington is facing $479,700 in fines for having a worker unload molten sulfur from a railcar **without wearing the proper respiratory protection**, along with other serious safety violations.

The Washington State Department of Labor & Industries (L&I) cited and fined the company in July for seven willful serious violations, seven serious violations and four general violations.
The company formulates products for agricultural fertilizer, airports, pulp and paper, and water treatment. During a Jan. 2023 investigation, L&I inspectors found that an employee who had been working on top of a railcar became incapacitated and fell to the ground and suffered serious injuries after being exposed to hydrogen sulfide gas. The worker was **not** wearing a hydrogen sulfide gas monitor, respiratory protection, or fall protection. At the time of the incident, the worker had a full beard that would not allow the proper seal of a respirator. Personal hydrogen sulfide and sulfur dioxide monitors were not issued to employees.

Company management said the process for unloading molten sulfur changed from unloading tank trucks to unloading railcars a few months prior to the incident, but they hadn't done any assessment for how dangerous the new process might be.

On Jan. 26, L&I inspectors issued an Order of Immediate Restraint, stopping work at the molten sulfur railcar unload area until the company took specific steps to make their workers safer, including providing respirators and ensuring they fit and were used properly. The order was lifted Feb. 6. On Feb. 16, inspectors returned to perform a walkthrough of the railcar unload area and sulfur forming unit. Here, they observed and photographed a worker loosening the bolts to a manway hatch on a molten sulfur railcar. One inspector said he could see a bluish/white plume of smoke, hear the hiss of gas escaping from the manway hatch, and he could hear

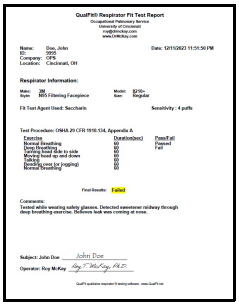
multiple alarms coming from employee's hydrogen sulfide and sulfur dioxide monitor. The inspector concluded that just loosening the bolts on the manway hatch allows toxic gas to escape, substantiating the willful violations found during the initial inspection.

This same company was previously cited for more than 60 safety violations following an Oct. 2022 inspection. Six of the recent willful violations are for hazards that were not fixed from the 2022 citations. The company is appealing both the 2022 and 2023 citations. Fines paid from citations go into the workers' compensation supplemental pension fund, helping workers and families of those who have died on the job.

QualFit® Software© Enhancement

In addition to previous enhancements to **QualFit**® software, such as the full screen option and export data functions, more improvements are now available and available for existing users on January 1st. The new version includes a cleaner looking OSHA compliant **printed report**, making it visually easier to identify respirator make, model, style and size. Improvements also make it easier to recognized the specific exercise when a challenge agent is detected for failing respirators. Other changes were made to making the printed report easier to read.

A **new** 4-line "**branding**" option was also added. This allows owners to identify their facility on the printed report. While prior versions had the option to identify the respirator wearers company name and location, the newest option allows the owners of **QualFit**® software to identify their name, address, phone and/or web address at the top of the page.



Larger data entry screens with a larger font size has been added. It is now even easier to see subject and respirator information when using smaller laptop display screens.

A **faster search** function to retrieve the name and ID number for previously tested subjects in the database has also been added. Just type a letter or two, click search, and a list of subjects previously tested will auto populate. This is not only faster, but helps eliminate data entry errors.

The software doesn't include any "bug" fixes, because previous versions don't have any. **QualFit**® Software© has always been bug-free!

Effective January 1st, these enhancements will be available at no-charge to current **QualFit**® owners. To get the free updates, just double click the "QualFitUpdater.exe" file on the QualFit flash drive after the new year. Then select the "Check for Updates" button on the window that pops up. An internet connection is necessary to run the Update function. Don't worry about losing any data, past test records and database files are not affected. All new sales include these enhancements, so there's no need for new users to update their software.

Sometime during early 2024, **QualFit**® will make a major announcement in this newsletter.

To purchase **QualFit**® Software©: www.QualFit.net

OSHA News

Fined for Failure to Clean Respirators

In a September 27, 2023 OSHA announcement, it was revealed that an Augusta, Georgia, battery manufacturer faces $160,727 in for exposing employees to unsafe levels of lead. OSHA made its determination based on personal air monitoring of workers and lead **accumulation on respirators** and counters in areas where workers took their lunch breaks.

OSHA cited the company for two repeat violations after inspections found the company failed to have engineering and work practice controls in place to reduce exposures to lead and didn't prevent lead from accumulating on surfaces. The company was also cited for two serious violations for **failing** to ensure employees' respirators were properly cleaned and disinfected.

