Frequently Asked Questions
OSHA National Emphasis Program (NEP) Inspections – Occupational Exposure to Isocyanates

What is an OSHA National Emphasis Program (NEP)?

NEPs represent a temporary shift of OSHA's priorities, so that additional resources are deployed for targeted enforcement on a specific safety and health issue that affects workers nationwide. In this case, OSHA is focusing on the potential for health effects associated with occupational exposure to isocyanates.

Our state has its own OSHA program. Are we affected by this national announcement?

Yes. Any individual state program must meet or exceed the federal NEP inspection requirements. State participation in this national emphasis effort is required.

Could my company be inspected?

Yes, if you handle isocyanates you could be inspected. This includes methylene diphenyl diisocyanate (MDI), toluene diisocyanate (TDI), hexamethylene diisocyanate (HDI), methylene bis-cyclohexylisocyanate (HMDI) (hydrogenated MDI), isophorone diisocyanate (IPDI), and naphthalene diisocyanate (NDI). OSHA stated that inspections under this NEP will target all workplaces under OSHA's jurisdiction that handle isocyanates, even those with less than 10 employees.

Will my company be notified of an inspection?

OSHA is not required to give any notice prior to arriving on your site to conduct an NEP inspection.

How do I ensure my company is ready for an OSHA NEP inspection?

OSHA will initially plan to focus on 6 general items. (The OSHA compliance officer may expand the scope of the inspection beyond the isocyanate-related work operations or activities if other workplace hazards or violations are observed and/or brought to the auditor's attention.)

1- Injury and illness recordkeeping (if your company is subject to recordkeeping)
   - **Ensure your records properly record injuries and illnesses using OSHA 300 logs.** The injury and illness records will be reviewed & employees interviewed to determine if injuries and illnesses related to isocyanate exposures have been recorded, including any work-related cases of asthma. Regulations at 29 CFR 1904 establish criteria for what constitutes a "recordable" injury or illness. It is beyond the scope of this FAQ to discuss those criteria in detail.

2- Exposure to isocyanates
   - **Ensure you are using proper engineering controls, such as ventilation and containment.**
   - Inspections will include an evaluation of the employer's controls (engineering controls, administrative and work practice controls, and personal protective equipment (PPE)) where potential exposures to isocyanates are present. This will include:
     i. Air sampling - Personal air samples shall be collected during inspections. If the process that uses isocyanates is not in operation the day of the inspection, the OSHA inspector may return at a later date to perform sampling.
     ii. Wipe Sampling – inspectors will check for surface contamination (e.g., visible foam/coating) on surfaces, tools and equipment near the operation using isocyanates as well as in places where contamination may not be expected such as drinking fountains, telephones, locker rooms, and lunchrooms, to identify potential sources of skin exposure. OSHA will also evaluate housekeeping and protective equipment deficiencies, such as the inside of gloves and the inside of respirators.

3- Personal Protective Equipment (PPE) assessment
   - **Ensure all workers have the appropriate PPE, and that required documents are available, such as those for a respiratory protection program.** The auditor will review the employer's hazard assessment to determine compliance with the applicable PPE OSHA regulations for respiratory protection, eye and face protection, and general PPE. This includes regulations in 29 CFR 1910 Subpart I (General Industry), 1926 Subpart E (Construction), 1915 Subpart I (Shipyard), and 1918 Subpart J (Longshoring).

4- Hazard Communication
    - **Ensure that labels on incoming containers of hazardous chemicals are not removed or defaced**
    - **Ensure you have the correct safety data sheets for all hazardous chemicals, and ensure that they are readily accessible during each work shift to employees while they are in their work area.**
    - **Ensure training records are up to date and available.** The inspection will include consideration of the training the employer provides to employees regarding the hazards associated with isocyanates. Even in cases where regulations do not specifically require records of the training, records can be very helpful.
5- Housekeeping
    - **Ensure your company is following good housekeeping, including handling of chemicals and equipment. Do not overlook housekeeping in non-work areas.**
6- Flammable or combustible materials
    - Review the Material Safety Data Sheets (MSDSs) and **ensure you are in compliance with all applicable OSHA standards pertaining to flammable or combustible materials.**

Can our company be fined from an inspection?

