

DEPARTMENT OF LICENSING AND REGULATORY AFFAIRS

DIRECTOR'S OFFICE

OCCUPATIONAL HEALTH STANDARDS

(By authority conferred on the director of the department of licensing and regulatory affairs by sections 14 and 24 of 1974 PA 154, and Executive Reorganization Order Nos. 1996-2, 2003-1, 2008-4, and 2011-4, MCL 445.2001, 445.2011, 445.2025, and 445.2030)

PART 432. HAZARDOUS WASTE OPERATIONS AND EMERGENCY RESPONSE

R 325.52101 Scope.

Rule 1. These rules prescribe the requirements for safety and health programs, training, medical surveillance, control methods, sanitation, and personal protective equipment for employees who are involved in hazardous waste operations and response to chemical emergencies.

History: 1991 AACCS.

R 325.52102 Application.

Rule 2. (1) These rules apply to all of the following operations when employees are exposed, or have a reasonable possibility of exposure, to safety or health hazards:

(a) Cleanup operations which are required by a governmental body, whether a federal, state, local, or other body, which involve hazardous substances, and which are conducted at uncontrolled hazardous waste sites. Such sites include any of the following:

(i) Sites on the environmental protection agency's (EPA) national priority site list (NPL).

(ii) Sites on state priority site lists.

(iii) Sites recommended for the EPA NPL.

(iv) Sites which are government-identified and are undergoing initial investigation conducted before the presence or absence of hazardous substances has been determined.

(b) Corrective actions that involve cleanup operations at sites covered by the resource conservation and recovery act of 1976 (RCRA), as amended, 42 U.S.C. §6901 et seq. "Congressional findings."

(c) Voluntary cleanup operations at sites recognized by federal, state, local, or other governmental bodies as uncontrolled hazardous waste sites.

(d) Operations which involve hazardous wastes and which are conducted at treatment, storage, and disposal (TSD) facilities regulated by 40 C.F.R. parts 264 and 265 pursuant to RCRA, by agencies under agreement with EPA to implement RCRA regulations.

(e) An emergency response operation that involves the release of, or a substantial threat of the release of, hazardous substances, without regard to the location of the hazard.

(2) All of the requirements of the Michigan occupational health and safety act (MIOSHA) occupational health rules and occupational safety rules for both general industry and construction apply, pursuant to their terms, to operations specified in subrule (1) of this rule, whether mentioned in these rules or not. Where there is a conflict or overlap between these and other rules, the requirement that is more protective of employee health and safety shall apply.

(3) All of these rules, except for R 325.52129 to R 325.52135, apply to hazardous substance cleanup operations covered by subrule (1)(a), (b), and (c) of this rule.

(4) R 325.52129 applies to operations at TSD facilities covered by subrule (1)(d) of this rule. All of the following apply to this subrule:

(a) R 325.52129 applies to any TSD operation which is regulated by 40 C.F.R. parts 264 and 265 or by Michigan law authorized under RCRA and which is required to have a permit or interim status from EPA pursuant to 40 C.F.R. §270.1 or from a Michigan agency pursuant to RCRA.

(b) Employers who are not required to have a permit or interim status because they are conditionally exempt small quantity generators under 40 C.F.R. §261.5 or are generators who qualify under 40 C.F.R. §262.34 for exemptions from regulation under 40 C.F.R. parts 264, 265, and 270 need not comply with subrules R 325.52129 (1) to (8). Excepted employers who are required by the EPA or a Michigan agency to have their employees engage in emergency response or who direct their employees to engage in emergency response shall comply with R 325.52129(9). Excepted employers who are not required to have employees engage in emergency response, who direct their employees to evacuate in the case of emergencies, and who meet the requirements of R 325.52129 (9)(a) and (b) are exempt from the rest of R 325.52129.

(c) If an area is used primarily for treatment, storage, or disposal, any emergency response operation in that area shall be in compliance with R 325.52129(9). In other areas that are not used primarily for treatment, storage, or disposal, any emergency response operation shall be in compliance with R 325.52130 to R 325.52135. Compliance with R 325.52130 to R 325.52135 shall be deemed to be in compliance with R 325.52129(9).

(5) An emergency response operation which involves the release of, or a substantial threat of a release of, hazardous substances and which is not covered by subrule (1)(a) to (d) of this rule shall be in compliance with R 325.52130 to R 325.52135.

History: 1991 AACCS; 1998-2000 AACCS; 2014 AACCS.

Editor's Note: An obvious error in R 325.52102 was corrected at the request of the promulgating agency, pursuant to Section 56 of 1969 PA 306, as amended by 2000 PA 262, MCL 24.256. The rule containing the error was published in *Michigan Register*, 2014 MR 6. The memorandum requesting the correction was published in *Michigan Register*, 2014 MR 6.

R 325.52102a Adopted and referenced standards.

Rule 2a. (1) "NIOSH Recommendations for Occupational Health Standards," 1986 edition, is adopted by reference in these rules. This standard is available from the National Institute for Occupational Safety and Health, Publications Dissemination Division, Cincinnati, Ohio 45226, or via the internet at website: www.cdc.gov/niosh, at no cost as of the time of adoption of these rules.

(2) “Threshold Limit Values and Biological Exposure Indices for 1990-1991,” 1990 edition, is adopted by reference in these rules. The ACGIH publication is available from the American Conference of Governmental Industrial Hygienist, 1330 Kemper Meadow Drive, Cincinnati, Ohio 45240-4148, or via the internet at website: www.acgih.org, at a cost at the time of adoption of these rules is \$25.00.

(3) The following regulations from the Code of Federal Regulations are adopted by reference in these rules. Copies of these regulations are available from the U.S. Government Printing Office, via the internet at website www.gpoaccess.gov, at no charge as of the time of adoption of these rules.

(a) 40 C.F.R. §261.3, Identification and Listing of Hazardous Waste, “Definition of Hazardous Waste.”

(b) 42 C.F.R. Part 84 “Approval of Respiratory Protective Devices.”

(c) 49 C.F.R. §171.8, Definitions and Abbreviations “General Information, Regulations, and Definitions.”

(d) 49 C.F.R. §172.101, General Information, Regulations, and Definitions “Hazardous Materials Table, Special Provisions, Hazardous Materials Communications, Emergency Response Information, Training Requirements, and Security Plans.”

(e) 49 C.F.R. Part 173, Shippers – General Requirements for Shipments and Packagings “Pipeline and Hazardous Materials Safety Administration, Department of Transportation.”

(f) 49 C.F.R. Part 178, Specifications for Packagings “Pipeline and Hazardous Materials Safety Administration, Department of Transportation.”

(g) 42 U.S.C. §9601, “Comprehensive Environmental Response Compensation and Liability Act (CERCLA).”

(4) The standards adopted in subrules (1) to (3) of this rule are also available for inspection at the Department of Licensing and Regulatory Affairs, MIOSHA Standards Section, 7150 Harris Drive, P.O. Box 30643, Lansing, Michigan, 48909-8143.

(5) Copies of the standards adopted in subrules (1) to (3) of this rule may be obtained from the publisher or may also be obtained from the Department of Licensing and Regulatory Affairs, MIOSHA Standards Section, 7150 Harris Drive, P.O. Box 30643, Lansing, Michigan, 48909-8143, at the cost charged in this rule, plus \$20.00 for shipping and handling.

(6) The following Michigan occupational safety and health standards are referenced in these rules. Up to 5 copies of these standards may be obtained at no charge from the Michigan Department of Licensing and Regulatory Affairs, MIOSHA Standards Section, 7150 Harris Drive, P.O. Box 30643, Lansing, Michigan, 48909-8143 or via the internet at website: www.michigan.gov/mioshastandards. For quantities greater than 5, the cost, as of the time of adoption of these rules, is 4 cents per page.

(a) Construction Safety Standard Part 18 “Fire Protection and Prevention,” R 408.41801 to R 408.41884.

(b) General Industry Safety Standard Part 6 “Fire Exits,” R 408.10601 to R 408.10697.

(c) General Industry Safety Standard Part 73 “Fire Brigades,” R 408.17301 to R 408.17320.

(d) Occupational Health Standard Part 301 “Air Contaminants,” R 325.51101 to 325.51108.

(e) Occupational Health Standard Part 380 “Occupational Noise Exposure,” R 325.60101 to 325.60131.

(f) Occupational Health Standard Part 381 “Ionizing Radiation,” R 325.60601a to 325.60618.

(g) Occupational Health Standard Part 430 “Hazard Communication,” R 325.77001 to 325.77003.

(h) Occupational Health Standard Part 451 “Respiratory Protection,” R 325.60051 to 325.60052.

(i) Occupational Health Standard Part 470 “Employee Medical Records and Trade Secrets,” R 325.3451 to R 325.3476.

(j) Occupational Health Standard Part 474 “Sanitation,” R 325.47401 to R 325.47427.

(k) Occupational Health Standard Part 490 “Permit-Required Confined Spaces,” R 325.63001 to R 325.63049.

(l) Occupational Health Standard Part 529 “Welding, Cutting and Brazing,” R 325.52901 to R 325.52908.

(7) Appendices A, B, C, and D to these rules are informational only and are not intended to create any additional obligations or requirements not otherwise imposed or to detract from any established obligations or requirements.

History: 2014 AACCS.

R 325.52103 Definitions.

Rule 3. As used in these rules:

(1) “Buddy system” means a system of organizing employees into work groups in such a manner that each employee of the work group is designated to be observed by a least 1 other employee in the work group. The purpose of the buddy system is to provide rapid assistance to employees in the event of an emergency.

(2) “Cleanup operation” means an operation where hazardous substances are removed, contained, incinerated, neutralized, stabilized, cleared up, or in any other manner processed or handled with the ultimate goal of making the site safer for people and the environment.

(3) “Decontamination” means the removal of hazardous substances from employees and their equipment to the extent necessary to prevent the occurrence of foreseeable adverse health effects.