Respiratory Protection Violations Drop Out of the Top 5

OSHA released their top 10 most frequently cited workplace safety and health standards for fiscal year 2023, which ended September 30th. For the first time in several years, respiratory protection dropped out of the top 5, last year 3rd, this year 7th. In some respects this could be considered a good thing (i.e., an improvement in workplace practice) or bad (i.e., less emphasis on respiratory protection or ignoring the details). Regardless, here the top 10 list for fiscal year 2023:

1.	Fall Protection - General Requirements	§1926.501:	7,271 violations
2.	Hazard Communication	§1910.1200:	3,213 violations
3.	Ladders	§1926.1053:	2,978 violations
4.	Scaffolding	§1926.451:	2,859 violations
5.	Powered Industrial Trucks	§1910.178:	2,561 violations
6.	Lockout/Tagout	§1910.147:	2,554 violations
7.	**Respiratory Protection**	**§1910.134:**	**2,481 violations**
8.	Fall Protection - Training Requirements	§1926.503:	2,112 violations
9.	Personal Protective Equipment Eye & Face	§1926.102:	2,074 violations
10.	Machine Guarding	§1910.212):	1,644 violations

Here's a breakdown for the top 5 sections cited within the respirator standard 1910.134, by section, **number of violations**, and description of the section:

(e)(1) **505** The employer shall provide a medical evaluation to determine the employee's ability to use a respirator, before the employee is fit-tested or required to use the respirator in the workplace.

(f)(2) **359** The employer shall ensure an employee using a tight-fitting facepiece respirator is fit-tested prior to initial use of the respirator, whenever a different respirator facepiece (size, style, model or make) is used and at least annually thereafter.

(c)(1) **358** In any workplace where respirators are necessary to protect the health of the employee or whenever respirators are required by the employer, the employer shall establish and implement a written respiratory protection program with worksite-specific procedures. The program shall be updated as necessary to reflect those changes in workplace conditions that affect respirator use.

(c)(2) **244** Where respirator use is not required.

(g)(1) **132** Facepiece seal protection

Commentary:

In my experience, these violations are **not** reflective of current problems associated with workers using respiratory protection. The OSHA Directorate of Enforcement Programs, should send compliance officers into local hospitals and healthcare facilities and have them interview previously fit tested employees and watch respirator fit testing. If they did, the number of citations for improperly conducted fit tests, as required in mandatory Appendix A, would rise to the top. They would see qualitative fit testing without threshold screening procedures, failure to use an enclosure, inadequate number of exercises, incorrect delivery of challenge agents, etc. Or, watch a quantitative fit test that doesn't take a sample from the breathing zone or unable to measure leakage due to kinked tubing.

Hydrogen Sulfide Injures Workers

On October 23, 2023, OSHA announced that if had fined a tank service firm $399,349 for failing to protect workers from toxic gas (hydrogen sulfide) while cleaning a tanker truck. Two responding firefighters also suffered injuries, while the two employees were transported to a local hospital, where one was admitted.

OSHA inspectors determined the company didn't provide adequate respiratory protection and didn't evaluate the worksite for possible respiratory hazards. OSHA said the company failed to provide workers with appropriate respirators, manage a required respiratory protection program to provide workers with medical evaluations before respirator use, and conduct respirator fit testing. In addition, the company failed to provide appropriate protective clothing and eye, face, and hand protection; didn't label containers; and failed to provide injury and illness logs to OSHA within 4 business hours.

To view the OSHA announcement, go to:
https://www.dol.gov/newsroom/releases/osha/osha20231023-1
or Click Here

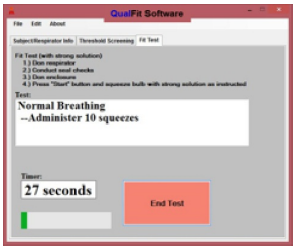
Getting Rid of Suction Cups

Previous newsletters announced the coming release of **Fit Test Tubing Holders™** for use with ambient aerosol quantitative fit testing methods (i.e., TSI PortaCount® & AccuFIT 9000®). Tubing holders make the process of fit testing faster and more reliable. More importantly, they help eliminate passing of poorly fitting respirators. Unfortunately, I haven't had time to figure out a cost-effective way to produce these in volume, pack, and ship. Consequently, if you're tired of suction cups falling off during the middle of fit testing or getting unreliable results, you'll need to wait a little longer.

QualFit® Software©

An easier, more accurate way to administer respirator fit tests using sweet or bitter fit test methods.

QualFit® software© automates and records qualitative respirator fit testing using Saccharin and/or Bitrex aerosol solutions. The software prompts the operator to deliver the aerosol solution with the correct number of squeezes for each exercise, at the proper time, and in the proper order. This improves fit testing accuracy. The software displays the current exercise in progress, automates the timing sequence and calculates the number of squeezes to be administered, based on threshold screening results. Visual and audible prompts allow the operator to focus their attention on the respirator wearer. The entire procedure becomes less frustrating for the operator and subject being tested. The software tracks each step of the fit testing procedure required in mandatory Appendix A of the OSHA Respirator Standard. **QualFit®** software improves the quality and efficiency of respirator fit testing. An OSHA compliant report can be printed or electronically saved. The employer benefits by knowing the test procedure was properly administered and provides written documentation for compliance with record keeping requirements specified in paragraph "m" of the OSHA standard. The employee benefits by knowing a standardized procedure was followed, rather than what often appears to be a random procedure.



