

Stonewater  
Consulting

# Baseline Hazard Recognition

A Guidance Document for Completing  
the Hazard Inventory of ***Company***  
***Name*** Procedure EHS-XX.XX

Stonewater Consulting, LLC  
Robert J. Wagner, Principal  
Safety, Culture Change, Quality  
Value-added HSE in Lean/6σ Heavy  
Manufacturing & Services  
(440) 708-0257  
RobJWagner@Windstream.net

# Chemical Use and Exposure

- All **Company Name** locations are likely to have some chemicals on hand, which may be used by Company Name Associates locally or at customer job-sites.
- Examples are solvents, adhesives, sealers, strippers, varnishes, cleaning compounds & fuels.
- See the Region EHS Manager for assistance evaluating the hazards and handling/storage requirements for these chemicals.
- Also see the **Company Name** Training Presentation on Chemical Safety, as well as the Material Safety Data Sheets for the chemicals at your site.

# Chemical Use and Exposure

Chemicals may present any of the following hazards, singly or in combination:

- **Flammable chemicals** (e.g., Acetone, fuels, etc.) burn vigorously if exposed to heat or flame & will have special handling and storage requirements, including limiting the areas where they may be used & the work practices in those areas (e.g., No Smoking, no spark/heat producing equipment or processes nearby).
- **Corrosive/Caustic chemicals** (e.g., strippers, cleaners, etc.) will cause burns to human tissue, may burn through metals or other materials & will have special handling and storage requirements, including specific Personal Protective Equipment (PPE) and possibly ventilation.
- **Toxic chemicals** (e.g., solvents, sealers, etc.) may cause temporary or permanent illness or death through prolonged inhalation, skin absorption or ingestion. These chemicals will have special handling & storage requirements including specific Personal Protective Equipment (PPE) and possibly ventilation.
- **Reactive chemicals** (unlikely at Company Name) may react violently if exposed to other chemicals, including some that react with water.

# Chemical Use and Exposure

- Assessing the hazard
  - Walk the site and discuss chemical use with the process managers & installers.
  - Review the chemical inventory & MSDSs

# Chemical Use and Exposure

- Assessing the hazard - Flammables:
  - Does the site store/use any fuels (kerosene, diesel, gasoline)? If so,
    - How much?                      Where & how is it stored?
    - What kind?                      What is the NFPA or HMIS rating?
  - Does the site store/use any solvents? If so,
    - How much?                      Where & how is it stored?
    - What kind?                      What is the NFPA or HMIS rating?
  - Does the site store/use any other flammables? If so,
    - How much?                      Where & how is it stored?
    - What kind?                      What is the NFPA or HMIS rating?

# Chemical Use and Exposure

- Assessing the hazard – Corrosives/Caustics:
  - Does the site store/use any acids or bases? If so,
    - How much?                      Where & how is it stored?
    - What kind?                      What is the NFPA or HMIS rating?
- Assessing the hazard – Toxics:
  - Does the site store/use any toxic chemicals? If so,
    - How much?                      Where & how is it stored?
    - What kind?                      What is the NFPA or HMIS rating?
- Assessing the hazard – Reactive Chemicals:
  - Does the site store/use any reactive chemicals? If so,
    - How much?                      Where & how is it stored?
    - What kind?                      What kind of reactivity?

# Physical Hazards

All **Company Name** locations are likely to have some physical hazards present or to which Associates may be exposed on customer sites, such as:

- Very hot or cold environments, surfaces, processes or substances (hot or freezing chemicals)
- Working at elevations greater than 4'
- Being struck by raw materials in storage or in process
- Trip Hazards &/or unsafe work surfaces

# Physical Hazards

- Assessing the hazard – Very Hot/Cold Environments:
  - Do Associates have to work in environments where heat exhaustion or hypothermia are a hazard? If so,
    - How often? Is there currently any control in place?
    - What kind?
  - Are Associates exposed to very hot/very cold surfaces, equipment, processes or substances?
    - How often? Is there currently any control in place?
    - What kind?
- Assessing the hazard – Working at elevations >4':
  - Do Associates work at heights >4' w/open sides from which they could fall? If so,
    - How often? Are these surfaces guarded by proper guard rails?
    - Are Associates trained to recognize fall hazards?
    - Is access to non-process related elevated surfaces restricted (e.g., roof access, storage platforms, etc.)?
      - Access gated & locked? Signs Posted?

