SMCX
DoD Safety Management Center of Excellence

Hazard Prevention & Control

OSHA VPP

March 2025






This presentation outlines hazard prevention and control (HPC) requirements for the purposes of Occupational Safety and Health Administration (OSHA) Voluntary Protection Programs (VPP) implementation.

The presentation provides information on the background and importance of HPC, required documentation, and the various levels of employee knowledge. It concludes with an action checklist and supplemental details to help with OSHA VPP implementation and sustainment efforts.

Objectives

- In this presentation, you will learn to:
  - Summarize the background and importance of HPC
  - List HPC-related documentation
  - Describe the knowledge leadership/management, key personnel, and the workforce should have regarding HPC
  - Identify HPC actions to implement and sustain OSHA VPP

This presentation is beneficial to safety and health (S&H) professionals, VPP representatives, and others with HPC responsibilities, such as engineers, industrial hygienists, maintenance personnel, emergency managers, and supervisors.

Background & Importance

- Included in the HPC criteria for VPP
- Outlined in DoDI 6055.01
- Applies the hierarchy of controls
- Documents implemented hazard controls
- Establishes written hazard control programs
- Conducts follow-up studies on hazard controls after implementation

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DoDI = Department of Defense Instruction

HPC is one of the four main elements of OSHA VPP. There is a HPC sub-element within the HPC element that focuses on applying the hierarchy of controls during the hazard control selection and implementation process to ensure you consider the most effective controls first. It also focuses on documenting controls in S&H procedures, inspections, and training.

In addition, DoDI 6055.01 requires Services and Agencies to use the hierarchy of controls when selecting hazard controls. Visit DoDI 6055.01 to learn more about Department of Defense (DoD) risk management and hazard control information at: http://www.dtic.mil/whs/directives/corres/pdf/605501p.pdf.

Written hazard control programs (e.g., hazardous energy control, bloodborne pathogens, respiratory protection, permit-required confined space entry) are a key component of the HPC sub-element. The hazard control programs you must implement depends on the hazards and risks at your organization.

Documentation

- Hazard control programs
- S&H instructions and SOPs
- Documents showing hazard control selection
- Documents addressing the use/analysis of hazard controls
- Hazard control follow-up evaluations

Image retrieved from Microsoft Images

SOP = standard operating procedure

Make sure you provide examples of completed forms and documents to your assessment team. Do not show them blank forms! They want to see the completed documents to thoroughly assess the processes within your safety and occupational health management system (SOHMS).

The documents listed on the slide are not all-inclusive; however, this is the most common documentation that supports the HPC sub-element.

Show documents that explain how you select and implement your hazard controls. Examples include: job hazard analyses (JHAs), job safety analyses (JSAs), fault tree analysis, failure modes and effects analysis, and S&H training records.

Evaluate and document any hazard control you implement to make sure it's working as intended and is an effective control. Document these evaluations to show the controls you select are appropriate for the job performed.

The image shows a lock and tag as a part of a site's lockout/tagout program. This program is one of several hazard controls programs required by OSHA. Image retrieved from Microsoft Images.

Leadership/Management Knowledge

- Leaders and managers should be knowledgeable about:
  - Methods to eliminate/control employee exposure to hazards
  - Processes for abating hazards and selecting hazard controls
  - Status of uncontrolled hazards/serious deficiencies

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Image retrieved from Microsoft Images

Leaders and managers must understand the hierarchy of controls and the methods used eliminate or control employee exposure to hazards. They should also be familiar with the hazard control evaluation process and ensure that selected controls protect their employees from exposure.

Leaders and managers should have a thorough understanding of how the hazard abatement process works and must know the status of “open” identified hazards and any interim control measures that are in place to control them, especially higher risk hazard (assigned a risk assessment code [RAC] of 1, 2, or 3) uncontrolled for more than 30 days.

Image retrieved from Microsoft Images.

