MWC Procedure & Policy Manual (PPM)

Table of Contents

Curriculum Development Procedure (2019)

Title: Curriculum Development Procedure
Adopted January 15, 2019

The following is adapted from 2014 Competitive Renewal application (funded 2015)

ADDIE Process (Analysis, Design, Development, Implementation, Evaluation)

Analysis

Identify a need

Review other NIEHS-awardee programs for similar target population
Document need, show duration and outline content
Submit to NIEHS for Approval of Concept
Proceed with DDIE, if approved (revise if needed)

Design/**D**evelopment

Considerations include:

a: characteristics of training target audience (language, literacy, culture)
note: continue to monitor language needs
note: literacy approaches include Small Group Activity Method (SGAM), skill outcomes

note: training center policy re: literacy/written items
b: target audience training needs
note: part of submission to NIEHS for approval of concept
c: course prerequisites, if any
note: considered; described in Participant, Facilitator Guides
d: learning objectives
note: Bloom's used by MWC to write measurable objectives
e: analysis/selection of delivery methods to target/locale/objectives
note: mapped to learning outcomes
f: instructor manual lesson plan, learning objectives, aids, technology
note: see format of MWC Facilitator Guide below
g: trainee manual
note: see format of MWC Participant Guide below
h: effective alternatives to resources/technology
note: see Facilitator Guide, facilitator preparation below
Other design considerations include:
Regulatory requirements
Use or modify existing MWC materials
Teaching strategies—see facilitator guide outline below
note: develop lesson plan to meet needs
Graphics/white space
Language level

- Participant Guide—developed first
  - Usual format
    - Acknowledgement/Warning/Disclaimer (prerequisites)
    - Table of Contents
    - For each module
      - Intro with learning objectives
      - Content, with exercises as appropriate
        - Note: exercises may be in separate manual
      - Summary
    - Closing
  - Content review
    - Subject Matter Experts not involved in development
- Facilitator Guide—developed to match Participant Guide
  - Introductory pages
    - Acknowledgement/Warning/Disclaimer (prerequisites)
    - Table of Contents
    - Overview
    - Sample agenda(s) for program
    - Lesson Plan formats
    - Instructional Resources
    - Presentation guidance
    - Exercise guidance
  - Standard format for each module
    - Time Requirement
    - Number of facilitators (consistent with Minimum Criteria)
    - Materials needed
    - Chapter/module/session Objectives
    - Suggested Facilitator Preparation
      - Includes:
        - Content knowledge/review of material
        - Technology pre-check and back-up plan
    - Minimum Content Requirements
    - Questions you may be asked
    - Presentation of the Session
    - Summary
  - Facilitator Follow-up
  - For each exercise
    - Time Requirement
    - Number of facilitators
    - Materials needed
    - Procedure
  - Knowledge, skill, ability assessments
    - Knowledge (as appropriate for program)
      - Test items developed for each knowledge goal

- Peer review of test bank
- Revise
- Link each item to page in Participant Guide
- Select items for pre and post-test based on duration of didactic training in agenda
    - add all didactic hours
    - module didactic/total didactic=weighting proportion of items for that module on an exam
- Review resulting items, revise as needed
- Develop answer key

Skill and Ability assessments

- Develop checklists
- Peer reviewed as part of Participant Guide
- Develop 'improved my ability' outcomes
- Review, revise, finalize

Review—internal and/or external to meet the needs

Submit to NIEHS for review and comment

- Revise as needed
- Resubmit to NEIHS if requested

Implementation

Post for use

- Manuals initially at MWC website
- Registration/evaluation/test items/timeline at Evaluation website

Evaluation

Review individual program evaluation reports

- Identify content/delivery/other concerns
- Document resolution of content/delivery issues

Receive suggested changes or additions (facilitator follow up feedback/other)

- Prioritize when to address (example, test items or inaccuracies require immediate resolution)
    - If not incorporated within a year, document reason
- For new materials, provide to NIEHS for review (see Analysis)
- For minor revisions/additions, document and transmit to NIEHS

Requests to extend existing program to new audience

- Seek NIEHS review/input

Evaluation Procedure
(2019, 2019)

Title: Evaluation Procedure—Overall Approach; Purpose and Use of Information
Adopted January 15, 2019
Revised July 22, 2019
See Tab 100 for Prior Procedure

Evaluation of program delivery and participant achievements is necessary to collect data to chart compliance with regulatory and other overall needs of participants and to identify when this does not occur so that remediation can be designed and implemented. In addition, adequate staffing and infrastructure must be in place at each training center; this is monitored through review of participant feedback, periodic listing of space/equipment/supplies and instructor evaluations (documentation of qualifications, tracking annual updates of knowledge/skills, annual evaluation). Annually data on practices at each training center regarding policies and procedures are collected and evaluated through a self-audit. Through scaled item responses and open-ended comments, all Kirkpatrick Models levels of learning are addressed.

Each of these aspects of MWC evaluation is described below, by source: types of information collected, rationale for collection, use(s).

Source: Participant Feedback – all programs

Types of information collected

Instructor ratings (4-pt scale, strongly agree strongly disagree, Does Not Apply--DNA)

Described what I was going to learn
Presented information clearly
Answered my questions well
Gave me feedback on activities
Used time well
Treated me with respect
Was knowledgeable and informed
Updated me on new information

Rationale

Provides feedback on presentation style, use of activities, conduct, perceived knowledge

Uses

Summarized in program-specific report reviewed by Program Director and Central Administration to identify any concerns, plan and document remediation.

Summarized for NIEHS in Progress Report and Annual Report
May be covariates in data analysis

Overall rating of instructor (5-pt scale, very good very poor)

Rationale

Provides summary of participant evaluation of instructor

Uses

- Summarized in program-specific report reviewed by Program Director and Central Administration to identify any concerns, plan and document remediation.
- Reported to NIEHS in Progress Report and Annual Report
- Reported to Advisory Board
- May be covariates in data analysis

Course rating (4-pt scale, strongly agree strongly disagree, Does Not Apply--DNA)

- Was interesting
- Was hands-on/interactive
- Was held in a comfortable environment
- Was appropriate for my job
- Taught me skills I will use on my job
- Made me feel that I can do my job better
- Made me want to work more safely

Rationale

Provides feedback on perception of relevance, usefulness and use of adult education methods.

Provides Kirkpatrick Level 1 assessment.

Uses

- Summarized in program-specific report reviewed by Program Director and Central Administration to identify any concerns, plan and document remediation.
- 'Interesting', 'interactive', 'appropriate' are Level 1 Kirkpatrick Model outcomes (Reactions).
- Summarized for NIEHS in Progress Report and Annual Report
- May be covariates in data analysis

Overall rating of the course (5-pt scale, very good very poor)

Rationale

Provides summary of participant evaluation of instructor

Uses

- Summarized in program-specific report reviewed by Program Director and Central Administration to identify any concerns, plan and document remediation.
- Reported to NIEHS in Progress Report and Annual Report
- Reported to Advisory Board
- May be covariates in data analysis

Key outcomes are rated (4-pt scale, strongly agree strongly disagree, Does Not Apply--DNA)

Three or four outcomes are program-specific
Use resources to find information --included for all programs

Rationale

Provides feedback on program-specific outcomes as central goals; including using/finding information is an over-arching goal of all adult-focused training.

Uses
Summarized in program-specific report reviewed by Program Director and Central Administration to identify any concerns, plan and document remediation.

May be covariates in data analysis

Open-ended items

- Explain any strongly disagree, very poor or DNA response on scaled items
- The most important thing I learned and will use from this course was…
- The course would be more useful to me if….
- What other comments would you like to make about the instructor(s) or course?

Rationale

Provides opportunity for participant input 'in their own words'

Items selected to identify reasons for low ratings, identify unmet needs of participants, most valued content.

Uses

Summarized in program-specific report reviewed by Program Director and Central Administration to identify any concerns, plan and document remediation, identify possible changes or topics for new programming.

Identified uses provides data on what actions participants plan to take based on training.

Source: Participant Feedback – refresher programs only

Types of information collected

Duration since initial training (<2 years, 2-5 years, 5-10 years, >10 years)

Rationale

Provides estimate of how many refresher programs have been completed.

Uses

Summarized in program-specific report reviewed by Program Director and Central Administration to identify any concern regarding completeness of data, plan and document remediation.

May be covariate in data analysis.

Since my last training, I have …. (4-pt scale, routinely□ not at all)

- Used references and resources to get information about work hazards
- Used a skill or procedure learned in training
- Planned my work better to minimize health and safety hazards
- Discussed health and safety practices with my coworkers
- Used health and safety equipment more effectively
- Made decisions so that I work more safely

Rationale

Provides feedback on key actions during the past year.

Uses

Summarized in program-specific report reviewed by Program Director and Central Administration to identify any concern regarding completeness of data.

May be covariate in data analysis.

What currently might stand in the way of work safety at your workplace…(4-pt scale, strongly agree strongly disagree)

- I have enough time to work safely
- Management/supervisor resists changes to health and safety practices
- Co-workers resist changes to health and safety practices
- I have the right resources (equipment, technology, information) to work safely
- The training just does not apply to my workplace

Rationale

Provides participants opportunity to rate safety culture and relevance of training.

Uses

Provided verbatim in program-specific report reviewed by Program Director and Central Administration to identify any concern regarding completeness of data, plan and document remediation.

May be covariate in data analysis
Can evaluate internal consistency (see course item: was appropriate for my job)

Open-ended items

In the past year, how have you applied training at your work or in your community?
What keeps you from using your training at work or in your community?

Rationale

Provides feedback on uses of training and barriers to use.

Uses

- Provided verbatim in program-specific report reviewed by Program Director and Central Administration to identify any concern regarding completeness of data, plan and document remediation.

- Reported uses are impacts of training and are categorized by Kirkpatrick Model Learning Levels of 2 (Learning), 3 (Behavior) or 4 (Results). These are reported to NIEHS in the Progress Report and Annual Report
- Impacts may be used in marketing
- Barriers provide opportunity for barrier-reduction training
- Identifying barriers informs programming needs

Source: Participant Feedback – site refresher programs only

Types of information collected

Site work related actions

In the past 12 months, identify conduct of 12 specific site-related tasks and fill-in 'other'
Employer name/city/town where any identified activity conducted

Rationale

Basis of funding is in Superfund to meet the national needs for workers who can do site remediation safely.

Uses

- Document activities of participants in relation to site work.
- Reported to NIEHS in Progress Report and Annual Report.
- Evaluate consistency between activities and use of PPE
- Collect employer information for follow up to obtain listing of sites where participants worked

Source: Space/equipment/supplies

Types of information collected

Course rating item—all programs

Was held in a comfortable environment

Open-ended comments provide opportunity to address equipment/supplies—all programs

The course would be more useful to me if….
What other comments would you like to make about the instructor(s) or course?

Rationale

Standardized rating of training environment

Open-ended is opportunity for participant input 'in their own words'

Uses

Summarized in program-specific report reviewed by Program Director and Central Administration to identify any concerns, plan and document remediation

Space drawing and equipment/supplies listing

Drawing of training space(s)
Listing of training-related equipment and supplies

Rationale

Successful training requires adequate space and equipment/supplies

Uses

Document facilities at any new training center
Competitive renewal

Source: Instructor Qualifications

Types of information collected

Documentation of qualifications

Relevant work experience

- Number of years
- First/Last job titles
- Brief description of most recent job responsibilities
- Academic training—institution, degree/dates
- Non-degree training—program title, sponsor, duration
- Certificates/certifications—title, awarded by, date
- Date completed course/module to be taught
- Date completed co-teaching with mentor
- Date successfully demonstrated adult education skills

Rationale

Trainer education and skill/experience documentation

Uses

Document hiring practices consistent with institution and Minimum Criteria
Preparation of Biosketch for Competitive Renewal

Tracking of annual skill/knowledge updating

Annual refresher/professional update training added to Biosketch
Annual professional development added to Biosketch
Annual evaluation (training observed/feedback)
Rationale

Annual updates improve knowledge and skills of trainers

Uses

Document annually (prevents omitting applicable training) in less-frequent reporting
Competitive renewal

Annual evaluation

Elements rated by observer (yes/no, with comments)

- Were objectives stated clearly?
- Were objectives implemented?
- Intro created an atmosphere of 'need to know'
- Presentation was well organized
- Stayed within time limits
- Created an atmosphere that encouraged learning
- Effectively used technology
- Demonstrated effective instruction
- Explained how course applied
- Encouraged participation
- Gave helpful feedback
- Made good use of leading questions
- Clarified statements and answers
- Summarized module

Instructor feedback

Thinking back on the presentation…
What aspects went very well?
What aspects did not go as well as you would have like?
What resources would have helped?
Are they available to you?
Did any exchanges in the presentation make you think: Gee, what do I say now?

What actions/activities would help you in the future if this happens?

Are there training or support materials that you feel would improve the content of this part of the training?

Rationale

Both the observer and the trainer have input to evaluation process

Uses

Document review

As needed, identify actions to be taken at any of several levels

Source: Self-audit

Types of information collected

Items for the annual self-audit are identified from a 'tickler file' maintained by program administration supplemented by items that address upcoming NIEHS initiatives or concerns. The tickler file usually includes instances where one or more training center had a question or concern regarding implementation of a policy or use of a training exercise/program.

Rationale

Processes and procedures adopted by the group are to be followed

Provide needed input to NIEHS information needs

Uses

- Identify any compliance concerns and remediate
- Provide documentation to NIEHS in Progress Report and Annual Report
- Show activity in Competitive Renewal
- Provide input to NIEHS

Quality Control Procedure (2014, 2019)

Title: Quality Control Procedure
Adopted January 15, 2019
Modified July 22, 2019
See Tab 100 for Prior Plan

The Quality Control Plan (procedures described in funded Competitive Renewable applications, most recently 2015-2020) includes activities at all levels: Evaluation Service Center (ESC), Central Administration, and Training Centers. The overall program monitors participant performance, quality and effectiveness of training delivery, impact after training and assures integration of feedback into the revision of participant and instructor materials (e.g., modules on topics suggested by participants).

ESC: Delivery/effectiveness data reports: The evaluation and curriculum teams develop program-specific data collection instruments for each new/revised program. See http://www.uc.edu/evaluationservices/MWC/forms.html for forms. Completed questionnaires and test results are forwarded to ESC and a report generated summarizing the results and feedback. This report contains trainee perceptions of the program, initial gains in knowledge and/or skills and feedback on the program (Kirkpatrick levels1 and 2 evaluation) and for refresher programs includes feedback on open-ended items to elicit changes made and barriers (Kirkpatrick levels 3 and 4).

Central Administration: Central Administration reviews all ESC reports to Program Directors and follows with a letter, highlighting possible improvements (e.g., equipment did not work), data inconsistencies (e.g., high proportion report no hands-on, but many report that hand-on was best part of program) or rarely areas of concern (e.g., unusually low ratings). Program Directors respond to these items with explanation and/or a remediation plan. Annually a Self-audit is constructed to evaluate compliance with policies and procedures. Identified inconsistencies or deficiencies are remediated at the Training Center. Using the summary report created by ESC, Central Administration works with Program Directors to assure remediation of any identified deficiency.

Training Centers: Program Directors review the ESC reports and respond to letters from Central Administration. Training centers also collect the impact reports as part of the 'Year in Review Exercise', and during discussions with participants or report backs from participants and managers. Any impact reported by any employer or participant to a Program Director is forwarded to Central Administration for inclusion in the annual compilation reported to NIEHS.

Tab 1
Attendance at Trainer Meeting
(1989, 2019)

Title: Attendance at Trainer Meeting
Adopted June 12, 1989
Revised January 15, 2019
See Tab 100 for Prior Policy

As part of the Project Coordinator's report, it was moved and adopted that one trainer from each center must attend the Trainer Meeting. Advance notice will be given in scheduling the event.

Tab 2
Certificate of Training
(1989, 1999, 2019)

Title: Certificate of Training
Adopted 1989
Amended September 15, 1999
Revised January 15, 2019
See Tab 100 for Note about Prior Policies

A course certificate will be provided to each trainee who successfully completes the course of instruction based on MWC definition of 'successful completion' including all the various assessments and attendance. The signed certificate includes the following:

- Name of trainee
- Course title and HAZWOPER category as appropriate
- Course completion date
- Statement that the trainee has successfully completed the course
- Name and address of the training provider
- For any training that requires annual refresher training, an expiration date or date when the refresher training must be completed.
- List of levels of PPE used by the trainee to complete the course (optional)
- An individualized, unique certificate number

If a laminated card is issued, it will include all the information on the certificate; a photo of the trainee is optional on this additional documentation.

For any participant who does not successfully complete the course, a certificate for 'awareness' training may be issued.

Tab 3
Copyright
(1989, 1989, 1990, 2019)

Title: Copyright of Midwest Consortium Materials
Adopted January 1989
Revised June 12, 1989
Amended June 11, 1990
Revised January 15, 2019
See Tab 100 for Prior Policies

1. All existing materials shall be copyrighted and registered in the name of the Midwest Consortium for Hazardous Waste Worker Training. As new materials are developed or existing materials are substantially revised, they shall be immediately copyrighted.

2. All Consortium members are granted a royalty-free license to reproduce all materials.

3. In accordance with PHS policy, the federal government is granted a royalty-free, nonexclusive and irrevocable license to reproduce, publish or otherwise use Consortium materials.

4. Permission to reproduce materials from other training programs or evaluation materials may be granted by the Consortium to other NIEHS grantees on a case-by-case basis. All requestors will be required to attribute the work to the Consortium.

5. The Principal Investigator of the Midwest Consortium is the sole person authorized by the Consortium to grant permission to reproduce materials. Consortium program directors will be consulted, as appropriate. The Steering Committee will be kept informed of all requests and actions.

Tab 4
Fee Policy
(1988, 1990, 1991, 1994, 2012)

Title: Fees Charged for Midwest Consortium Training Program Delivery
Adopted March 1988
Amended October 1990
Amended October 1991
Amended June 1994
Deleted April 26, 2012
See Tab 100 for Prior Policies

A motion was made at the April 26, 2012 Steering Committee Meeting to remove policy as fees were generally driven by competition within the State served. Motion carried. Policy removed.

Tab 5
Marketing
(1988 (est.), 1989, 2019)

Title: Marketing Midwest Consortium Programs
Adopted 1988
Re-affirmed January 1989
Revised January 15, 2019
See Tab 100 for Note about Prior Policy and Prior Policies

1. Consortium-wide marketing should promote only Consortium Training programs, developed and approved by the Consortium. Other training programs offered by the training centers should not be formally promoted.

2. The training programs would be marketed only to the appropriate target audiences (e.g., 8-hour Supervisor should not be advertised as an introductory program).

3. Reference to Consortium requirements for medical releases and waivers of liability should be included in promotional materials.

4. Consortium-wide marketing will support the existing policy regarding referrals (i.e., union members are referred to their union if it is an NIEHS awardee; out-of-state applicants are referred to Midwest Consortium or other NIEHS awardee, as appropriate).

5. To facilitate consistency between institutional and Consortium marketing efforts, pre-publication or review of institutional materials is encouraged.

Tab 6
Medical Fitness
(1989, 1990, 2019)

Title: Medical Fitness-for-Training
Adopted June 1989
Amended October 17, 1990
Revised July 22, 2019
See Tab 100 for Prior Policies

Any participant who is expected to participate in hands-on exercise involving donning/doffing of supplied air respiratory protection must be evaluated by a health care professional using the fitness-for-training exam. This includes all participants in 40H, 40T, IER and 24AMN, and other programs including refresher training if designed by the Program Director and the training center staff to require use of Level A or B protection.

The Training Center will accept and retain only the signed portion of the form. No medical information is retained at the Training Center. No medical information is collected by training center staff during training.

Any participant in programs where only air purifying respirators will be used will don/doff the respirator without cartridge(s) to eliminate stress and the need for fitness-for-training clearance. The Hold Harmless Agreement is retained as an alternative for use with Municipal Fire Department and Government Agency employees.

Tab 6
Medical Fitness

Dear Health Care Professional:

Your patient has enrolled in a training program for hazardous waste or emergency response worker. The training may include full 'dress-out' in personal protective equipment (PPE), including a respirator. Medical clearance is required prior to training because of the remote possibility of an untoward health effect.

Full PPE involves wearing an air-tight and water-tight fully encapsulating protective suit which weighs up to 25 lbs. The self-contained breathing apparatus (SCBA) may weigh up to 35 lbs. and be carried by shoulder straps on the back. Trainees may be required to wear full PPE for up to ½ hour at a time and perform tasks such as maneuvering 55-gallon drums or shoveling simulated contaminated dirt. This may take place in heat or cold, indoors or outdoors.

Health risks include heat stress and demands on the cardio-pulmonary systems. The work of breathing is increased, with increased inspiratory and expiratory resistance, increased dead space and changes in minute ventilation. There is increased cardiac demand. Heat stress is induced by the clothing itself, and inspired air in respirators may become heated. Other effects are reduced visual fields and voice clarity. Claustrophobia may be a problem. Trainees will receive on-site information about the signs and symptoms of heat stress.

Obvious medical exclusions for use of PPE and respirators include uncontrolled hypertension, heart attack in the last six months, angina pectoris, aortic stenosis, history of spontaneous pneumothorax, moderate or severe pulmonary disease, obesity and poor conditioning.