QualFit® - Making Respirator Fit Testing Simple

For Information visit: www.QualFit.net
To place a secure online credit card order visit:
https://qualfit-software.square.site/

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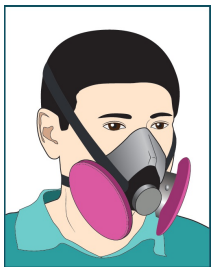
QualFit® Software© is registered with the U.S. Copyright Office June 13, 2021.

Respirator Selection & Development of Cartridge Change Out Schedules
May 14-15, 2024
Go to www.DrMcKay.com for details.

NIOSH News

Elastomeric Respirators in Healthcare



On July 11th and August 8th, NIOSH hosted webinars related to the assessment of elastomeric respirators in healthcare delivery settings. The webinar recordings are now publicly available. To view the recordings, go to: https://www.youtube.com/watch?v=kz2pMFQ1zjY&list=PLvrp9iOILTQbVtooE3OOJj4UGB4uhtEcs&index=205
Or, Click Here.

NIOSH announces Counterfeit N95 Challenge winner

On Dec 1, NIOSH in collaboration with NASA Tournament Lab and HeroX announce winners of the NIOSH Counterfeit N95 Challenge. The goals of the challenge are to develop innovative approaches that could reduce the number of counterfeit N95® respirators in the marketplace and to improve the confidence of end users who will purchase these products. The challenge winner, **Essayon Engineering**, developed a filtering facepiece respirator (FFR) phone app and website to help people check the authenticity of a respirator.

Essayon Engineering will receive the $35,000 prize pool for Phase 2 of the NIOSH Counterfeit N95 Challenge for the N95 FFR Validation App and Website. This winning solution demonstrated how a validation database with a private label lookup function and one-way communication with NIOSH's Certified Equipment List (CEL) could improve confidence that respirators are authentic. The app also includes a prototype "visual" validation tool where users can see pictures obtained directly from the manufacturers' websites and compare them against the respirator they are assessing.

NIOSH urges all buyers to inspect a respirator or its packaging for the required labeling prior to purchase. You can view information on the Buyer Beware section of NIOSH's Respirator Trusted-Source Information webpage at: https://www.cdc.gov/niosh/npptl/topics/respirators/disp_part/RespSource.html. Or, Click Here
At the time of this publication, the app was not yet available. But, I'll post information in a future newsletter.

In Case You Missed It

Hospital Respiratory Protection Toolkit

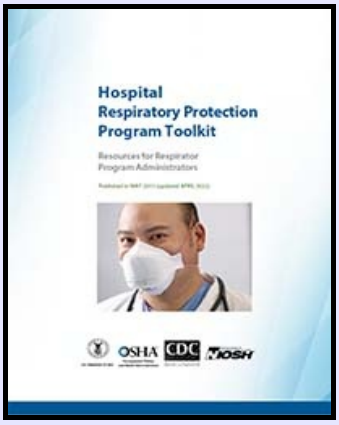
In case you missed it, in April 2022, NIOSH revised the original 2015 Hospital Respiratory Protection Toolkit.

The toolkit was developed to assist hospitals in developing and implementing effective respiratory protection programs, with an emphasis on preventing the transmission of aerosol transmissible diseases to healthcare personnel. In addition, the toolkit:

- Explains why healthcare facilities must implement respiratory protection programs,
- Lists different types of respirators that could be used,
- Outlines the development of a respiratory protection program, and
- Provides a respiratory protection program template.

Revisions include:

Grammatical and punctuation errors were corrected as well as typos. Contextual changes include improved wording to reflect more recent health and safety guidance since the publication of the original toolkit. Hyperlinks were updated to follow more modern standards and broken hyperlinks were fixed. Resources that were previously available, but no longer available were removed.



For details, go to:

DHHS (NIOSH) publication number 2015-117

To get your own copy of the Hospital Respiratory Protection Toolkit, copy and paste the following URL:https://www.cdc.gov/niosh/docs/2015-117/
Or, Click Here

Standard Test Procedure Changes

Sulfur Dioxide Standard Test Procedure Update
On September 22, 2023, NIOSH-NPPTL combined four Standard Testing Procedures (STPs) (TEB-APR-STP-0048A, -0048B, -0048C, and -0048D) for Sulfur Dioxide cartridge/canister testing into a single combined test procedure (-0048). This makes the previous STPs (-A, -B, -C, and D) obsolete and updated to NPPTL-APR-STP-0048-508 Revision 3.0

In addition to combining the four previous STPs into a single document, changes affect format and header, minor revisions to test equipment and method, to match current lab practices. Clarification of tolerances for all measured values was also improved.

