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What OSHA Health and Safety Requirements Apply to My Brownfield?



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YES, if your brownfield is **ANY** of the following:

- listed or proposed for listing on the National Priority List (NPL),
- listed or proposed for listing on a State priority list,
- identified or listed by a government agency as an uncontrolled hazardous waste site (even during initial investigation),
- regulated as a corrective clean-up action covered by the Resource Conservation and Recovery Act.

Does OSHA consider my brownfield a hazardous waste site?

NO, if your brownfield is **ALL** of the following:

- not identified or listed as an uncontrolled hazardous waste site by any government agency,
- not regulated as a corrective clean-up action covered by the Resource Conservation and Recovery Act.

Even if OSHA does not consider your brownfield a hazardous waste site, the EPA/State may still require compliance with the Hazardous Waste Operations and Emergency Response (HAZWOPER) standard. HAZWOPER may be a requirement of your funding contract or participation in a State Voluntary Cleanup Program (VCP). If you must comply with HAZWOPER, refer to the answers on the LEFT side of this presentation.

If **OSHA considers** your brownfield a hazardous waste site, then you must comply with:

- the Hazardous Waste Operations and Emergency Response (HAZWOPER) Standard, and
- all other applicable General Industry (1910) Standards, or
- all other applicable Construction Industry (1926) Standards.

How does classification as a hazardous waste site impact work at my brownfield?



If **OSHA does not consider** your brownfield a hazardous waste site, then you must comply with:

- all applicable General Industry (1910) Standards, or
- all applicable Construction Industry (1926) Standards.

Site hazards and employee exposures depend on site conditions, tasks, and cleanup methods. Site assessment and cleanup activities may expose your employees to:

- site chemicals (inhalation, surface contact, involuntary ingestion)
- heavy equipment (impact, injury),
- heat or cold stress
- ergonomic risks (hand tools and sampling equipment)
- slips, trips or falls (unstable structures and uneven terrain)
- cave-ins (excavations or trenches)
- electrical risks (impact underground/overhead utility lines)
- confined space entry (trenches, tanks)
- noise

Although HAZWOPER may be the primary OSHA standard with which you comply, based on the site hazards and anticipated employee exposures you may need to consider:

- Air Contaminant Standards
- Personal Protective Equipment Standards
- Heavy Equipment Standards
- Walking and Working Surface Standards
- Excavation Standards
- Emergency Action/Response Plan Standards
- Confined Space Entry Standards
- Hearing Conservation Standards

What hazards are associated with brownfield site assessment and site cleanup methods?



What OSHA standards apply to site assessment and cleanup?



Note: Your work operations determine whether you will need to comply with 29 CFR 1910 or 29 CFR 1926.

Site hazards and employee exposures depend on site conditions, tasks and cleanup methods. Generally, site assessment and cleanup activities may expose your employees to:

- site chemicals (inhalation, surface contact, involuntary ingestion)
- heavy equipment (impact, injury)
- heat or cold stress
- ergonomic risks (hand tools and sampling equipment)
- slips, trips or falls (unstable structures and uneven terrain)
- cave-ins (excavations or trenches)
- electrical risks (impact underground/overhead utility lines)
- confined space entry (trenches, tanks)
- noise

You would determine which standards apply by identifying the anticipated chemical, physical and biological hazards and employee exposures. You may wish to consider:

- Air Contaminant Standards
- Personal Protective Equipment Standards
- Heavy Equipment Standards
- Walking and Working Surface Standards
- Excavation Standards
- Emergency Action/Response Plan Standards
- Confined Space Entry Standards
- Hearing Conservation Standards

OSHA (State or Federal) is the primary agency enforcing Safety and Health standards for private and many public employers. However, since the EPA and state environmental agencies may also require HAZWOPER compliance, they may play some role in assuring HAZWOPER compliance.