Please administer the attached brief history and physical, review the results with the trainee, and forward only the attached medical clearance statement to the training program; retaining any medical record at your office is most appreciated. Laboratory studies (e.g., pulmonary function, cardiogram, exercise testing) are not required unless you feel they are indicated.

Thank you for your cooperation.

Midwest Consortium for Hazardous Waste Worker Training

MEDICAL EVALUATION FOR HAZARDOUS MATERIALS TRAINING PROGRAM

HISTORY OF:

Uncontrolled hypertension	Yes	No
Angina pectoris	Yes	No
Myocardial infarction	Yes	No
Aortic stenosis	Yes	No
Other cardiac disease	Yes	No
Pneumothorax	Yes	No
Asthma	Yes	No
Chronic respiratory disease	Yes	No
Phobias in confined spaces	Yes	No

PHYSICAL EXAMINATION

Height _____ Weight _____

BP: Systolic _____ Diastolic _____

Pulse _____ Respirations: _____

Heart:

- Rate
- Rhythm
- Murmurs
- Other

Lungs:

Comments:

MEDICAL FITNESS FOR TRAINING FOR HAZARDOUS MATERIALS TRAINING

I have evaluated _____and find _____to be medically fit to participate in full 'dressout' using personal protective equipment including a respirator in the training program.

I understand that this does not substitute for full medical clearance for Hazardous Waste or Emergency Response worker activities.

Date:_____ Signature: _____

Name: _____

Address: _____

_____

_____

Telephone: ( ) _____ - _____

Hold Harmless Agreement

_____ (Name of Agency) agrees to indemnify, defend and hold harmless the Midwest Consortium for Hazardous Waste Worker Training, and _____ (Institution), each institution comprising the Midwest Consortium for Hazardous Waste Worker Training, their staff, officers, agents, and employees from any and all liability arising out of any injury, medical conditions or adverse health effects experienced by any employee or agent of _____ (Name of Agency) sent for training. In addition, _____ (Name of Agency) certifies that its employees and agents are in a physical condition that will allow them to safely wear a self-contained breathing apparatus and Level A training suit.

_____

(Agency)

_____

(Signature and Title)

_____

(Date)

Tab 7
Training Record
(1989, 2014, 2019)

Title: Minimum Training Record
Adopted June 1989
Revised April 22, 2014
Revised January 15, 2019
See Tab 100 for Prior Policies

At a minimum, the following records will be maintained for a training program file:

- Date(s) of program, including date certificate of successful completion awarded
- Materials used, including additions to MWC materials
- Name and unique identifier of each participant (class list)
- Waiver, as appropriate
- Medical release, as appropriate
- Proficiency assessment tools and results documentation
    - Examples: exams, scored exercises, checklists, other
- Attendance documentation
- Clear record of which trainees successfully completed the course
- Note of any restrictions to a participant
- Number on the certificate awarded to each participant achieving successful completion (can be added to class list)

Training records are maintained for a minimum of 5 years or as required by the institution, whichever is longer.

Tab 8
Monthly Activity Report
(1989, 1993, 2001, 2006, 2007, 2014, 2016, 2017, 2020, 2021, 2022)

Title: Monthly Activity Report
Adopted April 1989
Revised October 1993
Revised June 2001
Revised January 2006
Revised January 2007
Revised 2014
Revised 2016
Revised 2020
Revised 2021
Revised 2022
See Tab 100 for Note and Prior Policies

The report is to be completed by the Project Coordinator or Director and submitted to the Principal Investigator by the 15th of the month following the report period (i.e. March submission will report on February data)

MWC Monthly Data Report Template CU

Tab 9
Equipment Labeling
(1989, 2012)

Title: Equipment Labeling
Adopted December 1989
Revised April 26, 2012
See Tab 100 for Prior Policy

It was voted on and passed at the April 26, 2012 Steering Committee Meeting to change the language of this policy to $5,000 to reflect the NIH level.

Tab 10
Refresher/Supervisor Eligibility
(1989, 2019)

Title: Refresher/Supervisor Eligibility
Adopted June 12, 1989
Revised July 22, 2019
See Tab 100 for Prior Policy

Persons attending a refresher training program conducted by the Midwest Consortium for Hazardous Waste Worker Training shall provide one of the following as part of the registration process:

1. Documentation of completion of initial training (this may be a certificate or letter from the training group or the employer).

2. Written statement from the employer of experience, training, and/or competencies equivalent to an initial training program.

3. Personal, written documentation of experience, training, and/or competencies equivalent in content to an initial program.

Failing to produce 1, 2 or 3, the person shall be advised to enroll in an initial training program.

NOTE: For persons who have completed initial Consortium training and are returning to the same institution for refresher training, the documentation process can be done internally.

Tab 11
Voting Rules
(1989, 2000, 2019)

Title: Voting rules
Adopted April 1989
Amended December 2000
Revised January 15, 2019
See Tab 100 for Background and Prior Policies

1. The ultimate responsibility and accountability for carrying out this grant rest with the Central Administration. All matters dealing with the funding agency (the NIEHS) and other external agencies rest with the Central Administration. To fulfill the grant's purposes, the Central Administration must subcontract to participating institutions key aspects of the grant including training, evaluation and other services.

To facilitate the operation of this subcontracting arrangement a Steering Committee is established. The Steering Committee is composed of directors or heads of each participating institution. The chairs of two standing committees (Evaluation and Curriculum) will each serve *ex officio* on the Steering Committee. The Central Administration fiscal officer will also serve *ex officio*.

The Steering Committee will formulate policies and recommend procedures. The Steering Committee will deal with such issues as internal resource allocation, inclusion or exclusion of participating institutions, curriculum and evaluation. The Steering Committee will be permanently chaired by the MWC Principal Investigator.

2. For purposes of formal votes the director or head of each participating institution may cast ballots. Should a member be unable to attend a called meeting, a staff member from that institution may be designated the representative for that institution. In this event, the member must name the designee in a written notice to the Steering Committee chair at least 48 hours prior to any scheduled meeting. The designee may participate fully in the meeting. There will be no proxy voting.

3. Each institution will have one vote on all matters. All matters put to a vote must receive a majority. The Principal Investigator has 1 vote to be used only to change the voting outcome.

4. The voting system will be reviewed periodically.

Tab 12
Release Form
(1988, 2019)

Title: Release from Liability Form
Adopted January 1988
Deleted January 15, 2019
See Tab 100 for Prior Policies

It was voted on and passed at the January 15, 2019 Steering Committee Meeting to delete this policy due to redundancy

Tab 13
Non-contract Trainer
(1990, 1996, 2019)

Title: Non-contract Trainers
Adopted April 3, 1990
Amended March 1, 1996
Amended January 15, 2019
See Tab 100 for Background and Prior Policies

Adopted 1990
Purpose:

To ensure quality control of "non-contract" trainers providing Consortium-sponsored training. A non-contract trainer is an individual employed by a government agency within the six-state Consortium region whose agency applies to the respective Midwest Consortium Training Center in that state to provide training to its employees who meet and maintain the criteria listed below.

Definition:

A non-contract trainer is an individual employed by a government agency, whose agency applies to the Midwest Consortium Training Center to provide training within the six states to its employees who meet the criteria and maintain the criteria listed below.

Restrictions:

Training pursuant to this policy shall be restricted to the delivery of Awareness and Operations-level training for state and municipal government employees.

Criteria:

1. "Non-contract" trainer credentials will be carefully examined by the Consortium Training Center personnel to determine if they are qualified. Academic degrees, trainer experience, and subject matter knowledge control will be considered.
2. "Non-contract" trainers will attend at least one Consortium presentation of the curriculum to be instructed.
3. "Non-contract" instructors will receive trainer training from the Consortium Training Center for which they will be providing training.
4. "Non-contract" instructors will deliver one or more training programs with an experienced Training Center instructor before independently provide training.

5. “Non-contract” trainers will receive annual retraining to meet the requirements of 1910.120 in addition to a review of adult education techniques. The annual refresher requirement may be fulfilled by attending the Consortium’s Annual Trainer Meeting.

“Non-contract” trainers are required to present all the topics, modules, labs, and exercises included in the student manuals and instruction guides. Tailoring of Consortium curricula is permitted with prior review and approval by the staff of the sponsoring Consortium Training Center.

Amended 2019
The non-contract trainer policy is amended to include all programs.

Tab 14
Data Access
(1991, 2019, 2019)

Title: Data Access Policy Statement
Adopted January 9, 1991
Amended January 15, 2019
Revised July 22, 2019
See Tab 100 for Note about Prior Policies

Background

Each training institution maintains information on trainees who have participated in one or more Midwest Consortium programs. These files include biographical and training performance information. Unlike data on the central computer where evaluation data are stored, training institution data allows for the identification of individual trainees. This document presents a proposal for a data access policy that meets the needs of legitimate requesters and the rights to privacy of the individual trainees.

Each training institution will comply with the parent institution student/personnel records policy.

The Privacy Act of 1974 (Public Law 93-579) includes several safeguards that may go beyond existing institutional policy:

1. Trainees have a right to know how the information you hold is used.
2. Trainees have a right to access their own files and to correct, amend or request deletion of information that is inaccurate, irrelevant or outdated.
3. Information obtained for one purpose cannot be used for other purposes without the concerned individual's consent.
4. Medical records should not be released since that would constitute an unwarranted invasion of personal privacy.

Training institutions will develop additional policies or interpret existing Institutional policies to accommodate special kinds of requests. What trainee information should be made available to and employer from a contract training program? Individual data? Group data? Who 'passed'? Open ended comments? How should a training institution respond to a request by a potential employer for names of trained individuals? How should a training institution respond to requests from a researcher for names of trained individuals for the purposes of soliciting their participation in a research project? (Suggest that clearance from the Institutional Review Board should accompany any such request.) These considerations have been integrated into a brief 5-

point data access policy statement which should provide adequate decision flexibility for each training institution.

Policy

1. Training institutions should comply with their parent institution's policy governing student records.
2. Training institutions not operating under the aegis of a parent institution should adopt the institutional policy governing student records at the institution of the MWC Principal Investigator.
3. Training Institutions should be aware of the provisions of the 1974 Privacy Act (Public Law 93-579) and operate in accordance with them.
4. Requests for information shall be considered only if they are made in writing. Responses to request also shall be in writing. Central Administration should be kept current about such requests for and decisions about dissemination of trainee information.
5. Requests by researchers should be accompanied by clearance for the project by the appropriate Institutional Review Board(s).

Tab 15
MWC Annual Instructor Evaluation
(1993, 2008, 2019)

Title: Annual Instructor Evaluation Form
Adopted January 1993
Amended January 10, 2008
Amended January 15, 2019
See Tab 100 for Prior Policies

Annual Instructor Evaluation

Instructor's name:
Module:
Date:

In addition to checking yes or no on the following specifics the observer is encouraged to add any comments that would be helpful to the overall process.	**Yes**	**No**	**Reviewed & Discussed**	**Plan made to remediate**
Were objectives stated clearly? Comments:				
Were objectives implemented? Comments:				
The introduction created an atmosphere of "need to know". Comments:				
Presentation was well organized. Comments:				
Used MWC approved materials Comments:				

In addition to checking yes or no on the following specifics the observer is encouraged to add any comments that would be helpful to the overall process.	**Yes**	**No**	**Reviewed & Discussed**	**Plan made to remediate**
Stayed within the time allotted. Comments:				
Created an atmosphere that encouraged learning. Comments:				
Effectively used technology (if none, put NA), Comments:				
Demonstrated effective instruction techniques. Comments:				
Explained how course applied to job or community. Comments:				
Encouraged participants to take part in discussion. Comments:				
Gave helpful feedback. Comments				
Made good use of leading questions. Comments:				
Clarified statements and answers. Comments:				
Summarized module: Comments:				

Additional Comments:

Instructor Feedback

Name:
Material Covered:

A. Thinking back on the presentation…

1. What aspect(s) went very well?

2. What aspect(s) did not go as well as you would have liked?

   What resources would help in these aspect(s)?

   Are they available to you?

3. Did any exchanges in the presentation make you think: Gee what do I say now?

   What actions/activities would help you in the future if this happens?

B. Are there other training or support materials that you feel would improve the content of this part of the training?

Tab 16
Successful Completion
(1995, 2002, 2003, 2004, 2005, 2007, 2008, 2009, 2012, 2014, 2016, 2017, 2018, 2019, 2019, 2020, 2021, 2022, 2023)

Title: Successful Completion defined for each program
Adopted January 11, 1995
Amended as shown to reflect new programs or requirements: May 23, 2023

Amended May 23, 2023 (amended program in **bold**)
Successful completion for each program is defined below (**see also note at end**):

Program	Requirement
3AW	Attendance (for outline program approved topics see Policy Tab 22a)
8AI	Attendance, active participation in all activities
8AM	Attendance, active participation in all activities
8CS	Attendance, 100% on all Performance Checklists
8HR (Modules, any format)	Attendance, 100% on all Performance Checklists, min 70% any Performance Measure in module(s) used
8HR-P	Attendance, min 70% on Hazardous material fact sheets; 100% on Performance Checklists
8TR (Modules, any format)	Attendance, 100% on all Performance Checklists, min 70% any Performance Measure in module(s) used; ERG exercise required
40H	Attendance, min 70% written items, 100% on all Performance Checklists
40T	Attendance, min 70% written items, 100% on all Performance Checklists
AMN	Attendance, min 70% post-test, 100% on all Performance Checklists
CSR	Attendance, 100% on all Performance Checklists
CVC	Attendance
CVD	Attendance, 100% on Response Drill Checklist
DRL	Attendance, 100% on all Performance Checklists
ERR (Modules, any format)	Attendance, 100% on all Performance Checklists, min 70% any Performance Measure in module(s) used
ERR (WMD Modules)	Attendance, 100% on all Performance Checklists
ERR-P	Attendance, min 70% on Hazardous materials fact sheet, 100% on all performance Checklists
ETT	Attendance, Conduct a Drill, Examine Results
EXP	Attendance, 100% on all Performance Checklists

Program	Requirement
FCP	Attendance
HCS	Attendance for the entire program, participation in exercises.
HOS	Attendance, 100% on all Performance Checklists
ICS	Attendance, min 70% written items, active participation in all activities
IER	Attendance, min 70% written items, 100% on all Performance Checklists
ISA	Attendance
MLD	Attendance, 100% on all Performance Checklists
OAC	Attendance
OEC	Attendance, 100% on Skills Checklist
PBT	Attendance
PPE	Attendance, 100% on all Performance Checklists
PRP	Attendance
PSR	Attendance, 100% on Performance Checklists
REL	Attendance
REL-H	Attendance, satisfactorily submitted the Reporting What You See Exercise via Google Forms, attended the live 2-hour training
SEC-F	Attendance, 100% on all Performance Checklists
TBL	Attendance, 100% on all Performance Checklists
TSD	Attendance, min 70% written items, active participation in all activities
TUR	Attendance
VOL	Attendance
WEA	Attendance, active participation in all activities

Each Training Center director will maintain a policy to be implemented when successful completion cannot be documented. This may include remediation, 'attendance certificate' or other methods shown in the policy and known to all trainers.

Tab 17
Refresher Language for Certificates (1992, 2019)

Title: Refresher Program Certificate Language
Adopted July 12, 1992
Amended September 1, 1992
Deleted January 15, 2019
See Tab 100 for Prior Policies

Motion to delete passed by Steering Committee January 15, 2019 as not necessary.

Tab 18
Minimum Criteria Policy
(1993, 2002, 2006, 2020)

Title: NIEHS Minimum Criteria 2018
(annotated with MWC documentation of actions to comply)
Adopted May 28, 1993
Revised January 17, 2002
Amended 2002
Adopted 2006 (revised 2006 Minimum Criteria)
Adopted February 22, 2020 (final updates to revised 2018 Minimum Criteria accepted)
See Tab 100 for prior policies

See Tab 100 for Notes and Prior Policies

NOTES: The following is the MWC documentation of compliance with the 2018 NIEHS WTP Minimum Criteria, *shown in italics*, below each item.

Reference to MWC Procedure and Policy Manual is shown as PPM with a title Procedure (Curricula, Evaluation, Quality) or Policy (Tab number).

In this document, based on the NIEHS terminology, Training Director refers to the MWC grant PI(s); Program Director refers to the director at a Training Center.

Guiding Principles
The following are broad, overarching principles that frame the more detailed guidance in this document.

29 CFR 1910.120 provides the needed framework for protecting hazardous waste workers and emergency responders. It is the most proactive OSHA standard for protecting workers who respond to disasters, both natural and man-made. In the latter category, OSHA has indicated that terrorist acts involving chemical, biological, radiological, and nuclear weapons would be covered by the standard. Acts involving explosive agents may also be covered, depending on the types of exposures generated by the acts.

This guidance is primarily intended for organizations that provide hazardous waste worker and emergency response training under grants from NIEHS but may likewise prove valuable to any organization that provides similar occupational health and safety training.

This document draws on and references other guidance materials that provide excellent recommendations for training the intended target populations. Of particular note are the National Fire Protection Association (NFPA) guidelines and the April 2003 edition of the Federal Emergency Management Agency's (FEMA) "Guidelines for HazMat/WMD Response, Planning

and Prevention Training: Guidance for Hazardous Materials Emergency Preparedness (HMEP) Grant Program." The FEMA guidance has been fully adopted by reference in this document.

Whenever there is doubt about the appropriate category of training, the more comprehensive and protective option should be applied.

Peer-to-peer training with hands-on activities is the most effective model for worker training. This guidance recommends that hands-on training should fill at least one-third of the training program hours.

Hands-on training is an essential component of HAZWOPER and HAZWOPER-supporting training. As the WTP has matured, its acceptance of online learning and integration of technology-enhanced training has grown. The WTP has embraced the concept of blended learning, whereby a training program can operate in all training modalities. In such an approach, the objectives of each individual training course are considered carefully prior to choosing the training modality. And while the program recognizes the challenges related to getting workers into the classroom, it still believes that hands-on, participatory training offers the best environment and experience for learning. The program also believes that online learning should be used primarily for awareness-level training or for knowledge-based training that does not require a skills development component.

Proven adult-learning techniques should be the core of all worker training.

Worker safety and health training must be provided in a language and at a literacy level the participant can understand. If a worker does not speak or comprehend English, instruction must be provided in a language that the worker can understand. Similarly, if the worker's vocabulary is limited or there is evidence of low literacy among participants, the training must account for this limitation.

MWC: MWC curricula is designed and developed considering the language, literacy and culture of the training target audience (PPM Curricula Development Process).

Training organizations should follow a code of conduct that ensures that both trainers and trainees are treated with dignity and respect. This code of conduct should ensure there is no discrimination, belittling, or harassment, and that there is respect for multiple cultures and genders during training.

MWC: MWC has adopted a Code of Conduct covering these topics (see PPM, Tab 27)

Worker safety and health training must be preceded by a needs analysis to ensure the appropriate knowledge, skills, and attitudes are being transmitted.

MWC: The ADDIE (Analysis, Design, Development, Implementation, Evaluation) process is used for program development. In addition, reconnaissance is conducted when appropriate prior to training to understand the needs of trainees in contract programs. At the start of a program, facilitators collect information during introductions and introductory exercises in order to tailor the content to the needs of the group. (See PPM Curricula.)

The training must be followed by a proper evaluation to document the knowledge, skills, or attitudes were acceptably transmitted and that the worker possesses the necessary abilities to perform the tasks.

MWC: Assessment tools include skills checklists, knowledge tests and feedback on attitudes. The skills checklists and knowledge items are formulated by the curriculum development team and then reviewed by others familiar with the training needs. Attitude items on the evaluation form were created by a psychologist who specialized in training, in consultation with program directors. Training knowledge, skill and attitude objectives are mapped to program content. In addition, feedback is collected from trainees after all MWC programs and the responses thoroughly evaluated to assess program effectiveness. (See PPM Evaluation.)

Post-disaster training must be tailored to the specific hazards presented by each disaster and should be revised as often as significant new hazard information becomes available or the stage of the disaster changes.

MWC: MWC concurs with these principles. To supplement other tools, the MWC developed a high-wind recovery fact sheet, for example. We obtained NIEHS supplemental funding for WMD training material development that continues to be used in refresher programs.

The original 1991 Minimum Criteria guidance was the basis of the OSHA non-mandatory appendix on training in the 29 CFR 1910.120 standard (Appendix E, Training Curriculum Guidelines). This update of the Minimum Criteria maintains most of the original recommendations; changes are intended to make the original material more clear, relevant, and/or protective of workers.

1. ORGANIZATION

This document is organized in the following manner:

- Section 8 presents worker training principles and characteristics of excellence to which all training providers should adhere.
- Sections 9, 10, and 11 provide minimum training program design criteria, quality control criteria, and curriculum guidelines, respectively, which apply to the initial and refresher training requirements within the HAZWOPER standard at 29 CFR 1910.120(e), (p), and (q).
- All-hazards training programs exclusively focus on the emergency response [29 CFR 1910.120(q)] sector and may be integrated into both full-time and collateral duty emergency responder training or provided as additional separate training modules or courses subsequent to initial training. Sections 9 and 10 apply to these training programs.
- Section 12 addresses accreditation/certification of training programs covered in this guidance.
- Section 13.1 (Annex A) provides guidance specific to all 1910.120-supporting training programs. Sections 9 and 10 apply to these programs as well. Such training programs, however, shall for purposes of this guidance not be considered as part of the initial HAZWOPER training programs, but as separate training programs.
- Section 13.2 (Annex B) provides the agenda for the technical workshop that served as the

basis for the revisions to this document.
- Section 13.3 (Annex C) provides a checklist for planners and evaluators regarding the principles of adult education.
- Section 14 provides a list of references and resources.