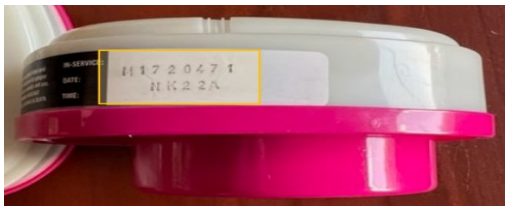
To view or obtain a copy of the revised procedure, go to:
https://www.cdc.gov/niosh/npptl/stps/pdfs/.pdf
Or,
Click Here

Manufacturer User Notices:

Gerson P100/OV Cartridge Recall
On October 16, 2023 The Louis M. Gerson Company, Inc. (**Gerson**) has issued a recall notice for certain Gerson G71 P100 OV cartridge lots produced between Nov 22 and Nov 23, 2021 (Lot M10871571NK22A and M10871571NK23A, respectively. These combination P100/OV cartridges are also sold as brand names **Wurth and Fastenal (Body Guard)**. The affected products were manufactured with an defective filter that may affect performance against particulate exposures. Relevant part numbers are:

0871571
08G71FP
08G71WU

The following photos may help identify what these combination filter/cartridges look like.



For details to identify specific lot and shipping codes, visit the Gerson website at:
https://www.gersonco.com/wp-content/uploads/2023/10/Gerson-Recall-Notice-101623.pdf
Or, Click Here

Merilogy Voluntarily Rescinds Approval
August 2023: NIOSH has honored a request by Merilogy Inc. to voluntarily rescind one NIOSH respirator approval. As of August 16, 2023, approval number TC-84A-9294 is no longer approved by NIOSH. The NIOSH Certified Equipment List no longer includes this approval number.
For additional information Click Here

Air Filtration Solutions Voluntarily rescinds Approval
August 2023: NIOSH has honored a request by Air Filtration Solutions Ltd. to voluntarily rescind one NIOSH respirator approval issued to Air Filtration Solutions Ltd. Any respirator with approval number TC-84A-9267 is no longer approved by NIOSH. The NIOSH Certified Equipment List no longer includes this approval number.
For the complete text NIOSH CA 2023-1064 Click Here

Voluntary Rescission of Walter Surface Technologies Approvals
September 2023: NIOSH has honored a request by Walter Surface Technologies to voluntarily rescind three NIOSH respirator approvals. As of September 29, 2023, any respirator marked with NIOSH approval numbers TC-21C-0815, TC-21C-0838, and TC-21C-0881 are no longer approved by NIOSH. The NIOSH Certified Equipment List no longer includes these approval numbers.
Due to the voluntary rescission of these NIOSH approvals, respirators bearing these NIOSH approval numbers may no longer be used, manufactured, assembled, sold, or distributed.

Unfortunately, neither NIOSH or a quick search on the Walter Surface Technologies website, provides examples of the specific respirators affected for the common user to identify what these products look like. Based solely on the affected approval numbers which include "21C", they appear to be PAPRs (Powered Air Purifying Respirators). A few years ago, Walter Surface Technologies acquired Allegro, so this may be of some help.

My suggestion to NIOSH: Provide photos of affected respirators!

3M Versaflo V-Series Control Valves

In a June 27, 2023 User Advisory Notice, posted the following document to be shared with their customers.

3M Versaflo™ Air Regulating Valve Assembly V-300

During recent evaluations, 3M learned that the V-300 Air Regulating Valve Assembly can exceed the allowable air flow range of 6-15 Cubic Feet Per Minute (CFM) required by NIOSH. The notice applies when used with 125-200 ft or 225-300 ft hoses, and operating at the upper end of the pressure schedule listed in the User Instructions. In these cases, the air flow of the system can exceed the NIOSH allowable upper limit of 15 CFM. It's important to recognize this doesn't pose a health or safety risk to the user, but is outside of the range for compliance with the NIOSH requirement.
Because of this, 3M is changing the pressure schedule values for the affected configurations and supplies a corrected table (Table 1) to comply with the NIOSH requirements. 3M recommends using the revised new pressure schedule immediately.

For a copy of the 3M User Notice Click Here, visit the 3M website, or call 3M Technical Support at 1-800-243-4630.

FlexAir PAPR Low Flow Alarm User Notice

On August 24, 2023 The Air Defense Group (ADG) issued a user notice for their FlexAir PAPRs, indicating a potential for FlexAir PAPR units to trigger a **premature** low airflow **alarm** above 4,000 feet altitude. These PAPRs are designed with a low flow alarm that is normally used to indicate when air flow is restricted through the respirator. Analysis conducted by the ADG revealed that the low flow alarm may be pre-maturely activated at altitudes above 4,000 feet. As a result, users should not use these PAPRS in environments over 4,000 feet. For questions please reach out to Virginia Griffith at Virginia.Griffith@ADG.com or call 301-352-8800.

ADG FlexAir PAPR

Honeywell Rescinds 19 Respirators

NIOSH has honored a request by **Honeywell** International, Inc. to voluntarily rescind 19 NIOSH respirator approvals. As of October 19, 2023, any respirator marked with a NIOSH approval label with the below approval numbers are no longer NIOSH approved. The NIOSH Certified Equipment List no longer includes these approval numbers:

14G-0264	14G-0265	14G-0267	14G-0272
14G-0297	84A-4188	84A-4189	84A-4190
84A-4372	84A-4373	84A-4378	84A-4387
84A-4388	84A-4710	84A-5159	84A-5160
84A-5163	84A-5224	84A-5667	