HAZWOPER identifies training requirements in paragraph (e), including:

- initial training (24 or 40 hrs in classroom and 8 or 24 hours supervised field work)
- supervisor training (8 additional hrs for site supervisors)
- annual refresher training (8 hrs)
- on-site training (site hazards, HASP requirements, emergency procedures)

HAZWOPER training may be augmented based on site hazards and employee roles. Additional training may include:

- confined space entry
- bloodborne pathogen exposure control
- emergency response responsibilities
- other task specific topics

HAZWOPER requires that you select and require the use of PPE that will:

- protect employees from the hazards and potential hazards they are likely to encounter (29 CFR 1910.120 (g)(3)(i))
- protect employees effectively relative to the requirements and limitations of the site, tasks and known or potential hazards (29 CFR 1910.120 (g)(3)(ii))

Site PPE should be selected, inspected, used, maintained and decontaminated according to the criteria identified in your written PPE program.

Is OSHA the only agency that could enforce applicable S&H standards?
← →

What training do employees need to work ← on-site? →

What personal protective equipment (PPE) should an employee wear while working on site?
← →

OSHA (State or Federal) is the primary agency enforcing Safety and Health standards for private and many public employers. However, since the EPA and state environmental agencies may also require HAZWOPER compliance, they may play some role in assuring HAZWOPER compliance.

Employees must receive the training they need to conduct their assigned jobs safely. Training should address the job/task hazards and appropriate controls, and must comply with the applicable OSHA requirements. Training topics may include:

- hazard communications
- confined space entry
- personal protective equipment use and selection
- bloodborne pathogen exposure control
- emergency response responsibilities
- hearing conservation
- other task specific topics

Since PPE selection is hazard- and exposure- dependent, you must perform a hazard assessment for each task to identify the hazards and exposures that may exist and determine if PPE may be needed (29 CFR 1910.132 (d)). If you determine that PPE is necessary then:

- select and require the use of PPE that will protect affected employees,
- communicate selection decisions to each affected employee,
- train affected employees, and
- select PPE that properly fits each affected employee.

YES, HAZWOPER requires:

- initial monitoring
- periodic monitoring
- high-risk employee monitoring

Employee exposure monitoring may also be required by chemical-specific air contaminant standards like the Lead Standard.

Do I need to monitor employee chemical exposures during site activities?



Exposure monitoring is one element of the hazard assessment identified above. Monitoring data provides information essential for assessing the need for exposure controls, like ventilation and PPE, during each task. Exposure monitoring will help further characterize:

- site contaminants and concentrations
- employee exposures during site tasks and operations

Employee exposure monitoring may also be required by chemical-specific air contaminant standards like the Lead Standard.

HAZWOPER requires a written Safety and Health Program containing an organizational chart, a comprehensive workplan and a site-specific safety and health plan (HASP). The HASP addresses the safety and health hazards of each phase of the operation. The HASP should include:

- a hazard analysis for each site task and operation
- employee training requirements
- task/operation specific PPE requirements
- medical surveillance requirements
- monitoring requirements (air, personal and environmental)
- site control procedures
- decontamination procedures
- an emergency response plan
- confined space entry procedures (if necessary)
- a spill containment program (if necessary)

What types of written documents may be uniquely associated with brownfield site

← work? →

Several OSHA standards require that you implement a set of written procedures. These standards often apply during brownfield projects and may include:

- Chemical-Specific Standards (i.e., Lead, Asbestos)
- Respiratory Protection
- Permit Required Confined Spaces
- Emergency Action/Response Plan
- Bloodborne Pathogen Exposure Control
- Hazard Communications

If these standards apply to site tasks or site contaminants then the written requirements of each must be addressed.

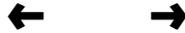
Emergency response can mean employee injury, fire, explosion or equipment failure. **IF** these events **involve hazardous substances**, they may be an emergency response within the scope of HAZWOPER (hazmat response). So, the answer is **YES** if the event is characterized by **ALL** of the following:

- results in an uncontrolled release of a hazardous substance.
- likely to result in an uncontrolled release of a hazardous substance.
- isn't an incidental release
- involves a hazardous substance that poses a potential safety or health hazard (i.e., fire, explosion, or chemical exposure)

If none of these are true, then the occurrence is not a hazmat response.

OSHA provides many resources to assist an employer comply with HAZWOPER, General Industry Standards and Construction Industry Standards. **These resources are identified in the poster handout.** If you are unable to locate the handout please contact: earl.cook@osha-slc.gov

Is emergency response to a site considered hazmat response?