2. WORKER TRAINING PRINCIPLES AND CHARACTERISTICS OF EXCELLENCE

Applying these principles to the development and delivery of training programs should ensure that the programs are excellent and provide the best possible basis for working in hazardous environments in a safe and healthful manner. The criteria should also help workers participate in reducing the hazards that create such environments. The training provider must recognize and incorporate the following characteristics of excellence and principles of adult education to meet the spirit of this guidance document.

MWC: MWC is committed to the listed characteristics of excellence and principles of adult education.

8.1 Characteristics of Excellence

The best training programs embody the following characteristics, which should be required of every program offered under these criteria. The programs are:

1. Accurate
2. Credible
3. Comprehensive
4. Clear
5. Practical

8.1.1 Accuracy

Accuracy can be ensured by requiring that the training materials be prepared and reviewed by qualified individuals, updated on an annual basis, and applied by appropriately qualified and experienced individuals employing appropriate training techniques and methods.

MWC: MWC documents in introductory pages that these work fields are constantly changing. Annual updates include feedback from participants and trainers, as well as review of operability of web links in program materials. All manuals include a request to participants and facilitators to forward comments regarding content or style for updates.

8.1.2 Credibility

Employing educational methods appropriate to adult learners is particularly important for the high-hazard work environment. Credibility is enhanced when instructional staff is experienced in applying the knowledge and skills that they are teaching, establishing a “peer” relationship with the trainee. Excellent programs often include “reality check” learning activities that give trainees the continuing opportunity to measure the relevance of the instructional materials against their

own personal experiences. Credibility is also enhanced when materials are based on the best available science and best practices in the field.

MWC: Exercises and small group activities are incorporated throughout training. A Facilitator Guide is provided as a 'how to' manual, showing the use of questions to elicit discussion and reduce the lecture format, and guidance on effective use of PowerPoint. All manuals include a request to participants and facilitators to forward comments regarding content or style for updates. Participants provide feedback at each program on facilitators, including 'was knowledgeable and informed'; this feedback is reviewed by Administration and Program Directors. (See PPM Curricula, Evaluation, Quality.)

8.1.3 Comprehensive

Minimally acceptable training programs must cover everything required for someone to safely conduct assigned work activities, a requirement that is particularly critical for working with hazardous materials.

Providing inadequate information or failing to ensure that the trainee has mastered the minimum necessary knowledge and skills can be dangerous to that trainee. Any training under the HAZWOPER standard must be comprehensive rather than simply meeting the minimum number of training hours specified in the standard.

MWC: In many work situations covered by HAZWOPER, it is not possible in advance to cover <u>everything</u>; training delivery includes topics in the standard in a manner that encourages the use of resources to find additional information. Participants are asked in all program evaluations if the training increased or refreshed the ability to 'use resources to find information '. MWC has a written curricula development process utilizing ADDIE (Analysis, Design, Development, Implementation, Evaluation) which facilitates the development and continuation of training programs that are comprehensive; learning outcomes based on the standard or documented population needs are mapped to the program content to assure coverage. (See PPM Curricula, Evaluation.)

For that reason, the criteria are presented in considerable detail in this guidance, recognizing that the fundamental training objective is to achieve acceptable knowledge and skills among trainees already skilled in their trade without any regard for the training duration.

8.1.4 Clarity

Training programs must not only be accurate, credible, and comprehensive; they must also be clear.

If the material is understandable only by someone with a college education, then the program will fail many workers. Training materials should be written in the language and grammar of everyday speech appropriate for the target audience and delivered in a language the participants can understand. Further, training material developers should measure readability levels to ensure that the training materials are appropriate for their target audience. They should accommodate a range of different literacy levels and learning styles, as discussed in Section 8.2.

MWC: MWC curricula is designed and developed considering the language, literacy and culture of the training target audience (PPM, Curricula Development Process). Participants provide feedback at each program on facilitators, including 'presented information clearly'; this feedback is reviewed by Administration and Program Directors. (See PPF Evaluation.)

8.1.5 Practicality

Training programs should present information and ideas and develop skills that students see as directly useful in their working lives.

MWC: MWC evaluation items include feedback on the level of agreement with a statement that the program 'was appropriate for my job', 'taught me skills I will use at work', 'makes be work more safely', 'made me feel that I can do my job better'. This feedback is reviewed by Administration and Program Directors. (See PPM Evaluation.)

8.2 Principles of Adult Education Applicable to HAZWOPER

The vast majority of HAZWOPER students are adults who already possess the knowledge, skills, and abilities to work in their current occupations, such as firefighters, emergency medical support personnel, rail workers, construction workers, chemical process operators, and utility workers. The objective of HAZWOPER training is to provide the additional knowledge, skills, and abilities to permit these workers to safely perform their trade in high-hazard environments. Achieving this requires basing instructional materials, techniques, staff, and setting upon sound and proven principles of adult education that are tailored to the specific target audience.

The following are the basic principles of adult education applied to HAZWOPER and related training programs:

Adults learn best by doing. Knowledge alone is insufficient in the HAZWOPER environment. Workers must also be competent and proficient in the unique skills that are required in such work. Hands-on training, learning activities, and proficiency assessment are mandatory.

MWC: All MWC programs include small group activities and the longer programs include interactive/hands-on exercises.

The training environment must be conducive to learning. HAZWOPER training has two distinct learning environments: the initial off-site training and the on-site, supervised training. The off-site training must provide the knowledge required to perform the work in the HAZWOPER environment and verify the satisfactory attainment of the related skills.

MWC: The design and management of the training facility is the responsibility of the Program Director at the Training Center. Documentation of available space, supplies and support services for the conduct of training is provided at five-year intervals or at the time of any move of a Training Center. The needed space is described in the Facilitator Manual. (See PPM Curricula.)

On-site, supervised training is intended to verify that the student can safely apply the necessary knowledge and skills in the actual workplace.

New skills should be based on current skills. The new skills required by a firefighter, construction worker, or other skilled worker to safely perform their work in a hazardous materials (HAZMAT) incident or hazardous waste cleanup operation must be constructed on the individual's current occupational skills. Heavy equipment operators, for example, should already be qualified to operate their equipment before receiving training to operate the equipment under the unique circumstances of the hazardous waste cleanup site. This approach greatly facilitates learning, peer interaction, and retention.

MWC: Depending on the year, >=98% of participants in MWC programs are employed at the time of training; therefore the employer has determined that the participant has the work skills. The participant is coming to training to improve the application of health and safety skills to that job. Also, the prior experience of participants is shared at the beginning of the longer programs, so that facilitators are aware of experience and skills that may not be apparent from the registration form. This information is useful in tailoring program emphasis and flow to best meet the needs of participants and facilitates learning from peers.

Adults learn from a variety of learning activities. These activities include hands-on demonstrations and activities, role playing, case studies, audiovisual presentations, discovery exercises, planning exercises, group discussions, lecture-discussions, report-back sessions, drills and exercises, computer use, website access, computer simulations, and blended approaches using integrated instructional technologies.

Adult learners need direct experience to apply new skills in the work environment. This principle is the underpinning of the necessity of the hands-on component of skills training. Scores on a knowledge test are not a satisfactory indication that new skills can be effectively and safely applied in the work setting.

Adults need frequent, non-judgmental feedback. Adult learners need to know how they are doing in a manner that is not judgmental. Training must respect students' existing knowledge, skill, experiences, and circumstances.

MWC: MWC Facilitator Guides detail approaches to each of these adult-learning areas. Regarding a variety of learning experience, each program includes discussion and interactive/hands-on approaches. During refresher programs, each participant is asked how training has been applied at work or at home during the past year—direct documentation that relevant skills have been applied. Participants in all programs provide an assessment of the feedback provided on activities as well as feedback on level of respect of the facilitator; these data in the evaluation summary of each program delivered are reviewed by Administration to identify any needed adjustments.

Opportunities must be provided for constructive feedback to each student in the training course.

MWC: Participants are provided feedback through checklists and direct interaction throughout training. Participants in all programs provide an assessment of the feedback provided on activities as well as feedback on level of respect of the facilitator; these data in the evaluation

summary of each program delivered are reviewed by Administration and Program Directors to identify any needed adjustments. (See PPM Quality.)

Small group activities are important to adult learners. This approach provides an opportunity for individual learners to share and discuss what they have learned with their peer students, as adult learners benefit from the experiences of other participants.

Adult learners respond better when they have the opportunity to learn from their peers. The WTP has recognized the critical importance of peer instructors since the inception of the program and continues to do so.

Adult learning must be reinforced. The knowledge and skills learned for work in the HAZWOPER environment must be retained to be of value to the student. This is the primary purpose of refresher training, which must include critical skills aspects. Site-specific training and periodic drills also serve as reinforcement mechanisms as newly learned knowledge and skills are applied in an actual or simulated work environment.

MWC: MWC utilizes hands-on methodology throughout, regardless of program. Regarding learning from peers, relevant work experience of each facilitator is shown in documentation held by the Program Director. From participant feedback, the MWC has documented a desire for more frequent training and drills at the worksite. As a result, a modular refresher program has been developed for each population covered by HAZWOPER that allows the Program Director to provide the 8-hours of content over several sessions, spaced to reinforce the concepts and allow for application at work; also, the use of drills is being investigated as method to provide interim training apart from refresher hours. (See PPM Curricula, Evaluation, Quality.)

Learning methods must consider the learner's technological fluency. Not all adult learners are comfortable or fluent with technology-enhanced training tools, such as computer-based or Web-based methods. The student's comfort level and fluency with technology must be considered before choosing technology-enhanced instructional methods and during curriculum design and delivery.

MWC: MWC concurs. Facilitator Manuals include guidance to use technology exercises as small group activities, strengthening skills of all; no proficiency assessment requires computer use.

Adult education is empowering. The knowledge, skills, and experiences adults gain in educational programs should empower them to improve the conditions under which they work and live.

MWC: The MWC routinely collects impacts regarding application of training at work or in the community from repeat participants. Impacts detailing transfer of training to home or community are strong evidence of increased self-efficacy.

Annex C provides a checklist for planners and evaluators regarding the principles of adult education.

9. MINIMUM TRAINING PROGRAM DESIGN CRITERIA

9.1 Introduction

The following minimum general criteria apply to all providers of initial and annual refresher training required by the 29 CFR 1910.120 regulations (HAZWOPER), the 29 CFR 1910.120-supporting training programs detailed in Annex A, and all-hazards supplemental training programs. The minimum initial and refresher HAZWOPER training curriculum guidelines are addressed in Section 11 of this document.

9.2 Assumptions

The HAZWOPER regulation requires initial off-site training and demonstration of the required minimum competencies in each of three primary categories of work covered by the regulation: hazardous waste cleanup operations, RCRA/ TSD, and emergency response. The hazardous waste cleanup operations section of the standard also requires initial on-site, supervised training after completion of the initial off-site training program. This is the responsibility of the employer and is not addressed in this guidance.

The required annual refresher training is included in this section and in the Minimum Training Curriculum Guidelines (Section 11) based on the assumption that if initial training programs are provided, refresher training will be as well. Refresher training may be provided off-site or on-site. Given this assumption, this document recognizes that there are exceptions where training providers may not be the same for the delivery of the various training elements, i.e., 1910.120 core, refresher, 1910.120-supporting, and all-hazards training.

This document does not provide guidance for craft, trade, job classification, or task training. This document is based on the assumption that all trainees possess the knowledge, skills, and abilities specific to their individual craft or trade prior to entering a HAZWOPER training program. Further, under no circumstances should a worker be allowed to engage in work covered by the HAZWOPER regulation unless he or she has successfully completed the applicable HAZWOPER training and is in possession of the necessary skills and abilities to perform the work assigned. Training programs that also provide trade or craft training must ensure that this training is successfully completed before the worker begins the applicable HAZWOPER course. Under no circumstances shall such training be conducted concurrent with HAZWOPER training or counted toward the required minimum HAZWOPER training hour requirements.

MWC: MWC does not provide craft or trade training.

This guidance recognizes that additional standard-specific training may be required for operations covered by the HAZWOPER standard where additional hazards may be present, such as confined spaces. Annex A covers 1910.120-supporting training. The need for all-hazards training has emerged as a result of the 9/11 terrorist attacks; the creation of the National Response Plan, the National Response Framework, and the National Disaster Recovery

Framework; and the issuance of several supplemental training awards by the NIEHS/WTP. Any training provider offering training in these additional 1910.120-supporting and all-hazards training categories must meet the applicable requirements established in this document in Sections 9 and 10.

MWC: MWC does not provide skilled-support training described in 29CFR1910.120(q)(4). The MWC Confined Space Rescue program includes the requirements of 29CFR1910.146. The WMD programs funded through supplemental NIEHS/WTP funding are available for use.

Refresher training requirements in the HAZWOPER regulations vary to some degree among the three primary HAZWOPER categories. The assumption in this guidance is that documented proficiency assessments are required in all annual refresher training, and this may include evaluation of selected skills proficiency.

MWC: MWC uses checklists to document skill proficiency in all refresher programs (Site Work, TSDF, Emergency Response).

The HAZWOPER regulations establish minimum initial training hours for the different work categories and minimum annual refresher training hours for some of these categories. The NIEHS/WTP awardees (and others such as OSHA and FEMA) have more than three decades of experience in providing and evaluating these various training requirements. This experience has led to the conclusion that, for most target populations, the OSHA-required minimum training hours are not adequate to ensure the necessary competencies. The objective of training, particularly in the high-hazard HAZWOPER environment, is the achievement of the necessary competencies and not simply completion of the minimum training hours required. OSHA-established minimum training hours must be met,

MWC: MWC complies with the OSHA-established minimum training hours for site workers and treatment/storage/disposal facility employees. For responders, the MWC builds one program upon another, with awareness training required before the 24 hours of operations-level training and operations-level training required prior to technician-level training.

but additional training hours may be required to achieve the needed competencies. This is particularly the case for the emergency response sector when all-hazards modules are added or integrated into the training courses. The following table provides a summary of the range of training hours required among the WTP awardees and addressed in the FEMA document to meet the minimum competencies:

TABLE 1	
Hazardous Waste Operations	
General site worker	40–80 hours*
Other than General site worker	24–36 hours*
Update Other than General site worker to General site worker	16–24 hours*
Refresher, annual	8 hours
RCRA/TSD	
Initial	24–40 hours*
Refresher, annual	8 hours
Emergency Response	
Awareness level	4–16 hours*
Operations level	8–40 hours*
Technician level	40–240 hours*
Refresher	8 hours**
Disaster Site Worker (OSHA Outreach Training Program)	**7.5–16 hours**

** Upper end of range exceeds OSHA minimum.*

*** Exceeds upper end for some levels of training or assigned duties.*

MWC: As a group, MWC offers all programs above except Other-than-General Site Worker.

Finally, it is assumed that training providers and their instructional staff will use a range of training techniques and methods, including technology-enhanced, that are appropriate to meeting the course training objectives.

MWC: MWC programming guidance for facilitators shows how to use a range of techniques and methods (discussion, lecture, small group activities, demonstrations, hands-on activities). Several programs or exercises include use of technology to identify information (remediation technologies, use of ERG or NIOSH Pocket Guide).

9.3 Core Criteria
A written training plan shall be prepared, implemented, maintained, and updated as necessary on an annual basis. It shall include the following elements at a minimum.

MWC: A written plan is developed for goals identified for each five-year period. It is reviewed at least twice annually.

9.3.1 Training Director
Each training program shall be under the direction of a training director who is responsible for the program. The training director must demonstrate the capacity for providing leadership, for

ensuring productivity of appropriate worker health and safety training and education programs, and for managing the training programs, including quality assurance and program evaluation. In addition, the training director shall have a minimum of two years of worker education experience.

MWC: Qualifications of the Training Director are reviewed by NIEHS.

The training director is also responsible for several specific aspects of the training program, which are identified in the following subsections.

9.3.2 Training Facility

Training facilities shall have available sufficient resources, equipment, and site locations to perform classroom and hands-on training in a setting conducive to effective learning for each specific course offered, and shall have sufficient organization, qualified instructional staff, support staff, technology, and services to conduct such training.

MWC: The design and management of each MWC training center is delegated by the Training Director to the on-site Program Director who assures that the training space (classroom and for hands-on), supplies and support services for the conduct of training are enough. Details are provided at five-year intervals or at the time of any move of a Training Center. Qualification of instructional staff is documented annually by the Program Director (See PPM, Tab 15).

When the curriculum employs technology-enhanced training methods, the facility or other training location shall have sufficient information technology support staff and infrastructure (working hardware, Internet/Wi-Fi activity and strength, tested and secure software applications, adequate IT security measures) to meet the classroom demands of the participants and the types of technology-enhanced training methods being used.

MWC: MWC program guidance addresses the technology needed to deliver each program. The annual review of instructional staff provides opportunity to assess the use of technology (as appropriate) and feedback to the Program Director if there are identified needs for infrastructure improvement or additional support personnel (PPM, Tab 15).

9.3.3 Instructional Staff

Instructors shall be deemed competent by the training director to instruct specific courses on the basis of:

- Documented relevant experience.
- Successful completion of the courses they intend to instruct.
- Successful completion or rotation of co-instructing with a training mentor who instructs courses on topics they will teach.
- Successful demonstration and/or implementation of adult education principles and adult learner-centered teaching training facility techniques for training (refer to Section 8.2).
- Successful demonstration of effective course instruction techniques, including voice pitch/volume, body language, and time management.
- Successful demonstration of use and implementation of equipment and technology-

enhanced training methods that will be used for courses they will teach.
- Successful completion of a train-the-trainer program specific to the topics they will teach.
- An annual evaluation of instructional competence by the training provider.

MWC: Instructional staff members are hired by the Program Director, consistent with institutional requirements and the MWC policy on qualifications (see PPM, Tab 19). Qualifications for the program/topic to be facilitated by the trainer are documented and integration into the program delivery team is documented (train-the-trainer process, as appropriate). An annual review is conducted by the Program Director, as required by MWC policy on Annual Instructor Evaluation (see PPM, Tab 15).

It is desirable that the same organization provide the courses and train-the-trainer program. To the extent possible, instructors should be experienced in the HAZWOPER category they intend to instruct and be peers of the trainees.

It is also desirable that instructors exercise ethical values and cultural sensitivity when providing training to different target populations. Each training provider should have a code of conduct or code of ethics by which trainers must abide.

MWC: MWC Program Directors follow institutional guidelines or the MWC policy, whichever is more comprehensive (see PPM, Tab 27).

This code should include the recognition that cultural differences and similarities between people exist and should not be assigned a value (positive, negative, better or worse, right or wrong). This allows one to respect and value other cultures and can reduce cultural barriers between trainers and their students.

Instructors shall be required to maintain competency by:

- Participating in continuing education or professional development programs.
- Acceptable continuing education or professional development programs should be determined by the training director.
- Successfully completing annual instructor refresher training.
- Being recertified by the training director after an annual review of instructional competency.

MWC: The Program Director is responsible for documenting annual educational development and refresher training completed by each trainer. Annual recertification is conducted at the end of the annual review (see PPM, Tab 15).

New instructors shall be assigned to work with a training mentor, or a more experienced instructor, for their first training(s). The training director or his or her designee will determine if the new instructor has successfully demonstrated proficiency in the course content.

MWC: The Program Director documents new instructor co-teaching with an experienced mentor (see PPM, Tab 19).

The instructor annual refresher shall be devoted to applicable educational techniques, applicable training technologies, new or revised federal standards applicable to the courses being instructed, and hands-on training, as appropriate.

MWC: The Program Director documents the content (see PPM, Tab 20).

When new training methods, including technologies, are introduced into the training program, instructors shall be trained to effectively apply them prior to using them in the courses they are instructing.

MWC: Instructors are deemed competent by the Program Director to use any new equipment or technology.

The annual review of instructor competency shall include, at a minimum, observation by the training director or his or her designee of instructional delivery, review and discussion of observations with the instructor, and an analysis of the instructor performance based on evaluations completed by trainees during the previous year.

MWC: Annual review includes observation of each trainer by the Program Director or a designee (see PPM, Tab 15). The totality of evaluation feedback over the year is reviewed with the trainer by the Program Director.

Instructors providing instruction in the 1910.120-supporting training programs identified in Annex A and in all-hazards training shall be certified competent to offer such instruction by the training director using the preceding criteria as guidance.

MWC: Program Directors follow the Competent Person policy (see PPM, Tab 29).

Where required by certain of these supporting training programs, such as Asbestos or Construction Safety and Health (OSHA 10- and 30-hour programs and Disaster Site Worker 7.5- and 15-hour programs), the instructor shall be certified or authorized in accordance with the applicable requirements established by the certifying or authorizing authority.

