Addendum II

Hazard Communication Program

This program has been prepared to comply with the requirements of the Federal OSHA standard ________________ and to insure that information necessary for the safe use, handling and storage of hazardous chemicals is provided to and made available to employees.

This program includes guidelines on identification of chemical hazards and the preparation and proper use of container labels, placards and other types of warning devices.

A. Chemical Inventory

1. __________________ maintains an inventory of all known chemicals in use on the worksite. A chemical inventory list is available from the ____________________________.

2. Hazardous chemicals brought onto the worksite by _________________________ will be included on the hazardous chemicals inventory list.

B. Container Labeling

1. All chemicals on site will be stored in their original or approved containers with a proper label attached, except small quantities for immediate use. Any container not properly labeled should be given to ____________________________ for labeling or proper disposal.

2. Workers may dispense chemicals from original containers only in small quantities intended for immediate use. A chemical left after work is completed must be returned to the original container or ________________________________ for proper handling.

3. No unmarked containers of any size are to be left in the work area unattended.

4. __________________________ will rely on manufacturer applied labels whenever possible, and will ensure that these labels are maintained. Containers that are not labeled or on which the manufacturer’s label has been removed will be relabeled.

5. __________________________ will ensure the each container is labeled with the identity of hazardous chemical contained and any appropriate hazard warnings.

C. Material Safety Data Sheets (MSDS)

1. Employees working with hazardous chemicals may request a copy of the material safety data sheet (MSDS). Requests for MSDS’s should be made to ____________________________.

2. MSDS should be available and standard chemical reference may also be available on the site to provide immediate reference to chemical safety information.

3. An emergency procedure to gain access to MSDS’s information will be established.
D. Employee Training

Employees will be trained to work safely with hazardous chemicals. Employee training will include:

1. Methods that may be used to detect a release of a hazardous chemical(s) in the workplace,
2. Physical and health hazards associated with chemicals,
3. Protective measures to be taken,
4. Safe work practices, emergency responses and use of personnel protective equipment,
5. Information of the Hazard Communication Standard including
   a. Labeling and warning systems, and
   b. An explanation of Material Safety Data Sheets (MSDS)

E. Personal Protective Equipment (PPE)

Required PPE is available from _______________________________. Any employee found in violation of PPE requirements may be subject to disciplinary actions up to and including discharge.

F. Emergency Response

1. Any incident of overexposure or spill of hazardous chemical/substance must be reported to ________________________ at once.

2. The foreman of the immediate supervisor will be responsible for insuring that proper emergency response actions are taken in leak/spill situations.

G. Hazards of Non-routine Tasks

1. Supervisors will inform employees of any special tasks that may arise which would involve possible exposure to hazardous chemicals.

2. Review of safe work procedures and use of required PPE will be conducted prior to the start of such tasks. Where necessary, areas will be posted to indicate the nature of the hazardous involved.

H. Informing Other Employers

1. Other on-site employers are required to adhere to the provisions of the Hazard Communication Standard.

2. Information on hazardous chemicals known to be present will be exchanged with other employers. Employers will be responsible for providing necessary information to their employees.

3. Other on-site employers will be provided with a copy of __________________________ hazard communication program.
I. Positing

1. __________________________ has posted information for employees at this jobsite on the Hazard Communication Standard. This information can be found at _________________.

Material Safety Data Sheets (MSDS)

Using a MSDS

An MSDS provides information the manufacturer of a chemical considers necessary for you the worker to determine what chemicals are in a product and what steps to take to protect yourself when using the product.

Although MSDS’s from different sources may look very different, they all contain the same type of information. MSDS may look difficult; and yes, there is a lot of technical language and data, but the information you need to identify, understand and work safely with a chemical product is fairly easy to find.

MSDSs are divided into sections usually beginning with the chemical and common name of the product. Besides knowing what this product is called, it’s important to know who makes it and where to reach the manufacturer. The manufacturer can answer questions about his product and help you if any emergency arises. You will usually find a phone number for the manufacturer in this section.

An important section to look for is usually called “Health Hazards” which tells you how dangerous the product can be, the type of danger it represents and what happens if your are overexposed to this product.

Equally important is the section that deals with “First Aid.” This section will give you some basic steps to take if you or another person are affected by the chemicals in this product.

Another section deals with “Protective Equipment.” Here specific recommendations for safety equipment and procedures are listed. This section tells you how to protect yourself from exposure when working with work or near this product.

By taking the time to read the MSDS, you have found some important basic information about the chemical(s) you work with including:

- What’s it called;
- What’s in it;
- What happens if the chemical affects you;
- What First Aid steps to take if exposure occurs; and
- How to protect yourself and work safely with the chemical.