Key Personnel Knowledge

- Key personnel should be knowledgeable about:
  - Processes for selecting hazard controls
  - Implementation and use of interim control measures
  - Examples of worksite hazard controls
  - Follow-up studies on implemented hazard controls
  - Documented evidence of hazard controls

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Image retrieved from Microsoft Images

Key personnel may include S&H staff, industrial hygienists, hazard control program managers, S&H training managers, and supervisors. This list is not all-inclusive, and there may be others within your organization that have HPC-related responsibilities.

These personnel must know and be able to explain your organization's process to select hazard controls. They use the hierarchy of control and determine which control(s) works best for the hazards your organization based on the hazard, risk level, temporary control measures, and technical and economic feasibility. Provide examples of hazard controls used throughout your organization.

Key personnel should conduct follow-up studies on implemented controls – once you implement a control, you need to make sure it's effective and functioning as intended.

Organizations generally document hazard controls in hazard analyses, work procedures, and self-inspection checklists. Key personnel should be able to explain how hazard controls are incorporated into these documents.

The image represents a meeting where key personnel are discussing S&H hazards and control methods. Image retrieved from Microsoft Images.

Workforce Knowledge

- Employees should be knowledgeable about:
  - S&H hazards of assigned jobs
  - Controls used to protect against S&H hazards
  - Types of PPE worn
  - S&H training attended

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Image retrieved from Microsoft Images

PPE = personal protective equipment

Employees must know how to protect themselves against hazards present in their work areas. This includes engineering controls, administrative controls, and using PPE as the **last**, and least effective, means of protection.

The image shows employees listening to their supervisor talk about PPE. Image retrieved from Microsoft Images.

Action Checklist

- ❑ Understand the hierarchy of hazard controls
- ❑ Identify control options
- ❑ Select hazard controls
- ❑ Develop/update a hazard control plan and programs
- ❑ Document/revise selected control measures
- ❑ Train employees
- ❑ Implement selected controls
- ❑ Evaluate the effectiveness of implemented controls
- ❑ Review written hazard control plans and training

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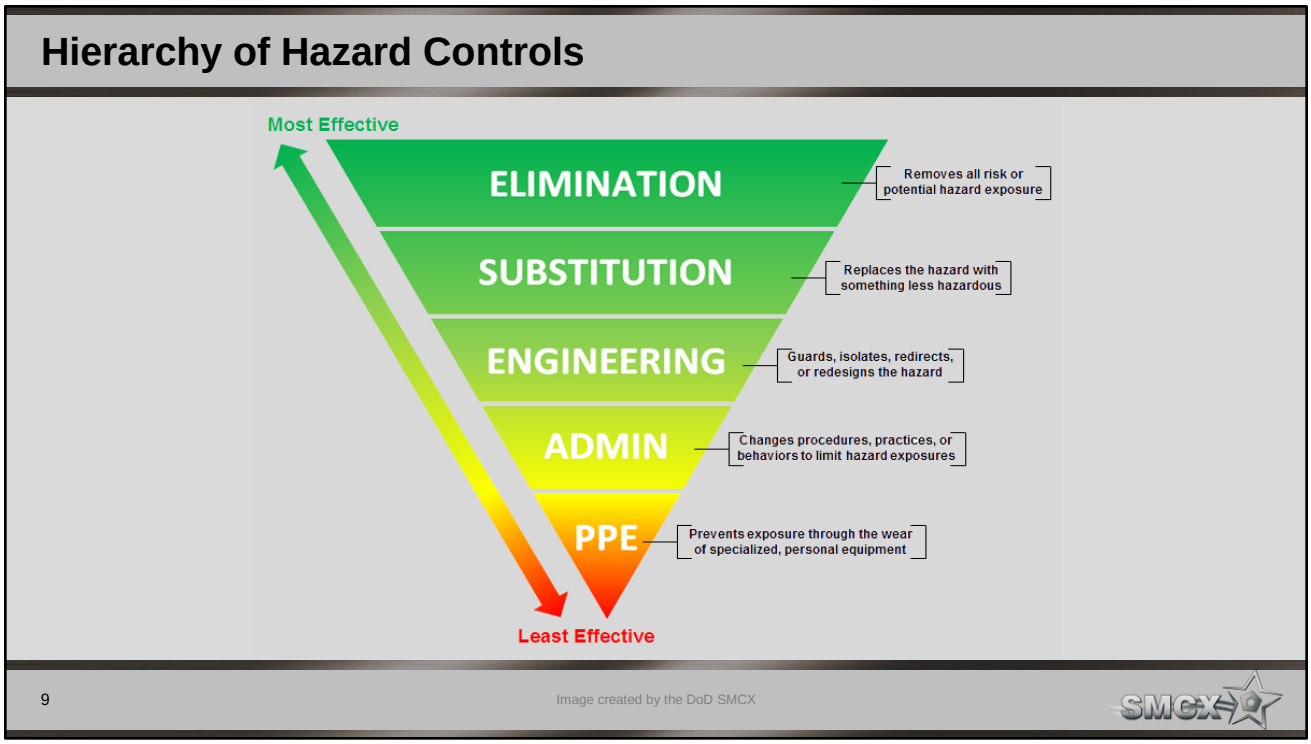
Follow this action checklist to implement and sustain VPP expectations for HPC. Each of these action checklist items will be covered in more detail.