(4) “Emergency response” or “responding to emergencies” means a response effort by employees from outside the immediate release area or by other designated responders, for example, mutual-aid groups or local fire departments, to an occurrence which results, or is likely to result, in an uncontrolled release of a hazardous substance. Responses to incidental releases of hazardous substances where the substance can be absorbed, neutralized, or otherwise controlled at the time of release by employees in the immediate release area or by maintenance personnel are not considered to be emergency responses within the scope of these rules. Responses to releases of hazardous substances where there is no potential safety or health hazards, such as, fire, explosion, or chemical exposure, are not considered to be emergency responses.

(5) “Facility” means any of the following:

- (a) A building.
- (b) A structure.
- (c) An installation.
- (d) Equipment.
- (e) A pipe or pipeline, including a pipe into a sewer or publicly owned treatment works.
- (f) A well.
- (g) A pit.
- (h) A pond.
- (i) A lagoon.
- (j) An impoundment.
- (k) A ditch.
- (l) A storage container.
- (m) A motor vehicle.
- (n) Rolling stock.
- (o) Aircraft.
- (p) A site or area where a hazardous substance has been deposited, stored, disposed of, placed, or otherwise caused to be located.
- (q) Facility does not mean any consumer product in consumer use or any waterborne vessel.

(6) “Hazardous material response (HAZMAT) team” means an organized group of employees which is designated by the employer and which is expected to perform work to handle and control actual or potential leaks or spills of hazardous substances that may require coming into close proximity to the substance. The team members perform responses to releases or potential releases of hazardous substances to control or stabilize a release or potential release. A HAZMAT team is not a fire brigade nor is a typical fire brigade a HAZMAT team. A HAZMAT team, however, may be a separate component of a fire brigade or fire department.

(7) “Hazardous substance” means any of the following substances, exposure to which results or may result in adverse effects on the health and safety of employees:

(a) Any substance defined under section 103(14) of the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) 42 U.S.C. §9601, which is adopted in R 325.52102a.

(b) Any biological agent and other disease-causing agent which, after release into the environment and upon exposure, ingestion, inhalation, or assimilation into any person, either directly from the environment or indirectly by ingestion through food chains, will, or may reasonably be anticipated to, cause any of the following in such persons or their offspring:

- (i) Death.
- (ii) Disease.
- (iii) Behavioral abnormalities.
- (iv) Cancer.
- (v) Genetic mutation.
- (vi) Physiological malfunctions, including malfunctions in reproduction.
- (vii) Physical deformations in such persons or their offspring.

(c) Any substance that is listed by the United States Department of Transportation as a hazardous material under 49 C.F.R. §172.101 “Hazardous Materials Table, Special

Provisions, Hazardous Materials Communications, Emergency Response Information, Training Requirements, and Security Plans,” and appendices, which are adopted in R 325.52102a.

(d) Hazardous waste.

(8) “Hazardous waste” means either of the following

(a) A waste or combination of wastes as defined in 40 C.F.R. §261.3 “Definition of Hazardous Waste,” which are adopted in R 325.52102a.

(b) Those substances defined as hazardous waste in 49 C.F.R. §171.8 “General Information, Regulations, and Definitions.” which are adopted in R 325.52102a.

(9) “Hazardous waste operation” means any operation to which these rules apply according with R 325.52102.

(10) “Hazardous waste site” or “site” means any facility or location at which hazardous waste operations take place and to which these rules apply.

(11) “Health hazard” means a chemical or a pathogen where acute or chronic health effects may occur in exposed employees. It also includes stress due to temperature extremes. The term health hazards includes chemicals that are classified in accordance with the Occupational Health Standard Part 430 “Hazard Communication,” which is referenced in R 325.52102a, as posing one of the following hazardous effects:

(a) Acute toxicity, any route of exposure.

(b) Skin corrosion or irritation.

(c) Serious eye damage or eye irritation.

(d) Respiratory or skin sensitization.

(e) Germ cell mutagenicity.

(f) Carcinogenicity.

(g) Reproductive toxicity.

(h) Specific target organ toxicity, single or repeated exposure.

(i) Aspiration toxicity or simple asphyxiant.

Note: See Occupational Health Standard Part 430 “Hazard Communication,” which is referenced in R 325.52102a, Appendix A “Health Hazard Criteria, Mandatory,” for the criteria for determining if a chemical is classified as a health hazard.

(12) “IDLH” or “immediately dangerous to life or health” means an atmospheric concentration of any toxic, corrosive, or asphyxiant substance that poses an immediate threat to life, would cause irreversible or delayed adverse health effects, or would interfere with an person’s ability to escape from a dangerous atmosphere.

(13) “Oxygen deficiency” means that concentration of oxygen, by volume, in the atmosphere below which air supplying respiratory protection shall be provided. An oxygen deficiency exists in atmospheres where the percentage of oxygen, by volume, is less than 19.5%.

(14) “Permissible exposure limit” or “PEL” means the inhalation or dermal permissible exposure limits of chemical substances specified or referenced in the air contaminants standard tables of Occupational Health Standard Part 301 “Air Contaminants for General Industry” which is referenced in R 325.52102a.

(15) “Postemergency response” means that portion of an emergency response which is performed after the immediate threat of a release has been stabilized or eliminated and cleanup of the site has begun. If postemergency response is performed by an employer’s own employees as a continuation of initial emergency response, it is considered to be part

of the initial response and not postemergency response. However, if a group of an employer's own employees that is separate from the group that provides the initial response performs the cleanup operation, the separate group of employees is considered to be performing postemergency response and is subject to R 325.52135.

(16) "Published exposure level" means the exposure limits specified in the publication entitled "NIOSH Recommendations for Occupational Health Standards," 1986 edition, which are adopted in R 325.52102a, or, if no limit is specified, the threshold limit values published by the American Conference of Governmental Industrial Hygienist (ACGIH) in the publication entitled "Threshold Limit Values and Biological Exposure Indices for 1990-1991," 1990 edition, which are adopted in R 325.52102a.

(17) "Qualified person" means a person who has specific training, knowledge, and experience in the area for which the person has responsibility and the authority to control operations.

(18) "Site safety and health supervisor" or "official" means an individual who is located on a hazardous waste site, who is responsible to the employer, and who has the authority and knowledge necessary to implement the site safety and health plan and verify compliance with applicable safety and health requirements.

(19) "Small quantity generator" means a generator of hazardous waste who, in any calendar month, generates not more than 1,000 kilograms (2,205 pounds) of hazardous waste.

(20) "Uncontrolled hazardous waste site" means an area where an accumulation of hazardous wastes creates a threat to the health and safety of individuals or the environment, or both. Such sites can be on public lands or on privately owned property. Normal operations at TSD sites are not included in this definition.

History: 1991 AACCS; 1998-2000 AACCS; 2014 AACCS.

R 325.52104 Safety and health program.

Rule 4. (1) An employer shall develop and implement a written safety and health program for its employees who are involved in hazardous waste operations. The program shall be designed to identify, evaluate, and control safety and health hazards and provide for emergency responses for hazardous waste operations.

(2) A safety and health program that is developed and implemented to meet other federal, state, or local regulations is acceptable to meet the requirements of subrule (1) of this rule if the program includes, or is modified to include, the topics required by this rule.

(3) The written safety and health program shall include all of the following topics:

(a) An organizational structure.

(b) A comprehensive work plan.

(c) A site-specific safety and health plan which need not repeat the standard operating procedures required by subdivision (f) of this subrule.

(d) The safety and health training program.

(e) The medical surveillance program.

(f) The employer's standard operating procedures for safety and health.

(g) Any necessary interface between the general program and site-specific activities.

(4) All of the following provisions apply to the organizational structure section of the program:

(a) The organizational structure section shall establish the specific chain of command and specify the overall responsibilities of supervisors and employees. It shall provide for all of the following:

(i) A general supervisor who has the responsibility and authority to direct all hazardous waste operations.

(ii) A site safety and health supervisor who has the responsibility and authority to develop and implement the site safety and health plan and verify compliance.

(iii) All other personnel needed for hazardous waste site operations and emergency response and their general functions and responsibilities.

(iv) The lines of authority, responsibility, and communication.

(b) The organizational structure section shall be reviewed and updated as necessary to reflect the current status of waste site operations.

(c) The original organizational structure section and any changes shall be made available to all affected employees.

(5) The comprehensive work plan section of the program shall address the tasks and objectives of site operations and the logistics and resources required to accomplish those tasks and objectives and shall provide for all of the following:

(a) Address anticipated cleanup activities, as well as normal operating procedures.

(b) Define work tasks and objectives and identify the methods for accomplishing those tasks and objectives.

(c) Establish personnel requirements for implementing the plan.

(d) Provide for the implementation of the training required in R 325.52109 to R 325.52112.

(e) Provide for the implementation of the required informational programs required in R 325.52120.

(f) Provide for the implementation of the medical surveillance program described in R 325.52113 to R 325.52116.

(6) The site-specific safety and health plan section of the safety and health program shall be available on the site for inspection by employees, their designated representatives, and Michigan occupational safety and health program (MIOSHA) personnel. The plan section shall address the safety and health hazards of each phase of site operation and include the requirements and procedures for employee protection. The site-specific safety and health plan shall provide for all of the following:

(a) A safety and health risk or hazard analysis for each site task and operation found in the work plan.

(b) Employee training assignments to assure compliance with R 325.52109 to R 325.52112.

(c) Personal protective equipment to be used by employees for each of the site tasks and operations being conducted as required by the personal protective equipment program in R 325.52118.

(d) Medical surveillance requirements in accordance with the program in R 325.52113 to R 325.52116.

(e) The frequency and types of air monitoring and personal monitoring and the environmental sampling techniques and instrumentation to be used, including the

methods and schedule of maintenance and calibration of monitoring and sampling equipment.

(f) Site control procedures in accordance with the site control program required in R 325.52108.

(g) Decontamination procedures in accordance with R 325.52124.

(h) An emergency response plan that meets the requirements of R 325.52125 for safe and effective response to emergencies, including the necessary personal protective equipment and other equipment.

(i) Confined space entry procedures.

(j) A spill containment program which meets the requirements of R 325.52121(2)(g) shall be included where appropriate.

(k) Preentry briefings to be held before initiating any site activity and at such other times as necessary to ensure that employees are apprised of the site safety and health plan and that this plan is being followed. The information and data from site characterization and analysis work required pursuant to R 325.52107 shall be used to prepare and update the site safety and health plan and preentry briefings.