Another section of a MSDS will tell you what the chemical looks, smells and feels like; how to safely handle and store the chemical; what happens to the chemical in the event of a fire; and what, if any, exposure limits have been set or recommended for the chemical(s) or product. Under the provisions of the Hazard Communication Standard, you have the opportunity to review your company’s HCS program, chemical inventory list and copies of MSDS for chemicals you are working with.

More information on MSDS, chemical information references and chemical safety can be obtained by asking your supervisor.
How Chemicals Enter Your Body

In order for a chemical to have any effect on you, you have to come in contact with a chemical in its solid, liquid or gas form.

There are four “routes of entry” or paths a chemical can take.

- **Breathing** (inhalation)

  Chemicals can enter through your lungs as you breathe the air around you. Some chemicals can irritate your lungs, nose and throat, like ammonia. Others can be absorbed into your blood, traveling to and affecting the organs in your body. Prolonged exposure to hazardous substances like asbestos and other solid fiber materials can cause serious health problems. Dusts and fibers can become trapped in your lungs causing irritation, scarring and damage.

  Regardless of the type of chemical you work with, your first line of defense against breathing in hazardous chemicals is to use an approved respirator.

- **Through your skin** (absorption)

  Although the skin is a very effective barrier to most chemicals, it can be penetrated. Damage to the skin from cuts, scrapes, cracking, dryness or other conditions can allow a chemical to enter into the body. Some chemicals can damage the skin on contact and others pass through the skin and into your bloodstream. A group of chemical solvents such as toluene, gasoline and mineral spirits are absorbed easily through your skin. Some pesticides like parathion can easily pass through the skin building up to poisonous levels in the body.

  There are two easy steps which will prevent absorption- wearing gloves that are chemical resistant and washing off any chemical that contacts the skin as soon as possible. When you are washing, make sure you use a product designed for washing skin and not products like paint thinner, turpentine and benzene.

- **Swallowing** (ingestion)

  A chemical can enter into your body if you accidentally swallow it or if your food or drink become contaminated. Simply by not washing your hands before you eat after working with chemicals or eating, smoking or drinking in an area where chemicals are in use could lead to trouble.

- **Injection**

  Like the shot you get from your doctor when you are ill, chemicals can be accidentally injected into your body. If you work around high pressure equipment of any kind like compressed air, grease guns, or hydraulic lines, the potential exists for this kind of accident. Be extra cautious around any kind of pressurized spray equipment, of high pressure lines and never use compressed air to clean off your hands, arms or clothing.
Solvents

A solvent in simple language is a liquid that dissolves another substance. In construction, we most often see them as cleaners, degreasers, thinners, fuel and glues.

Solvents are lumped into three main types or classes. Those containing water (aqueous solutions) like liquid forms of acid, alkalis and detergents and those containing carbon (organic solvents) like acetone, toluene and gasoline. The third group contains chlorine in their chemical makeup and are called chlorinated solvents like methylene-chloride and trichloroethylene.

Solvents can enter into your body in two ways, by breathing or by contact with your skin.

Any solvent you breathe (inhalation) can cause dizziness or headache as it affects your central nervous system. If you continue to breathe the vapors of a solvent, you could develop nose, throat, eye and lung irritation and even damage the liver, blood, kidneys, and digestive system.

Solvents on your skin can be absorbed into the body. Because solvents dissolve oils and greases, contact with your skin can dry it out producing irritation, cracking and skin rashes. Once a solvent penetrates through the skin, it enters into the bloodstream and can attack the central nervous system and body organs.

Like all chemicals the effect upon you will depend on a number of factors-how toxic it is, how long were you exposed, you own body’s sensitivity, and how concentrated or strong the solvent is.

You can protect yourself from solvent hazards by following a few simple rules:

- Know what chemicals you are working with.
- Use protective equipment like gloves, safety glasses and proper respirators recommended for that chemical.
- Make sure your work area has plenty of fresh air.
- Avoid skin contact with solvents.
- Wash with plenty of soap and water if contact with your skin and a solvent occurs.
- If a solvent splashes into your eyes, flush with running water for a minimum of 15 minutes and get medical help.

More information on the chemicals you work with is available from your supervisor.
Acids, Bases, Alkali

Acids and Bases (Caustics) can easily damage skin and eyes. How serious the damage is depends on how strong the chemical is, how long contact is maintained and what actions you take.

Acids and Bases can be liquids, solid granules, powders, vapors or gases. A few, commonly used acids include: sulfuric acid, hydrochloric acid, muriatic acid and nitric acid. Some common bases (caustics) are lye (sodium hydroxide) and potash (potassium hydroxide).