# Physical Hazards

- Assessing the hazard – Impact:
  - Does the site store & handle materials which, if they shifted or fell could strike and injure Associates? If so,
    - Is material properly secured &/or supported to prevent shifting & falling?
    - Are there controls in place to protect Associates when handling/moving the materials?
  - Are there processes at the site where material or machinery moves such that Associates could be struck? If so,
    - Are the swing radii guarded or access controlled to prevent Associate injury?
  - Are there processes or equipment at the site operating under extreme pressure or load (e.g., high pressure steam, air or fluids, highly spring-loaded mechanical equipment)? If so,
    - Are there preventive maintenance procedures and inspections in place?
    - Are Maintenance personnel trained for protecting themselves and others during maintenance activities?

# Physical Hazards

- Assessing the hazard – Machinery & Machine Guarding:
  - Is all machinery that is permanently installed and could present a hazard by falling or “walking” properly anchored to the building structure (usually the floor)?
  - Does the site have equipment requiring guarding? If so,
    - Was the machinery assessed for adequate guarding as purchased?
    - Are guards in place & properly in use (not removed or bypassed)?
    - If guarding is “by distance” are proximity controls engineered (light curtains, interlocked cages, pressure mats, etc.) or by work rules?
    - If guarding “by distance” is by engineering controls, are controls in place and working?
    - Are there preventive maintenance procedures and inspections in place?
    - If guarding “by distance” is by work rules,
      - Are signs &/or other warnings in place?
      - Are the work rules strictly enforced?

# Physical Hazards

- Assessing the hazard – Trip/Work Surfaces
  - Are there structural trip hazards present at the site (e.g., trenches, low pipes, low conduit covers, protruding floor plates, etc.)? If so,
    - Are these guarded?
    - Are there warning signs or other visibility warnings, such as high visibility paint?
  - Do field Associates encounter work surfaces that are uneven, cluttered, have holes or unguarded edges? If so,
    - Have these Associates received Walking/Working Surfaces safety training?
    - Have these Associates received Fall Protection Awareness training?

# Material Handling

**Company Name** facilities & customer sites are likely to have some material handling hazards present, such as:

- Lifting, positioning & carrying heavy objects
- Crane or hoisting operations
- Lift Equipment use

# Material Handling Hazards

- Assessing the hazard – Lifting, Positioning & Carrying:
  - Do Associates have to lift, carry or position heavy objects? If so,
    - How often? What kind?
    - Is there mechanical assistance available (scissor lift, crane, lift eqt., etc)?
    - Have all Associates been trained in proper lifting?
    - Have all Associates been trained on the individual maximum lift weight limit?
    - Have Job Safety Analyses (JSAs) been developed for routine material handling tasks?
  - Are cranes in use at the site? If so,
    - Is crane operation limited to qualified personnel?
    - Are cranes properly maintained?
  - Is lift equipment in use at the site? If so,
    - Is lift equipment operation limited to qualified personnel?
    - Is lift equipment properly maintained?

# Electrical Hazards

The **Company Name** business does not typically engage in electrical work. However:

- All sites may need to arrange for repairs to electrical equipment and;
- **Location** Associates will likely operate electrical equipment & must be familiar with basic electrical safety;
- Field Associates may encounter electrical hazards at customer job sites such as:
  - Connecting and operating cord & plug electrical equipment
  - Incidental exposure to unguarded energized electrical circuits
  - Operating portable generators

# Electrical Hazards

- Assessing the hazard – Plant & Equipment:
  - Are all electrical panels and disconnects properly marked for their purpose (what they control) & magnitude (voltage)?
  - Is proper clearance around all electrical panels and disconnects maintained (usually 3', but may be greater depending on voltage & configuration)?
  - Do in-house Maintenance Associates perform electrical repairs? If so,
    - How often?                      What kind?
    - Are these Associates trained and either Licensed Electricians or work under the supervision of Licensed Electricians?
- Assessing the hazard – Operating electrical, equipment, tools & machinery:
  - Have all Associates received basic electrical safety training appropriate to their responsibilities, i.e.,
    - All unauthorized personnel prohibited from attempted repair of electrical equipment;
    - Not overloading circuits;
    - Maintaining proper clearances around electrical control panels;
    - Basic electrical safety inspections of the equipment they use.