(l) Inspections conducted by the site safety and health supervisor, or designee, as necessary to determine the effectiveness of the site safety and health plan. Any deficiencies in the effectiveness of the site safety and health plan shall be corrected by the employer.

(7) The written safety and health program required by this rule shall be made available to employees and their representatives, to contractors and subcontractors involved in the hazardous waste operation, and to Michigan occupational safety and health program (MIOSHA) personnel.

History: 1991 AACCS; 2014 AACCS.

R 325.52105 Site excavation.

Rule 5. Site excavations that are created during initial site preparation or during hazardous waste operations shall be shored or sloped to prevent accidental collapse and shall be conducted in accordance with the provisions of R 408.40901 et seq. of the Michigan Administrative Code (construction safety rules).

History: 1991 AACCS.

R 325.52106 Contractors and subcontractors; notification by employer of procedures and hazards.

Rule 6. An employer who retains contractor or subcontractor services for work in hazardous waste operations shall, before commencement of those services, inform the contractors, subcontractors, or their representatives of the site emergency response procedures and any potential fire, explosion, health, safety, or other hazards of the hazardous waste operation that have been identified by the employer, including those identified in the employer's information program.

History: 1991 AACCS.

R 325.52107 Site characterization and analysis.

Rule 7. (1) Hazardous waste sites shall be evaluated in accordance with the provisions of this rule to identify specific site hazards and to determine the appropriate safety and health control procedures needed to protect employees from the identified hazards.

(2) A preliminary evaluation of the site's characteristics shall be performed before site entry by a qualified person to aid in the selection of appropriate employee protection methods. Immediately after initial site entry, a more detailed evaluation of the site's characteristics shall be performed by a qualified person to further identify hazards and to further aid in the selection of appropriate engineering controls and personal

protective equipment for the tasks to be performed.

(3) All suspected conditions that may pose inhalation or skin absorption hazards that are immediately dangerous to life or health (IDLH) or other conditions that may cause death or serious harm shall be identified during the preliminary survey and evaluated during the detailed survey. Examples of such conditions include the following:

- (a) Potential confined space entry.
- (b) Potential explosive or fire situations.
- (c) Visible vapor clouds.
- (d) Areas where biological indicators, such as dead animals or vegetation, are located.

(4) All of the following information, to the extent available, shall be obtained by the employer before allowing employees to enter a site:

- (a) The location and approximate size of the site.
- (b) A description of the response activity or job task to be performed.
- (c) The planned duration of employee activity.
- (d) Site topography.
- (e) Site accessibility by air and roads.
- (f) Pathways for hazardous substance dispersion.
- (g) The status and capabilities of emergency response teams that would provide assistance to on-site employees at the time of an emergency.
- (h) The hazardous substances that are expected at the site and their health hazards and chemical and physical properties.

(5) Personal protective equipment (PPE) shall be provided and used during initial site entry in accordance with all of the following requirements:

(a) Based upon the results of the preliminary site evaluation, PPE which will provide protection to a level of exposure below permissible exposure limits and published exposure levels for known or suspected hazardous substances and health and safety hazards shall be selected and used during initial site entry.

(b) If positive-pressure, self-contained breathing apparatus is not used as part of the initial entry ensemble, an escape, self-contained breathing apparatus with not less than a 5-minute supply of air shall be carried by employees or kept available at their immediate work stations.

(c) If the preliminary site evaluation does not produce sufficient information to identify the hazards or suspected hazards of the site, then both of the following shall be used:

(i) PPE that provides protection to level B shall be provided as a minimum protection (See R 325.52137 for availability of appendix B to these rules pertaining to level B protective equipment).

(ii) Direct reading instruments shall be used as appropriate for identifying IDLH conditions.

(d) PPE which is appropriate to protect employees from identified site hazards shall be selected and used in accordance with the provisions of R 325.52118.

(6) All of the following monitoring shall be conducted during initial site entry when the site evaluation produces information that shows the potential for ionizing radiation or IDLH conditions or when the site information is not sufficient to rule out such conditions:

(a) Monitoring for hazardous levels of ionizing radiation with direct-reading instruments.

(b) Monitoring the air with appropriate direct-reading test equipment for IDLH and other conditions that may cause death or serious harm, such as combustible or explosive atmospheres, oxygen deficiency, or toxic substances.

(c) Visually observe for signs of actual or potential IDLH or other dangerous conditions.

(7) Once the presence and concentrations of specific hazardous substances and health hazards have been established, the risks associated with these substances and hazards shall be identified. Employees who will be working on the site shall be informed of any risks that have been identified. In situations covered by the hazard communication standard incorporated pursuant to the provisions of section 14a of Act No. 154 of the Public Acts of 1974, as amended, being S408.1014a of the Michigan Compiled Laws, training required by that standard need not be duplicated. All of the following risks shall be considered:

(a) Exposures greater than a permissible exposure limit or a published exposure level.

(b) IDLH concentrations.

(c) Potential skin absorption and irritation sources.

(d) Potential eye irritation sources.

(e) Explosion sensitivity and flammability ranges.

(8) Any information concerning the chemical, physical, and toxicological properties of each substance known or expected to be present on-site that is available to the employer and relevant to the duties of an employee shall be made available to all affected employees before the commencement of their work activities.

(9) An ongoing air monitoring program that is in compliance with the provisions of R 325.52119 shall be implemented after site characterization has determined that the site is safe for the start-up of operations.

History: 1991 AACCS.

R 325.52108 Site control.

Rule 8. (1) Appropriate site control procedures to control employee exposure to hazardous substances shall be implemented before cleanup work begins.

(2) The site control procedures required as an element of the site-specific safety and health plan for protecting employees shall be developed during the planning stages of a hazardous waste operation and modified as necessary when new information becomes available.

(3) The site control procedures shall include all of the following:

- (a) A site map.
- (b) Site work zones.
- (c) A buddy system.
- (d) Site communications, including emergency alerting.
- (e) Standard operating procedures or safe work practices.
- (f) Identification of the nearest medical assistance.

History: 1991 AACCS.

R 325.52109 Training generally.

Rule 9. (1) All employees, supervisors, and management personnel who work at a hazardous waste site where cleanup operations are underway shall be trained and have supervised on-the-job field experience as required by this rule, R 325.52110, and R 325.52111 before they are permitted to engage in hazardous waste operations that could expose them to hazardous substances or safety or health hazards. All personnel shall also receive refresher training as required pursuant to R 325.52112.

(2) Employees and supervisors shall not participate in field activities until they have been trained at the level required by their job functions and responsibilities.

(3) Training shall cover all of the following topics:

- (a) The names of personnel and alternates who are responsible for site safety and health.
- (b) Safety, health, and other hazards present on the site.
- (c) Use of personal protective equipment.
- (d) Work practices which will minimize the risks of hazards.
- (e) The safe use of engineering controls and equipment on the site.
- (f) Medical surveillance requirements, including the recognition of symptoms and signs which might indicate overexposure to hazards.
- (g) The contents of the site-specific safety and health plan required pursuant to R 325.52104(6)(g) to (j).

(4) Employees who may respond to emergency situations at hazardous waste sites shall be trained in the proper response procedures for, and protection from, hazardous exposures.

History: 1991 AACCS; 2014 AACCS.

R 325.52110 Initial training.

Rule 10. (1) General site workers and supervisory personnel who are assigned to tasks that involve exposure or potential exposure to hazardous substances, health hazards, or safety hazards shall receive the training specified in both of the following provisions:

- (a) Forty hours of training conducted away from the hazardous waste site.

(b) Three days of field experience under the direct supervision of a trained and experienced supervisor.

(2) Workers who are on a site only occasionally for a specific and limited task and who are unlikely to be exposed above permissible and published exposure limits shall receive the training specified in both of the following provisions:

(a) Twenty-four hours of off-site training.

(b) One day of field experience under the direct supervision of a trained and experienced supervisor.

(3) Regular site workers who work in areas which have been monitored and fully characterized as indicating that exposures are below permissible exposure limits and published exposure levels, in areas where respirators are not required, or in areas where the site characterization indicates that health hazards do not exist or that the possibility of an emergency developing does not exist shall receive the training specified in both of the following provisions:

(a) Twenty-four hours of off-site training.

(b) One day of field experience under the direct supervision of a trained and experienced supervisor.

(4) Workers who have received 24 hours of training, who are covered by the provisions of subrules (2) and (3) of this rule, and who become general site workers or who are required to wear respirators shall receive an additional 16 hours of training and 2 days of supervised field experience to equal the requirements of subrule (1) of this rule.

(5) Management and supervisory personnel who work on-site shall receive the same amount of training and supervised field experience as their subordinates as specified in subrules (1), (2), and (3) of this rule, plus, at the time of job assignment, not less than 8 additional hours of specialized training on appropriate topics, such as the following:

(a) Employer's safety and health program.

(b) Employee training programs.

(c) Personal protective equipment program.

(d) Spill containment.

(e) Health hazard monitoring procedures and techniques.

History: 1991 AACCS.

R 325.52111 Training qualifications and certification.

Rule 11. (1) Trainers shall be qualified to instruct employees about the subject matter that is being presented in training. Such trainers shall have satisfactorily completed a training program for teaching the subjects they teach or shall possess the academic credentials and instructional experience necessary for teaching the subjects. Instructions shall demonstrate competent instructional skills and knowledge of the applicable subject matter.

(2) Employees and supervisors who have received and successfully completed the training and field experience specified in R 325.52109 and R 325.52110 shall be certified by their instructors or training supervisors as having successfully completed the necessary training. A written certificate shall be given to

each person who is certified. Any person who has not been certified or who does not meet the requirements of R 325.52112(2) shall be prohibited from engaging in hazardous waste operations.

History: 1991 AACCS.

R 325.52112 Refresher and equivalent training.

Rule 12. (1) All employees who are required to be trained pursuant to the provisions of R 325.52109(1) shall also receive 8 hours of refresher training annually on the topics specified in R 325.52109(3) and R 325.52110(5). Refresher training also shall include a critique of the past year's incidents that can serve as training examples for future work situations.