Yes, citations and fines are a possibility from these inspections. Potential citations include:

- If the inspector determines that injuries and illnesses from exposures to isocyanates have not been recorded.
- Exposure to isocyanates exceeding the OSHA PEL.
- Relying on respirators without considering feasible engineering controls such as ventilation.
- Poor housekeeping that allows contamination by isocyanates in a manner that could lead to exposure.
- Lack of PPE, ineffective PPE, failure to fit test or medically qualify employees for PPE, or improper use or storage of PPE.
- Failure to provide adequate training on the hazards of isocyanate exposure.
- Violations of flammable or combustible material standards.

How do I learn more and find these OSHA guidelines?

The full details of the Isocyanates NEP and links to the OSHA standards are found at:
http://www.osha.gov/OshDoc/Directive_pdf/CPL_03-00-017.pdf

Online Materials

OSHA & GENERAL INFORMATION

OSHA resources may be of assistance in this outreach effort. A variety of online resources can be accessed through OSHA's public web page, www.osha.gov, including an Isocyanates Safety and Health Topics Page (available at http://www.osha.gov/SLTC/isocyanates/index.html).

OSHA publications are available online at http://www.osha.gov/pls/publications/publication.html. If you are unable to access the online publications and would like to place an order, please contact the OSHA Publications Office at 1-800-321-OSHA (6742).

Employers can use these sample programs as guidance when developing their own customized programs that are tailored to their specific workplaces, such as respiratory protection and general safety programs. https://www.osha.gov/dcsp/compliance_assistance/sampleprograms.html

OSHA Small Business Assistance: Small business owners who are concerned about the cost of professional help can contact the OSHA Consultation Project Office in their state for free consultation service. Priority is given to businesses with fewer than 250 employees at a worksite, with further consideration given to the severity of the worksite problem. The OSHA Consultation Program can help employers evaluate and prevent hazardous conditions in their workplace that can cause injuries and illnesses, including the hazards associated with exposures to isocyanates. For more compliance assistance information, please visit OSHA's Small Business web page at http://www.osha.gov/dcsp/smallbusiness/index.html.

Respirator Cartridges and Change-out Schedules OSHA's Respiratory Protection standard, 29 CFR 1910.134, http://www.osha.gov/SLTC/etools/respiratory/change_schedule.html

Respiratory Protection – General: An effective written respiratory protection program must be developed and implemented in accordance with 29 CFR 1910.134. https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=12716

The following (attached) PDF presentation provides an overview of OSHA NEPs, general isocyanate information, and this specific isocyanate NEP courtesy of Jonathan Snare of the law firm Morgan, Lewis & Bockius. Provided with permission of author.

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ISOCYANATE GENERAL INFORMATION

SAFE HANDLING AND STORAGE OF ISOCYANATES:
http://www.dow.com/polyurethane/resources/stewardship.htm

The American Chemistry Council (ACC) provides a "Products, Resources and Document Library" at http://polyurethane.americanchemistry.com/Resources-and-Document-Library that includes:

- **Environmental, Health and Safety Literature Brochure**
  The Center for Polyurethanes Industry (CPI) provides environmental, health and safety (EHS) literature about polyurethanes to producers, applicators and other trade associations to help support the continued safety of people and the environment.
- **Guidance for Working with MDI and Polymeric MDI: Things You Should Know**
  An easy-to-read brochure which provides information about important health and safety considerations when working with MDI or Polymeric MDI. (AX-205, 2012)
- **Guidance for Working with TDI: Things You Should Know**
  An easy-to-read brochure which provides information about important health and safety considerations when working with TDI. (AX-202, 2012)
- **Model Respiratory Protection Program**
  This program was developed to help protect employees from respiratory hazards during truck bed lining applications and facilitate compliance with OSHA's Respiratory Protection Program Standard (29 CFR §1910.134). The program provides guidance on appropriate respirators, respirator use, storage, fit and evaluation. (AX-246)
- **Guidance for the Selection of Protective Clothing for MDI Users**
  Describes useful guidance on selecting the appropriate PPE and the performance characteristics of gloves, coveralls, splash suites, and other protective suites commonly used when working with MDI. (AX-178, 2013)
- **Guidance for the Selection of Protective Clothing for TDI Users**
  Describes useful guidance on selecting the appropriate PPE and the performance characteristics of gloves, coveralls, splash suites, and other protective suites commonly used when working with TDI. (AX-179, 2013)

