PERFORMANCE WORK STATEMENT
National Academy of Sciences (NAS)
Contract #68HERC19D0011
PR-ORD-21-00363 and PR-OAR-21-00336
Task Order #68HERC21F0115

I. TITLE: Respiratory Protection for the Public and Workers without Respiratory Protection Programs at their Workplaces

EAS Short Title: Respiratory Protection for the Public and Workers

II. Task Order Contracting Officer Representative(s):

Task Order Contracting Officer Representative (TOCOR)	**Alternate Task Order Contracting Officer Representative (ALTOCOR)**
Name: Emily Snyder	**Name: David Lehmann**
Office: ORD/CPHEA/HEEAD/IO	**Office: ORD/CPHEA/HEEAD/IHAB**
U.S. EPA, 109 T.W. Alexander Drive	U.S. EPA, 109 T.W. Alexander Drive
Mail Code: D143-01, Room #D1401	Mail Code: B105-02, Room #B487
Research Triangle Park, NC 27711	Research Triangle Park, NC 27711
Phone: 919-541-1006	**Phone:** 919-541-0234
Email: snyder.emily@epa.gov	**Email:** lehmann.david@epa.gov

III. PERIOD OF PERFORMANCE: Date of Task Order award through 2/11/2021 through 8/10/2022. The date should be August 10, 2022. This date will be updated on the PWS and the task order will be reviewed to make sure this date is reflected. (Comment by the CO)

IV. PURPOSE OF TASK ORDER

The purpose of this task order (TO) is to conduct a study organized by a committee of scientific experts and leaders convened by the National Academies of Sciences (NAS) to examine and consider processes for ensuring effective and appropriate respiratory protection for the general public when faced with inhalation hazards, including those associated with severe air pollution, wildfires, pandemics such as COVID-19, and other disasters and public health emergencies. The study will specifically address respiratory protection needs for vulnerable populations such as children, the elderly, and people with respiratory or cardiovascular disease. Additionally, respiratory protection issues will be explored for a broad range of workers who may need to use respiratory protective devices but whose workplaces are not required to implement respiratory protection programs.

V. BACKGROUND

ED_013283_00000295-00001

In the United States (U.S.), the testing and approval of respirators for worker safety and health and post-approval issues are under the purview of the National Institute for Occupational Safety and Health (NIOSH) and its National Personal Protective Technology Laboratory (NPPTL). The respirator approval process is limited to respirators for occupational use. Currently no respirators are approved for use by the general public during an environmental disaster (e.g. wildfires, severe air pollution) or pandemic (such as COVID-19) and there is not an approval process or central communication authority regarding respiratory protection for the general public for non-occupational use. Recent air quality concerns in the U.S. have included the widespread wildfires in California. In addition, air pollution levels are faced by embassy staff and families living abroad in high pollution areas including in China, India, and Indonesia. The respiratory protection needs of a broader class of workers who typically do not have respiratory protection programs in place also need to be addressed. Further, there are specific issues of concern regarding respiratory protection of vulnerable populations including children, the elderly, and people with respiratory or cardiovascular disease.

EPA conducts research on air pollutants and sets national ambient air quality standards subsequent to its authority under the Clean Air Act. In the U.S., particulate matter (airborne particles less than 2.5 micron in diameter, termed $PM_{2.5}$) is the most significant cause of air pollution-related health effects. Additionally, EPA is concerned about the public health impacts of $PM_{2.5}$ in wildfire smoke, as wildfires have been steadily increasing in frequency and magnitude. EPA, jointly with its interagency collaborators, recommends the use of respiratory protection by the general public during wildfires. However, many questions remain to be addressed about effective respiratory protection for the public and workers who are not covered by respiratory protection programs. The U.S. Department of State (DOS) and specifically, the Overseas Buildings Operations Bureau's Office of Safety, Health and Environmental Management (OBO/OPS/SHEM) require technical expertise to advise on the use of respiratory protection by overseas family members including children. Severe air pollution at most overseas locations is a major driver for use of respirators of varying degrees of quality and fit by family members. Other scenarios for use include wildfires, volcanic eruptions, chemical/biological attacks, and pandemics.

EPA and DOS have the following questions related to respiratory protection for the general public.

- What are the specific situations/scenarios that impact air quality outside traditional workplaces, which trigger the need for respiratory protection, e.g., forest fires, air pollution, chemical factory exhausts or accidents?
- What steps/actions do agencies and governments take at the local, state, and federal levels to help the affected populations on respiratory protection, e.g., relief workers, diplomats, general public? Examples of agencies and organizations include county/state health departments, FEMA, EPA, DOS, and nonprofits, such as the American Red Cross.
- What resources are currently available to such agencies and organizations to guide the affected populations (e.g., relief workers, diplomats, general public) about effective measures for respiratory protection? What are the existing specific sources (e.g., government agencies, manufacturers) of information on respiratory protection?