# Motor Vehicle Use

**Company Name** business requires some Associates to travel for various reasons and some operation of Commercial Motor Vehicles\*.

- Assessing the hazard – Non-Commercial Driving:
  - Do Associates have to travel on company business? If so,
    - How often?           What kind?
    - Have all these Associates completed basic driver safety training?
  - Does the location have company-owned/leased non-commercial vehicles? If so,
    - Are these vehicles properly equipped?
    - Is there a preventive maintenance program in place for them?

\* Commercial Motor Vehicles are those used for commercial purposes and have a Gross Combined Vehicle Weight (capacity including trailer) of >10,000lbs.

# Motor Vehicle Operation

- Assessing the hazard – Commercial Motor Vehicles (CMVs):
  - Does the site operate Commercial Motor Vehicles? If so,
    - How often?           What kind?
    - Are these vehicles and their drivers in the **Company Name** subcontracted management program?
  - Does the site operate Commercial Motor Vehicles with GCVW >26,000lbs? If so,
    - How often?           What kind?
    - Do the drivers of these vehicles have Commercial Driver's Licenses (CDLs)?
  - Are there any special requirements for CMVs in the location's state?

# Fire Prevention & Emergency Response

All **Company Name** sites are required to prevent and plan responses for emergency situations such as fire, weather, threats of violence & medical emergencies. The minimum requirements for all sites are:

- Assessment of potential causes for emergencies and preventive action
- Proper maintenance of emergency equipment such as fire suppression equipment and basic 1<sup>st</sup> aid supplies
- Development of procedures for emergency evacuation
- Verification of availability of mutual aid emergency services (Fire Department, Police, Emergency Medical Services)



# Fire Prevention & Emergency Response

## Assessing the hazard – Evacuation

– Does the site have an evacuation plan?

- Is it up-to-date? Is person in command identified? Backup?
- Is a muster point identified? Are annual drills conducted?
- Are all Associates trained in the evacuation procedure?

## Assessing the hazard – Weather Emergencies

– Does the site have a weather emergency plan?

- Is it up-to-date? Is there a notification of Associates process?
- If shelters are appropriate, are they identified & properly set up
- Are all Associates trained in the procedure?

## Assessing the hazard – Medical Emergencies

– Does the site have a medical emergency plan?

- Is it up-to-date? Are personnel responsibilities identified?
- If Mutual Aid (PD, FD, EMS) is relied on, has responsiveness been verified?
- Are all Associates trained in the procedure?

## Construction Hazards

**Company Name** sites whose Associates work at home construction or commercial construction sites, must provide training and equipment appropriate to those hazards, including:

- Specialized hazard recognition training for construction sites
- Appropriate PPE for construction sites (steel toe work shoes, hard-hats, etc.)

# Construction Hazards

## Assessing the hazard – Applicability

- Do site Associates work at construction sites?
  - Do site Associates do non-labor work, e.g., estimating, consulting, supervising, etc.? If so?
    - Are they provided appropriate PPE?
    - Have they received construction site hazard recognition training?
    - Have they received hazardous waste management training for non-CTI sites?
  - Do site Associates do labor, i.e., installations? If so,
    - Are they provided appropriate PPE?
    - Have they received construction site hazard recognition training?
    - Have they received hazardous waste management training for non-CTI sites?
    - Do they receive site safety orientations at the start of jobs?

## **Ergonomic Hazards**

***Company Name Associates* may perform work that requires repetitive or other motions that place stress on their musculoskeletal structure, either at *Company Name* sites or construction job-sites.**

### **Assessing the hazard – Task Analysis**

- Has an ergonomic study been performed of the site's routine tasks? (Note: This may be performed by trained in-house personnel.)
- Walk the site and assess whether there are routine tasks that require repetitive lifting, twisting, bending or joint motions.
- Walk some construction job-sites and assess whether there are routine tasks that require repetitive lifting, twisting, bending or joint motions.
- Do Associates complain of pain in joints that could be reasonably be associated with repetitive motion?