Use the hierarchy of controls to eliminate or reduce your employees' exposure to hazards. This methodology is required by DoD and Service/Agency regulations.

The hierarchy of controls is an inverted pyramid and goes from the most effective form of control (elimination) at the top down to the lease effective form of control (PPE) at the bottom. There are five levels:

1. Elimination: the most effective form of control, especially if done during pre-planning processes (e.g., removing a fall hazard by moving a process from heights to ground level)
2. Substitution: the second most effective form of control, especially if done during pre-planning processes (e.g., swapping a solvent-based chemical with a water-based chemical)
3. Engineering: the third most effective form of control and includes modifications, changes in design or equipment, and isolation (e.g., installing local exhaust ventilation, using enclosed paint booths, adding machine guards)
4. Administrative: the second least effective form of control and includes changing the way work is completed (e.g., implementing job rotations on a hot day, using housekeeping practices to reduce exposure)
5. PPE: the least effective form of control and is used or worn by employees to reduce exposure (e.g., using earplugs to reduce noise exposure, wearing gloves to protect against chemicals).

The image shows a hierarchy of controls, with elimination being the most effective control, and PPE being the least effective to control hazards. Image created by the SMCX.

Control Options

- Evaluate identified S&H hazards
- Review S&H regulations and guidance
- Investigate control measures used in other workplaces
- Gain employee input and suggestions for hazard controls
- Consult with available resources

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Image retrieved from Microsoft Images

You must understand the S&H hazards and risks you are trying to control.

First, review any S&H regulations or guidance for specific requirements (e.g., written programs) you must follow to control an identified hazard.

Next, consider other workplaces that have the same hazards – see what control(s) they use and decide if it will work at your organization.

Then, collect, organize, and review information with your employees to determine what controls are feasible and which ones will best address the hazard. Don't forget to ask other resources, like industrial hygienists, for their input.

The image shows an employee reviewing S&H guidance with a supervisor to check for any hazard control requirements. Image retrieved from Microsoft Images.

Control Selection

- Select controls using the hierarchy of controls
- Consider the technical **and** economic feasibility of proposed controls
- Avoid controls that could potentially create new hazards
- Review and discuss selected controls with employees
- Use a combination of control measures, as needed
- Eliminate or control all serious hazards **first**
- Use interim controls while you apply long-term solutions

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Always consider the technical and economic feasibility of the controls you select. Visit OSHA for clarification on this topic at:
https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=FEDERAL_REGISTER&p_id=21773

Selecting proper hazard controls is often a brainstorming process. Get employees involved and ask them about using a control(s) before you buy or change anything. Remember, they are the experts at what they do! Gather a diverse group of employees to brainstorm control ideas and assess how effective each control will be.

Always consider multiple layers or levels of control when one solution does not fully mitigate the hazard. For example, radiation hazards are usually enclosed in a room with a door, have lead-lined walls, and employees wear lead vests and radiation monitors to further control radiation exposures.

Always eliminate or control serious hazards first. Look at your hazard tracking log and a hazard's assigned RAC to determine which hazards are your top priority.