ED_013283_00000295-00002

- What are the respiratory protection needs for vulnerable populations (e.g., children, the elderly, and respiratory-compromised individuals)? What considerations are needed regarding the regulatory implications and approval processes for respiratory protective devices for these populations?
- What is the current role of each involved federal agency and what specific actions does it take in responding to inquiries or requests for guidance from other agencies and the general public? Do the current infrastructure, processes, and resources in place at any of the organizations facilitate optimal and effective guidance in responding to such inquiries? What, if any, are the barriers?
- What is the most effective way for a federal organization to serve as the authoritative and unified source of information and guidance to ensure the respiratory health and safety of the Nation and to ensure that respiratory protective devices meet the needs of all workers and the general public?
- What changes or enhancements must be made in the following areas to fulfill this responsibility?
    - Policies governing its charter
    - Organizational structure
    - Operations
    - Resources: Financial and Human
    - Communications and Outreach to a broader audience that includes the general public
- What is a reasonable timeline to establish this responsibility in a federal organization?

VI. SCOPE OF WORK

Per request from federal agencies across the U.S. government, the National Academies of Sciences, Engineering, and Medicine (NASEM) is convening an expert ad hoc committee that includes membership of the National Academies, relevant organizations and associations, federal agencies, and other experts in the areas to be addressed in the study. The committee was selected to ensure the presence of individuals with expertise in a variety of fields, including respiratory health, physiology, public health, occupational safety and health, emergency planning, respirator manufacturing, respirator research and evaluation, industrial hygiene, safety technology, worker advocacy, regulatory policy, and communications. The consensus report should be organized to address the following objectives:

1) determine the need for guidance on respiratory protection for the general public (including children and adults) and workers facing inhalation hazards outside of workplaces with known respiratory hazards subject to requirements for respiratory protection programs, including during disasters and public health emergencies. This should be based on an assessment of existing knowledge regarding the necessary factors (e.g. fit, filtration, fabric, airflow, and leakage) to ensure respiratory protection is effective for its intended use (i.e., source control and/or protection) across different hazard scenarios and the identification of gaps in existing standards/guidance;

ED_013283_00000295-00003

2) describe current and potential options for oversight and approval of respirators for these populations (i.e., workers who may need to use respiratory protective devices in the absence of a respiratory protection program and the general public); and
3) make recommendations for a framework of responsibilities and authorities, including those of federal agencies, to provide a unified and authoritative source of information and effective oversight in the development, approval, and use of respirators, including conformity assessment processes to meet the needs of these populations. As needed, the committee may consider recommendations to Congress regarding the implementation of the framework and the types of resources necessary for doing so.

Through this task order, EPA and DOS will fund this study. By funding this study, the two agencies' equities will be considered. Both EPA and DOS have stakeholders using respirators during emergencies and EPA, as the agency responsible for protecting human health from environmental hazards, will benefit from expert advice on developing guidance for the public about use of devices and other steps to provide respiratory protection.

VII. DESCRIPTION OF TASKS

Task 1: Kick-off Call (Contract Level PWS, Task Area 2, Page 5)

The NASEM shall convene a teleconference with the TOCOR and relevant EPA staff to review the deliverables and communication plans. This teleconference shall occur within seven (7) days after NASEM acceptance of the TO.

Task 1. Deliverables

Task	Sub-Task	Deliverable	Schedule
1	NA	Kick-off Call	Within seven (7) days after NASEM acceptance of the TO.

Task 2: Committee Membership (Contract Level PWS, Task Area 2, Page 5)

NASEM put together an expert ad hoc committee that includes membership of the National Academies, relevant organizations and associations, federal agencies, and other experts in the areas to be addressed in the study. NASEM shall provide a final list of committee members that includes biographical sketches which indicate their areas of expertise.

Task	Sub-Task	Deliverable	Schedule
2	NA	List of committee members and biographical sketches	Within fifteen (15 days) of award of task order.

ED_013283_00000295-00004

Task 3: Committee Meetings (Contract Level PWS, Task Area 2, Page 5 & Task Area 5 Page 6)

EPA is requesting NASEM to conduct virtual meetings. Typically, these committee meeting are held in person but due to COVID-19, EPA is anticipating that all three (3) meetings will be held virtually.