MWC: Program Directors follow the requirements of OSHA for applicable programs (see PPM, Tab 26).

3.3.1 Instructional Staff Using Technology-Enhanced Training Methods

Instructors who are using technology-enhanced training methods must be competent in the use of any technologies that are part of the curriculum.

MWC: Instructor annual evaluations (PPM, Tab 15) include effective use of technology, as appropriate. Program evaluations allow participants the opportunity to rate use of technology and provide feedback to instructors. Program guidance for instructors includes material on use of technology.

They must also be competent in knowing how to repair or replace technology- enhanced training tools that fail during a training session or have adequate support staff to do so, in order that trainee learning will not be disrupted by technology failures.

MWC: The MWC does not expect all facilitators to be able to repair equipment; rather, facilitators are guided to have a back-up plan if technology fails. This is especially important if training off-site where support personnel will not be available.

Instructors that use technology-enhanced training methods should also be proficient in the following:

Content knowledge. The instructor must be able to competently deliver the content via the selected training technology/ies.

MWC: The training for delivery is the responsibility of the Program Director. Instructor annual evaluations (PPM, Tab 15) include effective use of technology, as appropriate. Program guidance for instructors includes material on use of technology.

Engaging students. The instructor must be able to facilitate discussion and encourage conversation among the students using the selected technology-enhanced training method/s. This includes behaviors such as using personal examples, asking questions, addressing others by name, initiating discussion, using humor, and using inclusive pronouns. For situations where the instructor and the students are not in the classroom together, the instructor should respond to the students in a timely manner.

MWC: Each Facilitator Guide provides information on this aspect of delivery. The annual instructor evaluation (PPM, Tab 15) includes effectiveness at encouraging discussion among participants. Items on each Program Evaluation form completed by participants includes feedback on the following relevant aspects: presented information clearly, answered questions well, gave me feedback on activities, was hands-on/interactive.

Technology. The instructor must be familiar with the technology-enhanced training tool and/or system. Their knowledge should include basic use of the tool/system, technology troubleshooting skills, and ability to identify alternative technology-enhanced training solutions until problems are solved.

MWC: Instructor annual evaluations (PPM, Tab 15) include effective use of technology, as appropriate. Program guidance for instructors includes material on use of technology.

Good communication skills. The instructor must possess good communication skills that transcend the traditional learning environment and are enhanced to fit the technology-enhanced training environment.

MWC: Instructor annual evaluations (PPM, Tab 15) include effective use of technology, as appropriate. Program guidance for instructors includes material on use of technology.

Ability to manage learners. Instructors must develop the skill set needed to manage online

users. Instructors must master the technique of holding students accountable in a technology-enhanced training environment.

MWC: The MWC online programming does not include interaction in real-time.

Assessment. The instructor must incorporate various methods of assessing the learner's knowledge. This includes methods such as online tests and quizzes, papers, blogging, email, discussions, and polling questions.

MWC: Online quizzes are used as a knowledge check. Evaluation methods mirror face-to-face documentation or may be specialized in the case of resiliency programs.

9.3.4 Training Course Materials and Content

The training director shall ensure the review and approval of all course materials and other training aids, including but not limited to the course syllabus for each course offered, trainee manuals, instructor manuals, audiovisual aids, technology-enhanced training methods, handouts, demonstration equipment, and hands-on equipment, prior to their initial use and as needed thereafter or at least annually. The training director shall document the review and approval process.

MWC: All program-specific materials are reviewed annually, and determinations made to prioritize any identified needed changes. This review includes suggestions made throughout the year by trainers and participants. Needs are presented by the Curriculum Lead and the Training Director to the Steering Committee annually prior to the joint meeting with External Advisory Board. Priorities are set and reviewed with the Board. The status, plan and progress are documented in the Progress and Annual Reports to NIEHS.

The training director shall also ensure that all written materials, audiovisual aids, technology-enhanced training applications, and proficiency assessment instruments for each course are peer reviewed by technically competent external reviewers or by a standing advisory board established for that specific purpose. These reviewers shall possess relevant expertise and experience in the disciplines appropriate to the course subject. One or more of the reviewers shall be an experienced worker representing those to whom the training is directed.

MWC: Reviewers are selected for each new effort, based on the target population. The experienced worker is someone actively engaged in the work described or a trainer in the MWC who is/has documented experience and is likely to use the program/exercise/fact sheet. Knowledge and attitude proficiency assessment instruments for a program are finalized by the development team and forwarded to the Evaluation Services Center for posting and programming to generate the standardized report for each delivery.

Training courses shall be developed and updated as necessary to be consistent with the recognized principles of instructional design, such as the ADDIE method (Analysis, Design, Development, Implementation, and Evaluation), as discussed in detail in the U.S. Department of Energy (DOE) Systematic Approach to Training Handbook (DOE-HDBK-1078-94) and

addressed in ANSI/ASSE Z-490.1-2016. Learning objectives shall be developed that are realistic, meaningful, attainable, and measurable based on guidance such as SMART (Specific, Measurable, Action-Oriented, Relevant, and Timely).

MWC: The MWC uses ADDIE and learning objectives are developed based on Bloom's Taxonomy. Outcome measures include knowledge items, skill checklists and attitude items.

Instructors shall integrate a variety of teaching strategies and activities to meet the needs of multiple learning styles, cultures, and/or generations within the training target audience. In addition to the traditional lecture format, instructors should consider incorporating activities that involve group work and discussion, active learning, mentoring, technology integration, and three-way learning.

MWC: MWC programs emphasize a variety of active learning methods including hands-on learning, small group activities, discussion, and use of technology as a resource to find information.

Additional references that specifically consider the NIEHS/WTP target audiences can be found in the November 1998 WTP workshop report, "Guidelines for Training in Support of Workplace Safety and Health Programs," and in several reports from WTP Trainers' Exchange conferences. The Trainers' Exchange reports are available on the National Clearinghouse for Worker Safety and Health Training (National Clearinghouse) *website*. The Office for Domestic Preparedness provided a useful tool for analyzing delivery methods (called DMAT) and a comprehensive review of the ADDIE method in its 2003 "Approach for Blended Learning." The methods used shall be fully documented by the training director.

MWC: The process for all development and revision/updates is tracked by the Training Director as described in the Curriculum Development Process procedure.

Particular attention should be devoted to the following with respect to course design and content:

a. Characteristics of the training target audience, including language, culture, and literacy.
b. Target audience training needs.
c. Course prerequisites, if any.
d. Learning objectives, including learning objectives for each course module.
e. Analysis and selection of delivery methods appropriate to the training target audience, training location, and learning objectives.
f. Instructional materials including, but not limited to, an instructor's manual with lesson plans and learning objectives, a trainee manual, training aids, and learning technologies.
g. Effective alternatives for training/instruction should certain resources or technologies not be available at the designated training location.
h. Evaluation methods and criteria for satisfactory completion of the course.

MWC: MWC describes implementation of these considerations in the Design/Development stage of curricula development (PPM, Curricula Development Process). From the above listing, a-e are considered in the development of the concept (for NIEHS review and approval) and the integrated into the content of the Participant and Facilitator Guides and any training aids (f).

Item g is included in Facilitator Guidance; h is operationalized based on the Minimum Criteria guidance when applicable or overall MWC evaluation processes; a definition of successful completion is developed for each program.

9.3.5 Trainees

The program shall ensure, to the extent possible, that the trainees recruited are capable of being employed in work involving hazardous waste operations and/or emergency response. If trainees are currently employed in a trade, craft, or specific job/task classification, the program shall ensure, and document as appropriate, that they already possess the necessary skills of their trade, craft, or job/task classification. Trainees may be approved by the training director through a written justification based on the requirement that the basic trade, craft, or job/task classification competencies have been or will be achieved prior to commencing HAZWOPER training.

MWC: The majority (>=98%) of participants are employed at the time of training. Program Directors and their staff members interact with employers and participants prior to training to assure that the program meets the requirements of the jobs being conducted.

When necessary, the training program shall also have a written policy on the necessary medical clearance for trainees to participate in the course and engage in any required hands-on activities, such as respirator donning and doffing.

MWC: Any program that requires don/doff of SCBA and/or use of Level A or B suits requires 'fitness for training' clearance. (See PPM, Tab 6.)

No certificates of successful completion of the training shall be issued if the trainee is unable to complete all course elements deemed to be essential by the training director.

MWC: Criteria for Successful Completion are enforced by the Program Director. (See PPM, Tab 16.) Certificates are issued only upon meeting the criteria.

9.3.6 Instructor-Trainee Ratios

All classroom instruction shall not exceed 25 trainees per instructor.

MWC: MWC Facilitator Guides for equipment-based programs limit trainees to 24 per instructor. Compliance is assured by the Program Director.

The ratio of students to instructors for hands-on activities is based on the level of attention needed for the protective ensemble being worn: levels A and B require greater scrutiny by the instructor because of the increased risks of falls, heat stress, and claustrophobic reactions (Table 2). Ratios are also applicable to skills demonstrations to ensure effective and timely assessments, as well the safety of the trainees. No less than two instructors shall be present during any hands-on training activity that involves the wearing of personal protective or other equipment.

MWC: MWC Instructor Guides reference these ratios for equipment-based programs. Compliance is assured by the Program Director.

TABLE 2	
Ensemble level	**Ratio (Trainee/Instructor)**
C & D	10:1
A & B	5:1

For online-learning classes, opportunities for interactive questions and discussion with an instructor or other knowledgeable person should be provided during the time allotted for course completion. For training using technology-enhanced methods in a classroom, instructors must be able to provide or access the support necessary to meet the learning goals in the time allotted for class.

MWC: Each training center supports the technology utilized in its classrooms.

During group and hands-on activities, there must be a sufficient number of trainers available to answer questions and prompt group discussions.

MWC: Every MWC program is divided into sections, with each specifying the number of trainers needed for that section; when there is a combination of classroom and hands-on, separate guidance is given for each setting.

For courses in which the worker may have literacy limitations that could affect their understanding of the content and/or how to use the training technologies, sufficient instructors must be available to ensure that trainees can successfully engage in the training. The same consideration is needed for workers who lack literacy and competence in the technologies being used.

MWC: There are no technology-based assessments that could limit achievement of successful completion. Technology-related activities are conducted in small groups for the benefit of those who may have limited literacy and competence in the technologies being used.

9.3.7 Proficiency Assessment

9.3.7.1 Initial Training

WTP trainee proficiency shall be evaluated using a documented process.

MWC: All MWC programs have a documented process for evaluating trainee proficiency (PPM, Tab 16).

The training director, course instructors, and relevant curriculum staff will develop and use tools that are appropriate to evaluate the attainment of knowledge, skills, and attitudes for the learning objectives of individual lessons and the overall training program.

A variety of tools may be used to assess trainee proficiency. Proficiency must be measurable, demonstrable, and/ or observable as suitable for the stated learning objectives.

MWC: Proficiency for each knowledge learning objective of initial site worker, TSDF, operations and technician and ammonia responder programs are assessed by a graded exercise or exam; skill learning objectives are assessed using checklists for these programs. Assessments for other initial training are based on content and outcomes. (PPM, Tab 16)

The type, number, and extent of evaluation activities are dependent on the written objectives and skill requirements for a specific course. Assessment tools include, but are not limited to, written examinations, technology-enhanced methods such as anonymous polling apps, observation of skills demonstrations, tabletop exercises, and individual or group projects.

Proficiency assessment methods, regardless of the approaches used, shall be justified, documented, periodically reviewed, and approved by the training director using generally accepted procedures.

MWC: The Curriculum Lead, Training Director and development team approve final content. The Steering Committee approves the definition.

Assessment tools must be reviewed and updated as necessary to reflect any changes in curriculum and federal, state, or local regulations, as appropriate,

MWC: Periodic reviews of curricula always includes a review of the assessment tools, as specified in the PPM, Curricula Development Process.

and must be approved by the training director.

MWC: The Curriculum Lead, Training Director and others as appropriate approve updated assessment tools.

The dates that such modifications occur must be recorded and retained in course materials and records.

MWC: Modifications to assessments are tracked as a program update.

Periodic internal and/or external peer review is recommended. Specific proficiency assessment tools and level of minimum achievement shall be specified in writing by the training director.

MWC: See table of definitions of Successful Completion (PPM, Tab 16) and individual Facilitator Guides.

By convention for adult education and training courses, thresholds for satisfactory completion include 100 percent attendance, a minimum 70 percent score on written examinations, and 100 percent mastery of demonstrable skills. Written examinations and demonstrable skills must be mapped to the learning objectives, so that modifications do not inadvertently result in loss of assessment of critical skills.

MWC: Exam items are mapped to program content and knowledge objectives; skills checklists are mapped to objectives. Review of the mapping documentation is required when changes are made to program content or assessments.

On occasion, trainees may not meet the criteria for successful completion or proficiency. In such cases, it may be appropriate for the trainers to use their best judgement to correct and counsel trainees and to allow repeat or equivalent opportunities for successful completion. For example, incomplete attendance for good reason (emergencies, etc.) may be made up by alternative assignments for the topics missed, or some students may have poor reading skills but may be able to verbally demonstrate good understanding of concepts normally assessed in written examinations.

Given the nature and importance of many demonstrable skills, remedial actions and feedback can and should be used to assist trainees in order to achieve 100 percent mastery. Such demonstrable skills include safe use and operation of equipment or selecting, inspecting, donning, and doffing personal protective equipment (PPE). If, after re-assessment, trainee performance continues to be deficient, the trainee must retake the course before receiving a certificate of successful completion.

MWC: Each Training Center director maintains a policy to be implemented when successful completion cannot be documented. This may include remediation, 'attendance certificate' or other methods shown in the policy and known to all trainers. (See PPM, Tab 16.)

All assessments must be completed by the course instructor(s).

MWC: Written exams are conducted by the instructor. All skill assessments are conducted in-person, with qualified instructors/observers.

Thresholds for successful completion of proficiency tools may be modified, as appropriate, by the training director. However, in the interest of clarity and fairness to trainees, the thresholds must be specified and communicated before assessment.

MWC: All Facilitator Guides are being reviewed to assure that this is part of the introduction.

Documentation and recordkeeping of proficiency assessment tools, trainee achievement scores, and certificates of completion are required. WTP training organizations may find it most practical to create checklists or similar tools to document satisfactory completion of course

components by trainees. Copies (electronic or paper) or spreadsheets with appropriate levels of detail must be made for proficiency assessment tools, achievement score records, and certificates of successful completion.

MWC: The MWC policy on minimum training record (PPM, Tab 7) addresses these areas.

These records must be retained by the training organization for appropriate periods of time, according to the policies and procedures of the organization. In the absence of an organizational policy, a minimum of five years is required for training course record retention.

MWC: The MWC policy on minimum training record (PPM, Tab 7) stipulates that records must be maintained for a minimum of 5 years.

9.3.7.2 Refresher Training

Trainee proficiency shall be assessed by using a written assessment and/or other proficiency tools, such as observation of demonstrable skills.

MWC: Skill proficiency at refresher training is assessed by checklists or a graded exercise (ERG, NIOSH), as specified in each program.

Such tools must be selected and developed by the training director to evaluate selected knowledge and individual skills appropriate to the refresher for the initial course.

MWC: The tools are documented to be relevant to the skill being refreshed.

The level of minimum achievement necessary for proficiency shall be specified in writing by the training director.

MWC: Checklist assessments must be 100%; a graded exercise minimum score is 70%. (See PPM, Tab 16.)

Proficiency assessment methods, regardless of the approaches used, shall be justified, documented, periodically reviewed, and approved by the training director using generally accepted procedures.

MWC: Checklists are modified as content changes. The Curriculum Lead, Training Director and development team approve final versions.

Assessment tools must be reviewed and updated as necessary to reflect any changes in the initial curriculum and federal, state, or local regulations, as appropriate, and must be approved by the training director. Periodic internal and/or external peer review is recommended.

MWC: Periodic reviews of curricula always include a review of the assessment tools after any changes, as specified in the PPM, Curricula Development Process.

9.3.7.3 Representative Good Practice for Proficiency Assessment

Written examinations for two-day to five-day initial courses generally include a minimum of 50 questions relevant to the learning objectives of the course. For eight-hour refresher courses, written examinations generally include a minimum of 15 questions relevant to the course learning objectives, but documented alternatives, such as skills demonstrations, may also be appropriate. Examinations may be administered through written or verbal means, as deemed appropriate by the training director.

MWC: A 50-item posttest is used in the Site Worker, TSDF, Operations, Technician and Ammonia programs. Alternatives are used in other programs. (See PPM, Tab 16).

Some WTP training organizations administer pre- and post-course examinations. Many trainers review and correct examination answers after the post-test to help trainees recognize and retain the correct answers before leaving training.

Regarding the periodic review and update of assessment tools, many providers perform reviews and updates at least annually. Additional course review and update may be necessary to reflect any modifications in curriculum due to federal, state, or local regulations. Updates must be approved by the training director.

MWC: The Curriculum Lead, Training Director and development team approve final versions.

The dates that such modifications occur must be recorded and retained in course materials and records.

MWC: Modifications to assessments are recorded by version numbers or through updates to manuals.

Regarding the observation of demonstrable skills, most providers use checklists to track completion of specific tasks. Some trainers use cellphone applications to help retain certain records. The use of this and other technology is encouraged, with the caveat that some technologies may become obsolete and may result in the inadvertent loss of critical performance assessment records. Therefore, alternate methods of recordkeeping may be necessary.

MWC: MWC does not use these alternate technologies in assessments.

Some trainers use photographs or videos of trainees when performing activities or when dressed-out with PPE for evaluation, self-appraisal, and documentation. However, instructors should be aware that privacy issues or trainee preferences may limit such use in certain cases.

Some courses or sections of courses may be limited to participants who have completed medical clearance for training or use of PPE. Instructor demonstrations may be used instead of observation for these participants. In such cases, training providers may find it advisable to note on materials and course certificates of completion that the courses or sections of the courses are

for “awareness,” and that participants are not fully qualified to use specified PPE or to perform certain tasks.

MWC: See PPM, Tab 2.

9.3.8 Course Certificate
Written documentation shall be provided to each trainee who successfully completes the course of instruction based on the proficiency assessment requirements in 9.3.7 and attendance for the duration of the course.

MWC: WMC complies. (See PPM, Tab 2.)

This documentation shall include a signed certificate containing the following information, at a minimum:

a. Name of the trainee.
b. Course title indicating the HAZWOPER category to which the course applies.
c. Course completion date.
d. Statement that the trainee has successfully completed the course.
e. Name and address of the training provider.
f. Date that annual refresher training is required or statement that such is not required or an expiration date.
g. List of the levels of PPE used by the trainee to complete the course (optional).
h. An individualized, unique certificate number.

MWC: Certificates consistent with the above are provided by the Training Center. (See PPM, Tab 2.)

An appropriate laminated wallet-sized or a durable and non-reproducible card with a photograph of the trainee and the above information may also be issued to the trainee by the training provider. Such a card shall include the trainee’s unique certificate number.

MWC: This is done at the discretion of the Program Director. (See PPM, Tab 2.)

For HAZWOPER-supporting training programs or all-hazards training courses, certifications of successful completion of the course shall meet requirements for that course by the applicable regulatory entity.
Where no such written certification is required, a certificate shall be issued by the training provider containing the appropriate information using the preceding certificate information listing as a guide.

MWC: Requirements of other entities are met by the Program Director. (See PPM, Tab 26.)

9.3.9 Recordkeeping

Student records

The training provider shall maintain records listing:

- The dates courses were presented.
- Name of, and unique identifier for, each course trainee.
- A clear indication of which trainees successfully completed each course.
- The number of the training certificate issued to the trainee, cross-referenced by name, unique identifier, and date of course completion.

The training provider shall maintain records for all initial training, refresher training, 1910.120-supporting training, and all-hazards training for a minimum of five years after the last date that the trainee completed a course by the training provider or as otherwise required by state or federal regulations or requirements. Such records shall be provided to the trainee, to an individual designated in writing by the trainee, and to a representative, if mandated by law.

MWC: Training records are outlined (PPM, Tab 7).. The training program assigns a unique identifier to each participant that is used on the evaluation forms. Retention is 5 years or the requirement of the institution, whichever is longer. Training centers provide participants with training records upon request; release may also be made to others authorized by the participant or consistent with the Data Access statement. (See PPM, Tab 14.)

Instructor records

The training provider shall maintain records for instructors that document:

- Their qualifications.
- Certifications received.
- Annual instructor refresher courses taken.
- Professional development programs completed.
- Annual certification of instructional competency issued by the training director.

MWC: This information is maintained by the Program Director in personnel files. (See PPM, Tabs 15 and 19.)

9.3.10 Program Quality Control

The training director shall develop and maintain a written quality control and evaluation plan.

MWC: See the PPM for the MWC written Evaluation Process Overall Approach and Purpose/Use and Quality Control plans.

At least annually, the training director shall conduct or cause to have conducted a program quality control audit based on that plan, which shall be in writing.

MWC: Annually a self-audit is prepared by the Training Director and completed by each Program Director.

Program modifications to address identified deficiencies, new standards or regulations, or new training methods shall be documented, approved, and implemented.

MWC: Any deficiencies identified in the annual self-audit must be addressed.