Hazard Control Plan

- List and prioritize the hazards
- Assign responsibility for installing/implementing controls
- Establish a target completion date for each control
- Track progress toward completion
- Verify control effectiveness

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Image retrieved from Microsoft Images

Hazard control plan: A document that describes how to select, implement, and track controls for a hazard.

First, create a hazard control plan that explains your approach to mitigate a hazard. You may do this in conjunction with a written project plan or an abatement plan.

Then, assign personnel responsibility – sometimes, mitigating a hazard requires maintenance personnel, supervisors, and/or contractors.

Next, establish a target completion date – this helps move the implementation process along. Remember, this date isn't set in stone and may fluctuate based on the type of control you selected.

Next, track completion progress. Will you meet the target completion date? Do you need to make significant changes to your original plan? You won't be able to answer these questions unless you track the progress.

Finally, evaluate the effectiveness of the controls you implemented. This may involve subject matter experts (SMEs) from your organization (e.g., S&H staff, industrial hygienists, engineers). Assess your controls on a regular bases and verify they are still effective.

Document your actions to show exactly how, what, and when, you implemented controls at your organization.

Image retrieved from Microsoft Images.

Hazard Control Programs

- Review identified hazards and S&H regulations
- Determine which written programs are required
- Develop applicable hazard control programs
- Customize programs to fit workplace tasks/S&H hazards
- Incorporate implemented hazard controls into each program
- Have SMEs and others review completed programs
- Communicate program contents to the workforce

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Hazard control program: Otherwise, known as a S&H program; outlines the procedures and methods used to control specific hazardous exposures (e.g., falls, infectious materials, hazardous energy).

You will likely have several written hazard control programs and procedures at your worksite. Conduct a baseline hazard assessment and review S&H regulations (e.g., DoD, Service/Agency, OSHA) to determine which hazard control programs are required at your organization. Find examples of hazard control programs at: https://www.osha.gov/dcsp/compliance_assistance/sampleprograms.html

Do not just create a program because a regulation says a program is required. Only create a program if the program applies to your organization!

Ask SMEs to review the content, make sure it aligns with S&H regulations, and includes applicable organizational expectations and requirements, if necessary. Look into your organization's processes to see what types of approval are required to finalize and implement this program.

Always communicate the contents to the workforce so they can understand their roles and expectations.

Hazard Control Documentation

- Think about where to document control measu
  - Safe work procedures
  - Operating instructions
  - Hazard analyses
  - S&H rules
  - S&H inspection checklists
  - New employee orientation
  - S&H training

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Image retrieved from Microsoft Images

The list on the slide is not all-inclusive; it is just a few examples of where you might document your hazard controls.

Document hazard control information in various S&H documents as reminders.

Consider including control-related items on an inspection checklist helps to verify controls remain in place and are effective.

Think about the level of detail you want to include (e.g., Do they need directions on how to use the hazard control? Is there a specific type of gloves employees need to wear?) and consider the clarity and conciseness whenever you incorporate a hazard control into a safety document.

Image retrieved from Microsoft Images.

Employee Training

Employees	Training
Maintenance staff	• Types of hazard controls installed/implemented • Hazard control requirements and evaluation methods • Preventative maintenance requirements for hazard controls
Managers	• Required hazard controls • Types of hazard controls installed/implemented
Supervisors & Employees	• Required hazard controls • How to use hazard controls • Hazard control limitations • How to maintain hazard controls • Hazard control evaluation methods and requirements • Process for reporting damaged or ineffective hazard controls

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Employees require different levels of training and knowledge about the hazard controls you select and implement at your organization. The types of training listed in the table are recommendations; consider each employee's job and their assigned responsibilities to determine exactly what they need to know about a hazard control.

Never assume employees will understand how to use a new hazard or that your maintenance staff will know how to maintain it. Train your employees on what they need to know to use your hazard controls and safely perform their jobs. Creating a training matrix to identify and determine employee training needs.