The committee shall hold three (3) virtual meetings, one or more of which may include a public portion where they gather information from relevant experts and other stakeholders that shall inform their consensus report. NASEM shall identify expert speakers to participate in the public portion. NASEM shall set up and manage the virtual and in-person meetings and provide any technical support for the committee and the external experts' participation. The TOCOR and ALTOCOR shall be informed via email of the date and approximate times of virtual meetings at least one (1) month prior to the meetings. An agenda for any public sessions of a committee meeting will be provided two (2) weeks in advance. All communications regarding the virtual meetings should go through the TOCOR and ALTOCOR.

Task 3. Deliverables

Task	Sub-Task	Deliverable	Schedule
3	NA	Date, time, and public session agenda of meetings.	One (1) month prior to the meetings for date and approximate times. Two (2) weeks prior to the meetings for agendas.

Task 4: Draft and Release of Consensus Study Report Respiratory Protection for the General Public (Contract Level PWS, Task Area 2, Page 5)

EPA is requesting NASEM to produce a consensus study report on Respiratory Protection for the Public and Workers without Respiratory Protection Programs at their Workplaces.

Sub-Task 4.1 Drafting and Peer-Review of Consensus Study Report

The committee shall produce a consensus study report documenting the respiratory protection for the public and workers without respiratory protection programs at their workplaces, consistent with the scope of work/study charge as described in section VI. The committee shall determine the need for guidance on respiratory protection for the general public, describe current potential options for oversight and approval of respirators for these populations, and make recommendations for a framework of responsibilities and authorities, including those of federal agencies. Before release, the committee's report is subject to the NASEM's review procedures before it is delivered to EPA. EPA will share the report with DOS.

Sub-Task 4.2 Creation of Webpage to Disseminate Consensus Report Information

ED_013283_00000295-00005

The NASEM shall create a NASEM webpage for dissemination of information about the report prior to posting of the pre-publication version of the consensus report. The TOCOR and ALTOCOR shall be notified via email of the location of this website or similar means used to disseminate information to the public during the course of this task, as well as relevant changes to them.

Sub-Task 4.3: Pre-release briefing for EPA and DOS on Respiratory Protection for the Public and Workers without Respiratory Protection Programs at their Workplaces Consensus Report

NASEM shall provide a briefing for senior leadership in EPA, DOS, and other government agencies on the report Respiratory Protection for the Public and Workers without Respiratory Protection Programs at their Workplaces, including participation from the Committee members, prior to the posting of the pre-publication consensus study report on the NASEM Website. The briefing should occur prior to the pre-publication consensus study report on NASEM Website.

Sub-Task 4.4 Pre-publication Consensus Study Report on NASEM Website

Once finalized and approved by the NASEM, the report shall be released as a pre-publication Adobe PDF download to the public via the NASEM website. The TOCOR and ALTOCOR shall be notified via email of the location of posting of the report on the NASEM website developed under Sub-Task 4.2.

Sub-Task 4.5 Final Consensus Study Report on NASEM Website and in Print

Within three months of the pre-publication release, two final edited and bound versions of the report shall be available in print and Adobe PDF download via the NASEM website. The committee shall use the National Academies Projects and Activities Repository (NAPAR) on the National Academies' website to post information, as appropriate, under its procedures that implement the requirements of Federal Advisory Committee Act (FACA) Section 15. The TOCOR and ALTOCOR shall be notified via email of posting of the report on the NASEM website for the report.

Task	Sub-Task	Deliverable	Schedule
4	4.1	Conduct Peer-Review of Consensus Study Report	At least four (4) months prior to the end of the task order.
4	4.2	Webpage to Disseminate Consensus Report Information	Prior to completion of Sub-Task 4.4.
4	4.3	Pre-release briefing for EPA and DOS on Respiratory Protection for the Public and Workers without Respiratory Protection Programs at their Workplaces Consensus Report	Prior to completion of Sub-Task 4.4.

ED_013283_00000295-00006

4	4.4	Pre-publication Consensus Study Report on NASEM Website	At least three (3) months prior to the expiration of the task order.
4	4.5	Final Consensus Study Report on NASEM Website and in Print	Within three months of the pre-publication release.

Task 5: Dissemination of Respiratory Protection for the Public and Workers without Respiratory Protection Programs at their Workplaces (Contract Level PWS Task Area 2)

Sub-Task 5.1: Report Highlights for Respiratory Protection for the Public and Workers without Respiratory Protection Programs at their Workplaces Consensus Report

The NASEM shall create a 3-8 page document that includes report highlights and list of recommendations based on the findings in the consensus study report. The target audience for the report highlights and the list of recommendations is the EPA, DOS, other government agencies, and Congressional members and staff. This document may be in the form of a text summary, graphical summary, or some combination of both. It shall also be released as an Adobe PDF download to the public via the NASEM website created for this report.