The audit and program modifications documents shall be maintained by the training provider.
MWC: Results of each audit are shared with NIEHS and retained by MWC Administration.

Program quality control audits shall follow the criteria included in Section 10, "Training Program Quality Control Criteria."

MWC: Selected elements of the process are included in the self-audit as appropriate.

The training director shall provide in a timely manner whatever information and documentation may be requested during an NIEHS/WTP audit.

MWC: Should an audit be initiated by NIEHS, the Training Director and the University of the Training Director will be responsive.

10. TRAINING PROGRAM QUALITY CONTROL CRITERIA

10.1 Introduction

The criteria that follow should be used as an audit checklist by training providers, training directors, and others, such as the NIEHS awardee peer review audit teams. The factors listed in this section for determining the quality and appropriateness of training are applicable to 1910.120 courses, 1910.120-supporting courses (Annex A), and all-hazards courses.

10.2 Training Plan

A written plan is critical for developing effective training and must consider every step of the curriculum development process: the curriculum analysis, design, development, implementation, and evaluation.

MWC: The written curricula development process (PPM, Curricula Development Process) utilizing ADDIE (Analysis, Design, Development, Implementation, Evaluation) includes MWC approach to each element.

The plan must also consider instructor training, training materials and aids (both instructor and trainee), and teaching methods.

MWC: The trainer qualifications and required preparation are included in each Facilitator Guide. The Facilitator Guide also provides a step-by-step approach to program delivery emphasizing discussion and interactive approaches and description of aids required to 'pull off' each session. The written curricula development process (PPM, Curricula Development Process) requires development of materials for both instructors and trainees.

Auditors of the program should review the following:

1. The written training plan.
2. The title of the courses, the 1910.120 training category that each course addresses, duration of training, course content, and course schedules.
3. Training and qualifications of the assigned instructional staff.
4. The course syllabus.
5. Course prerequisites.
6. The training needs of the target audience (based on a "needs assessment").
7. Course design, including considerations of adult education principles, the characteristics of the target audience, instructional strategies and media, and the basis for the learning methods chosen, particularly with respect to the integration of new instructional technologies and techniques.
8. Learning objectives, for the course and for each module.
9. The course development process, including appropriate technical input, external review, evaluation, and documentation.
10. The instructional methods, including demonstrations and hands-on activities.
11. Monitoring of student safety, progress, and performance during training.
12. The assessment process, including pre-testing (if employed), written tests, and skills tests including acceptable levels of performance.
13. The evaluation process and implementation of the recommended changes.
14. Training delivery methods are appropriate for the training target audience.
15. Instructors are following their training outlines/syllabi.
16. Course materials are current and accurate.

MWC: The approach to training for each program is shown in the Facilitator Guide, including items 2 through 12 and 14; as appropriate, some of this information is also included in the Participant Guide. More details on the review of materials (item 9) may be held by the development team. The evaluation process scheme in item 13 follows the Quality Control Plan and the Evaluation Process plan. Item 15 is assessed by the Program Director during the annual evaluation (PPM, 15) and departures may be identified through the Administration review of evaluation reports; as needed, follow up is conducted. The currency and accuracy of materials is an ongoing process and updates are made as needed between annual reviews.

10.10.1 Outcome Evaluations

Outcome evaluation measures effects of the training program on the target population by assessing progress in the proposed or expected outcomes or program and learning objectives. Outcome evaluation allows the training director or designee to determine the degree to which program participants achieve the target knowledge, skills, and abilities and if and how the program affects their subsequent actions.

When conducting outcome evaluations, the training director or designee should consider the extent to which:

- Training program addresses the stated goals and is achieving intended outcomes.
- Training program is meeting the intent and requirements of applicable regulations and guidance.

- Participants demonstrate targeted knowledge, skills, and/or abilities.
- Participant assessments demonstrate adequately meeting learning objectives.
- Training program affects program participants' actions or safety environment after the training program.
- Recommended improvements to the training program are identified and addressed.

MWC: Alignment between the goals of the program and outcomes perceived by participants is assessed using an item: this course improved my ability to…or this course refreshed my ability to. When relevant regulations change, appropriate changes are made (example: development of HCS2012 and integration into all affected programs). Participant demonstration of KSAs are charted for each program delivered and summarized annually. By assembling reported impacts, the MWC documents changes in the workplace and the community; this is likely an undercount of impact. Recommended changes are assessed and implemented throughout the year or during an annual review.

10.10.2 Impact Evaluation

Impact evaluation assesses the effectiveness of the training program in achieving its ultimate goals. Impact evaluation helps determine the degree to which the program has made an impact on systemic issues in the workplace, including changes in worker and/or employer practices related to safety; workplace hazards; workplace policies, procedures, availability, and use of equipment; injuries and illnesses; safety culture; and work efficiency. Economic evaluation can also be conducted to assess impacts around costs relative to effects. Though not required by the Minimum Criteria, training program directors are highly encouraged to periodically conduct impact evaluation focused on priority evaluation questions important to program stakeholders.

When conducting impact evaluations, the training director or designee should consider the extent to which:

- Participants use knowledge, skills, and abilities acquired through training both on the job and in their daily lives.
- Participants' work behaviors/practices have changed (e.g., more attention to safety, practices safety precautions, identifies hazards).
- Participants, as well as supervisors and employers, have changed or attempted to change workplace policies, practices, or equipment to increase workplace safety.
- Supervisors, superintendents, and/or employers support safety and health training, consistently improving safety culture.
- Safety record of employer has improved, or reports of injuries and deaths averted from proper handling of a hazardous work environment show improvement.
- Worker retention related to safety and health has increased.
- Employee skills better match job requirements.
- Training meets employer and worker needs.
- Increased protection or resilience of communities has occurred.
- Costs of program resources are being expended efficiently or positively in comparison to outcomes.

MWC: Bullets 1 and 2 are assessed routinely. The MWC does not assess the actions of supervisors or the safety record of the employer; the actions of supervisors are outside the domain of contract training and safety records are a very weak indicator of the impact of training. The cost of a retention survey is prohibitive; however, we do assess the continued use of training over time among refresher participants. Feedback rating of the appropriateness of the training to the job, likelihood of using skills on the job and changes in feelings regarding doing the job better and more safely are collected. The rate of repeat business has not been assessed routinely; however, Program Directors are in frequent communication with employers and will be informed regarding inadequate training. Assessments of community-level resilience will emerge from current work. The MWC policy of retaining income at the training center provides the Program Director flexibility in purchasing needed supplies and hiring staff; no cost efficiency study has been conducted or is planned. (See PPM, Evaluation.)

10.10.4 Evaluation Model: Kirkpatrick Model

The Kirkpatrick Model is useful for evaluating training effectiveness. The four levels can help develop a plan for assessing outcomes and impacts.

The Kirkpatrick Model

Reactions (level 1): The degree to which participants find the training favorable, engaging, and relevant to their jobs. This is often attained through post-training feedback using participant questionnaires (e.g., what did you like, what could be improved).

Learning (level 2): The degree to which participants acquire the intended knowledge, skills, attitude, confidence, and commitment based on their participation in the training. This is often evaluated using participant assessments (e.g., written exams, proficiency assessments, pre- and post-tests).

Behavior (level 3): The degree to which participants retain and apply what they learned during training when they are back on the job. This is often attained through training participant surveys/interviews, retests, refresher training reflection, and workplace observations. Required drivers of level 3 are "processes and systems that reinforce, encourage, and reward performance of critical behaviors on the job."[3]

Results (level 4): The degree to which targeted outcomes occur as a result of the training. Isolating the effects of training is difficult, as other factors will impact training participant actions and workplace safety and health. This can be attained by using some methods to obtain information, including worker and employer surveys and interviews.

For more quantitative information, programs may try to access data on injuries and near misses, safety records, and economic impact, but this information is usually difficult to obtain and/or is incomplete.

11. GENERIC MINIMUM TRAINING CURRICULUM GUIDELINES

The following guidelines are for those operations specifically identified in OSHA regulation 29 CFR 1910.120 as requiring training. The guidelines in the following subsections indicate the required minimum competencies that must be demonstrated by the trainees taking the indicated course.
MWC: Compliance with this section is detailed in the appropriate paragraph below.

The training provider is responsible, in accordance with Section 9 of this document, for the conduct of the needs assessment and development of the appropriate learning objectives, course curriculum, course modules, and associated training materials required to achieve these competencies for the target audience.

11.1 Hazardous Waste Operations [1910.120(b)-(o)]

11.1.1 Introduction

This section applies to the initial off-site training required by the OSHA HAZWOPER standard at 1910.120(e) applicable to cleanup operations for general site workers and other than general site workers (occasional workers), including the required annual refresher training for general site workers. It does not apply to the required initial on- site training, after initial off-site training, or to the site-specific training required before entry onto a site, as these are the responsibilities of the employer. Hazardous waste cleanup managers and supervisors require initial training and three days of on-site supervised experience, plus an additional eight hours of specialized training at the time of job assignment and annual refresher training. This section does not address managers and supervisors training, although the initial off-site general site worker course may largely meet the needs of the initial 40-hour training program for such personnel.

Additional training may be required if hazards that are covered by separate regulations are present at a site. Annex A describes many such programs that are termed 1910.120-supporting training programs. Of importance, while these supporting training programs may be certified or accredited by another authority, the requirements in this document apply to those programs as well if they are funded under a NIEHS/WTP training grant award. These training programs are in addition to the core and refresher courses. This also applies to the all-hazards preparedness and response training, in which several awardees are engaged. These programs are training courses in addition to the initial and refresher courses.

11.1.2 Initial Training

Curriculum for hazardous waste operations, required by OSHA 29 CFR 1910.120(e), shall address the following minimum competencies established by OSHA

MWC: MWC adherence to the minimum competencies is outlined below.

and the additional listed competencies and shall be taught in a minimum of 40 hours.

MWC: MWC site worker initial training is a 40-hour course.

The standard also provides for the initial off-site training of occasional site workers, which shall be a minimum of 24 hours. Such programs shall include the appropriate training objectives for the competencies required in the initial general site worker course tailored to the job assignment of the occasional worker.

MWC: MWC does not provide this program.

This reduction in hours is only acceptable to OSHA if workers are not exposed above the exposure limits.

Should an occasional worker be upgraded to a general site worker, an additional 16 hours of off-site instruction is required, addressing curriculum topics needed to complete the full 40-hour curriculum. This guidance recommends that the upgrade training encompass a minimum of 24 additional hours to more fully bridge the gap in potential hazards between the two types of job assignments.

11.1.2.1 General Site Workers

The initial off-site general site worker training course shall be a minimum of 40 training hours in duration,

MWC: MWC site worker initial training is a 40-hour course.

shall devote a minimum of one-third of the training hours to hands-on training,

MWC: When last evaluated, this MWC program agenda allocated approximately 45% of training time to hands-on activities.

and shall be of sufficient detail that trainees can demonstrate competency in the following topics:

a. The HAZWOPER standard requirements.
b. Health hazards.
c. Safety hazards and safe work practices and procedures.*
d. The rudiments of confined spaces hazards and entry restrictions (additional training is required for entry).
e. Emergency response plan and procedures.
f. Materials handling procedures and equipment.*
g. Sampling procedures, precautions, and applications.*
h. Sample collection, monitoring, handling, packaging, and shipment.*
i. Respiratory protection, including program requirements and selection, use, care, and limitations.*
j. Personal protective ensembles (levels A, B, C, and D) and selection, use, care, and

limitations.*
k. Decontamination principles, practices, and procedures.*
l. Worker rights and responsibilities.
m. Medical surveillance requirements.
n. Monitoring requirements, monitoring instruments, their limitations, and demonstration of competency with instruments trainees may be required to use.*
o. Site safety and health plans.
p. The Hazard Communication standard and its requirements and purpose.
q. The information that is to be provided to the worker upon initial site entry.

**Should include a hands-on component.*

MWC: Topics a through q are covered by content, and by hands-on activities where shown.

11.1.2.2 Occasional Site Workers

Occasional workers, as defined in the HAZWOPER standard, are on-site only infrequently and then only for a specific, limited task. The standard further presumes that such workers are not exposed in excess of the applicable exposure limits and are not, therefore, required to wear respiratory protection. Initial off-site training of 24 hours duration and one day of on-site supervised training is required. The OSHA standard provides no guidance as to the competencies required for such workers. The standard does state, however, that workers who upgrade to full-time workers or who are subsequently required to wear respirators shall be provided an additional 16 hours of training and two days of on-site supervision.

MWC: MWC does not provide this program.

The upgraded training shall essentially encompass the competencies required in the 40-hour full-time general site worker course.

MWC: MWC does not provide this program.

For training providers offering "occasional worker" training, the course should address the applicable competencies required for the general site worker, excluding those competencies clearly associated with the OSHA-stated reason for a required upgrade, such as respirator wear.

Providers offering the upgrade training must address all of the competencies required for the general site worker and an additional eight hours of training specific to the competencies required in the initial 24-hour occasional site worker course, for a total of 24 hours of upgrade training.

MWC: MWC does not provide this program.

The 24-hour occasional worker curriculum should address the following subject areas, for which learning objectives sufficient to permit demonstration of competencies must be developed:

a. Health hazards
b. Safety hazards
c. Confined spaces: awareness

d. Emergency response: overview
e. Respiratory protection: awareness
f. PPE: awareness
g. Decon: awareness
h. Rights and responsibilities
i. Medical surveillance
j. Site safety and health plans
k. Hazard Communication standard
l. Minimum of six hours of hands-on or demonstration

MWC: MWC does not provide this program.

11.1.3 Annual Refresher

General site workers and supervisors must have a minimum of eight hours of annual refresher training.

MWC: MWC annual site worker refresher courses include eight hours of training.

A needs assessment should be done prior to, or during, the initial hour of the refresher training to identify any deficiencies in skills or knowledge that the class may have.

MWC: For site workers, the mandatory use of the Year in Review activity provides an opportunity for facilitators to identify participant needs. In addition, for contract programs, the Facilitator Guide reinforces the need to conduct reconnaissance in determining which refresher program should be used and if the modular refresher is selected, then to determine which modules are most appropriate.

The eight-hour off-site annual refresher training required by OSHA at 1910.120(e)(8) for general site workers and for supervisors shall be conducted only by training programs offering the initial course.

MWC: MWC training centers which offer refresher training also offer the initial course.

The course content shall include, at a minimum, a core curriculum established for the eight-hour refresher training required by 1910.120(e)(8), based on the initial general site worker course.

MWC: The course content of MWC refresher training is drawn from topics included in the initial training and specific topics are based on needs of participants.

Individuals developing the refresher course curriculum should:

- Review and retrain on relevant topics covered in the initial (24- or 40-hour) course using reports by the trainees of their relevant experiences during the preceding year to facilitate the review. Relevant topics may include essential safety and health aspects such as PPE, respiratory protection, decontamination, site safety and health plans, and topics identified

in lessons learned reports. These topics may also be extrapolated from OSHA standards interpretations, national statistics, journal articles, and/or major incidents that may apply by the instructor.

MWC: Several formats are available. The most flexible (modular refresher) includes topics identified by participants as part of the evaluation process as most important.

- Update materials covered in the initial course, including new technologies used in hazardous waste cleanup, task changes, and subject matter that applies to increased worker protection.

  MWC: One format for refresher training involves new technologies and associated tasks hazards.

- Review changes to pertinent provisions of RCRA, SARA, and The Frank R. Lautenberg Safety for the 21st Century Act and to pertinent OSHA standards. The review may be presented alone or integrated into other subject matter. If the latter approach is taken, workers must be advised of the provision update.

  MWC: This information is integrated as it becomes relevant; however, there are few regulatory changes in any year.

- Introduce additional subject areas, including topics that affect worker health and safety that may not have been covered in the initial 40-hour training program, such as bloodborne pathogens and emerging all- hazards issues.

  MWC: Several new topics have been introduced, such as risk management and combustible dust, designing a drill to use at the work site to reinforce training.

- Provide hands-on opportunities for new developments in PPE, such as new or altered donning/doffing procedures for respirators and new decontamination procedures for protective garments.

  MWC: As appropriate, these are introduced.

- Review newly developed monitoring equipment, including lecture/demonstration and hands-on training as appropriate. The operating principles, capabilities, and limitations should be addressed.

  MWC: Detailed information is available to Facilitators on a range of monitoring equipment.

11.1.4 On-Site Considerations

The HAZWOPER standard requires that general site workers be provided off-site initial training of a minimum of 40 hours before being allowed to work on such sites, and that they be provided

three additional days of supervised instruction by a HAZWOPER-trained and experienced supervisor on-site. For occasional workers, 24 hours of off-site initial training and one day of on-site supervised training is required. The purpose of this on-site training is to ensure that the worker has mastered the required knowledge and skills, has the abilities to perform the required work safely, and understands the limitations imposed by the "occasional site worker" designation. This on-site training is the responsibility of the employer.

To aid the employer in tailoring on-site supervised training, the training provider should make a detailed initial course outline available to the employer.

MWC: Program Directors provide this information to employers. (See PPM, Tab 28.)

11.2 RCRA/TSD [1910.120(p)]

11.2.1 Introduction

29 CFR 1910.120(p)(7) and (p)(8)(iii) establish the requirements for training of employees of employers conducting operations at treatment, storage, and disposal (TSD) facilities. 1910.120(p)(7) establishes a requirement for a minimum of 24 hours of initial training, but no competencies are listed. Eight-hour annual refresher is also required. 1910.120(p)(8)(iii) requires "training for emergency response employees" and lists several competencies that are to be achieved. Not all employees are required to be trained to the degree specified in the standard if the employer segregates the emergency response function between an adequate number of employees to control an emergency and others that are trained at the awareness level to recognize an emergency, summon fully-trained emergency response personnel, and take no actions to control the incident.

For purposes of this section, all TSD employees are assumed to be required to have the specified initial and refresher training at 1910.120(p)(7). The following "initial off-site" and "initial on-site" competencies must be addressed in such courses.

Emergency response employee training covered under 1910.120(p)(8)(iii) must address the applicable competencies specified in Section 11.3 but tailored to the individual TSD site.

MWC: See section 11.3.

11.2.2 Initial Training

Initial TSD worker training includes an off-site and on-site component, each of which is addressed separately in the following subsections.

MWC: MWC has informed the WTP that there is no requirement for on-site training in the standard; the origin of this in the Minimum Criteria is not known. The MWC does not do on-site training and does not inform employers that they must conduct such training.

11.2.2.1 Initial Off-Site Training

The initial off-site training course required in paragraph (p) of 1910.120 for the 24-hour training program, including a minimum of eight hours of hands-on training, shall enable trainees to demonstrate competency in the following areas:

a. The applicable paragraphs of 29 CFR 1910.120 and the elements of an employer's occupational safety and health program.
b. Relevant hazards such as chemical, biological, and radiological exposures; fire and explosion hazards; thermal extremes; and physical hazards.
c. General relevant safety hazards, including those associated with electrical hazards, powered equipment, lockout procedures, vehicular operations, and walking-working surfaces.
d. Confined-space hazard recognition and related procedures.
e. Work practices to minimize employee risk from workplace hazards.
f. Emergency response plan and procedures, including first aid that meets the requirements of paragraph (p)(8) of 1910.120.
g. Procedures to minimize exposure to hazardous waste and various types of waste streams, including the materials handling program and spill containment programs.
h. The hazard communication programs meeting the requirements of 29 CFR 1910.1200.
i. Medical surveillance programs meeting the requirements of 29 CFR 1910.120(p)(3), including the recognition of signs and symptoms of overexposure to hazardous substances and known synergistic interactions.
j. Decontamination programs and procedures meeting the requirements of 29 CFR 1910.120(p)(4).
k. The employer's requirements to implement a training program and its elements.
l. The criteria and programs for proper selection and use of PPE, including respirators.
m. The applicable appendices to 29 CFR 1910.120.
n. Principles of toxicology and biological monitoring as they pertain to occupational health.
o. The rights and responsibilities of employees and employers under OSHA (including 1910.120[p]) and RCRA.
p. Hands-on exercises and demonstrations with equipment to illustrate the basic principles that may be used during the performance of work duties and donning and doffing of PPE.
q. Reference sources, efficient use of relevant manuals, and knowledge of hazard coding systems, including information contained in hazardous waste manifests.
r. The job skills required before employees are permitted to participate in or supervise field activities. Each employer has the responsibility to ensure that additional job-specific training is provided following the basic health and safety training.
s. Air monitoring methods and equipment. This should include discussions of how to evaluate monitoring results provided by outside consultants.

MWC: The MWC Initial Training for TSD workers addresses topics a. through q. and s. Item r. is not required in the standard and is outside the scope of MWC capabilities. Due to low use, the training materials have not been updated to include HCS2012 (item h.); facilitators who find participants deficient in this standard use the short program on this topic to supplement the overall coverage of hazard communication.