These approval number include respirators representing two different test schedules (14G & 84A). Unfortunately, photos for the affected respirators are not provided.
The complete text of NIOSH CA 2023-1067 may be read at
https://www.cdc.gov/niosh/npptl/resources/pressrel/letters/respprotect/CA-2023-1067.html
Or, Click Here

Honeywell Rescinds additional 26 Respirators

As of November 13, 2023, NIOSH has honored a request by Honeywell International, Inc. to voluntarily rescind **26** additional respirator approvals. As of the above date, any respirator marked with a NIOSH approval label shown below is no longer NIOSH approved. The NIOSH Certified Equipment List no longer includes these approval numbers:

84A-0593	84A-0594	84A-0595	84A-0596
84A-0597	84A-0598	84A-0599	84A-0600
84A-0601	84A-0602	84A-0603	84A-0604
84A-0605	84A-0606	84A-0607	84A-0608
84A-0609	84A-0610	84A-0612	84A-0613
84A-0614	84A-0615	84A-0616	84A-0901
84A-0902	84A-0903		

All of the numbers shown above are from test schedule 84A.
You can read the entire text of NIOSH CA 2023-1070 using the following URL:
https://www.cdc.gov/niosh/npptl/resources/pressrel/letters/respprotect/CA-2023-1070.html
Or, Click Here

Honeywell Rescinds additional 48 Respirators
The National Institute for Occupational Safety and Health (NIOSH) has honored a request by Honeywell International Inc. to immediately rescind **48** NIOSH respirator approvals issued to Honeywell International Inc.

As of November 29, 2023, any respirator marked with a NIOSH approval label with the below approval numbers are no longer NIOSH approved. The NIOSH Certified Equipment List no longer includes these approval numbers:

23C-3483	23C-3510	23C-3511	23C-3512
23C-3513	23C-3528	23C-3529	23C-3534
23C-3535	23C-3536	23C-3537	23C-3580
23C-3581	23C-3582	23C-3583	23C-3584
23C-3590	23C-3591	23C-3592	23C-3593
23C-3596	23C-3597	23C-3598	23C-3600
23C-3602	23C-3603	23C-3604	23C-3605
23C-3610	23C-3611	23C-3612	23C-3613
23C-3618	23C-3620	23C-3622	23C-3624
23C-3630	23C-3631	23C-3632	23C-3633
23C-3638	23C-3639	23C-3640	23C-3641
23C-3644	23C-3645	23C-3648	23C-3649

All of the numbers shown above are from test schedule 23C. For the full text of NIOSH CA 2023-1071 copy and paste the following URL:
https://www.cdc.gov/niosh/npptl/resources/pressrel/letters/respprotect/CA-2023-1071.html
Or, Click Here

Dentec Safety Rescinds 30 Respirators
NIOSH has honored a request by **Dentec Safety** Specialists Corp. to voluntarily rescind 30 NIOSH respirators.

As of October 20, 2023, any respirator marked with a NIOSH approval label with the below approval numbers are no longer NIOSH approved. The NIOSH Certified Equipment List no longer includes these approval numbers:

23C-0264	23C-0266	23C-0268
23C-0270	23C-3306	84A-0905
84A-0907	84A-0909	84A-0911
84A-0944	84A-0946	84A-0948
84A-0950	84A-0952	84A-2011
84A-2012	84A-2568	84A-2569
84A-2570	84A-2571	84A-2572
84A-5282	84A-5283	84A-5284
84A-5285	84A-5286	84A-7843
84A-7845	84A-7847	84A-7849

These approval number include respirators representing two different test schedules (23C & 84A). Unfortunately, photos for the affected respirators are not provided.

The full text of NIOSH CA 2023-1068 may be found at:
https://www.cdc.gov/niosh/npptl/resources/pressrel/letters/respprotect/CA-2023-1068.html
Or Click Here

AOK Tooling Limited Rescinds 12 Respirators
NIOSH has honored a request by **AOK Tooling Limited** to voluntarily rescind 12 NIOSH respirators.

As of October 30, 2023, any respirator marked with a NIOSH approval label with the below approval numbers are no longer NIOSH approved. The NIOSH Certified Equipment List no longer includes these approval numbers:

84A-6269	84A-6757	84A-7788	84A-8060
84A-8075	84A-8077	84A-8091	84A-8130
84A-8131	84A-8137	84A-8148	84A-8454

All of these respirators are of the air-purifying category.

The complete text of NIOSH CA 2023-1069 can be found at:
https://www.cdc.gov/niosh/npptl/resources/pressrel/letters/respprotect/CA-2023-1069.html
Or, Click Here

For Adults Only: Suzhou Sanical
Suzhou Sanical Protective Product Manufacturing posted a notice to make end users aware that N95® respirators are **not** approved for use by children. This manufacturer has 13 different NIOSH approvals.

Some of these were marketed for use by children, which is not permitted by NIOSH. Details can be found on their October 2023 user notice or go to the NIOSH Respirator User Notices Issued by Manufacturers webpage under the Suzhou Sanical Protective Product Manufacturing section. Here's the NIOSH URL: https://www.cdc.gov/niosh/npptl/usernotices/noticesmanufact.html
Or, Click Here to go directly to the manufacturer's security warning.