Where can I get more information?



Emergency response can mean employee injury, fire, explosion or equipment failure. **IF** these events **involve hazardous substances**, they may be considered a emergency response within the scope of HAZWOPER (hazmat response). So, the answer is **YES**, if the event is characterized by **ALL** of the following:

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Brownfield Health & Safety Compliance Resources

Developed by the OSHA Salt Lake Technical Center, 10/8/00.

Coming soon on the OSHA website: [Health & Safety at Brownfield & VCP Sites](#). Check for this new page on the Subject Index at www.osha.gov.

Internet Resources

Federal OSHA	
Type of Resource	Internet Address (http://)
General Compliance Information: Provides access to OSHA information including the Technical Manual, compliance directives (guidance for compliance officers), standards, interpretive letters, sampling methods, memoranda of understanding, and case law. Several relevant links accessible from OSHA's website are identified below.	www.osha.gov/comp-links.html
Construction Compliance Information: Provides access to OSHA's Construction Resource Manual. This publication includes the Construction Standards and related compliance guidance.	www.osha-slc.gov/Publications/Const_Res_Man/index.html
HAZWOPER Compliance Information: Provides access to pages that OSHA identifies as good internet links to assist individuals in complying with HAZWOPER. The first link focuses on hazardous waste sites (paragraphs (b)-(o)); the second link highlights hazmat emergency response (paragraph (q)).	www.osha-slc.gov/SLTC/hazardouswaste/index.html and www.osha-slc.gov/SLTC/emergencyresponse/index.html
HAZWOPER Regulatory Text: Provides text of OSHA HAZWOPER standard (both General Industry and Construction, and links to written Interpretations.	www.osha-slc.gov/OshStd_data/1910_0120.html and www.osha-slc.gov/OshStd_data/1926_0065.html
Emergency Response Compliance Directive Text: Provides access to OSHA HAZWOPER paragraph (q) directive (guidance for compliance officers).	www.osha-slc.gov/OshDoc/Directive_data/CPL_2-2_59A.html
HASP Development: Provides access to the OSHA/ EPA beta-test version of an electronic HASP (e-HASP). The current version of e-HASP can be downloaded and used to create a written document. Though not complete, the program can be used to develop certain sections of a site-specific HASP including confined space entry procedures, training, on-site organizational structure, medical surveillance, spill containment, emergency response and hot work. Each of these sections provides an example of the detail and breadth required to fully comply with HAZWOPER.	www.osha-slc.gov/NewInit/hazmatcybercon/hazmatcybercon.html
HASP Development and Site Worker Protection Guidelines: Provides access to <i>Occupational Safety and Health Guidance for Hazardous Waste Site Activities</i> , a publication jointly authored by OSHA, the EPA, NIOSH, and the United States Coast Guard. This book describes how to implement the site-specific HASP elements required by HAZWOPER and offers general guidance on many worker protection issues like PPE selection and use, air monitoring, decontamination, site control, and spill containment.	www.osha-slc.gov/Publications/complinks/OSHG-HazWaste/4agency.html
HAZWOPER Training: Provides access to the non-mandatory Training Guidelines in Appendix E of the HAZWOPER Standard. These guidelines can be used to evaluate the contents of external training programs or to develop an internal training program.	www.osha-slc.gov/OshStd_data/1910_0120_APP_E.html