11.2.2.2 Initial On-Site Training

The employer shall provide hazardous waste workers with information and training as required by 29 CFR 1910.120(p). This training shall be conducted prior to employees' initial assignment into a work area, be appropriate to their potential for exposure, and shall cover the following topics:

a. The emergency response plan and procedures, including first aid meeting the requirements of paragraph (p)(8) of 1910.120.
b. A review of the employer's hazardous waste handling procedures, including the materials handling program and elements of the spill containment program, location of spill response kits/equipment, and names of those trained to respond.
c. The hazard communication program meeting the requirements of 29 CFR 1910.1200.
d. A review of the employer's medical surveillance program meeting the requirements of 29 CFR 1910.120(p)(3), including the recognition of signs and symptoms of exposure to relevant hazardous substances and known synergistic interactions.
e. A review of the employer's decontamination program and procedures meeting the requirements of 29 CFR 1910.120(p)(4).
f. An overview of the employer's training program (meeting the requirements of 1910.120[p][7]) and the parties responsible for that program.
g. A review of the employer's PPE and respirator programs, including the proper selection and use of PPE based on specific site hazards.
h. All relevant site-specific procedures addressing potential safety and health hazards.
i. Safe use of engineering controls and equipment on-site.
j. Names of personnel and alternates responsible for site safety and health.

MWC: MWC does not provide on-site training. This requirement for TSD workers is not in the standard.

11.2.3 Refresher Training

The HAZWOPER standard requires a minimum of eight hours of annual refresher training. However, the standard is silent with regard to the content of such refresher training. An effective RCRA/TSD refresher-training curriculum should consider the following points and must include a hands-on module

a. An initial needs assessment to identify deficiencies in skills or knowledge that the class may have.
b. Lessons learned, if any.
c. Review of TSD site-specific critical elements of the initial training course.
d. Update of materials in the initial training course, as appropriate.
e. Review of any pertinent regulatory changes.
f. Review of new technologies applicable to TSD operations, and new monitoring methods and equipment.
g. Hands-on review of skills essential to worker protection and revisions to procedures associated with their use, such as respirators and chemical protective clothing.

MWC: The Facilitator Guide for the modular TSD refresher provides information regarding reconnaissance to build a program meeting participant needs (items a and b). Modules are available to address content for d and g. Because of the limited population for this program, no content is available item f. Government websites can be used to reference a change in regulations or new TSD operations. Hands-on work is included in all program.

11.3 Emergency Response [1910.120(q)]: Full Time

11.3.1 Introduction

The emergency response section of the HAZWOPER standard, 1910.120(q), applies to the response to hazardous substance releases without regard to location, and includes hazardous substances and biological, chemical, and nuclear materials. The response function categories are awareness level, operations level, technician level, hazardous material specialist, and on-scene incident commander. Increasingly, response with respect to acts of terror is being seamlessly integrated into emergency response training programs. The last version of NFPA 472 applicable to emergency responder competencies is one example.

The emergency response groups to which the training provisions of 1910.120(q) (or the identical section of the U.S. Environmental Protection Agency (EPA) standard at 40 CFR 311 for emergency response personnel not covered by the OSHA standard) apply include but may not be limited to the following:

- Full-time career fire service personnel.
- Paid part-time fire service or emergency personnel.
- Unpaid part-time firefighters or emergency personnel.
- Full-time fire service personnel who are organized as industrial fire brigades and/or hazardous materials teams.
- Police officers (municipal officers, sheriffs, public safety officers, state troopers, etc.).
- Emergency medical services personnel.

For purposes of this document, these emergency response groups are considered “full-time” emergency responders and are assumed to already possess the knowledge, skills, abilities, and judgment appropriate to their job classification. Full-time emergency response organizations are encouraged to train with organizations whose employees are anticipated, based on past experience, a mutual aid agreement, or a contract, to provide skilled support personnel at an emergency incident.

11.3.2 Initial Training

Full-time emergency responders, as defined in the OSHA standard at 1910.120(q) and detailed in the preceding section, shall be trained in accordance with their duties or function in a hazardous substances response.

Specific training categories appropriate to the NIEHS/WTP training grants program, based upon role and function in such a response are:

a. First responder awareness.
b. First responder operations.
c. Hazardous materials technician.
d. Hazardous materials specialist.
e. Incident commander.
f. Emergency medical services (see also EPA 40 CFR 311).

The training competencies required for each category are different, as are the times required to meet those competencies. The following guidelines establish the minimum competencies that must be objectively demonstrated by the trainee for each of the specific training categories listed above.

These competencies are taken verbatim from the OSHA standard at 29 CFR 1910.120(q)(6). Of key importance to this guidance, the April 2003 edition of FEMA's "Guidelines for HazMat/WMD Response, Planning, and Prevention Training" is hereby adopted by reference. That document lists the minimum required competencies and suggested learning objectives in each responder category, as established in the HAZWOPER standard, and provides other recommended competencies based on the latest addition of NFPA 472 and 473. For each responder category, the training provider shall review the recommended additional competencies and suggested learning objectives in the FEMA guidelines document and adopt those that are applicable to the training provider's target audience and responder category.

The training director shall approve, document, and maintain these courses.

MWC: MWC follows the detailed Curriculum Process (see PPM Curriculum).

a. First responder awareness level, 1910.120(q)(6)(i):
Must be able to objectively demonstrate competency in the following:

- An understanding of what hazardous substances are, and the risks associated with them in an incident.
- An understanding of the potential outcomes associated with an emergency created when hazardous substances are released.
- The ability to recognize the presence of hazardous substances in an emergency.
- The ability to identify the hazardous substance, if possible.
- An understanding of the role of the first responder awareness individual in the employer's emergency response plan, including site security and control and the U.S. Department of Transportation's Emergency Response Guidebook.
- The ability to realize the need for additional resources, and to make appropriate notifications to the communications center.

MWC: Emergency personnel listed in 11.3.1 above may participate in one or more MWC programs to assist the employer in meeting the obligation to certify competency at the awareness-level.

b. First responder operations level, 1910.120(q)(6)(ii):
Must be able to objectively demonstrate competency in the following:

- Awareness level competencies.
- Knowledge of basic hazard and risk assessment techniques.
- Know how to select and use proper PPE provided to the first responder operations level.
- An understanding of basic hazardous materials terms.
- Know how to perform basic control, containment, and/or confinement operations within the capabilities of the resources and PPE available with their unit.
- Know how to implement basic decontamination procedures.
- An understanding of the relevant standard operating procedures and termination procedures.

MWC: Emergency personnel listed in 11.3.1 above may participate in one or more MWC programs to assist the employer in meeting the obligation to certify competency at the operations-level.

c. Hazardous materials technician, 1910.120(q)(6)(iii):
Must be able to demonstrate competency in the following:

- Operations level competencies.
- Know how to implement the employer's emergency response plan.
- Know the classification, identification, and verification of known and unknown materials by using field survey instruments and equipment.
- Be able to function within an assigned role in the Incident Command System (ICS).
- Know how to select and use proper specialized chemical PPE provided to the hazardous materials technician.
- Understand hazard and risk assessment techniques.
- Be able to perform advance control, containment, and/or confinement operations within the capabilities of the resources and PPE available with the unit.
- Understand and implement decontamination procedures.
- Understand termination procedures.
- Understand basic chemical and toxicological terminology and behavior.

MWC: Emergency personnel listed in 11.3.1 above may participate in one or more MWC programs to assist the employer in meeting the obligation to certify competency at the technician-level.

d. Hazardous materials specialist, 1910.120(q)(6)(iv):
Must be able to demonstrate competency in the following:

- Technician level competencies.
- Know how to implement the local emergency response plan.
- Understand classification, identification, and verification of known and unknown materials by using advanced survey instruments and equipment.
- Know the state emergency response plan.
- Be able to select and use proper specialized chemical PPE provided to the hazardous materials specialist.
- Understand in-depth hazard and risk techniques.

- Be able to perform specialized control, containment, and/or confinement operations within the capabilities of the resources and PPE available.
- Be able to determine and implement decontamination procedures.
- Have the ability to develop a site safety and control plan.
- Understand chemical, radiological, and toxicological terminology and behavior.

MWC: MWC does not provide this program. However, emergency personnel listed in 11.3.1 above may participate in one or more MWC programs to assist the employer in meeting the obligation to certify competency at the specialist-level.

e. Incident commander, 1910.120(q)(6)(v):
Must be able to demonstrate competency in the following:

- Operations level competencies.
- Know and be able to implement the employer's ICS.
- Know how to implement the employer's emergency response plan.
- Know and understand the hazards and risks associated with employees working in chemical protective clothing.
- Know how to implement the local emergency response plan.
- Know the state emergency response plan and of the Federal Regional Response Team.
- Know the importance of decontamination procedures.
- Several additional requirements within 29 CFR 1910.120(q)(3)(i-ix) may be applicable as well in developing the learning objectives specific to the above competency requirements.

MWC: MWC does not provide this program. However, emergency personnel listed in 11.3.1 above may participate in one or more MWC programs to assist the employer in meeting the obligation to certify competency at the level of incident commander.

f. Emergency medical services (EMS):
The HAZWOPER standard lists no competency requirements for EMS personnel participating in a hazardous materials response beyond the general duty to properly train individuals to perform their assigned role in a hazardous materials emergency. The FEMA guidelines provide recommended training competencies and learning objectives for EMS level 1 and 2 personnel based on NFPA 473. Training providers who offer courses for EMS level 1 and 2 personnel should select those recommended competencies and learning objectives from among those listed in the FEMA document for their training target audience as the basis on which to develop their training course(s).

MWC: MWC does not provide EMS level 1 or 2 training. However, personnel listed in 11.3.1 above may participate in one or more MWC programs to assist the employer in meeting the obligation to provide training for those who will function as EMS.

g. Additional training topics:

The following additional training topics merit consideration for inclusion in each of the preceding training categories:

- Hazard recognition.
- Safe work practices and procedures.
- General site safety.
- Site safety plans and standard operation procedures.
- Decontamination procedures and practices.
- Emergency procedures, first aid, and self-rescue.
- Safe use of field equipment.
- Safe sampling techniques.
- Storage, handling, use, and transportation of hazardous materials.
- Use, care, and limitations of PPE, with emphasis on respiratory protective devices.
- Rights and responsibilities of employees under OSHA standards and other laws concerning safety and health, right-to-know, compensation, and liability.
- Medical monitoring requirements.
- Community relations.
- Incident Command System.

MWC: These topics are included as needed by regulation or reconnaissance. Emergency personnel listed in 11.3.1 above may participate in one or more MWC programs to assist the employer in meeting the obligation to certify competency for anticipated tasks.

11.3.3 Refresher Training

All full-time emergency response personnel trained in accordance with 1910.120(q)(6) are required to have annual refresher training or to demonstrate competency based on the methodology used by the employer annually in the hazardous materials emergency response category to which they have been trained. No minimum hours for such refresher training are required by the standard.

Providers of 1910.120(q) refresher training should develop a refresher course curriculum that addresses the required competencies for the pertinent responder categories and should ideally include a drill exercise as the hands-on component of the course.

MWC: Emergency personnel listed in 11.3.1 above may participate in one or more MWC refresher programs to assist the employer in meeting the obligation to certify competency annually.

11.4 Emergency Response: Collateral Duty

11.4.1 Introduction

A large and varied group of first responders may be pulled into a hazardous materials incident to provide specific support services incidental to their primary occupation. These personnel are involved in the emergency response phase under 29 CFR 1910.120(q), but have no function after

the emergency is terminated and cleanup has begun, unless they have additional training. This applies whether the hazardous situation was man-made (e.g., purposely released by terrorist, incidental to the act of terrorism) or incidental to a natural disaster (e.g., flooding, hurricanes, earthquakes). This category includes, among others:

a. Skilled support personnel such as heavy equipment operators in the construction sector, railroad personnel who operate equipment that could be used in an incident response, and certain hospital personnel, which are described at 29 CFR 1910.120(q)(4). This covers workers who are not necessarily an employer's own employees, are not expected to serve in an emergency response capacity, but are suddenly called upon (e.g., as a one-time occurrence) to provide assistance at a scene involving a hazardous substance release.

b. Specialist employees who provide their expertise to the first responders with respect to specific hazardous materials, which are described at 29 CFR 1910.120(q)(5).

c. A variety of workers under 29 CFR 1910.120(q)(6). These are employees who are engaged in emergency response but are not full-time responders and are usually not part of an emergency response team.
The following are examples of categories of workers who fall under 1910.120(q)(6):

- Industrial workers with part-time duties in chemical emergency response.
- Service and maintenance workers such as power utility and facility workers.
- Security guards.
- Transportation workers: truck, rail, water, warehouse.
- Public works personnel.
- Sanitation workers.
- Street and highway maintenance workers.
- Hospital first receivers.
- Hospital "skilled support personnel" as described by OSHA (Whittaker 4/25/97).
- Volunteers (as described at 29 CFR 553.101).
- For purposes of this document, these categories are termed collateral duty.

11.4.2 Initial Training

Emergency response training for collateral duty responders is established in the OSHA standard at 1910.120(q)(4) for skilled support personnel, 1910.120(q)(5) for specialist employees, and 1910.120(q)(6) for a wide range of emergency response, operations, technicians, and specialists. The OSHA Construction Focus Four Module can serve as a useful resource to help responders.

a. Skilled support personnel:
Skilled support personnel are to be provided a "just-in-time" on-scene training briefing about the hazards of the site and actions to be taken to protect the individual worker. Except for the "just-in-time" training briefing at the time of deployment, no other training is required by the OSHA standard. Employers who wish to keep their employees on the site after the incident transitions from an emergency response/rescue to a cleanup must provide the required additional training. In addition, it is strongly encouraged that skilled support personnel train with first responders in

their local jurisdiction in advance of an incident, so they are familiar with one another prior to an incident.

MWC: Personnel listed in 11.4.1.c above may participate in one or more MWC programs to assist the employer in meeting the obligation to certify competency for collateral duty emergency response assignments.

b. Specialist employees:
The OSHA standard requires that specialist employees receive training or demonstrate competency in their area of specialization annually.

MWC: MWC does not provide this training program. However, personnel listed in 11.4.1.c above may participate in one or more MWC programs to assist the employer in meeting the obligation to certify competency for collateral duty emergency response specialist assignments.

c. Other workers under 1910.120(q)(6):
The OSHA standard requires that employees who participate or are expected to participate in emergency response shall be given training and that training is based on the duties and function to be performed by each employee. Collateral duty workers under (q)(6) are primarily covered by either (q)(6)(i), First responder awareness level, or (q)(6)(ii), First responder operations level.

MWC: Personnel listed in 11.4.1.c above may participate in one or more MWC programs to assist the employer in meeting the obligation to certify competency for collateral duty emergency response.

11.5 Disaster Response and Recovery Workers

NIEHS awardees were instrumental in partnering with OSHA to develop the OSHA Disaster Site Worker course, which is primarily focused on skilled support personnel and includes mandatory hands-on respirator training. Consequently, this document strongly supports providing the OSHA course for all skilled support personnel. Such training is to be provided by instructors authorized as course instructors by successfully completing the OSHA Disaster Site Worker Trainer course.

Transportation workers who may engage in after-incident cleanup activities also require initial training pursuant to 1910.120(e), and the OSHA Disaster Site Worker course may be an appropriate additional course as well. Fixed facility workers are required to be trained in the facility emergency response plan and, if management intends to use facility employees to respond to a hazardous materials emergency, those employees are required to be trained in the appropriate emergency response categories described in 1910.120(q)(6) and Section 11.3 of this document. If a facility hazardous materials incident requires off-site workers for the subsequent cleanup, they must be trained in accordance with 1910.120(e).

MWC: When offered, MWC Program Directors comply with OSHA requirements. (See PPM, Tab 26.)

If, however, the employer elects to use facility employees to conduct such a cleanup on the company property, those employees must be trained specific to the OSHA Respiratory Protection standard and the Hazard Communication standard, among others as specified in 1910.120(q)(11)(ii).

MWC: MWC provides a Personal Protective Equipment and a Hazard Communication program to assist employers in meeting these requirements in order to certify competency.

Such training may be considered 1910.120-supporting training per Annex A of this document.

All rescue and recovery workers, who will or may be providing assistance at disasters, should be trained prior to being deployed to a disaster site. Training should include general training, site-specific training, task-specific training, and pre- deployment and pre-job briefings. Short and specific training (sometimes referred to as site-specific training) should focus on critical survival skills and on the direct hazards or most hazardous conditions that may be found at the site.

Populations to be trained include:

- Day laborers
- Volunteers (spontaneous, organized)
- Operations training for volunteers during disaster response and recovery should be addressed.
- Volunteers are strongly encouraged to receive disaster preparedness training prior to deploying to disaster sites. Volunteers are also encouraged to join a legitimate volunteer organization, such as a Community Emergency Response Team, the Red Cross, or National Voluntary Organizations Active in Disaster, rather than heading out on their own. At a minimum, volunteers should receive an awareness site-specific training before entering any disaster area.
- The National Incident Management System is a systematic, proactive approach to guide departments and agencies at all levels of government, nongovernmental organizations, and the private sector to work together seamlessly and manage incidents involving all threats and hazards—regardless of cause, size, location, or complexity—in order to reduce loss of life, property, and harm to the environment. Responses to disasters are usually coordinated through the ICS. The ICS provides a structure to promote effective coordination among responders. It allows for an integrated organizational structure that is not hindered by jurisdictional boundaries. In addition to the training established by OSHA, it is important for those who are responding to disasters to be trained on the ICS to better understand the operating structure of any disaster.
- Homeowners
- Business owners

MWC: Programs for the populations listed above include

Day Laborers:
OSHA 10
Awareness (3 hours)
Volunteers:

Volunteer Preparedness (1 hour)
Disaster Preparedness (16 hours)
...for Weapons of Mass Destruction
...for High-volume fuel transportation routes
NIMS:
Incident Command Awareness (4 hours)
Incident Command System (16 hours)
Homeowners:
Disaster Preparedness along high-volume fuel routes (2 hours)
Reporting Environmental Releases (4 hours)
Persistent, Bioaccumulative Toxins (4 hours)
Community Awareness (3 hours)
Toxic Use Reduction (4 hours)
Business Owners:
Disaster Preparedness along high-volume fuel routes (2 hours)
Toxic Use Reduction (4 hours)

Note: The above programs are shown on the MWC website or the Clearinghouse website. Programs developed for use at a single training center to increase local resilience are held by that center, after NIEHS review and comment.

12. CERTIFICATION

OSHA initially addressed accreditation or certification of training programs under 29 CFR 1910.120 with a Notice of Proposed Rulemaking in 1990. OSHA has never finalized that rule at 29 CFR 1910.121. Instead, OSHA issued a nonmandatory training appendix to the 29 CFR 1910.120 standard (Appendix E), which was based in large part on the original NIEHS/WTP Minimum Criteria requirements for such training under the WTP grants program.

Accreditation or certification of some of the 1910.120-supporting training programs in Annex A of this document is already covered by existing requirements, such as the Asbestos Hazard Emergency Response Act for asbestos abatement activities. Many of the remaining programs are governed by requirements established in specific OSHA standards, but are not required to be accredited or certified, nor is it likely that they will be in the future.

Each training provider for which this guidance is applicable shall annually certify in writing that the training program meets the requirements established in this guidance specific to the HAZWOPER courses, 1910.120-supporting training courses, and all-hazards training courses offered. Where certification or accreditation is also required by another certifying/accrediting entity, such as for asbestos abatement, it shall be noted, and a copy of the applicable certification/accreditation appended.

MWC: MWC programs are not certified or accredited. This document serves as validation that the MWC complies with the Minimum Criteria general principles and for content of the

programs delivered.

13. ANNEXES

HAZWOPER-trained workers may be required to have additional training due to particular hazards present on 13 specific HAZWOPER sites. Typically, such additional training is associated with hazards that may be present for which specific regulations or standards require training. An example is radiation training associated with mixed waste remediation work. This guidance terms these training programs "1910.120-supporting training." They are presented in Annex A. Several such 1910.120-supporting programs are identified, as are the training requirements and certification/accreditation authorities for each where such currently exist.

Under the scope of the NIEHS/WTP training grants program these 1910.120-supporting training programs are funded on the basis of the individual grants contract.

Annex B provides the agenda for the technical workshop that served as the basis for this document.

Annex C provides a checklist with respect to the principles of adult education, which is referenced in Section 8 of this document.

13.1 Annex A: 29 CFR 1910.120-Supporting Training Programs

Employers engaged in work covered by the HAZWOPER standard may need additional worker training (possibly including certification) that is associated with specific hazards that may be present in a particular HAZWOPER work environment for which there are additional applicable standards or regulations. Such additional competency training may be applicable to hazardous waste site operations [29 CFR 1910.120(b)-(o)], RCRA/TSD operations [29 CFR 1910.120(p)], and emergency response operations [29 CFR 1910.120(q)]. Additionally, there may be other trainings that have direct relevance to 1910.120 in order to maintain a safe and healthful work environment but are not part of a required training regimen.

For purposes of the NIEHS/WTP grant program, such additional training programs for target training populations that have been trained and certified in accordance with 1910.120(e), (p), or (q) as a prerequisite may be funded by the program if such additional training programs are included in the annual renewal application, approved, and meet the following criteria in addition to the criteria specified in Sections 9 and 10 of this document.

OSHA 10 and 30 for General Industry and Construction: Training must be conducted by an instructor who has completed the OSHA 500 Trainer Course for Construction or the OSHA 501 Trainer Course in Occupational Safety and Health Standards for General Industry and has been authorized by OSHA.