(2) An employer who can show, by documentation or certification, that an employee's work experience or training has resulted in training equivalent to the training required by the provisions of R 325.52109 and R 325.52110 shall not be required to provide the initial training requirements specified in R 325.52110 to such employee. However, certified employees or employees with equivalent training who are new to a site shall receive appropriate, site specific training before site entry and have appropriate supervised field experience at the new site. Equivalent training includes any academic training or the training that existing employees might have already received from actual hazardous waste site work experience.

History: 1991 AACCS.

R 325.52113 Medical surveillance.

Rule 13. (1) Employers that are engaged in the operations described in R 325.52102(1)(a) to (c) and employers with a hazardous material response (HAZMAT) team shall establish a medical surveillance program, in accordance with this rule, for all of the following employees:

(a) All employees who are or may be exposed, for 30 days or more a year, to hazardous substances or health hazards at or above permissible exposure limits (PEL) or, if there is no PEL, above the published exposure levels for these substances without regard to the use of respirators.

(b) All employees who wear a respirator for 30 or more days a year or as required by Occupational Health Standard Part 451 "Respiratory Protection," which is referenced in R 325.52102a.

(c) All employees who are injured, become ill, or develop signs or symptoms due to the possible overexposure to hazardous substances or health hazards from an emergency response or hazardous waste operation.

(d) All employees on a HAZMAT team.

(2) Medical examinations and consultations shall be made available by the employer at no cost to the employee, without a loss of pay, and at a reasonable time and place for each employee covered by subrule (1) of this rule under the following, as applicable:

(a) For employees who are covered under subrule (1)(a),(b), and (d) of this rule, the following schedule applies:

- (i) Before assignment to hazardous waste or emergency response operations.
 - (ii) At least once every 12 months for each covered employee, unless the responsible physician believes a longer interval is appropriate. The interval shall not be more than 2 years.
 - (iii) At termination of employment or reassignment to an area where the employee will not be covered, unless the employee has had an examination within the last 6 months.
 - (iv) As soon as possible upon notification by an employee that the employee has developed signs or symptoms indicating possible overexposure to hazardous substances or health hazards or that the employee has been injured or exposed above the permissible exposure limits or published exposure levels in an emergency situation.
 - (v) At more frequent times if the examining physician determines that an increased frequency of examination is medically necessary.
- (b) For employees who are covered under subrule (1)(c) of this rule and for all employees, including those of employees who are covered by R 325.52102(1)(e), who may have been injured, received a health impairment, developed signs or symptoms which may have resulted from exposure to hazardous substances resulting from an emergency incident, or been exposed during an emergency incident to hazardous substances at concentrations above the permissible exposure limits or the published exposure levels without the necessary personal protective equipment being used, the following schedule applies:
- (i) As soon as possible after the emergency incident or development of signs or symptoms.
 - (ii) At additional times if the examining physician determines that follow-up examinations or consultations are medically necessary.

History: 1991 AACCS; 1998-2000 AACCS; 2014 AACCS.

R 325.52114 Medical examinations, consultations, and procedures to be performed by or under supervision of physician; content of examinations and consultations; copies of rules and information to be provided by employer.

Rule 14 (1) All medical examinations, consultations, and procedures shall be performed by or under the supervision of a licensed physician, preferably a physician who is knowledgeable in occupational medicine.

(2) Medical examinations required by R 325.52113(2) shall include a medical and work history or updated history if one is in the employee's file, with a special emphasis on the symptoms related to the handling of hazardous substances and health hazards and on fitness for duty, including the ability to wear any required personal protective equipment (PPE) under conditions that may be expected at the work site.

(3) The content of medical examinations or consultations pursuant to R 325.52113(2) shall be determined by the attending physician. (See R 325.52137 for availability of appendix D, reference no. 10)

(4) An employer shall provide a copy of these rules and appendices to the attending physician and all of the following information for each employee who is to be examined:

- (a) A description of an employee's duties as they relate to the employee's exposures.
- (b) The employee's exposure levels or anticipated exposure levels.
- (c) A description of any personal protective equipment used or to be used.

(d) Information from previous medical examinations of the employee which is not readily available to the examining physician.

(e) Information required pursuant to Occupational Health Standard Part 451 “Respiratory Protection,” which is referenced in R 325.52102a.

History: 1991 AACCS; 1998-2000 AACCS; 2014 AACCS.

R 325.52115 Physician's written opinion; employer duty to obtain; content; prohibited disclosures.

Rule 15. (1) An employer shall obtain, and furnish an employee with, a copy of the attending physician's written opinion following each examination or consultation required pursuant to the provisions of R 325.52113.

(2) The physician's written opinion shall contain all of the following information:

(a) The physician's opinion as to whether the employee has any detected medical conditions which would place the employee at increased risk of material impairment of the employee's health from work in hazardous waste operations or emergency response or from respirator use.

(b) The physician's recommended limitations upon the employee's assigned work.

(c) The results of the medical examination and tests if requested by the employee.

(d) A statement that the employee has been informed by the physician of the results of the medical examination and any medical conditions which require further examination or treatment.

(3) The written opinion provided to the employer and the employee shall not reveal specific findings or diagnoses unrelated to the occupational environment.

History: 1991 AACCS.

R 325.52116 Medical surveillance recordkeeping.

Rule 16. (1) An accurate record of the medical surveillance required pursuant to R 325.52113 shall be retained and provided to others in accordance with Occupational Health Standard Part 470 “Employee Medical Records and Trade Secrets,” which is referenced in R 325.52102a.

(2) The medical records required pursuant to R 325.52115 and this rule shall include all of the following information:

(a) The name and social security number of the employee.

(b) A physician's written opinions, recommended limitations, and results of examinations and tests.

(c) Any employee medical complaints related to exposure to hazardous substances.

(d) A copy of the information provided to the examining physician by the employer, except for the copy of these rules and appendices.

History: 1991 AACCS; 2014 AACCS.

R 325.52117 Control of hazards.

Rule 17. (1) Engineering controls, work practices, personal protective equipment, or a combination of these shall be implemented in accordance with this rule to protect employees from exposure to hazardous substances and safety and health hazards.

(2) Engineering controls, such as pressurized control cabs on mobile equipment or remotely operated material handling equipment, and work practices, such as removing nonessential personnel from areas of high risk, shall be used to reduce and maintain employee exposures to or below permissible exposure limits, except to the extent that such controls and practices are not feasible.

(3) If engineering controls and work practices are not feasible or not required, any reasonable and appropriate combination of controls, practices, and personal protective equipment (PPE) shall be used to reduce and maintain employee exposures to or below the permissible exposure limits or dose limits for substances with a permissible exposure limit.

(4) An employer shall not use a schedule of employee rotation as a means to comply with permissible exposure limits or dose limits, except when there is no other feasible way of complying with the airborne or dermal dose limits for ionizing radiation.

(5) An employer shall comply with Occupational Health Standard Part 380 "Occupational Noise Exposure," Occupational Health Standard Part 381 "Ionizing Radiation," and Occupational Health Standard Part 529 "Welding, Cutting and Brazing," which are referenced in R 325.52102a.

(6) Any reasonable and appropriate combination of engineering controls, work practices, and PPE shall be used to reduce and maintain employee exposure to or below published exposure levels for hazardous substances and health hazards without exposure or dose-regulating rules. The employer shall use safety data sheets (SDS) and other published literature as a guide in making a determination as to the level of appropriate protection.

History: 1991 AACCS; 2014 AACCS.

R 325.52118 Personal protective equipment (PPE).

Rule 18. (1) Personal protective equipment (PPE) shall be selected and used to protect employees from the hazards and potential hazards they are likely to encounter as identified during the site characterization and analysis.

(2) Personal protective equipment selection shall be based on an evaluation of the performance characteristics of the PPE relative to the requirements and limitations of the site, the task-specific conditions and duration, and the hazards and potential hazards identified at the site.

(3) Positive-pressure, self-contained breathing apparatus or positive-pressure, air line respirators that are equipped with an escape air supply shall be used when chemical exposure levels will create a substantial possibility of immediate death or immediate serious illness or injury or will impair the ability to escape.

(4) Totally-encapsulating chemical protective suits (protection equivalent to level A protection as recommended in appendix B) shall be used in conditions where skin absorption of a hazardous substance may result in a substantial possibility of immediate death or immediate serious illness or injury or may impair the ability to escape.

(5) The level of protection provided by PPE selection shall be increased when additional information on site conditions indicates that increased protection is necessary to reduce

employee exposures below permissible exposure limits and published exposure levels for hazardous substances and health hazards. (See R 325.52137 for availability of appendix B pertaining to selecting PPE ensembles.) The level of employee protection provided may be decreased when additional information or site conditions show that decreased protection will not result in hazardous exposures to employees.

(6) All of the following provisions pertain to the use of totally-encapsulating chemical protective suits.

(a) Totally-encapsulating suits shall be selected to protect employees from the particular hazards which are identified during site characterization and analysis.

(b) Totally-encapsulating suits shall be capable of maintaining a positive air pressure. Appendix A, "Personal Protective Equipment Test Methods," shall be consulted for a test method to evaluate this air pressure requirement.

(c) Totally-encapsulating suits shall be capable of preventing inward test gas leakage of more than 0.5%. See appendix A for a test method.

(7) An employer shall establish a written personal protective equipment (PPE) program which is part of the safety and health program required by R 325.52104 or R 325.52129. This program is also a part of the site-specific safety and health plan specified in R 325.52104. The personal protective equipment program shall address all of the following elements if applicable:

(a) PPE selection based on site hazards.

(b) PPE use and limitations.

(c) Work duration.

(d) PPE maintenance and storage.

(e) PPE decontamination and disposal.

(f) PPE training and proper fitting.

(g) PPE donning and doffing procedures.

(h) PPE inspection before and after use.

(i) PPE proper use.

(j) Evaluation of the effectiveness of the PPE program.

(k) Limitations during temperature extremes and other appropriate medical considerations.

Manufacturer instructions relating to the subjects specified in subrules (d) to (h) of this subrule may be incorporated into the PPE program.

History: 1991 AACCS; 1998-2000 AACCS; 2014 AACCS.

R 325.52119 Workplace monitoring.