Type of Resource	Internet Address (http://)
<p>Health and Safety Training: Provides access to the index of topics addressed by OSHA's Technical Links webpages. Each individual webpage provides training resources on the focus topic. For example, if you are interested in Respiratory Protection, access this topic from the general index webpage, and go to the training subsection. This subsection provides links to internal and external training resources focusing on respiratory protection.</p>	<p>www.osha-slc.gov/SLTC/index.html</p>
<p>PPE Selection and Use: Provides access to OSHA Publication 3151, <i>Assessing the Need for Personal Protective Equipment, A Guide for Small Business Employers</i>. This publication assists an employer evaluate his/her workplace and job tasks to determine when PPE may be required and which PPE may provide appropriate protection. The publication provides checklists to assess a workplace and general guidelines to develop a written PPE program.</p>	<p>www.osha-slc.gov/Publications/OSHA3151/Osha3151.html</p>
<p>Health and Safety Programs: OSHA has software programs to help you address key elements of a Health and Safety Program. The first URL provides access to the Expert Systems software entitled "Safety and Health Program Advisor." The second URL provides general access to the Expert Systems software programs. Several programs focus on specific Health and Safety Program elements including respiratory protection, lockout/tagout, confined space safety awareness, lead, asbestos, hazard awareness, and fire safety. These programs can help you identify specific hazards in your workplace or at your brownfield.</p>	<p>www.osha-slc.gov/dts/osta/oshasoft/shpeval.html and www.osha-slc.gov/dts/osta/oshasoft/#safetyhealth</p>
NIOSH/CDC	
<p>Chemical and Worker Protection Information: Provides general access to the public NIOSH home page and a link back to the Centers for Disease Control. The site search mechanism is the most efficient way for an individual to identify links to NIOSH publications (i.e Pocket Guide to Chemical Hazards) and related external links. NIOSH provides technical information that assist an individual in anticipating, evaluating and controlling chemical hazards, biological hazards, infectious diseases, agricultural hazards, and physical hazards. The CDC homepage provides additional resources that target community and public health issues.</p>	<p>www.cdc.gov/niosh/homepage.html and Direct link to the Pocket Guide: www.cdc.gov/niosh/npg/npg.html</p>
EPA	
<p>Brownfield Technical Resources: Provides access to the EPA's Brownfield webpage and a list of regional Brownfield programs and contacts. The first link provides information about EPA and external resources addressing funding, environmental justice, technical information and publications, pilot demonstration case studies and human resources. The second link provides additional links to EPA regional brownfield resources, contacts, and program information.</p>	<p>www.epa.gov/brownfields/ and www.epa.gov/brownfields/#other</p>
<p>Brownfield Assessment and Cleanup Technology: Provides access to the EPA's Brownfield's Technical Support Center (BTSC). The BTSC offers technical experts and information to help you evaluate the technologies available for conducting a site assessment or cleanup operation on your brownfield. BTSC's mission is to assist you in finding effective technology that will allow you to achieve your objectives for individual site redevelopment.</p>	<p>www.brownfieldstsc.org</p>
<p>General Information about Site Cleanup Operations: Provides access to the EPA/Labor Task Force Hazardous Waste Site Cleanup Operations webpage. This webpage lists OSHA and EPA publications, links and compliance information related to cleanup operations.</p>	<p>www.ert.org/respn_s_resrcs/H_s/cleanup.html</p>