Masprot Stop Sale of NIOSH Respirators
Effective November 17, 2023, Masprot S.C., El. LTDA posted a user notice to inform end users of a voluntary stop sale for **all** of their NIOSH Approved® respirators. Masprot is a Chilean company that researches, designs and manufactures a variety of personal protective equipment. To see the user notice, go to the NIOSH Respirator website section on User Notices Issued by Manufacturers and scroll down to the section for Masprot S.C., El. LTDA section.
Or, to save time, Click Here, then view the 2nd page for the English version of the letter.
From what I can tell, all of their respirator products are elastomeric half and full facepiece respirators. I don't believe they manufactured any filtering facepiece respirators (FFRs).

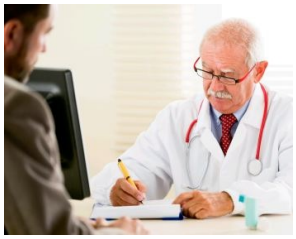
To my readers, please continue sending photos, videos and testimonials of **improperly conducted** fit testing. If you worked for an employer that conducted fit testing improperly, share your story. If your employer knowingly had the fit test operator administer the test incorrectly, share this too. I promise to keep your name and employer name confidential.

Wanted: Fit Test Adapters
Rather than throwing away damaged fit test adapters, consider donating them to our fit testing workshops. We strive to make our fit testing workshops as realistic as possible. Incorporating damaged along with good fit testing adapters can provide a valuable training experience. If you wish to send a damaged fit test adapter or a damaged facepiece with unusual or difficult to find leakage for our respirator inspection workshops, send us an email at info@DrMcKay.com and we'll provide shipping information.

Undamaged fit test adapters are also needed. On average, we lose one (1) fit test adapter every workshop due to wear and tear, poor adapter design, not following instructions, and other causes. If you've switched to another method of fit testing, rather than putting unwanted adapters into a landfill or taking-up space in you cabinet, donate them to our workshop. Or, if you're a respirator manufacturer, feel free to make a donation.

Respirator Program Administrator Training
Attend at least four days of respirator training from three different training categories and earn a certificate for Respirator Program Administrators.
This program can be given onsite.
For additional information, email us at info@DrMcKay.com

Medical Complications from Respirator Use



OSHA requires respirator medical clearance for persons required to wear respiratory protection. Researchers at the University of Cincinnati are collecting information on persons who:

1) Developed a medical complication while wearing a respirator, and
2) Identify pre-existing medical conditions causally related to the complication that developed.

If you have information (published or un-published) that establishes a link between a specific medical condition and a complication that developed as a result from wearing a respirator or during fit testing, please share this information with us. We're particularly interested in cases where a medical complication was induced by respirator use. Information such as the specific type of respirator worn, work environment, duration of use, level of physical exertion, underlying medical conditions that contributed to the complication, etc., is needed. You can send this information to: info@DrMcKay.com

2023 McKay Publications

R Metzler, D Spelce, J Johnson, C Coffey, T Rehak, **R McKay**
A Good Seal - Why Respirator Fit Testing is Essential for Filtering Facepiece Respirators.
The Synergist, Pages 28-30, October, 2023.

2023 McKay Presentations

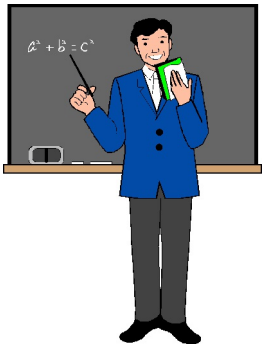
An Overview of Respiratory Protection for Public Health Employees.
An 8 hour presentation given to Hazard Evaluations and Technical Assistance Branch (HETAB), Division of Field Studies and Engineering (DFSE), National Institute for Occupational Safety and Health (NIOSH), in Cincinnati, OH on July 17, 2023.

Voluntary Use of a Respiratory Protection and Common Fit Testing Errors
Presented to the American Society of Safety Professionals - Southwestern Ohio Chapter. 2 hours. Zoom presentation. October 10, 2023.

Recent Changes to ATS-ERS Spirometry Standards from an Occupational Perspective
Presented to the Tri-State Occupational Medicine Association (TSOMA) Annual Education Conference in Cincinnati, OH, October 27, 2023.

Training Opportunities

Respirator Training Courses:



Dr. McKay and the University of Cincinnati is pleased to announce the following programs on Respiratory Protection and Fit Testing to your staff. They are:

Overview of Respiratory Protection:
http://www.drmckay.com/rtc-overview.shtml
April 16, 2024
October 22, 2024

Fit Testing Workshop (2-day):
http://www.drmckay.com/rtc-workshop.shtml
April 17-18, 2024
October 23-24, 2024

Respirator Selection & Cartridge Change Out Schedule Workshop.
http://www.drmckay.com/rtc-resp_selection.shtml
May 14-15, 2024

Fit Testing Refresher & Advanced Topics
http://www.drmckay.com/rtc-resp-refresher-advanced.shtml
May 16, 2024

All courses are held in Cincinnati, unless noted otherwise. On-site training is available.