Rule 19. (1) Monitoring shall be performed in accordance with the provisions of this rule where there may be employee exposure to hazardous concentrations of hazardous substances. Monitoring shall be performed to assure the proper selection of engineering controls, work practices, and personal protective equipment so that employees are not exposed to levels of hazardous substances which are greater than permissible exposure limits.

(2) Air monitoring shall be used to identify and quantify airborne levels of hazardous substances and safety and health hazards in order to determine the appropriate level of employee protection that is needed on-site.

(3) Upon initial workplace entry, representative air monitoring shall be conducted to identify all of the following:

- (a) Any IDLH condition.
- (b) Exposure above established permissible exposure limits.
- (c) Exposure above a radioactive material's dose limits.
- (d) Other dangerous conditions, such as the presence of flammable atmospheres or oxygen-deficient environments.

(4) Periodic monitoring shall be conducted when the possibility of an IDLH condition or flammable atmosphere has developed or when there is an indication that exposures may have risen above permissible exposure limits or published exposure levels since prior monitoring. All of the following are situations where the possibility that exposures have risen shall be considered:

- (a) Work begins on a different area of the site.
- (b) Contaminants other than those previously identified are being handled.
- (c) A different type of operation is initiated, for example, drum opening as opposed to exploratory well drilling.
- (d) Employees are handling leaking drums or containers or working in areas with obvious liquid contamination, for example, a spill or lagoon.
- (e) A sufficient reasonable interval has passed so that exposures may have significantly increased.

(5) After hazardous waste cleanup operations commence, an employer shall monitor those employees likely to have the highest potential exposures to those hazardous substances and health hazards likely to be present above permissible exposure limits or published exposure levels by using personal sampling frequently enough to characterize employee exposure. If the employees likely to have the highest exposure are exposed above permissible exposure limits or published exposure levels, monitoring shall continue to determine all employees likely to be above those levels. An employer may utilize a representative sampling approach by documenting that the employees and chemicals were chosen for monitoring based on the preceding criteria of this subrule. The monitoring of employees who are engaged in site characterization operations covered by the provisions of R 325.52107 is not required.

History: 1991 AACCS.

R 325.52120 Hazard information program.

Rule 20. An employer shall develop and implement a program, which is part of the employer's safety and health program required by the provisions of R 325.52104, to inform employees, contractors, and subcontractors and their representatives who are engaged in hazardous waste operations of the nature, level, and degree of exposure likely as a result of participation in such hazardous waste operations. Employees, contractors, and subcontractors who work outside of the operations area of a site are not covered by this rule.

History: 1991 AACCS.

R 325.52121 Handling, labeling, and disposing of hazardous substances, drums, and containers.

Rule 21. (1) Hazardous substances and contaminated soils, liquids, and other residues shall be handled, labeled, transported, and disposed of in accordance with the provisions of this rule, R 325.52122, and R 325.52123.

(2) All of the following provisions pertain to the use, handling, or movement of drums and other containers of hazardous substances:

(a) Drums and containers that are used during cleanup shall be appropriate for the wastes that they contain and the handling that is anticipated.

(b) When practical, drums and containers shall be inspected and their integrity shall be assured before being moved. Drums or containers that cannot be inspected before being moved because of storage conditions, for example, drums or containers that are buried, stacked behind other drums, or stacked several tiers high in a pile, shall be moved to an accessible location and inspected before further handling.

(c) Unlabeled drums and containers shall be considered to contain hazardous substances and handled accordingly until the contents are positively identified and labeled.

(d) The movement of drums and containers shall be minimized by preplanning and organization of site operations.

(e) Before moving drums or containers, all employees who are exposed to the transfer operation shall be warned of the potential hazards associated with the contents of the drum or containers.

(f) United States department of transportation-specified salvage drums or containers and suitable quantities of proper absorbents shall be kept available and used in areas where spills, leaks, or ruptures may occur.

(g) Where spills of a hazardous substance from drums or containers may occur, a spill containment program which is part of the employer's safety and health program that is required pursuant to the provisions of R 325.52104 shall be implemented to contain and isolate the entire volume of the hazardous substance being transferred.

(h) Drums and containers that cannot be moved without rupture, leakage, or spillage shall be emptied into a sound container using equipment which is appropriate for the circumstances involved in the transfer of hazardous materials.

(i) A ground-penetrating system or other type of detection system or device shall be used to estimate the location and depth of buried drums or containers.

(j) Soil or covering material shall be removed with caution to prevent drum or container rupture.

(k) Fire extinguishing equipment that meets the requirements of R 408.10801 et seq. of the Michigan Administrative Code shall be on hand and ready for use to control incipient fires.

(l) Material handling equipment that is used to transfer drums and containers shall be selected, positioned, and operated to minimize sources of ignition related to the equipment from igniting gases or vapors released from drums or containers.

(m) Drums and containers of radioactive wastes shall not be handled until their hazard to employees is properly assessed.

(3) All of the following procedures shall be used in areas where drums or containers are being opened:

(a) Where an air line respirator system is used, connections to the breathing air cylinders shall be protected from contamination and the entire system shall be protected from physical damage.

(b) Employees who are not actually involved in opening drums or containers shall be kept a safe distance from the operation.

(c) If employees are required to work near or adjacent to drums or containers being opened, a suitable shield that does not interfere with the work operation shall be placed between the employees and the drums or containers being opened to protect the employees in case of explosion.

(d) Controls for drum or container opening equipment, monitoring equipment, and fire suppression equipment shall be located behind an explosion-resistant barrier.

(e) When there is a reasonable possibility of flammable gases or vapors being present, material handling equipment and hand tools shall be types that will not produce sources of ignition.

(f) Drums and containers shall be opened in a manner that will safely relieve interior pressure. If pressure cannot be relieved from a remote location, appropriate shielding shall be placed between the employee and the drums or containers to reduce the risk of employee injury.

(g) Employees shall not stand upon or work from drums or containers.

(4) All of the following provisions apply to the handling or shipping of shock-sensitive wastes:

(a) The shipping of shock-sensitive wastes may be prohibited under United States department of transportation regulations. Employers and their shippers shall refer to the provisions of 49 C.F.R. SS173.21 and 173.50.

(b) All nonessential employees shall be evacuated from the area of transfer.

(c) Material-handling equipment shall be provided with explosion containment devices or protective shields to protect equipment operators from exploding containers.

(d) An alarm system that can be perceived by employees above surrounding light and noise conditions shall be used to signal the commencement and completion of explosive waste-handling activities.

(e) Continuous communications through appropriate means shall be maintained between the employee who is in charge of the immediate handling area and the site safety and health supervisor or command post until such time as the handling operation is completed. Communication equipment or methods that could cause shock-sensitive materials to explode shall not be used.

(f) Drums and containers that are under pressure, as evidenced by bulging or swelling, shall not be moved until such time as the cause of the internal pressure is determined and appropriate containment procedures have been implemented to protect employees from explosion due to relieving the pressure of the drum or container.

(5) In addition to the requirements of subrule (4) of this rule, all of the following precautions shall be taken when handling laboratory waste packs (lab packs):

(a) Lab packs shall be opened only when necessary and then only by an individual who is knowledgeable about the inspection, classification, and segregation of the containers within the pack according to the hazards of the waste.

(b) If crystalline material is noted on the outside of any container, the contents shall be handled as a shock-sensitive waste until the contents are identified.

(c) Drums and containers of packaged laboratory wastes shall be considered to contain shock-sensitive or explosive materials unless known not to contain such materials.

(6) Sampling of containers and drums shall be done in accordance with a sampling procedure which is part of the site safety and health plan developed for, and available to, employees and others at the specific worksite.

History: 1991 AACS.

R 325.52122 Shipping and transport of drums and containers of hazardous substances.

Rule 22. All of the following provisions apply to shipping and transporting drums and containers of hazardous substances:

(a) Drums and containers shall be identified, classified, and labeled before packaging for shipment.

(b) Drum or container staging areas shall be kept to the minimum number necessary to safely identify and classify materials and prepare them for transport.

(c) Staging areas shall have adequate access and egress routes.

(d) Bulking of hazardous waste is permitted only after a thorough characterization of the waste has been completed.

History: 1991 AACS.

R 325.52123 Tank and vault operations.

Rule 23. (1) Tanks and vaults that contain a hazardous substance shall be handled in a manner similar to that for drums and containers by following R 325.52121.

(2) Appropriate tank or vault entry (confined space entry) procedures of Occupational Health Standard Part 490 "Permit-Required Confined Spaces" and Occupational Health Standard Part 451 "Respiratory Protection," which are referenced in R 325.52102a, and which are addressed in the site safety and health plan covered by R 325.52104(6) shall be followed in all cases where employees enter tanks, vaults, or other confined spaces.

History: 1991 AACS; 2014 AACS.

R 325.52124 Decontamination.

Rule 24. (1) Procedures for all phases of decontamination shall be developed and implemented in accordance with this rule.

(2) All of the following provisions apply to decontamination procedures:

(a) A decontamination procedure shall be developed, communicated to employees, and implemented before any employees or equipment may enter areas on site where the potential for exposure to hazardous substances exists.

(b) Standard operating procedures shall be developed to minimize employee contact with hazardous substances or with equipment that has contacted hazardous substances.

(c) All employees who leave a contaminated area shall be appropriately decontaminated and all contaminated clothing and equipment that leaves a contaminated area shall be appropriately disposed of or decontaminated.

(d) Decontamination procedures shall be monitored by the site safety and health supervisor to determine their effectiveness. When such procedures are found to be ineffective, appropriate steps shall be taken to correct any deficiencies.

(e) Decontamination shall be performed in geographical areas that will minimize the exposure of uncontaminated employees or equipment to contaminated employees or equipment.

(f) All equipment and solvents that are used for decontamination shall be decontaminated or disposed of properly.

(g) Protective clothing and equipment shall be decontaminated, cleaned, laundered, maintained, or replaced as needed to maintain the effectiveness of the clothing and equipment.

(h) Employees whose non-impermeable clothing becomes wetted with hazardous substances shall immediately remove that clothing and proceed to a shower. The clothing shall be disposed of or decontaminated before it is removed from the work zone.

(i) Unauthorized employees shall not remove protective clothing or equipment from change rooms.