MWC: Instructional staff members are hired by the Program Director, consistent with requirements for conducting OSHA training. These are generally consistent with the MWC requirements for conducting interactive, participant-centered training as shown in policy on

qualifications (see PPM, Tab 19). As appropriate, the Competent Person policy is also used. (See PPM. Tab 29.) Qualifications for the program/topic to be facilitated by the trainer are documented at the Training Center. Annual recertification is conducted by the Program Director, as required by MWC policy on Annual Instructor Evaluation (see PPM, Tab 15).

Disaster Site Worker Outreach Training Program: A training program for disaster site workers who provide skilled support services (e.g., utility, demolition, debris removal, heavy equipment operation) or site cleanup services in response to natural and man-made disasters. Specifically, it is recognized that all workers at disaster sites need to be aware of the differences between the hazards on disaster sites and regular construction or demolition worksites; to know what procedures or PPE will protect them from those hazards; to know how to successfully decontaminate themselves; and to be able to inspect, don, and doff air-purifying respirators. Also, the program will make management and labor aware that pre-incident training is essential for ensuring disaster site worker safety and health. Training must be conducted by a trainer who has completed the OSHA Disaster Site Worker Trainer course.

MWC: The OSHA program is offered by MWC. Instructional staff members are hired by the Program Director, consistent with requirements for conducting OSHA training. These are generally consistent with requirements for conducting interactive, participant-centered training as shown in the MWC policy on qualifications (see PPM, Tab 19). Qualifications for the program/topic to be facilitated by the trainer are documented at the Training Center. As appropriate, the Competent Person policy is also used. (See PPM, Tab 29.) Annual recertification is conducted by the Program Director, as required by MWC policy on Annual Instructor Evaluation (see PPM, Tab 15).

Radiation: Training for Rad Worker I and Rad Worker II must be in accordance with DOE 10 CFR 835 and the DOE G 441.1-12 guide or other specific federal agency regulations or standards specific to worker radiation training should such be required for the specific project.

MWC: These programs are not offered by MWC.

Asbestos: The training program shall be accredited by the applicable state or regional EPA office authority for asbestos operations specified by that authority if the employer requires certified workers to engage in such operations. The EPA Model Accreditation Plan at 40 CFR 763 Subpart E, Appendix C or 40 CFR 763.93 (a)(1) are applicable per the OSHA asbestos regulations depending upon the classification of the work.

MWC: This program is not offered as part of MWC training unless required as part of a package of site worker qualifications requested by the employer. If offered in a package, the program must comply with the authorities cited.

Confined Spaces: Confined space recognition training is a requirement in the core HAZWOPER training programs. However, entry into confined spaces requires additional confined spaces training in accordance with 29 CFR 1910.146, Permit-Required Confined Spaces, or 29 CFR 1926 Subpart AA, Confined Spaces in Construction. Such shall be conducted by instructors

certified as competent to do so by the training director.

MWC: The OSHA program is offered by MWC. Instructional staff members are hired by the Program Director, consistent with requirements for conducting OSHA training. These are generally consistent with the requirements for conducting interactive, participant-centered training as shown in MWC policy on qualifications (see PPM, Tab 19). Qualifications for the program/topic to be facilitated by the trainer are documented at the Training Center. As appropriate, the Competent Person policy is also used. (See PPM, Tab 29.) Annual recertification is conducted by the Program Director, as required by MWC policy on Annual Instructor Evaluation (see PPM, Tab 15).

Infectious Diseases: Training shall be provided by an instructor certified or authorized as competent by the training director. While there is no national infectious disease standard, one may refer to the California Aerosol Transmissible Disease standard. The NIEHS pathogen safety data guide and training module (October 2016) are available on the National Clearinghouse *website*.

MWC*: A specific program is not provided by the MWC.*

Lead: Training shall be conducted by instructors certified as competent by the training director and shall be in accordance with 29 CFR 1910.1025 or 29 CFR 1926.62. If required by the employer, the lead training program shall be accredited by the applicable state authority.

MWC: Lead abatement is not offered as part of MWC training unless required as part of a package of site worker qualifications requested by the employer. If offered in a package, the program must comply with the authorities cited.

Training for those potentially affected by lead exposure in water in Flint MI is provided through a series of topical programs reviewed by NIEHS.

Bloodborne Pathogens: Training shall be provided by an instructor certified as competent by the training director and shall be in accordance with 29 CFR 1910.1030.

MWC: A specific program is not provided by the MWC. However, the topic is covered in various programs. Instructional staff members are hired by the Program Director, consistent with requirements for conducting interactive, participant-centered training as shown in the MWC policy on qualifications (see PPM, Tab 19). Qualifications for the program/topic to be facilitated by the trainer are documented at the Training Center. As appropriate, the Competent Person policy is also used. (See PPM, Tab 29.) Annual recertification is conducted by the Program Director, as required by MWC policy on Annual Instructor Evaluation (see PPM, Tab 15).

Lockout/Tagout: Training shall be provided by an instructor certified as competent by the training director and shall be in accordance with 29 CFR 1910.147, The Control of Hazardous

Energy.

MWC: The OSHA program is offered by MWC. Instructional staff members are hired by the Program Director, consistent with requirements for conducting OSHA training. These are generally consistent with the requirements for conducting interactive, participant-centered training as shown in the MWC policy on qualifications (see PPM, Tab 19). Qualifications for the program/topic to be facilitated by the trainer are documented at the Training Center. As appropriate, the Competent Person policy is also used. (See PPM, Tab 29.) Annual recertification is conducted by the Program Director, as required by MWC policy on Annual Instructor Evaluation (see PPM, Tab 15).

Process Safety Management: Training shall be conducted by an instructor certified as competent by the training director and shall be in accordance with 29 CFR 1910.119, 29 CFR 1926.64, or 40 CFR 68. This training may include lessons learned prevention training, hazard identification training, or process hazard analysis training.

MWC: No program has been developed by the MWC. However, the topic is covered in various programs. Instructional staff members are hired by the Program Director, consistent with requirements for conducting interactive, participant-centered training as shown in the MWC policy on qualifications (see PPM, Tab 19). Qualifications for the program/topic to be facilitated by the trainer are documented at the Training Center. As appropriate, the Competent Person policy is also used. (See PPM, Tab 29.) Annual recertification is conducted by the Program Director, as required by MWC policy on Annual Instructor Evaluation (see PPM, Tab 15).

Mold: "Guidelines for the Protection and Training of Workers Engaged in Maintenance and Remediation Work Associated with Mold" (May 2005) and "NIEHS Disaster Recovery: Mold Remediation Guidance, Health and Safety Essentials for Workers, Volunteers, and Homeowners" (May 2013) are available on the National Clearinghouse *website*.

MWC: MWC provides Mold Remediation training. Instructional staff are hired by the Program Director, consistent with institutional requirements and the MWC policy on qualifications consistent with requirements for conducting interactive, participant-centered training as shown in the MWC policy (see PPM, Tab 19). Qualifications for the program/topic to be facilitated by the trainer are documented at the Training Center. Annual recertification is conducted by the Program Director, as required by MWC policy on Annual Instructor Evaluation (see PPM, Tab 15).

Trenching and Shoring: Training in accordance with 29 CFR 1926 Subpart P, Excavations, shall be conducted by an instructor certified as competent by the training director.

MWC: The OSHA program is offered by MWC. Instructional staff members are hired by the Program Director, consistent with requirements for conducting OSHA training. These are generally consistent with requirements for conducting interactive, participant-centered training as shown in the MWC policy on qualifications (see PPM, Tab 19). Qualifications for the

program/topic to be facilitated by the trainer are documented at the Training Center. As appropriate, the Competent Person policy is also used. (See PPM, Tab 29.) Annual recertification is conducted by the Program Director, as required by MWC policy on Annual Instructor Evaluation (see PPM, Tab 15).

Tab 19
Trainer Qualifications
(1994, 2019, 2019)

Title: Trainer Qualifications documentation
Adopted January 11, 1994
Amended January 15, 2019
Amended July 22, 2019
See Tab 100 for Prior Policies

Training Center Directors will maintain documentation of the qualifications of each trainer on the Trainer Qualification Form or its equivalent.

DOCUMENTATION OF TRAINER QUALIFICATIONS--CONSORTIUM PROGRAMS

Name_____

Hazwoper Subject Area(s)

_____

Work Experience

Number of Years _____
Beginning Job Title

_____
Last (or current) Job Title

_____

Brief Description of Most Recent Job Responsibilities

_____

_____

_____

_____

Academic (Degree) Training Programs

Institution	Degree	From-To	Mo/yr

Non-Degree Programs
Program Title, Sponsor, Duration

Title	Sponsor	Duration
		days
		days
		days
		days
		days

Certifications/Certificates achieved

Certification/Certificate title Awarded by Date

Documentation of training

Date successfully completed course/module to be taught

Comment

Date successfully co-instructed with experienced mentor

Comment

Date successfully demonstrated adult education principle and adult learner-centered techniques

Comment

Tally since employment

annual program refresher (show content and date for each year employed)

annual professional development (show program and date)

annual evaluation (observed training, discussed participant feedback)

date: / / outcome: certified competent yes no

name of evaluator_____

Tab 20
Simulation Exercise Trainer Qualifications & Emergency Plan (1988, 2012 ,2019, 2019)

Title: Simulation Exercise Trainer Qualifications and Required Emergency Plan
Adopted 1988
Amended April 2012
Revised January 15, 2019
Revised July 22, 2019
See Tab 100 for Prior Policies

For exercises and simulation, specific trainer qualifications must be met in order to help assure safety of participants and facilitators. An Emergency Response Plan or Site Safety Plan must be in place for the activity. Appropriate documentation of the qualifications, emergency plan and a description of the activity is retained in the Program File for the training.

Trainer qualification considerations include:

- Staffing consistent with the Minimum Criteria requirements
- Medically cleared to use respiratory protection for training
- Experienced in use of all the PPE and procedures
- Skills in anticipation and recognition of possible hazards when using PPE
- Skills in anticipation and recognition of possible hazards during decon
- Documented training in recognizing heat and cold stress effects
- Working knowledge of the Emergency Response Plan

A plan for emergency situations includes:

- Safety briefing
- Emergency communication, including emergency stop
- At least one person certified in First Aid and CPR must be on site (does not have to be a trainer), unless EMS is onsite
- Emergency Medical Care alert system
- Site description/access
- Site description
- Physical Hazard analysis, including heat and cold or weather events
- Responsibilities of Facilitators and Participants/Accountability

Sample templates for use are shown on the following pages: Template 1 for 8HR, Template 2 for ERR, Template 3 for 24 and 40-hour programs. These are provided as guidance.

Template 1: Site Safety Plan for Hazardous Materials Site Worker Refresher

Location: _____ Date: _____

Lead Instructor: _____

Associate Instructor: _____

INCIDENT MANAGEMENT SYSTEM

Training Center Personnel Roles and Responsibilities

1. _____ will serve as the Site Supervisor (SS) and is responsible for implementing the Site Safety Plan.
2. _____ will serve as the Site Safety Officer (SSO) and is responsible for identifying and controlling hazards during all hands-on activities.

HAZARD CONTROL

The SS and SSO will take the following steps to control hazards during all hands-on activities.

- A written plan will be developed for conducting the response simulation. The SS and SSO will eliminate possible hazards from the site where the activity will occur or they will select a site that is free of foreseeable and potential hazards.
- The SS and SSO will ensure the use of the buddy system for all hands-on activities.
- The SS and SSO will instruct participants in the emergency signals that will be used during hands-on activities.
- Participants will wear the appropriate protective equipment based on the hazards that are being simulated.
- Participants will conduct themselves appropriate to the seriousness of the emergency response simulation.
- At least two entry/exit points will be available at the site.
- During periods of high ambient temperatures (>90 degrees F), the SSO will pay special attention to the potential for heat stress. The SSO will monitor all participants and assure adequate fluid in-take. A shady rest area will be available if the site is out-of-doors.

ZONING

- The exercise area will be zoned into three areas: hot zone, warm zone, and staging.
- The hot zone will be established at the simulated hazards.
- The warm zone will be designated for decontamination activities.
- Staging is where all participants are assigned when not performing a task in the other zones as assigned by the instructors.
- All zones will be clearly marked with cones and tape.
- No more than 4 participants per instructor will be allowed in the hot zone at one time.

ACCOUNTABILITY

To ensure accountability:

- All participants will sign in at the beginning of each day.
- Any visitors or observers will sign in and out during any hands-on activities.
- _____ will be responsible for taking the roster to the exercise area during the hands-on activities.
- Immediately after any emergency, the SS will conduct a roll call of all participants and visitors.
- Any personnel leaving the area must check out and provide time and date.
- All participants must sign out at the end of each day.

COMMUNICATION

- The SSO will use an air horn or other effective method as a warming device. When the air horn is sounded, all participants will assemble in the staging area for a personnel accountability report.
- A communication device will be available during hands-on activities to contact the appropriate author during an emergency. The SSO will verify the communication device is functioning properly before the simulation begins.

NOTIFICATION

The SS will arrange to contact the following should the need arise:

- For site Emergencies:

  _____
- Environmental:

  _____
- Local Fire Department:

  _____
- The SS will establish a procedure whereby instructors or participants can be contacted during the training program. For training conducted at this site, the phone number is: _____.
- Appropriate contact numbers will be posted at the site.

MEDICAL CARE

- At least one instructor will be certified in basic first aid and CPR.
- A basic first aid kit will be available in the exercise area and in the classroom.
- Participants will be advised to discuss any special medical concerns they may have with the lead instructor.

SAFETY BRIEFING

- The SS and SSO will conduct a safety briefing for participants prior to any hands-on activities.
- The safety briefing will cover the following areas: hazard control, zoning, accountability, communications, notification, and medical care.

Site Supervisor	Date
Site Safety Officer	Date

Template 2. Site Safety Plan for Emergency Response Refresher

Location: Date:

Lead Instructor:

Associate Instructor:

INCIDENT MANAGEMENT SYSTEM

Training Center Personnel Roles and Responsibilities:

1. _____will serve as the Incident Commander (IC) and is responsible for implementing the Site Safety Plan.
2. _____ will serve as the Site Safety Officer (SSO) and is responsible for identifying and controlling hazards during all hands-on activities.

HAZARD CONTROL

The IC and SSO will take the following steps to control hazards during all hands-on activities.

- A written plan will be developed for conducting the response simulation. The IC and SSO will eliminate possible hazards from the site where the activity will occur or they will select a site that is free of foreseeable and potential hazards.
- The IC and SSO will ensure the use of the buddy system for all hands-on activities.
- The IC and SSO will instruct participants in the emergency signals that will be used during hands-on activities.
- Participants will wear the appropriate protective equipment based on the hazards that are being simulated.
- Participants will conduct themselves appropriate to the seriousness of the emergency response simulation.
- At least two entry/exit points will be available at the site.
- During periods of high ambient temperatures (>90 degrees F), the SSO will pay special attention to the potential for heat stress. The SSO will monitor all participants and assure adequate fluid in-take. A shady rest area will be available if the site is out-of-doors.

ZONING

- The exercise area will be zoned into three areas: hot zone, warm zone, and staging.
- The hot zone will be established at the simulated hazards.
- The warm zone will be designated for decontamination activities.

- Staging is where all participants are assigned when not performing a task in the other zones as assigned by the instructors.
- All zones will be clearly marked with cones and tape.
- No more than 4 participants per instructor will be allowed in the hot zone at one time.

ACCOUNTABILITY

To ensure accountability:

- All participants will sign in at the beginning of each day.
- Any visitors or observers will sign in and out during any hands-on activities.
- _____ will be responsible for taking the roster to the exercise area during the hands-on activities.
- Immediately after any emergency, the SS will conduct a roll call of all participants and visitors.
- Any personnel leaving the area must check out and provide time and date.
- All participants must sign out at the end of each day.

COMMUNICATION

- The SSO will use an air horn or other effective method as a warming device. When the air horn is sounded, all participants will assemble in the staging area for a personnel accountability report.
- A communication device will be available during hands-on activities to contact the appropriate author during an emergency. The SSO will verify the communication device is functioning properly before the simulation begins.

NOTIFICATION

The IC will arrange to contact the following should the need arise:

- For site Emergencies: _____
- Environmental: _____
- Local Fire Department: _____
- The IC will establish a procedure whereby instructors or participants can be contacted during the training program. For training conducted at this site, the phone number is: _____.
- Appropriate contact numbers will be posted at the site.

MEDICAL CARE

At least one instructor will be certified in basic first aid and CPR.

- A basic first aid kit will be available in the exercise area and in the classroom.
- Participants will be advised to discuss any special medical concerns they may have with the lead instructor.

SAFETY BREIFING

- The IC and SSO will conduct a safety briefing for participants prior to any hands-on activities.
- The safety briefing will cover the following areas: hazard control, zoning, accountability, communications, notification, and medical care.

Site Supervisor	Date
Site Safety Officer	Date

Template 3. Emergency Response Plan for 24-hour or 40-hour program Simulation Exercise

EMERGENCY RESPONSE PLAN to use when conducting a simulated exercise

I. Introduction

A. The Simulation Exercise is a complex, multi-part exercise that integrates much of the classroom and small group training of the program into a hands-on simulation where attendees don PPE and perform tasks in Levels A, B and C protection.

B. As with any hands-on simulation or exercise there are numerous potential safety hazards (e.g. crushed by a falling drum, etc.). In order to ensure that instructors and attendees are aware of these potential hazards and how to react to them, the minimum safety requirements enumerated below must be implemented during every Simulation Exercise.

II. Safety Briefing

Before the Simulation Exercise is started all attendees will receive a safety briefing that covers the contents of this plan. (May want to have students sign a document to acknowledge receipt of briefing.) If in-suit radios are not used, a clear set of hand signals must be established, verified and used during the Simulation Exercise.

III. Emergency Communications

A. Emergency communications equipment (telephone or 2-way radio) will be present at the training site.

B. Communications equipment will be verified to be working before the Exercise begins.

C. Emergency telephone numbers and directions to appropriate health care facilities will be posted at each telephone or available on the cell phone of each instructor before the Simulation Exercise is initiated.

D. Addresses and maps to the nearest treatment center(s) should be posted in the event it is elected to transport a non-emergency case for treatment.

IV. Emergency Medical Treatment

A. At least one instructor present on the training site shall have completed at least the equivalent of the Red Cross Basic CPR course (8-hr).

B. At least one instructor present shall have current certification in the Red Cross Basic CPR Course or its equivalent (8-hr).

C. A standard First Aid Kit shall be available for use during the Simulation Exercise.

D. Use of standby EMS crew is preferable (if available) instead of the above.

V. Exercise Area Access

A. There shall be at least two entrance/exit points to the simulation site.

B. If the Simulation Exercise is conducted in a public area, a sign shall be posted identifying it as a training simulation.

VI. Physical Hazards

A. Heavy lifting and physical exertion will be required. Extra caution is required because of the additional stresses from PPE wear. Use of proper lifting technique is essential.

B. The bulky, heavy PPE increases potential for falling because it restricts range of motion and changes center of gravity. The extra weight also increases the risk of injury from a fall. These problems will be magnified if the simulation site is not on level ground. The need for caution and attention to balance and dexterity must be emphasized. Non-suited safety person must stay close to each suited person.

C. The task of handling and moving drums is always hazardous but even more so in PPE. All instructors and course attendees are required to wear safety shoes. Extra care and attention are required to protect the hand from pinching or crushing injuries.

VII. Temperature Stresses

A. Heat stress due to wearing heavy equipment and chemical protective suits must be a major concern in summer months and cannot be ignored even in cold weather.

B. All attendees should be familiar with heat stress from classroom presentations and be able to recognize it.

C. Adequate drinking water and electrolyte replacements (e.g. Gatorade) must always be available. At high heat index levels up to 2 liters per hour of liquid may be required by each person to maintain body fluid levels.
D. Air temperature and humidity should be monitored before suits are donned. This information is available from the National Weather Service or the local airport weather station.
E. The lead instructor must monitor the heat index and adjust work/rest times and breaks to insure everyone drinks enough fluid.
F. All instructors and attendees must ensure they drink adequate liquids to avoid dehydration.
G. Shaded break area is recommended.
H. Cool weather may present other hazards, for example --as a suit is removed, the trainee could chill from cold air hitting moist clothing or exposed skin.

VIII. Wearing Level A or B

A. Wearing Level A or B protection presents additional hazards which require attention:
    a. Weight- The additional weight increases stress and affects mobility and balance.
    b. Claustrophobia-Some people cannot handle being enclosed in a respirator or suit. They must be calmed and removed from the suit to restore normal breathing.
    c. Hyperventilation- The stress of suit or respirator causes some people to hyperventilate. They must be calmed and removed from the suit to restore normal breathing.
    d. Breathing rate-Under stress the breathing rate increases and the SCBA tanks will empty faster than the rated time. This means less work can be accomplished.
    e. Low Pressure Alarm-People wearing SCBAs should be reminded that the low-pressure alarm does not mean their air is gone, but there is 3 to 5

minutes remaining. This additional warning may help to prevent panic when someone's alarm sounds.

B. While wearing Level A or B protection during the Simulation Exercise, each course attendee shall have a "buddy" within arms and length, who is not suited and can react to and assist in any emergencies.