Type of Resource	Internet Address (http://)
<p>HASP development and Site Worker Protection Guidelines: Provides access to an index of the EPA's Environmental Response Team Center (ERTC) publications. These publications focus on hazardous waste site activities and emergency response, and may help you develop a site-specific HASP and/or a Health and Safety Program. Publications include Health and Safety Documents (Standard Operating Safety Guidelines), Environmental Utilities and Software (including an earlier version of the electronic HASP), Standard Operating Procedures (risk assessment and sampling guidelines) and fact sheets. Documents can be ordered on-line or by contacting the ERTC Environmental Resource Center at (723)321-4398.</p>	<p>www.ert.org/media_resrcs/media_resrcs.asp</p>
<p>Hazardous Waste Regulations Information: Provides access to the RCRA, Superfund, EPCRA hotline internet homepage. The site provides links to the EPA program areas supported by the hotline, hotline reports, regional and state contacts, and hotline training information. This site can be used to obtain general information about the coverage and implications of the regulations identified. The site also provides hotline telephone contacts and monthly reports that summarize frequent calls and the resulting answers.</p>	<p>www.epa.gov/epaoswer/hotline</p>
<p>General Information about Site Assessment and Clean-up Technology: The first site provides access to the EPA publication <i>Roadmap to Understanding Innovative Technology Options for Brownfields Investigation and Cleanup, Second Edition</i>. The second site provides access to the companion publication <i>A Tool Kit of Information Resources for Brownfields Investigation and Cleanup</i>. The Roadmap provides general information about brownfield characteristics and a stepwise process for evaluating innovative technologies. Both publications reference additional federal and private publications and contacts capable of providing additional assistance.</p>	<p>www.clu-in.org/download/misc/roadmap99.pdf and www.clu-in.org/products/toolkit99/pages/middle.htm</p>
DOE	
<p>HASP Development: Provides access to the Department of Energy's (DOE) Health and Safety Planning Guidelines. This publication provides DOE directions for preparing a site-specific HASP. The text and referenced requirements may provide an example of HASP organization and content. You can use the URL provided or access this document through the OSHA Hazardous Waste Technical Links webpage.</p>	<p>tis-hq.eh.doe.gov/docs/osh.html?</p>
USACE	
<p>Health and Safety Issues Associated with Site Assessment and Cleanup Technologies: Provides access to the US Army Corps of Engineers (US ACE) Engineering Manual for Health and Safety Aspects of Remedial Technologies. This resource provides a general list of the chemical, physical, biological and radiological hazards associated with the treatment technologies often onsite (hazardous waste or brownfield). The manual also references OSHA and consensus requirements for protecting workers using these technologies.</p>	<p>www.frtr.gov/matrix2/health_safety/toc.html</p>
<p>Health and Safety Program: Provides access to the US ACE Health and Safety Program. The text and referenced requirements may provide an example of the organization and content of a comprehensive Health and Safety Program. You can use the URL provided or access this document through the OSHA Hazardous Waste Technical Links webpage.</p>	<p>www.usace.army.mil/inet/usace-docs/eng-manuals/em385-1-1/toc.htm?</p>

Hazardous Materials and Emergency Response Hotlines

Hotline Contact Information	Description
<p>OSHA Offices of Health Compliance Assistance (OHCA) & General Industry Compliance Assistance (GICA)</p> <p>(202)693-2190 (OHCA) (202)693-1850 (GICA) Monday through Friday from 9 a.m.- 4 p.m. Eastern Time Closed Federal Holidays</p>	<p>These OSHA offices provides public compliance assistance for the range of OSHA standards in 1910 (General Industry) and health-related question in 1926 (Construction). A contractor-supported phone line is available during the hours shown.</p>
<p>National Response Center (NRC) Hotline</p> <p>(800) 424-8802 (202) 426-2675 in the Washington DC area</p>	<p>The NRC hotline is the first contact a responsible party should make to report an oil or chemical release. The hotline is operated by the U.S. Coast Guard and is available 24 hours a day, every day of the year. Spills of hazardous materials and oil meeting requirements outlined by the Federal Water Pollution Control Act, CERCLA, and DOT regulations must be reported to the NRC. Spill information is evaluated and selected federal agencies are notified, by the call center, within 15 minutes of the initial report.</p>
<p>The RCRA, Superfund & EPCRA Hotline</p> <p>(800) 424-9346 (703) 412-9810 in the Washington area. Operates Monday through Friday from 9:00 a.m. - 6:00 p.m. Eastern Time. Closed Federal Holidays</p>	<p>This hotline provides information to the public and is operated by an EPA contractor. Callers can obtain current information about RCRA (including Underground Storage Tanks), Superfund, the Oil Pollution Act (OPA), the Emergency Planning and Community Right-to-Know Act (EPCRA) and the accidental release prevention provisions (i.e. RMP preparation) of the Clean Air Act (CAA). An individual can also obtain relevant EPA documents by contacting the hotline.</p>
<p>Toxic Substances Control Act (TSCA) Assistance Information Service</p> <p>Operates Monday through Friday from 8:30 a.m. - 5 p.m. Eastern Time. (202) 554-1404 Washington DC. E-mail: tsca-hotline@epamail.epa.gov</p>	<p>This service provides technical information and publications about producing, testing, manufacturing and documenting substances regulated by the act. Callers are also provided with information on specific sections of this act including, asbestos in schools, lead-based paint in residences, PCBs, and Dioxins. Businesses can receive assistance complying with TSCA, including regulatory advice, publications, and audiovisual materials.</p>