(j) Commercial laundries or cleaning establishments that decontaminate protective clothing or equipment shall be informed of the potentially harmful effects of exposure to hazardous substances.

(3) Where the decontamination procedure indicates a need for regular showers and change rooms outside of a contaminated area, such showers and change rooms shall be provided and shall be in compliance with Occupational Health Standard Part 474 "Sanitation," which is referenced in R 325.52102a.

(4). If temperature conditions prevent the effective use of water, other effective means for cleansing shall be provided and used.

History: 1991 AACCS; 2014 AACCS.

Editor's Note: An obvious error in R 325.52124 was corrected at the request of the promulgating agency, pursuant to Section 56 of 1969 PA 306, as amended by 2000 PA 262, MCL 24.256. The rule containing the error was published in *Michigan Register*, 2014 MR 6. The memorandum requesting the correction was published in *Michigan Register*, 2014 MR 6.

R 325.52125 Emergency operations at hazardous waste sites.

Rule 25. (1) An emergency response plan shall be developed and implemented by all employers within the scope of R 325.52102(1)(a) and (b) to handle anticipated emergencies before start-up of hazardous waste operations. The plan shall be in writing and available for inspection and copying by employees, their representatives, Michigan

occupational safety and health program personnel, and other federal and state government personnel with relevant responsibilities. An employer who will evacuate its employees from the danger area when an emergency occurs and who does not permit any of its employees to respond to assist in handling the emergency is exempt from the requirements of this rule if the employer provides an emergency action plan that is in compliance with General Industry Safety Standard Part 6 “Fire Exits,” and Construction Safety Standard Part 18 “Fire Protection and Prevention,” which are referenced in R 325.52102a.

(2) The emergency response plan shall address all of the following topics:

- (a) Pre-emergency planning.
- (b) Personnel roles, lines of authority, training, and communication.
- (c) Emergency recognition and prevention.
- (d) Safe distances and places of refuge.
- (e) Site security and control.
- (f) Evacuation routes and procedures.
- (g) Decontamination.
- (h) Emergency medical treatment and first aid.
- (i) Emergency alerting and response procedures.
- (j) A critique of response and follow-up.
- (k) PPE and emergency equipment.

(3) In addition to the topics for the emergency response plan specified in subrule (2) of this rule, both of the following elements shall be included in an emergency response plan for a hazardous waste cleanup site:

- (a) Site topography, layout, and prevailing weather conditions.
- (b) Procedures for reporting incidents to local, state, and federal governmental agencies.

(4) The emergency response plan shall be a separate section of the site-specific safety and health plan and shall be compatible and integrated with disaster, fire, or emergency response plans of local, state, and federal agencies.

(5) The emergency response plan shall be rehearsed regularly as part of the overall training program for site operations and shall be reviewed periodically and amended, as necessary, to keep it current with new or changing site conditions or information.

(6) An employee alarm system shall be installed in accordance with General Industry Safety Standard Part 6 “Fire Exits,” which is referenced in R 325.52102a, to notify employees of an emergency situation, to stop work activities if necessary, to lower background noise in order to enhance communication, and to begin emergency procedures.

(7) Based upon the information available at time of an emergency, an employer shall evaluate the incident and site response capabilities and proceed with the appropriate steps to implement the site emergency response plan.

History: 1991 AACCS; 1998-2000 AACCS; 2014 AACCS.

Editor's Note: An obvious error in R 325.52125 was corrected at the request of the promulgating agency, pursuant to Section 56 of 1969 PA 306, as amended by 2000 PA 262, MCL 24.256. The rule containing the error was published in *Michigan Register*, 2014 MR 6. The memorandum requesting the correction was published in *Michigan Register*, 2014 MR 6.

R 325.52126 Illumination of work areas.

Rule 26. (1) Work areas shall be lighted to not less than the minimum illumination intensities listed in table 1 while any work is in progress. Approved wiring and electrical equipment, as specified in the provisions of R 408.41701 et seq. of the Michigan Administrative Code, shall be used.

(2) Table 1 reads as follows:

Table 1

Minimum Illumination Intensities in Footcandles

Area or operations Footcandles

General site areas.....5

Excavation and waste areas, accessways,.....3 active storage areas, loading platforms, refueling, and field maintenance areas.

Indoors: warehouses, corridors,.....5 hallways, and exitways.

Tunnels, shafts, and general underground.....5 work areas; exception: a minimum of 10 footcandles is required at tunnel and shaft heading during drilling, mucking, and scaling. Bureau of mines-approved cap lights are acceptable for use in the tunnel heading.

General shops, such as mechanical.....10 and electrical equipment rooms, active storerooms, barracks or living quarters, locker or dressing rooms, dining areas, and indoor toilets and workrooms. First aid stations, infirmaries,.....30 and offices.

History: 1991 AACCS.

R 325.52127 Sanitation.

Rule 27.(1) All of the following provisions apply to potable water:

(a) An adequate supply of potable water shall be provided on the site.

(b) Portable containers that are used to dispense drinking water shall be capable of being tightly closed and shall be equipped with a tap. Water shall not be dipped from containers.

(c) Any container that is used to distribute drinking water shall be clearly marked as to its contents and shall not be used for any other purpose.

(d) Where single-service cups are supplied, both a sanitary container for the unused cups and a receptacle for disposing of the used cups shall be provided.

(2) Both of the following provisions apply to nonpotable water:

(a) Outlets for nonpotable water, such as water for industrial or fire fighting purposes, shall be identified to indicate clearly that the water is unsafe and is not to be used for drinking, washing, or cooking purposes.

(b) There shall not be a cross-connection, open or potential, between a potable water system and a nonpotable water system.

(3) All of the following provisions apply to toilet facilities.

(a) Toilets shall be provided for employees according to the provisions of the following table:

Table 2
Toilet Facilities

Number of employees	Minimum number of facilities
20 or less	One
More than 20, less than 200	One toilet seat and 1 urinal per 40 employees.
200 or more	One toilet seat and 1 urinal per 50 employees.

(b) Under temporary field conditions, at least 1 toilet facility shall be available.

(c) Hazardous waste sites that are not provided with a sanitary sewer shall be provided with any of the following toilet facilities, unless prohibited by local codes:

(i) Chemical toilets.

(ii) Recirculating toilets.

(iii) Combustion toilets.

(iv) Flush toilets.

(d) The requirements of this subrule shall not apply to mobile crews that have transportation readily available to nearby toilet facilities.

(e) Doors to toilet facilities shall be provided with locks that are controlled from inside.

(4) All employee food service facilities and operations shall meet the applicable laws, ordinances, and regulations of the jurisdictions in which they are located.

(5) When temporary sleeping quarters are provided, they shall be heated, ventilated, and lighted.

(6) An employer shall provide adequate washing facilities for employees who are engaged in operations where hazardous substances may be harmful to employees. Such facilities shall be near the worksite, in areas which are under the control of the employer, and where exposures are below permissible exposure limits. Such facilities shall be equipped to enable employees to remove hazardous substances from themselves.

(7) When hazardous waste cleanup or removal operations commence on a site and the duration of the work will require 6 or more months, an employer shall provide showers and change rooms for employees who are exposed to hazardous substances and health hazards involved in hazardous waste cleanup or removal operations. Showers shall be provided and shall meet the requirements of Occupational Health Standard Part 474 "Sanitation," which is referenced in R 325.52102a. Change rooms shall be provided and shall meet the requirements of Occupational Health Standard Part 474 "Sanitation," which is referenced in R 325.52102a. Change rooms shall consist of 2 separate change areas separated by the shower area required by this subrule. One change area, with an exit leading off the worksite, shall provide employees with a clean area where they can remove, store, and put on street clothing. The second area, with an exit to the worksite, shall provide employees with an area where they can put on, remove, and store work clothing and personal protective equipment. Showers and change rooms shall be located in areas where exposures are below the permissible exposure limits. If this cannot be accomplished, then a ventilation system shall be provided that will supply air that is below the permissible exposure limits. Employers shall assure that employees shower at the end of their workshifts and when leaving the hazardous waste site.

History: 1991 AACCS; 2014 AACCS.

R 325.52128 New technology programs.

Rule 28. (1) An employer shall develop and implement procedures for the introduction of effective new technologies and equipment developed for the improved protection of employees who work with hazardous waste cleanup operations. Such new technologies shall be implemented as part of the site safety and health program to assure that employee protection is being maintained.

(2) New technologies, equipment, or control measures that are available to the industry, such as the use of foams, absorbents, sorbents, neutralizers, or other means to suppress the level of air contaminants while excavating the site or for spill control, shall be evaluated by employers or their representatives to determine their effectiveness before using them on a large scale. Such evaluations shall be made available to the Michigan occupational safety and health program (MIOSHA) upon request. Manufacturers' and suppliers' information and data may be used as part of this evaluation.

History: 1991 AACCS.

R 325.52129 Operations at treatment, storage, and disposal (TSD) facilities; establishment of written safety and health program, hazard communication program, medical surveillance program, decontamination procedures, procedures for introduction of new and innovative equipment, procedures for handling drums or containers, training program, and emergency response program

Rule 29. (1) This rule applies to employers who conduct operations at treatment, storage, and disposal (TSD) facilities specified in R 325.52102(1)(d), except for employers that may be exempted in accordance with R 325.52102(4)(a) to (c).

(2) An employer shall develop and implement a written safety and health program for employees who are involved in hazardous waste operations. This written program shall be available for inspection by employees, employees' representatives, and Michigan occupational safety and health program (MIOSHA) personnel. The program shall be designed to identify, evaluate, and control safety and health hazards in the employer's facilities for the purpose of employee protection and shall provide for emergency response that is in compliance with this rule. The program shall address, as appropriate, all of the following areas:

- (a) Site analysis.
- (b) Engineering controls.
- (c) Maximum exposure limits.
- (d) Hazardous waste handling procedures.
- (e) Uses of new technologies.

(3) An employer shall implement a hazard communication program that is in compliance with the requirements of Occupational Health Standard Part 430 "Hazard Communication," which is referenced in R 325.52102a.

(4) An employer shall develop and implement a medical surveillance program in accordance with R 325.52113 to R 325.52116.

(5) An employer shall develop and implement decontamination procedures in accordance with R 325.52124.