Respirator Selection & Change Out Schedules

This workshop provides guidance on respirator selection and the development of OSHA compliant change out schedules for respirator cartridges. A combination of lecture with practice problem sessions is used. The course is designed to teach students how to select a respirator based on workplace conditions (exposure level, type of contaminant, length of time to be worn, etc.). The selection process goes beyond the typical recommendation to "use a NIOSH approved air purifying respirator". Students will learn how to select a specific respirator as well as a specific filter/cartridge (when appropriate). More than a dozen guidelines for development of an OSHA compliant cartridge change out policy will also be taught, including common computer models and how to use them.

Partial Listing of Topics

Respirator Selection

* Review of facepiece definitions and modes of operation.
* Practical and theoretical basis for respirator selection based upon:
  Assigned Protection Factors (APF)
  - MUC's, HR's, IDLH, etc.
* OSHA guidelines for respirator selection.
  - IDLH and non-IDLH atmospheres.
* Selection steps and information gathering procedures.
* Minimum respiratory protection versus practical alternatives.
* Filter selection issues
  - How to select an N, R, or P filter.
  - Why filter selection is influenced by exposures below the exposure limit.
  - How to choose a 95 versus 100 filter.
* Practical methods for handling unknown concentrations without defaulting to an SCBA.
* Calculating MUC's for mixtures.
* Selection Workshop
  - Practical problems and solutions.

Development of Cartridge Change Out Schedules

* OSHA recommendations for a change out policy.
* Factors that affect cartridge service life.
* Learn how to develop an OSHA compliant change out schedule.
* Understanding the breakthrough curve.
* Common methods used to define breakthrough.
* What level of breakthrough should be used?
* Work rate tables.
* Effect of high relative humidity.
* Methods for determining service life (use, limitations, and practice problems)
  - OSHA recommendations
  - Rules of thumb
  - Using laboratory data
  - Using math models
  - Using computer (software) models
  - Cartridge testing methods (3 methods) Combining methods
* Learn how to develop a change schedule when computer models are not available.
* Recommendations for mixtures:
  - OSHA compliance method
  - mole fraction method
  - multi vapor model
* How to confirm your change-out schedule.
* Storage and migration concerns.
* Immediate Breakthrough Upon Reuse (IBUR) concepts

Gain confidence your current procedures are correct!

Fit Testing Workshop (2-days):

This two (2) day workshop provides comprehensive lecture and "hands-on" training for students who need to learn how to conduct an OSHA accepted qualitative or quantitative respirator fit test. Students will have an opportunity to fit test a variety of different style facepieces, including filtering facepieces, half, & full. A combination of lecture and "hands-on" testing in the presence of a trained and experienced instructors will be used to help participants learn how to conduct respirator fit testing to satisfy regulatory requirements. Hands-on fit testing will include qualitative and quantitative methods. The following types of fit testing equipment will be available: Saccharin (sweetener) and Bitrex (bitter) qualitative fit test kits using squeeze-bulb nebulizers, including **QualFit**® software©. Quantitative fit testing with the TSI PortaCount, AccuFIT 9000, and the OHD QuantiFit©. Class size will be limited to ensure a favorable faculty to student ratio. Students will learn how to set-up, operate, maintain, troubleshoot, analyze, and interpret fit test results. Where appropriate, students will learn how to calibrate testing equipment and record results. All course materials, supplies, equipment, and reference manuals will be provided.

Students will also disassemble, reassemble, and inspect respirators for common problems. The workbook alone is a valuable reference for solving fit testing problems in the future.

This course uses a combination of lecture and small practicum groups to ensure students have ample time to practice and learn fit testing techniques. The second day provides students sufficient time to concentrate on the particular methods of interest to them. The "Hands-On" approach is emphasized in this course. Students will have the opportunity to fit test several different make and model respirators. The fit testing workshop provides an opportunity to see and experience many different types of commonly used fit testing methods (qualitative and quantitative).

Individuals who plan to attend the fit testing workshop, but have little or no experience with respiratory protection should take our 1-day "Overview" class, routinely offered before the fit testing workshop. A substantial discount is given when both courses are taken.

Dr. McKay is the past chair of the ANSI Z88.10 Respirator Fit Testing sub-committee, a voting member of the ASTM sub-committee on respirator fit test methods, the AIHA Respiratory Protection Committee, and others.

Fit Testing Refresher & Advanced Topics:
This 1-day course is specifically designed for the person who has been conducting fit tests, but has not had formal training or needs a review. This course reviews OSHA fit testing requirements and helps the operator understand **why poorly fitting respirators pass fit testing and why good fitting respirators fail**. It also provides an opportunity to discuss advanced topics not covered during a typical 2-day fit testing workshop due to time limitations. This course is also valuable for respirator program administrators who need a better understanding of fit testing procedures and assurance that their fit testing program is being run properly. The emphasis of this course is on quantitative fit testing, although many of the concepts are applicable to all fit test methods.