C. All SCBA facepieces will be cleaned/disinfected between users.

D. All Level A training suits should be sprayed with a disinfectant and towel (paper) dried between uses.

IX. Responsibilities

A. Instructors:

a. Must ensure that all issues listed in this plan have been discussed in class prior to the site simulation exercise.

b. Must ensure all participants are aware of the hazards, how to recognize and react to them.

c. Must have at least three instructors present at all times during the Simulation Exercise. (Four would be preferable) One shall be designated as lead and have overall responsibility for the exercise.

B. Attendees:

a. Be aware of the hazards covered in classroom training and the safety briefing.

b. Watch yourself and your fellow classmates to try to avoid the hazards.

X. Weather

A. In the event of adverse or inclement weather the lead instructor must determine if the Exercise can be conducted without endangering the attendees substantially beyond the inherent risks of the Exercise under the best conditions. Weather conditions to be considered include, but are not limited to excessive heat or cold, rain, snow and limited visibility.

B. Plans should exist for use of an alternate sheltered training location to avoid disruption due to weather.

XI. Emergency Stop

A. An emergency stop signal (e.g. hand-held air horns work well), separate and distinct from any signal used as a training stimulus will be used to terminate the exercise in the event of an emergency.

B. All personnel on site must know the emergency stop signal.

Tab 21
Outreach Report
(1997, 2012, 2022)

Title: Outreach Monthly Forms; Outreach Yearly Forms
Adopted 1997
Deleted April 26, 2012
See Tab 100 for Prior Policy

It was voted on and passed at the April 26, 2012 Steering Committee Meeting to delete this policy as information is no longer reported to NIEHS.

Adopted and re-opened tab 21 November 15, 2022

It was voted on and passed via Google poll on 11/15/22 by MWC center directors to re-open Tab 21 to use for the Informational Outreach report. This report is submitted to MWC and the data entered into the NIEHS DMS data system. Currently, data is due at the end of the program year. MWC directors have been asked to submit a report monthly, along with the monthly data report for consistency.

November 21, 2022: Updated Tab 21 to include the Information Outreach Template

2022-2023 DMS
Infor Outreach MAS

Tab 21 - Place holder page (contained the old Outreach Report in Word format)

Tab 22
Program Guidance Outline Programs (2021)

A vote was finalized on July 20, 2021 to remove Tab 22/Outline Programs from the Policy & Procedure manual. Tab 22 removed August 12, 2021.
See Tab 100 for Prior Policies

Summary:
3AW
IMS
ICS for WMD
ICA
8CS
8TR
PPE

Tab 23
Safety Plan for Performance Measure Refresher Programs (2000, 2004, 2019)

Title: Safety Plan for Performance Measure Refresher Programs
Adopted December 5, 2000
Amended October 5, 2004
Deleted January 15, 2019
See Tab 100 for Prior Policies

It was voted on and passed at the January 15, 2009 Steering Committee Meeting to incorporate this policy into the Simulation Excise (Tab 20); therefore the Policy is deleted.

Tab 24
Disbarment from Doing Business with Any Government Agency (2006, 2019)

Title: Disbarment from Doing Business with any Government Agency
Adopted January 6, 2006
Revised January 15, 2019
See Tab 100 for Prior Policy

Any Midwest Consortium member institution that is disbarred from doing business with the Government will provide written documentation of this determination within five business days of notification to the Principal Investigator and the Grants Management Office awarded NIEHS funds.

Tab 25
Payment to Consultants
(2008, 2019)

Title: Payment to Consultants
Adopted January 2008
Revised January 15, 2019
See Tab 11 for Prior Policy

Payment to Advisory Board Members is $500 per day. Payment to Technical Advisors is $500 per day.

Tab 26
Counting OSHA-sanctioned Courses (2018)

Title: Counting OSHA-sanctioned Courses
Adopted January 11, 2018

Beginning the date of passage of this policy by the Steering Committee, OSHA programming developed and controlled by the OSHA Training Institute (see https://www.osha.gov/dte/edcenters/index.html) can be reported for entry into the NIEHS data base by including the relevant information on the Monthly Report form if facilitator time is paid in whole or in part with NIEHS funds. Acknowledgement of NIEHS funding must be made by distributing it as part of the program materials in writing and stated verbally during the introduction. Sample language follows:

The Midwest Consortium supports presentation of this program under cooperative agreement number U45 ES 06184 from the National Institute of Environmental Health Sciences.

It is the responsibility of each Training Center Director to:

1. Comply with all OSHA requirements regarding program content and duration.

2. Adhere to all current, relevant OSHA requirements for instructor development, including continuing education. See for example: https://www.osha.gov/dte/outreach/program_requirements.pdf

3. Maintain any training or trainer records required by OSHA for the duration specified by OSHA.

4. Include programs on the Monthly Report form.

As the Midwest Consortium does not collect evaluation data on these programs, no evaluation reports are generated.

NOTE: This policy is void if the training program is reported as part of the deliverables of any local, state or federally funded training activity.

Tab 27
Code of Conduct (2019)

Title: Code of Conduct
Adopted July 22, 2019

The Midwest Consortium for Hazardous Waste Worker Training trainers and administrators are committed to ethical conduct throughout training delivery.

The MWC recognizes that many differences exist across the populations served, including race, cultural customs, religion, political views, sexual orientation and gender identity. We are committed to the following:

All participants will be treated with respect through the training process.

> This is monitored by training personnel and through participant feedback to an item rating 'treated with respect'. Whenever any participant reports 'disagree' or strongly disagree' identified when the evaluation data summary is reviewed by Administration, and the Program Director, the Program Director is responsible for reporting follow-back and documentation of actions to the Administration.
>
> See also introduction to Facilitator Guides.

Guidance to training center personnel includes:

> Assure trainer clothing is professional and devoid of words/logos that may offend
> Assure that there is no discrimination, belittling or harassment
> Omit all personal opinions regarding social issues during training and breaks
> Design dressout activities to eliminate inferred harassment or unwanted touching
> Conduct role playing to practice management of any trainer harassment by a participant

Where an institutional Code of Conduct is consistent with the MWC goal (and may include broader guidance), that Code will be used.

Tab 28
Information for employers for on-site training (2019)

Title: Information provided to employers when on-site training is required
Adopted: July 22, 2019

To aid the employer in tailoring on-site supervised training, the MWC Program director will provide a detailed initial course outline to the employer.

Tab 29
Competent Person Documentation (2019)

Title: Competent Person Documentation
Adopted January 15, 2019
See Tab 100 for Background

When training must be delivered by a competent person, the trainer will have specific skills relevant to identifying existing and predictable hazards in the surroundings or conditions which are unsanitary, hazardous, or dangerous to employees or trainees while conducting training activities and will be authorized by the Program Director to take prompt, sustained corrective measures to eliminate them.

Prior to assignment as a competent person, the Program Director or designee will document the training and/or experience and knowledge of the trainer for the topic and knowledge of the applicable standard. The trainer will follow MWC policies regarding medical clearance for training and the safety plan for the training arena. Continued designation as a competent person will be evaluated yearly.

The Program Director will maintain documentation of the evaluation process and results for each trainer.

Tab 30
Program Income (2019)

Title: Program Income
Adopted January 15, 2019
See Tab 100 for Background

Midwest Consortium training center Directors will closely monitor the program income account set up to segregate any dollars resulting from these training activities from other grant or client income streams and assure:

1. all funds are expended to support growth of the program as funded by NIEHS and
2. in-house institutional fiscal personnel are responsible for compliance with NIH policies.

Tab 31
In-Person Training during COVID-19 Pandemic (2020)

Title: In-Person Training during COVID-19 Pandemic

Training centers must do all that they reasonably can to minimize the risk of exposure to the SARS-CoV-2 coronavirus during in-person training sessions for the duration of the COVID-19 pandemic. Therefore, training centers shall implement the protective measures and room cleaning and disinfection guidance provided in the "Midwest Consortium COVID-19 Guidelines for In-Person Training" document included in this Tab.

The purpose of this guidance is to reduce the risk of COVID-19 exposure during an in-person hazardous materials training session. The guidance broadly describes protective measure responsibilities (before, during, and after training) for hosting facilities, facilitators/trainers, and training participants. It includes training safety measures, cleaning and disinfecting procedures, and what to do if a participant becomes ill upon arrival at the course.

Acknowledgements

The Midwest Consortium (MWC) developed this guidance under cooperative agreement number U45 ES 06184 from the National Institute of Environmental Health Sciences. The following Midwest Consortium training centers provided input and suggestions to this document:

Citizens Environment Alliance
Green Door Initiative
Environmental Management Institute at Ivy Technical College
Emergency Response Solutions International
Lakeshore Technical College
University of Minnesota
University of Tennessee

In-Person Training Notes

This document is intended to be used as "one page" guidance for each stakeholder during in-person training (company/host facility/training center, facilitator and participants). **It does not substitute or replace a comprehensive institutional COVID-19 safety plan at each Training Center.** In addition, this document is not intended to provide detailed step-by-step instructions for COVID-19 infection control procedures for hands-on exercises and use of personal protective equipment during training. Please review the MWC Procedure and Policy Manual for additional guidance before training commences.

MWC training centers should consult their own institutions/institutional policy for responsibility and liability, including a full review of health monitoring procedures in consideration of HIPAA requirements.

Every host facility must have a comprehensive infection prevention and control plan and be ready to answer questions from facilitators and participants using the facility.

Host Facility/Company Responsibility During Training: Building and Classroom Protective Measure Guidance

- **Provide** a specific entry/exit to the building for facilitators and participants (if possible, separate from staff/employees) with 6-foot distancing markers outside of the facility.
- **Assign** doors for entering/exiting the classroom to maintain 6-foot physical distancing. One-way markings should be used and clearly visible throughout the classroom.
- **Screen** all participants and facilitators entering the facility by monitoring temperature (if this is required by employer/host facility), and by asking them if they have any symptoms or if they have been exposed to someone who has tested positive to COVID-19 in the last 10 days. Any person showing any potential symptoms of COVID-19 or who has been potentially exposed must leave the facility immediately.
- **Identify** building restroom locations for facilitators and participants, separate from facility employees if possible. Provide soap, hot running water, and single use towels for frequent handwashing; ensure they are replenished throughout the training day. When soap and water are not available, provide alcohol-based hand sanitizers with greater than 60% ethanol or 70% isopropanol. Hand sanitizer stations should be placed throughout the building, classroom, and training area. Keeping restroom doors open (as available) and adding foot openings to doors is recommended.
- **Close** communal break rooms, employee storage areas, facility lounges, and other high traffic spaces to participants. Designate areas for participant lunch and breaks with appropriate physical distance, as well as "off limit" areas with clear markings.
- **Arrange** classroom chairs and tables to ensure participants maintain at least 6 feet between each person including the facilitator's teaching areas. Limit training sessions by available classroom size to maintain physical distance of 6 feet or greater. Facility-owned equipment (laptops, projectors, AV equipment, etc.) must be disinfected before/after use by participants.
- **Ventilate:** Ensure an adequate flow of fresh air circulating through the classroom by opening windows if possible. Consider implementing guidance on optimizing building ventilation to protect against COVID-19. Refer to the guidance from ASHRAE at https://www.ashrae.org/technical-resources/resources and maximize outside air circulating through the ventilation system. If classroom fans such as pedestal, desk or hard mounted fans are used, take steps to minimize air from fans blowing from one person directly to another.
- **Provide** participant meals as individually packaged "box lunches" (if offered). No buffet style meals or shared items (coffee pots, candy/snacks in a dish, etc.) should be offered. Participants should be encouraged to bring their own drinks/ refreshments/ lunch to training sessions; any provided beverages should be in individually sealed containers.

- **Disinfect** and clean classrooms, training areas, high contact surfaces, bathrooms, trash cans, and break/lunchroom areas before and during training duration. Ensure disinfection of the training area is conducted using: common EPA-registered household disinfectant; OR alcohol solution with at least 60% ethanol OR 70% isopropanol; OR diluted household bleach solutions if appropriate for the surface, example floors, walls, ceiling and windows). Training areas (surfaces, tables, chairs and bathrooms MUST be disinfected before and at the end of the training day. At the end of each training day, personnel emptying all trash must wear impervious (does not allow fluid to pass though) gloves.

Facilitator Responsibility During Training: Protective Measure Guidance

Facilitators and Participants must screen their health in advance of arriving at the training, including taking their temperature at home each day of training. A facilitator/ participant with temperature over 100° or answering "yes" to any of the following questions (sent in advance of training) should not access the classroom or enter the facility on the training day.

Have you been confirmed positive for COVID-19 with subsequent tests confirming current infection? **Yes or No** Have you been in close contact with any persons who have been confirmed positive for COVID-19? **Yes or No**	Are you currently experiencing, or recently experienced, any acute respiratory illness symptoms such as fever (over 100.4 degrees) cough, or shortness of breath? **Yes or No**	Have you been in close contact with any persons who have traveled and are also exhibiting acute respiratory illness symptoms? **Yes or No**

- **Brief** participants on new COVID-19 exposure controls/class expectations for conducting training safely before training begins. Distribute this information in writing to each participant.
- **Masks** must always be worn in the classroom by participants and facilitators except when eating/drinking. Face shields and possibly gloves must be worn at all participant workstations.
- **Assign** each participant an individual class workstation to maintain 6-foot physical distancing during teaching and exercise activities. Provide each participant with their own equipment, materials, and PPE – no sharing. Do not reuse training manuals and hard copies of reference materials (NIOSH Pocket Guide, ERG, handouts, etc.).
- **Place** your facilitator desk a minimum of 6 feet from the participants.
- **Limit** participation to 8 students and 1 facilitator depending on size of the classroom. Adjustment can be made if you have a larger classroom. Programs with more than 8 participants may use video web conferencing to broadcast to another room. If 6-foot physical distancing cannot be maintained in the training area, limit the duration of any breaking of physical distancing to 15 minutes maximum.
- **Collect** attendance verbally. Do not pass around sign-in sheets. A facilitator will sign-in each participant. Facilitator/Participants could also use mobile devices for attendance verification.
- **Test:** If tests, exams, assessments, etc. are administered, place answer sheets on desks before participants arrive. Participants grade themselves. Facilitators collect post-tests with gloved hands and place them in a sealed envelope. Paperwork should be quarantined for a minimum of 72 hours before being opened.
- **Disinfect:** Props/demonstration materials handled by the facilitator and participants should be disinfected throughout the class and at the end of each day. Reusable personal protective equipment (PPE) must be cleaned and disinfected after participant use with an EPA registered disinfectant cleaner and follow manufacturer recommendations for cleaning. PPE that is not reusable should be

disposed of properly. General cleaning should be done onsite and specialized equipment cleaning should be done off site with each piece of equipment labeled with who cleaned it, date and type of disinfectant used. Facilitators should store all cleaned (disinfected) equipment and tools at the end of the training.

- **Release** participants by seating rows to maintain physical distance. Remind participants to maintain a 6-foot distance between participants during dismissal. Complete and sign off a checklist of safety procedures used before departure.

Participant Responsibility During Training: Protective Measure Guidance

- **Familiarize** yourself with COVID-19 symptoms before attending your training:
    - Coughing
    - Fever
    - Shortness of breath, difficulty breathing
    - Early symptoms such as chills, repeated shaking with chills, muscle pain, sore throat, new loss of taste or smell, high temperature and headache.
    - If you develop a fever and/or any symptom of respiratory illness, such as cough or shortness of breath**, DO NOT COME TO THE TRAINING**! Call your healthcare provider right away. Similarly, if you are in close contact with someone showing these symptoms, call your healthcare provider immediately and do not come to class.
- **Don** a face mask/covering before entering the building and wear it during the training (if you do not have a face mask, one will be provided to you).
- **Sanitize** your hands thoroughly upon entering the facility with the alcohol-based hand sanitizer of at least 60% ethanol or 70% isopropanol that is provided.
- **Wash** your hands with soap and hot water for at least 20 seconds before going into the classroom or re-entering classroom. Do this before the training, during training, at the end of the day, and every time you use the restroom. When soap and running water are unavailable, use an alcohol-based hand sanitizer with at least 60% ethanol or 70% isopropanol. Follow appropriate respiratory etiquette in the classroom which includes:
    - Avoid touching your eyes, nose, and mouth with your hands.
    - Cover your mouth and nose with a tissue when you cough or sneeze. Throw any used tissues in the trash. If you don't have a tissue, cough or sneeze into your elbow, not your hands. Bend your arm, and make sure you sneeze into, not over, your elbow.
    - Wash your hands or use sanitizer on them after blowing your nose, coughing, or sneezing.
    - Maintain at least 6 feet physical distance while in shared spaces with other participants.
- **Bring** your own water bottle/beverage if possible. Consider bringing food from home; do not share your food with others or touch their food.
- **Avoid** physical contact with others in the classroom during training. No hand shaking, high-fives, or fist bumps. Maintain space of 6 feet from other participants and follow marked paths when entering/exiting the classroom and direct others to do so if needed.
- **Use** only your assigned PPE and training materials (i.e., manuals, pens, pencils, highlighters, books, notepads, etc.) provided during class**. Do not share your materials.**

- **Disinfect** and clean your PPE, tools, and equipment after each use. The facilitator will provide disinfecting materials to you and guidance to perform this operation safely. Consult your facilitator for proper techniques so all PPE items are cleaned thoroughly per training center and facility procedures.
    - **Exit** the classroom one person at a time and maintain a 6-foot distance from other participants. Deposit your trash in the container provided at the end of the class. Wash your hands with soap and water and/or apply sanitizer before leaving the facility for the day.

Facility Responsibility During In-Person Training
Room Cleaning and Disinfection Guidance

- **Train** all workers on current COVID-19 procedures for cleaning/disinfection and wearing appropriate personal protective equipment (PPE) **before** entering or cleaning a training room.
- **Disinfect** and clean office areas, classrooms, common areas, high contact surfaces, bathrooms, and other areas at least once per day and at the end of every training day. Employees performing cleaning will be issued proper PPE, as recommended by the Centers for Disease Control and Prevention.
- **Change** trash collected frequently by someone wearing impermeable gloves and face protection (mask, face shield, etc.). Empty trash containers at the end of every training session and each day.
- **Maintain** Safety Data Sheets of all disinfectants used on site. Make sure all containers are labeled properly according to GHS guidelines.
- **Determine** work scope for cleaning the training areas:
    - Identify workspace for cleaning (size up): room size, additional conference/ breakout rooms, room fixtures, room accessories, bathrooms, etc.
    - Determine the number of workers needed to clean the workplace.
    - Determine type of cleaning: Emergency cleaning, Routine high touch (restroom stalls and dispensers, toilet sinks and faucets, doorknobs, drinking fountains, and surface tables), or Supplemental cleaning (elevator buttons and handrails, vending machines, light switches, work surfaces, copiers, printers, and floor cleaning)
- **Review** disinfectants for use against SARS-CoV-2 (Environmental Protection Agency List N), disinfecting solutions, floor cleaning solutions, and PPE requirements needed for all agents.
- **Identify** method and disinfecting agents to be used.
- **Ensure** that any disinfection shall be conducted using one or more of the following:
    - Common EPA-registered disinfectant;
    - Alcohol solution with at least 60% ethanol or 70% isopropanol; or
    - Diluted household bleach solutions (these can be used if appropriate for the surface).
- **Clean** and disinfect the facility and classroom once per day and at the end of each training day to reduce transmission risks.
- **Provide** hand-washing stations/restroom facilities with hot water and soap for workers to use after job completion.

COVID-19 Exposure Guidance during Training*

*Refer to your institution and city, county, and state entities for specific COVID-19 policies and requirements.

- **If a participant or facilitator exhibits COVID-19 symptoms during training:**
  If a participant or facilitator exhibits COVID-19 symptoms during a training program, immediately notify the institution/facility/training center contact and the training center Program Director for follow-up.

- **Any Participant/Facilitator testing positive for COVID-19** must remain away from the facility and training center until they are symptom free for ten (10) days without the use of fever-reducing or other symptom-altering medicines (e.g., cough suppressants). The training center will require a participant or facilitator who reports to the facility/classroom with COVID-19 symptoms to return home immediately until they are symptom free for ten (10) days or per institutional/facility policies and local and state requirements.

MWC In-Person COVID-19 Training Guidance
Reference Links

- American Industrial Hygiene Association Guidance: https://aiha-assets.sfo2.digitaloceanspaces.com/AIHA/resources/Reopening-Guidance-for-General-Office-Settings_GuidanceDocument.pdf.
- American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) Resources for COVID-19: https://www.ashrae.org/technical-resources/resources
- CDC COVID-19 information: https://www.cdc.gov/coronavirus/2019-nCoV/index.html
- CDC guidance: Cleaning and Disinfecting Your Facility
- The Center for Construction Research and Training (CPWR): CPWR COVID-19 Resources
- NIEHS Worker Training Program COVID-19 resources: https://tools.niehs.nih.gov/wetp/covid19worker/
- NIOSH infographic "How to Properly Put on and Take off a Disposable Respirator": https://www.cdc.gov/niosh/docs/2010-131/pdfs/2010-131.pdf
- OSHA guidance on preparing workplaces for COVID-19: https://www.osha.gov/SLTC/covid-19/