(6) An employer shall develop and implement procedures for the introduction of new and innovative equipment into the workplace in accordance with R 325.52128.

(7) An employer shall develop and implement procedures for handling drums or containers in accordance with R 325.52121 (2)(a) to (g) and R 325.52122 before starting work that involves the handling of drums or containers.

(8) An employer shall develop and implement, in accordance with all of the following provisions, a training program, which is part of the employers health and safety program, for employees who are exposed to health hazards or hazardous substances of TSD operations to enable the employees to perform their assigned duties and functions in a safe and healthy manner so as not to endanger themselves or other employees:

(a) The initial training program of new employees shall be a program of 24 hours of training. A certificate of such training shall be issued to each employee who successfully completes this training.

(b) Initial training need not be provided for current employees for whom it can be shown that their previous work experience or training is equivalent to the training requirement of subdivision (a) of this subrule.

(c) All employees shall be given 8 hours of refresher training annually.

(d) Trainers who provide the initial training specified in subdivision (a) of this subrule shall have satisfactorily completed a program for teaching the subjects they teach or shall have academic credentials and instruction experience to demonstrate a satisfactory degree of competency in the subjects they teach.

(9) An employer shall develop and implement an emergency response program in accordance with all of the following provisions:

(a) An emergency response plan shall be developed and implemented. The emergency response plan need not duplicate any of the subjects fully addressed in the employer's contingency planning required by permits, such as those issued by the United States environmental protection agency, if the contingency plan is made part of the emergency response plan. The emergency response plan shall be a written portion of the safety and health program required by subrule (2) of this rule.

(b) An employer who will evacuate its employees from the worksite when an emergency occurs and who does not permit any of its employees to assist in handling the emergency is exempt from the requirements of this subrule if the employer provides an emergency action plan in accordance with General Industry Safety Standard Part 6 "Fire Exits," and Construction Safety Standard Part 18 "Fire Protection and Prevention," which are referenced in R 325.52102a.

(c) The emergency response plan shall address all of the following topics to the extent that they are not addressed in any specific program required in this rule:

(i) Pre-emergency planning and coordination with outside parties.

(ii) Personnel roles, lines of authority, and communication.

(iii) Emergency recognition and prevention.

(iv) Safe distances and places of refuge.

(v) Site security and control.

- (vi) Evacuation routes and procedures.
 - (vii) Decontamination procedures.
 - (viii) Emergency medical treatment and first aid.
 - (ix) Emergency alerting and response procedures.
 - (x) Critique of response and follow-up.
 - (xi) PPE and emergency equipment.
- (d) An employer shall provide and complete training for emergency response employees before they become involved in actual emergency operations. Such training shall include all of the following:
- (i) Elements of the emergency response plan.
 - (ii) Standard operating procedures for emergency response operations.
 - (iii) Personal protective equipment available and use and limitations of each.
 - (iv) Procedures for handling emergency incidents.
 - (v) Both exceptions to the training requirements of this subdivision are as follows:
 - (A) An employer need not train all employees to the degree specified if the employer divides the work force so that a sufficient number of employees who are responsible for controlling emergencies have the training specified and so that all other employees who might initially respond to an emergency incident have sufficient awareness training to recognize that an emergency response situation exists and that they are instructed in that case to summon the fully trained employees and not attempt control activities for which they are not trained.
 - (B) An employer need not train all employees to the degree specified if arrangements have been made in advance for an outside, fully trained emergency response team to respond in a reasonable period and all employees who might initially respond to the incident have sufficient awareness training to recognize that an emergency response situation exists and they have been instructed to call the designated outside, fully trained emergency response team for assistance.
 - (vi) Employee members of TSD facility emergency response organizations shall be trained to a level of competence in the recognition of health and safety hazards to protect themselves and other employees. This includes training in all of the following areas:
 - (A) The methods used to minimize the risk from safety and health hazards.
 - (B) The safe use of control equipment.
 - (C) Selection and use of appropriate PPE.
 - (D) Safe operating procedures to be used at the incident scene.
 - (E) Techniques of coordination with other employees to minimize risks.
 - (F) Appropriate response to overexposure to health hazards or injury to themselves or others.
 - (G) Recognition of subsequent symptoms which may result from overexposure.
 - (vii) An employer shall certify that each covered employee has attended and successfully completed the training required in this subdivision or shall certify the employee's competency at least yearly. The method used to demonstrate competency for certification of training shall be recorded and maintained by the employer.
- (e) All of the following provisions pertain to the procedures for handling emergency incidents:
- (i) In addition to the elements for the emergency response plan required by subrule of this subrule, the following elements shall be included in emergency response plans to the

extent that they do not repeat any information already contained in the emergency response plan:

- (A) Site topography, layout, and prevailing weather conditions.
- (B) Procedures for reporting incidents to local, state, and federal governmental agencies.
- (ii) The emergency response plan shall be compatible and integrated with the disaster, fire, and emergency response plans of local, state, and federal agencies.
- (iii) The emergency response plan shall be rehearsed regularly as part of the overall training program for site operations.
- (iv) The site emergency response plan shall be reviewed periodically and, as necessary, be amended to keep it current with new or changing site conditions or information.
- (v) An employee alarm system shall be installed in accordance with General Industry Safety Standard Part 6 “Fire Exits,” which is referenced in R 325.52102a, to notify employees of an emergency situation, to stop work activities if necessary, to lower background noise to aid communication, and to begin emergency procedures.
- (vi) Based upon the information available at the time of the emergency, an employer shall evaluate the incident and the site response capabilities and proceed with the appropriate steps to implement the site emergency response plan.

History: 1991 AACCS; 1998-2000 AACCS; 2014 AACCS.

R 325.52130 Emergency response to hazardous substances releases; emergency response plan.

Rule 30. (1) This rule and R 325.52131 to R 325.52135 apply to employers whose employees are engaged in emergency response wherever it occurs, except in operations specified in R 325.52102(1)(a) to (d).

(2) Emergency response organizations that have developed and implemented programs equivalent to the requirements of this rule and R 325.52131 to R 325.52135 for handling releases of hazardous substances pursuant to section 303 of the Emergency Planning and Community Right-To-Know Act of 1986, 42 U.S.C. §11003, “Comprehensive emergency response plans,” shall be deemed to have met the requirements of this rule and R 325.52131 to R 325.52135.

(3) An emergency response plan shall be developed and implemented to handle anticipated emergencies before the commencement of emergency response operations. The plan shall be in writing and available for inspection and copying by employees, their representatives, and Michigan occupational safety and health program (MIOSHA) personnel. An employer who will evacuate its employees from the danger area when an emergency occurs and who does not permit any of its employees to assist in handling the emergency is exempt from the requirements of this subrule and subrule (4) of this rule if the employer provides an emergency action plan in accordance with General Industry Safety Standard Part 6 “Fire Exits,” and Construction Safety Standard Part 18 “Fire Protection and Prevention,” which are referenced in R 325.52102a.

(4) An employer shall develop an emergency response plan which shall address all of the following to the extent that they are not addressed elsewhere:

- (a) Pre-emergency planning and coordination with outside parties.
- (b) Personnel roles, lines of authority, training, and communication.
- (c) Emergency recognition and prevention.

- (d) Safe distances and places of refuge.
- (e) Site security and control.
- (f) Evacuation routes and procedures.
- (g) Decontamination.
- (h) Emergency medical treatment and first aid.
- (i) Emergency alerting and response procedures.
- (j) Critique of response and follow-up.
- (k) PPE and emergency equipment.

(5) Emergency response organizations may use the local emergency response plan or the state emergency response plan, or both, as part of their emergency response plan to avoid duplication. Those items of the emergency response plan that are properly addressed by the local and state emergency plans may be substituted into an employer's emergency plan or otherwise kept together for use by employers and employees, use.

History: 1991 AACS; 1998-2000 AACS; 2014 AACS.

R 325.52131 Emergency response procedures.

Rule 31. (1) The senior emergency response official who responds to an emergency shall become the individual in charge of a site-specific incident command system (ICS). All emergency responders and their communications shall be coordinated and controlled through the individual in charge of the ICS, and shall be assisted by the senior official present for each employer.

(2) The senior official at an emergency response is the most senior official on the site who is responsible for controlling the operation at the site. Initially, it is the senior officer on the first piece of responding emergency apparatus to arrive on the incident scene who is the senior official. As more senior officers arrive, such as the battalion chief, fire chief, state law enforcement official, or site coordinator, the position of senior official is passed up the line of authority which has been previously established.

(3) The individual in charge of the ICS shall identify, to the extent possible, all hazardous substances or conditions present and shall address, as appropriate, all of the following:

- (a) Site analysis.
- (b) Use of engineering controls.
- (c) Maximum exposure limits.
- (d) Hazardous substance handling procedures.
- (e) The use of any new technologies.

(4) Based on the hazardous substances or conditions present, the individual in charge of the ICS shall implement appropriate emergency operations and assure that the personal protective equipment worn is appropriate for the hazards to be encountered. However, personal protective equipment shall meet the criteria contained in General Industry Safety Standard Part 73 "Fire Brigades," which is referenced in R 325.52102a, when worn while performing fire fighting operations beyond the incipient stage for any incident.

(5) Employees who are engaged in emergency response and who are exposed to hazardous substances that present an inhalation hazard or potential inhalation hazard shall wear positive-pressure, self-contained breathing apparatus while engaged in emergency response and until such time that the individual in charge of the ICS determines, through

the use of air monitoring, that a decreased level of respiratory protection will not result in hazardous exposures to employees.

(6) The individual in charge of the ICS shall limit the number of emergency response personnel at the emergency site in those areas of potential or actual exposure to incident or site hazards to those who are actively performing emergency operations. However, operations in hazardous areas shall be performed using the buddy system in groups of 2 or more.

(7) Back-up personnel shall stand by with equipment ready to provide assistance or rescue. Qualified emergency medical service personnel shall also stand by with medical equipment and transportation capability.

(8) The individual in charge of the ICS shall designate a safety official, who is knowledgeable in the operations being implemented at the emergency response site, with specific responsibility for identifying and evaluating hazards and for providing direction with respect to the safety of operations for the emergency.