Sub-Task 5.2: ~~Public~~ Webinar on Respiratory Protection for the Public and Workers without Respiratory Protection Programs at their Workplaces Consensus Report for Study Sponsors and Other Key Stakeholders

Sub Task 5.3 Recordings of Public Webinar for Study Sponsors and Other Key Stakeholder Available on the NASEM website

The National Academies of Sciences, Engineering, and Medicine shall plan and execute two webinars (between 1.5-2 hours in duration) to engage the study sponsors and other key stakeholders in a facilitated discussion on the framework and recommendations provided in the report, *Frameworks for Protecting Workers and the Public from Inhalation Hazards*. Each of the webinars will focus on one of the two user groups of focus in the report—the public or workers without respiratory protection programs in their workplaces. These webinars shall provide the study sponsors and other relevant federal agencies and nonfederal organizations an opportunity to

- share their reactions to the report and its recommendations,
- discuss practical considerations that may affect implementation of the framework and recommendations, and
- explore priority actions and next steps.

Session topics will be developed in consultation with staff from the sponsoring organizations, and include input or reactions from relevant policy makers, public health agencies, health care professionals, and other stakeholders. The webinar focused on the discussion of the report components oriented to the use of respiratory protective devices by workers will include the

ED_013283_00000295-00007

sharing of perspectives and implementation planning from agencies and stakeholders described in the worker-oriented report recommendations, including NIOSH. Similarly, the public-user focused webinar will involve the sharing of perspectives and discussion of next steps by stakeholders called out in the public-oriented report recommendations, beginning with perspectives and plans from the study sponsors. The public and interested stakeholders not invited to participate directly in the discussion sessions will have an opportunity at the end of the webinar to submit questions and comments.

Prior to the webinars, the report highlights with list of recommendations, infographic(s), and the stakeholder-specific action guides oriented to public health agencies and health care providers (see section on Infographics and Action Guides below), will be made available on the study webpage and to the study sponsors for dissemination in conjunction with the webinars.

The intended audiences for each of these webinars are broad and information about the webinars and the accompanying Twitter event (see Twitter Event below – Task 5.6) will be broadcast widely via NASEM channels and by the sponsors. A recording will be generated to capture the discussions from the webinar for those unable to attend the live event.

The webinar shall take place in the summer of 2022 at least 10 days before the end of the task order. Monthly planning calls will be scheduled to facilitate ongoing discussions with staff from sponsoring organizations and other identified stakeholders on the development of the webinar agenda. These planning calls will include discussion of the sponsors' current implementation plans in advance of the webinars. Dissemination materials will be provided to the sponsors prior to the webinars and the proposed twitter event will be scheduled to occur following the webinar. The webinar recording will be delivered prior to the contract end date on August 10, 2022.

Sub-Task 5.4: Congressional Briefings on Respiratory Protection for the Public and Workers without Respiratory Protection Programs at their Workplaces Consensus Report

NASEM shall provide two briefings to Congressional members and staff, subject to their request. This briefing shall include participation from the Committee members. The TOCOR and ALTOCOR shall be informed via email of the date and time of the briefings prior to the briefings.

Sub-Task 5.5: Additional Dissemination Activities – Materials to Support Webinar and Promotion Activities

The National Academies of Sciences, Engineering, and Medicine shall develop two action guides summarizing key content included in *Frameworks for Protecting Workers and the Public from Inhalation Hazards*. Proposed action guides will focus on information for:

- Public Health Agencies
- Health Care Providers

Content for the action guides will be developed in consultation with staff from the sponsoring agencies and may include but is not limited to:

- Report terminology

ED_013283_00000295-00008

- Key report findings related to use of and communication regarding respiratory protective devices
- Relevant report recommendations
- Knowledge gaps and priorities for future research

These action guides will be disseminated prior to, during, and following the two public webinars, as well as by the sponsors via their networks and partners (e.g., APHA, NACCHO). Additionally, an overview of the report and its resources, including these action guides, will be offered to pertinent public health groups and initiatives such as Million Hearts, based on input from the sponsors. Possible engagements using these action guides include a brief presentation at the Million Hearts monthly call with health care providers and public health professionals and a blog post about the action guide and webinar in coordination with NACCHO.