Both acids and bases can be corrosive, causing damage to whatever they come in contact with. The more concentrated the chemical the more dangerous it can be. Vinegar is a mild form of acetic acid; and as such, it can be swallowed or rubbed into the skin with no damage, but a concentrated solution or acetic acid can cause serious burns.

Different acids react differently when they contact your skin. Sulfuric acid mixes with water to produce heat; when it contacts your skin, it reacts with moisture causing burns. Hydrofluoric acid may not even be noticed if it spills on your skin, but hours later as the acid is absorbed into the muscle tissue, it can cause deep burns that are very painful. Most acids in a gas or vapor form, when you breathe them, react with the moisture in your nose and throat causing irritation or damage. Acetic and nitric acids don’t react with water so when these vapors are breathed in, they quickly penetrate into the lungs causing serious damage.

Bases as a class of chemicals feel slippery or soapy, in fact, soap is made from a mixture of a base (lye) and animal fat. Concentrated bases dissolve tissue easily and therefore can cause severe skin damage on contact. Concentrated caustic gases like ammonia vapors can damage the skin, eyes, nose, mouth and lungs. Even dry powder forms of bases can damage you when you breathe them in because they react with the moisture in your skin, eyes and respiratory tract.

Cement and mortar are alkali compounds in their wet or dry form. As dust and powder, they can cause damage to skin and eyes when they react with moisture in your body. Concentrate and mortar can also cause an allergic reaction in people who become sensitive to them. These compounds are abrasive and can damage your skin by the sandpaper-like quality they possess.

Always follow these rules when working with acids and bases:

- Know what chemicals you are working with and how strong (concentrated) they are.
- Use Personal Protective Equipment as required.
- In case of skin or eye contact, flush with cool water for at least 15 minutes but do not rub the skin or eyes.
- Always add acid to water to prevent splatter.
- Keep acids and bases apart, store separately and clean up spills promptly.
- Check with your supervisor if you need more information.
Metals

We don’t usually think of chemicals when we talk about metals, but the fact is that every time we weld, braze, torch cut, solder, grind, polish, coat, finish or drill metals we may be producing dust, fumes and vapors containing that metal.

The metal in dust, fumes and vapors can easily be deposited in the lungs and then into the bloodstream. Although breathing in the dust or fume of a metal is the most common way for metals to get into your body, you could swallow metal particles or compounds if you smoke, drink, chew gum or eat your lunch in an area where these compounds are present. Some metals like mercury and certain compounds of lead can be absorbed by your skin.

Common Construction Metals

Cadmium

Cadmium and its compounds can be toxic. A condition called metal fume fever, with flu-like symptoms can occur when small doses are inhaled. In larger doses cadmium inhalation can be fatal. Small repetitive doses can cause kidney damage or lead to emphysema. Welding cadmium coated metals is the most common cause to exposure, adequate ventilation and an approved respirator will protect you.

Nickel

Exposure to metal dust or fumes containing nickel and nickel compounds can inflame and irritate the skin causing an itching rash. Inhalation of nickel compounds has been linked to cancer of the lungs and nasal sinuses.

Lead

Lead exists normally in the body but can easily build to a level that is toxic. Early signs of lead poisoning-fatigue, irritability, headache, cramps, stomach pain, loss of appetite—are likely to be ignored. Continual buildup can damage the nervous system, brain, kidneys and reproductive system. Soldering pipes, casting lead seals and repairing piping are common lead procedures; but lead is also found in gasoline, canned food an most city water supplies.

Zinc, Copper, Brass and Magnesium

Fumes, powders and compounds of these metals are sometimes encountered in welding, brazing, cutting and spray metallizing work. Inhalation of these metals can cause metal fume fever, a flu-like condition with coughing, shortness of breath, fatigue, fever, chills, profuse sweating and chest pains.

Following a few simple procedures will protect you from metal exposure:

- Know what is in the metals you are working with.
- When dust or fumes are produced, use the appropriate respirator properly.
- Always make sure you have plenty of ventilation.
- Pay attention to personal hygiene and housekeeping. Before eating, drinking and smoking, wash your hands and keep your work area separate from your lunch area.
Training Session on Hazard Communication

I know where the Material Safety Data Sheets for my work are kept.

I understand the safe work procedures and precautions to be taken when working with these products including use of protective equipment and/or apparel.

I know where emergency supplies are kept.

I know where the emergency phone number and Hazard Communication Information is posted.

I am aware that I may review copies of the hazardous chemical list, the company’s written program and MSDS’s

_______________________________________    ______________________
Employee Signature            Date

_______________________________________
Job Location or Name

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