(9) When activities are judged by the safety official to be an IDLH or imminent danger condition, the safety official shall have the authority to alter, suspend, or terminate those activities. The safety official shall immediately inform the individual in charge of the ICS of any actions taken to correct these hazards at an emergency scene.

(10) After emergency operations have terminated, the individual in charge of the ICS shall implement appropriate decontamination procedures.

(11) Approved self-contained, compressed air breathing apparatus may, if necessary, be used with approved cylinders from other approved self-contained, compressed air breathing apparatus if such cylinders are of the same capacity and pressure rating. All compressed air cylinders that are used with self-contained breathing apparatus shall meet the criteria of the United States Department of Transportation and National Institute for Occupational Safety and The Department of Public Health adopted federal standards by reference January 1, 1975 which are adopted in these rules by reference. The criteria are set forth in 42 C.F.R. Part 84 "Approval of Respiratory Protective Devices," and 49 C.F.R. Parts 173 "Pipeline and Hazardous Materials Safety Administration, Department of Transportation," and 178 "Pipeline and Hazardous Materials Safety Administration, Department of Transportation," as adopted in R 325.52102a.

History: 1991 AACCS; 1998-2000 AACCS; 2014 AACCS.

R 325.52132 Emergency response personnel.

Rule 32. (1) Skilled support personnel who are skilled in the operation of certain equipment, such as mechanized earth-moving or digging equipment or crane and hoisting equipment, who are needed temporarily to perform immediate emergency support work that cannot reasonably be performed in a timely fashion by an employer's own employees, and who will be or may be exposed to the hazards at an emergency response scene are not required to receive the training required in the provisions of R 325.52133 for the employer's regular employees. However, these personnel shall be given an initial briefing at the site before participating in any emergency response. The initial briefing shall include instruction in the wearing of appropriate personal protective equipment, what chemical hazards are involved, and what duties are to be performed. The personnel referred to in this subrule need not be an

employer's own employees. All other appropriate safety and health precautions provided to the employer's own employees shall be used to assure the safety and health of these personnel.

(2) Specialist employees who, in the course of their regular job duties, work with, and are trained in the hazards of, specific hazardous substances and who will be called upon to provide technical advice or assistance at a hazardous substance release incident to the individual in charge shall receive training annually or annually demonstrate competency in the area of their specialization.

History: 1991 AACCS.

R 325.52133 Emergency response training.

Rule 33. (1) Employees who participate or are expected to participate in emergency response shall be trained in accordance with the requirements of this rule. Training shall be based on the duties and functions to be performed by each responder of an emergency response organization. The skill and knowledge levels required for all new responders, those hired after the effective date of these rules, shall be conveyed to them through training before they are permitted to take part in actual emergency operations on an incident.

(2) First responders at the awareness level are individuals who are likely to witness or discover a hazardous substance release and who have been trained to initiate an emergency response sequence by notifying the proper authorities of the release. They would take no further action beyond notifying the authorities of the release. First responders at the awareness level shall have sufficient training or have had sufficient experience to objectively demonstrate competency in all of the following areas:

(a) Understanding what hazardous substances are and the risks associated with them in an incident.

(b) Understanding the potential outcomes associated with an emergency created when hazardous substances are present.

(c) The ability to recognize the presence of hazardous substances in an emergency.

(d) The ability to identify the hazardous substances in an emergency, if possible.

(e) Understanding the role of the first responder awareness individual as specified in the employer's emergency response plan, including site security and control, and as specified in the United States department of transportation's emergency response guidebook.

(f) The ability to realize the need for additional resources and to make appropriate notifications to the communication center.

(3) First responders at the operations level are individuals who respond to releases or potential releases of hazardous substances as part of the initial response to the site for the purpose of protecting nearby persons, property, or the environment from the effects of the release. These individuals are trained to respond in a defensive fashion without actually trying to stop the release. Their function is to contain the release from a safe distance, keep it from spreading, and prevent exposures. First responders at the operational level shall have received not less than 8 hours of training or have

had sufficient experience to objectively demonstrate competency in all of the following areas in addition to those listed for the awareness level in subrule (2) of this rule:

(a) Knowledge of the basic hazard and risk assessment techniques.

(b) Knowing how to select and use proper personal protective equipment provided to the first responder operational level.

(c) Understanding basic hazardous materials terms.

(d) Knowing how to perform basic control, containment, and confinement operations within the capabilities of the resources and personal protective equipment available to their unit.

(e) Knowing how to implement basic decontamination procedures.

(f) Understanding the relevant standard operating procedures and termination procedures. The employer shall certify demonstrated competency in the areas specified in this subrule.

(4) Hazardous materials technicians are individuals who respond to releases or potential releases for the purpose of stopping the release. They assume a more aggressive role than a first responder at the operations level in that they will approach the point of release in order to plug, patch, or otherwise stop the release of a hazardous substance. Hazardous materials technicians shall have received not less than 24 hours of training equal to the first responder operations level of subrule (3) of this rule and, in addition, be competent in all of the following areas:

(a) Knowing how to implement the employer's emergency response plan.

(b) Knowing the classification, identification, and verification of known and unknown materials by using field survey instruments and equipment.

(c) Being able to function within an assigned role in the incident command system.

(d) Knowing how to select and use proper specialized chemical personal protective equipment provided to the hazardous materials technician.

(e) Understanding hazard and risk assessment techniques.

(f) Being able to perform advance control, containment, and confinement operations within the capabilities of the resources and personal protective equipment available to the unit.

(g) Understanding and implementing decontamination procedures.

(h) Understanding termination procedures.

(i) Understanding basic chemical and toxicological terminology and behavior.

The employer shall certify competency in the areas specified in this subrule.

(5) Hazardous materials specialists are individuals who respond with, and provide support to, hazardous materials technicians. Their duties parallel those of the hazardous materials technician; however, those duties require a more directed or specific knowledge of the various substances they may be called upon to contain. The hazardous materials specialist would also act as the site liaison with federal, state, local, and other government authorities concerning site activities. Hazardous materials specialists shall have received not less than 24 hours of training equal to the technician level of subrule (4) of this rule and, in addition, be competent in all of the following areas:

(a) Knowing how to implement the local emergency response plan.

(b) Understanding the classification, identification, and verification of known and unknown materials by using advanced survey instruments and equipment.

(c) Being aware of the state emergency response plan.

(d) Being able to select and use proper specialized chemical personal protective equipment provided to the hazardous materials specialist.

(e) Understanding in-depth hazard and risk techniques.

(f) Being able to perform specialized control, containment, and confinement operations within the capabilities of the resources and personal protective equipment available.

(g) Being able to determine and implement decontamination procedures.

(h) Having the ability to develop a site safety and control plan.

(i) Understanding chemical, radiological, and toxicological terminology and behavior.

(6) On-scene incident commanders who will assume control of the incident scene beyond the first responder awareness level shall receive not less than 24 hours of training equal to the first responder operations level of subrule (3) of this rule and, in addition, be competent in all of the following areas:

(a) Knowing and being able to implement the employer's incident command system.

(b) Knowing how to implement the employer's emergency response plan.

(c) Knowing and understanding the hazards and risks associated with employees who work in chemical protective clothing.

(d) Knowing how to implement the local emergency response plan.

(e) Being aware of the state emergency response plan and the federal regional response team.

(f) Knowing and understanding the importance of decontamination procedures. An employer shall certify competency in the areas specified in this subrule.

(7) Trainers who teach any of the training subjects specified in subrules (1) to (6) of this rule shall have satisfactorily completed a training course for teaching the subjects they are expected to teach, such as the courses offered by the United States national fire academy, or they shall have the training or academic credentials and instructional experience necessary to demonstrate competent instructional skills and a satisfactory command of the subject matter of the courses they are to teach.

(8) Both of the following provisions pertain to refresher training:

(a) Those employees who are trained in accordance with the provisions of this rule shall receive annual refresher training of sufficient content and duration to remain competent with respect to their duties and functions or shall demonstrate competency in those areas at least yearly.

(b) A statement shall be made of the training or competency and, if a statement of competency is made, an employer shall keep a record of the methodology used to demonstrate competency.

History: 1991 AACCS.

R 325.52134 Emergency response medical surveillance; chemical protective clothing.

Rule 34. (1) Members of an organized and designated HAZMAT team and hazardous materials specialists shall receive a baseline physical examination and be provided with medical surveillance as required pursuant to the provisions of R 325.52113 to R 325.52116 of these rules.

(2) Any emergency response employee who exhibits signs or symptoms which may have resulted from exposure to hazardous substances during the course of an emergency incident shall be provided with medical consultation as required pursuant to the provisions of R 325.52113(2)(b).

(3) Chemical protective clothing and equipment to be used by organized and designated HAZMAT team members or to be used by hazardous materials specialists shall be in compliance with the requirements of R 325.52118.

History: 1991 AACCS.

R 325.52135 Post-emergency response operations.

Rule 35. (1) Upon completion of the emergency response, the hazardous substances, health hazards, and materials contaminated with them, such as contaminated soil or other elements of the natural environment, are removed from the site of the incident, the employer who conducts the cleanup shall comply with either of the following provisions:

(a) Meet all of the requirements of R 325.52104 to R 325.52128.

(b) Where the cleanup is done on plant property using plant or workplace employees, such employees shall have completed the training requirements of all of the following:

(i) The provisions of General Industry Safety Standard Part 6 “Fire Exits,” and Construction Safety Standard Part 18 “Fire Protection and Prevention,” which are referenced in R 325.52102a.

(ii) The provisions of Occupational Health Standard Part 430 “Hazard Communication,” which is referenced in R 325.52102a.

(iii) The provisions of Occupational Health Standard Part 451 “Respiratory Protection,” which is referenced in R 325.52102a.

(iv) Other appropriate safety and health training appropriate to the tasks.

(2) All equipment that is to be used in the cleanup of the site of an incident shall be in serviceable condition and shall have been inspected before use.

History: 1991 AACCS; 1998-2000 AACCS; 2014 AACCS.

R 325.52136 Rescinded.

History: 1991 AACCS; 2014 AACCS.

R 325.52137 Rescinded.

History: 1991 AACCS; 1998-2000 AACCS; 2014 AACCS.