Infographics are a way to represent data visually or to break down a complex concept through visual means. Infographics add another dimension of user engagement and are capable of containing many layers of information. They also have the benefit of being used as one "full-size" document, like a handout, or to crop the document into "smaller" graphics/data points (i.e. social media cards) for distribution on social media channels. Infographic and social media cards targeted to the public shall be developed, specifically, one "full-size" infographic, along with six social media cards. Content for infographic and social media cards shall include but is not limited to:

- Key respiratory protection terminology
- Examples of respiratory protective devices
- Key report information related to use of respiratory protective devices

Initial drafts of the action guides (including outlines of key content and format options), infographic and social media cards will be developed and shared with sponsors for review and feedback. Final materials will be delivered to the sponsor prior to the webinar and will be made available as a resource to all webinar participants. The materials will also continue to be promoted, along with the report, following the webinar on NASEM social media channels.

Sub-Task 5.6: Additional Dissemination Activities – Promotion of Report

The Health and Medicine Division's shall develop a podcast to highlight critical information, recommendations, and key report takeaways. Showcasing work in this storytelling and narrative form will allow for deeper engagement with audiences about the respiratory protection needs of the public and workers without protection. There is also opportunity for the sponsor(s) to serve as discussion moderators.

This podcast will be targeted to policy makers, public health agencies, health care professionals, and other relevant stakeholders, and will provide another opportunity for dissemination of the report highlights and action guides. Content and discussion prompts will be developed in consultation with study sponsors and may include but is not limited to:

- Report framework and recommendations

ED_013283_00000295-00009

- The challenge of communicating respiratory protection terminology to unfamiliar audiences

The Health and Medicine Division has a robust presence on Twitter, with more than 69,000 followers, and can reach 150,000 followers when combined with the National Academies twitter channels. NASEM shall conduct a live twitter event that will allow the audience—policy and decision makers, researchers, academic professionals, and the public—to participate in a discussion through retweets and replies. The Twitter event will include:

- Social media card development and promotion leading up to the event
- Guided conversation on social media, highlighting major points from the webinars' discussions
- Coverage of sponsors' perspectives and screenshots of presentations
- Prep session
- Social media boosting (Twitter-sponsored content/ads)

The appropriate subject matter expertise and primary participants will be determined via discussion with the sponsors during planning sessions. This event will continue to use the report hashtag #respiratoryprotection, which will allow the social media team who will be facilitating the event, to monitor online conversation and track engagement.

Lastly, National Academies communications staff shall write a feature story, focused on the lay audience, to garner additional media attention following the webinars. Feature stories are housed on the National Academies Press Room where journalists visit to research information and find individuals they might speak with about areas of interest.

In terms of timing for these communications' products, conceptual development and production of the podcast shall begin immediately following prospectus review and approval. The episode will be finalized and ready for promotion prior to the task order end date. It will also be made available as a resource to all webinar participants and will live on a newly created Health and Medicine Division Podcast page. The twitter event shall follow the webinars by a few days to a week to build up audience interest. This staggering of webinar and twitter events will allow sponsors and committee members to participate more actively and allow for more in-depth discussion following the sharing of perspectives and planning by the sponsors during the webinars. Finally, the feature story will be developed and disseminated following the webinars.

Task	Sub-Task	Deliverable	Schedule
5	5.1	Report Highlights	At least two (2) months prior to the expiration of the task order.
5	5.2	Date and time of Webinar for Study Sponsors and Other Key Stakeholders	At least two (2) weeks prior to webinar.

ED_013283_00000295-00010

5	5.2	Webinar for Study Sponsors and Other Key Stakeholders	At least 10 days prior to the expiration of the task order.
5	5.3	Recordings of Webinar for Study Sponsors and Other Key Stakeholder available on the NASEM website	Prior to the expiration of the task order.
5	5.4	Date and time of Congressional Briefings	Prior to the briefings.
5	5.4	Two (2) Congressional Briefings on Respiratory Protection for the Public and Workers without Respiratory Protection Programs at their Workplaces Consensus Report, subject to the request of Congressional staff members.	At least one (1) month prior to the expiration of the task order.
5	5.5	Additional Dissemination Activities – Draft Materials to Support Webinar and Promotion Activities (Action Guides, and Social Media Cards)	At least 2 weeks prior to webinar
5	5.6	Additional Dissemination Activities – Promotion of Report – Concept for Infographic Podcast and Discussion Prompts	Concepts for infographic and podcast to be delivered 1 month prior to expiration of the task order and discussion prompts and 2 weeks prior to recording podcast
5	5.6	Additional Dissemination Activities – Promotion of Report – Draft Plan for Twitter Event and Draft Feature Story	At least 2 weeks prior to the expiration of the task order

deliverables shall be provided in Adobe Acrobat. Deliverables will be reviewed by the TOCOR.

ED_013283_00000295-00011