Control Implementation

- Implement controls outlined in the hazard control plan, programs, and safety documents
- Use interim measures until a more permanent control is available
- Implement easy and inexpensive controls immediately
- Communicate hazard control information to the workforce

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Image retrieved from OSHA

Implement hazard controls according to your hazard control plan, associated programs, and documentation.

When a permanent control may not be immediately feasible, use interim controls, as needed, until you put a more permanent hazard control in place.

You are required to prioritize hazard controls by addressing the most serious S&H hazards first. However, you should always implement easy and inexpensive controls (e.g., housekeeping practices, removing tripping hazards) immediately because they reduce risk with little cost or effort.

Remember, it is your responsibility to communicate any new hazard controls to your workforce whenever you add hazard controls in your workplace.

The image shows an employee using a hazard control measure (two-handed controls). Image retrieved from OSHA at: https://www.osha.gov/SLTC/etools/machineguarding/presses/twohandtrips.html.

Effectiveness of Controls

- Track progress and verify implementation
- Involve employees in hazard control evaluations
- Conduct regular inspections
- Confirm controls operate as designed
- Determine the effectiveness of controls

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Image retrieved from Microsoft Images

Monitor hazard controls to determine they are still effective and inspect and evaluate controls once they are installed.

You may also need to:
- Observe employees using the control measure(s)
- Ask employees for opinions about the control(s)
- Conduct exposure monitoring
- Perform another risk assessment
- Assess the immediate area for new hazards

The image shows an employee conducting a routine workplace inspection. Image retrieved from Microsoft Images.

Effectiveness of Controls

- See if controls need modified/replaced
- Confirm employees use/follow required hazard controls
- Conduct routine preventive maintenance, as needed
- Document completed hazard control evaluations

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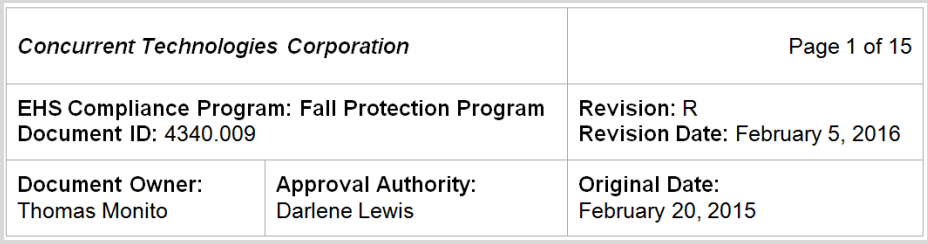
Image retrieved from Microsoft Images

Always document the outcomes whenever you complete a hazard control evaluation. This shows that your organization took the initiative to verify a hazard control is appropriate to address the identified S&H hazard and is working as intended.

The image shows an employee not wearing PPE during a hazardous task. Conduct follow-up to ensure controls put in place are used and used correctly. Image retrieved from Microsoft Images.

Reviews & Updates

- Review hazard control programs annually
- Review S&H documents for missing or dated hazard controls
- Document programmatic reviews and any changes made



Concurrent Technologies Corporation		Page 1 of 15
EHS Compliance Program: Fall Protection Program **Document ID:** 4340.009		**Revision:** R **Revision Date:** February 5, 2016
Document Owner: Thomas Monito	**Approval Authority:** Darlene Lewis	**Original Date:** February 20, 2015

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Image courtesy of Concurrent Technologies Corporation

Review any programs and safety documents you put into place – many organizations do this annually, as required by DoD Instruction 6055.01.

Technology can change significantly in a year. Review current controls to determine if newer or more technologically advanced controls exist. Review each case(s) where you may have selected a less effective hazard control to determine if your budget has flexibility or if a different, better control is more feasible. Some of those “too expensive” controls may have also reduced in price in the past 12 months too.

The image shows a written fall protection program with the original creation date and the latest review/revision date listed on the cover. Image courtesy of Concurrent Technologies Corporation.

Conclusion

- In this presentation, you learned to:
  - Summarize the background and importance of HPC
  - List HPC-related documentation
  - Describe the knowledge leadership/management, key personnel, and the workforce should have regarding HPC
  - Identify HPC actions to implement and sustain OSHA VPP