# Hazardous Energy Control – Lockout/Tagout

**Company Name** manufacturing sites may need Associates to perform minor servicing of machinery and may have Maintenance personnel who perform repairs on plant & equipment requiring de-energizing and controlling potentially hazardous energy sources.

In addition, Associates that work at home construction or commercial construction sites may encounter electrical circuits that are locked & tagged out.

Working under Lockout/Tagout (LOTO) requires specialized training and authorization.

Potentially hazardous energy sources requiring LOTO include,

- Electrical >35 vAC or 50 vDC
- Gravity loaded
- Stored energy sources such as capacitors
- Pneumatic/Hydraulic
- Spring or other compression loaded

# Hazardous Energy Control – Lockout/Tagout

## Assessing the hazard – Applicability

- Does the site have Maintenance personnel who perform repairs to plant & equipment where hazardous energy sources are present? If so,
  - Are electricians licensed or working under supervision of a licensed electrician?
  - Are equipment-specific LOTO procedures available for routine repairs?
  - Are Maintenance personnel trained & authorized for LOTO?
  - Is sufficient & proper LOTO equipment readily available?
- Do site Associates perform minor servicing of manufacturing machinery? If so,
  - Are equipment-specific LOTO procedures available for routine repairs?
  - Are the Associates trained & authorized for LOTO on their machinery?
  - Is sufficient & proper LOTO equipment readily available?
- Do site Associates perform work at home construction or commercial construction sites ? If so,
  - Have the Associates received LOTO Awareness training?

# Confined Spaces

***Company Name*** sites may have spaces such as pits, dry-wells, sanitary or storm drain access points or tanks that may be Confined Spaces. Confined Spaces are defined as any space that is:

- large enough and so configured that an employee can bodily enter and perform assigned work,
- has limited or restricted means for entry or exit, and
- is not designed for continuous employee occupancy.

**CONFINED SPACE ENTRY BY *Company Name* PERSONNEL IS CURRENTLY PROHIBITED AND MUST BE CONTRACTED TO QUALIFIED SERVICE PROVIDERS. CONTACT YOUR REGION EHS MANAGER IF YOUR SITE NEEDS *Company Name* PERSONNEL TO ENTER CONFINED SPACES.**

# Confined Spaces

## Assessing the hazard

- Walk the site and determine if there are confined spaces present. If so,
  - Are they labeled as confined spaces and entry prohibited?
  - Is there a routine need to perform work (maintenance, repairs, etc.) requiring entry into these spaces. (Note: entry is defined as breaking the entry plane of the space with any body part.) If yes,
    - Does the site have access to qualified contractors to perform those tasks?
  - Have all Associates received Confined Space Awareness training?
- Do site Associates perform work at home construction or commercial construction sites ? If so,
  - Have the Associates received Confined Space Awareness training? (Note: This training is covered in OSHA 10 hour training.)

# Asbestos

**Buildings constructed prior to 1980 may contain asbestos insulating or construction materials.**

**Associates that work at home or commercial refurbishment sites may encounter asbestos-containing materials that may become disturbed during the work.**

**ASBESTOS WORK BY *Company Name* PERSONNEL IS CURRENTLY PROHIBITED AND MUST BE CONTRACTED TO QUALIFIED SERVICE PROVIDERS. CONTACT YOUR REGION EHS MANAGER IF YOUR SITE NEEDS *Company Name* PERSONNEL TO DO WORK THAT MAY DISTURB ASBESTOS.**

# Asbestos

## Assessing the hazard

- Was the **Company Name** site constructed before 1980? If so,
  - An asbestos survey must be conducted by a qualified service provider. (Note: **Company Name** will likely have an asbestos survey on file.)
  - Any asbestos-containing materials must be identified with labels.
- Do site Associates perform work at home or commercial refurbishment sites? If so,
  - Have the Associates received Asbestos Awareness training?
  - Do contracts specify asbestos assessments to be performed prior to start of work?