Partial Listing of Topics

Review of fit test procedures
- Facial hair: issues & solutions
- Selection process
- Comfort assessment
- Interference with PPE

Establishing pass/fail criteria
Interpretation of fit test results
Why user seal checks fail to detect leakage
Why user seal checks create leaks not present
Proper use of fit test adapters
Selecting sample probe location
Why leaking respirators pass fit testing
Why good fitting respirators fail fit testing
What does a high fit factor really mean?
Wear time & non wear time issues
- Understanding fit factor vs protection

When is quantitative fit testing required?
Opportunity to get answers to your questions

This course can also be given on-site.

Overview of Respiratory Protection:
This 1-day course provides a practical overview of respirators, standards, guidelines, use, and limitations of commonly used air purifying respirators. This class also provides an excellent overview of the OSHA Respirator Standard. Little or no prior formal training is required. The morning session includes lectures on the types and use of respirators and basic respirator selection procedures using APFs and MUCs. The advantages and disadvantages of different respirator facepieces, filters (N, R, & P), cartridges, PAPR's, and the physiologic effects of wearing a respirator will also be discussed. Respirator standards and program requirements will be reviewed to help the student comply with OSHA regulations. This class will help the student understand the most significant physiologic effects of wearing a respirator and OSHA requirements for respirator medical clearance. An introduction to qualitative and quantitative fit testing and seal check procedures will be covered (unless all attendees are participating in the fit testing workshop, where these topics will be covered more comprehensively). This course is essential for those individuals who oversee respirator users in their work place or new to respiratory protection.

Respirator Training at Your Location:
A variety of respirator training programs are available on-site. Courses available include:
* Fit Testing Refresher & Advanced Topics
* How to Develop a Cartridge Change Out Schedule (1 day)
* Respirator Selection (1 to 1.5 days)
* Fit Testing for Health Care Professionals (1 day)
* Basics of a Respiratory Protection Program (2 days)
* Overview of Respiratory Protection (1 day)
* Respirator Fit Testing: Quantitative (1 or 2 days)
* Respirator Fit Testing: Qualitative (1day)
* Fit Testing at your workplace. Not a course, but a hands-on program with your staff and equipment.

For information about **QualFit**® Software© for qualitative respirator fit testing with sweet and/or bitter agents, go to www.QualFit.net

What is **QualFit**® Software© ?
12 minutes
https://youtu.be/RwdMfrQXdTY

Basic Operation of **QualFit**® Software© :
18 minutes
https://youtu.be/vfwfuVOkAKw

Comprehensive Fit Test Training Video
54 minutes
https://youtu.be/FxpVsm3OhLY

Respirator Fit Testing Errors and Solutions - 21 minutes
https://youtu.be/0RsQEeOcS7o

QualFit® **Full Screen Option** - (5 min)
https://youtu.be/RJr-IIKTLas

The full screen exercise option makes it easier for the test operator to visualize the exercise testing screens during the test procedure, even when standing 8 or more feet away. In addition, audio beeps and changes in font color help to ensure the aerosol is delivered at the proper time and sequence as required by OSHA, ANSI, ASTM, ISO and other organizations.

I hope you enjoy this newsletter. Dr. McKay volunteers his time to many standard setting organizations and governmental agencies. Dr. McKay does not receive public or private funding for these services. Therefore, donations are appreciated and help this practice to continue. The opinions in this newsletter are Dr. McKay's and not the University of Cincinnati.
Click Here to Donate

Dr. McKay has approximately 40 years of national and international experience in all areas of respiratory protection including **research, teaching, clinical practice, peer reviewed publications, and consultation** as a faculty member at the University of Cincinnati. Dr. McKay is past chair of ANSI/AIHA Z88.10 (now ASTM), the committee responsible for "*Respirator Fit Test Methods*" and a member of ANSI/ASSE Z88.2-2015, which published the "*American National Standard - Practices for Respiratory Protection*". Respirator committee assignments also include the American Industrial Hygiene Association's Respiratory Protection committee. He has conducted respirator fit testing, training, and consultation services for governmental agencies, including OSHA, NIOSH, NPPTL, CDC, private industry, and respirator manufacturers. He's developed more than a dozen different continuing education courses on respiratory protection, which include fit testing, respirator selection, cartridge change out, program administration, filter penetration, protection factors, and other topics.

Fit Testing Refresher & Advanced Topics
This 1-day course is specifically designed for the person who has been conducting fit testing, but needs a better understanding as to why poorly fitting respirators pass can pass a fit test and why good fitting respirators fail. This class provides an opportunity to discuss advanced topics not covered during a typical 2-day fit testing workshop due to time limitations. This course is also valuable for respirator program administrators who need a better understanding of fit testing procedures and assurance that their fit testing program is being run properly. **This program identifies tricks and omissions some fit test operators' use to allow poorly fitting respirators to pass fit testing (QLFT & QNFT)**.
May 16, 2024

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To be Added to our Newsletter:
To be added to our Newsletter, go to
www.DrMcKay.com
There is no cost to subscribe. Your email address is NOT given to any other source. Newsletters are sent 2 - 3 times per year.

If you Receive Duplicate Newsletters:
Click "reply" and put "Remove" in the subject heading of the email address you wish to have removed as described above.

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