SPRAY POLYURETHANE FOAMS

The American Chemistry Council provides a "Products, Resources and Document Library" at that includes: Spray foam health and safety at http://polyurethane.americanchemistry.com/Spray-Foam-Coalition and http://polyurethane.americanchemistry.com/Resources-and-Document-Library The sites include:

- **Guidance on Ventilation During Installation of Interior Applications of High-Pressure Spray Polyurethane Foam**
  This document provides general guidance on ventilation during installation of interior applications of SPF in new residences and buildings and during renovation and weatherization projects in existing homes and buildings.
- **Guidance on Best Practices for the Installation of SPF**
  The SPF Installation Guidance is intended to provide an overview of best practices to help professional installers use SPF effectively and efficiently to insulate homes and commercial buildings. It discusses considerations for the use and handling of materials as well as steps that help make the jobsite safe and secure. It also addresses health and safety hazards and offers steps to avoid potential issues. Steps and tips for installing, measuring, and inspecting SPF are included to supplement those offered by manufacturers.
- **Presentation on Unvented Attics: Application Guidelines Before, During and After Installation**
  The Spray Foam Coalition developed and has presented this presentation to audiences interested in learning more about spray foam in unvented attics. It includes guidelines from the design considerations through the application and the final test-out.
- **CPI Statement on the Safe Use of Two-Component Low-Pressure Spray Polyurethane Foam**
- **Working Safely with Low-Pressure SPF Insulation**
  This video provides general guidance for professionals on how to apply low-pressure spray polyurethane foam. It is intended as a supplement to other job safety information already available such as specialized training, Material Safety Data Sheets (MSDS), product label information and other materials.
- **Personal Protective Equipment Sheet**
  This chart shows appropriate PPE for high-pressure and low-pressure applications.
- **Disposal of Used SPF Drums**
  This article describes procedures for disposing of empty drums at the end of a spray foam job.
- **Fire Safety Guidance: Working with Polyurethane Foam Products During New Construction, Retrofit and Repair**
  A bulletin advising construction trades of precautions for performing "hot work" around polyurethane and polyisocyanurate insulations. (AX-426, 2011)
- **Isocyanate-based Spray-on Linings: Worker Protection**
  The purpose of this document is to keep owners, operators and workers in the spray-on linings industry informed about important worker safety and health information associated with isocyanates based spray-on lining products. (AX-362, 2013) | (Spanish)

SPRAY POLYURETHANE FOAMS CONTINUED

- **Guidance Document on Spray-on Polyurethane/Polyurea-Based Lining Applications Containing Isocyanates**
  This guidance document provides information to professionals concerning important health and safety aspects when working with isocyanates during spray-on lining applications. Topics covered in this document include, but are not limited to: recognizing potential health hazards, wearing respiratory protection and personal protective equipment, containing overspray and responding to emergencies. (AX-405, 2013)
- **Exposure Control Guidelines in the Truck Bed Liner (TBL) Industry for High Pressure System Applications**
  These Guidelines have been prepared to provide general information and to explain the precautions and practices associated with the safe handling of MDI in the truck bed lining (TBL) industry during high pressure system applications. (AX-417, 2007) | (Spanish)
- **Exposure Control Guidelines in the Truck Bed Liner (TBL) Industry for Low Pressure System Applications**
  These Guidelines have been prepared to provide general information and to explain the precautions and practices associated with the safe handling of MDI in the truck bed lining (TBL) industry during low pressure system applications. (AX-416, AX-416S) | (Spanish)
- **Health and Safety Product Stewardship Program for High-Pressure Application of SPF**
  This program presents general information with respect to the use of spray polyurethane foam chemicals and other associated chemicals used in spray polyurethane foam applications. The Workbook and Presentation provide guidance to applicators and helpers who apply professional grade high pressure spray polyurethane foam in both interior and exterior construction applications. (2010) | (Presentation)

Spray foam health and safety www.spraypolyurethane.com includes FREE *Low-Pressure Spray Polyurethane Foam Chemical Health and Safety Training (Low-Pressure SPF Chemical Health and Safety Training)* in both English and Spanish

The Spray Polyurethane Foam Alliance (SPFA) also maintains a contractor certification program for spray foam: http://www.sprayfoam.org/