CHEMICAL SAFETY

Location _____ Trainer _____ Date _____

General Information
When chemicals are not properly contained and handled, they can be:
- Inhaled–as dust or gas.
- Absorbed–through skin or clothing.
- Swallowed–in small doses over a long period of time.

Four main types of chemicals:
1. **Toxic Agents**–Poisons such as hydrogen sulfide and cyanides can cause injury, disease, even death.
2. **Corrosives**–Irritants such as chlorine are especially dangerous to the eyes and respiratory tract.
3. **Flammables**–Liquids and gases that burn readily such as ethyl, ether and gasoline. Conditions for burning: just the right amount of flammable, oxygen and spark or other source of energy.
4. **Reactives**–Substances that can explode such as nitro compounds. Conditions: being hit, dropped, heated or mixed with the wrong chemical.

If improperly handled, virtually every chemical that the Company uses in its operation of the plants has the potential to harm an individual. Therefore, certain guidelines must be strictly followed to ensure employee safety. These guidelines are:
- All chemical containers must be labeled at all times.
- Know your chemicals before working with them. Read about them.
- Employees working directly with chemicals must wear protective boots, gloves, eye wear and apron. It is the plant manager's and employee's responsibility to know what protection is required and see that it is worn.
- When transporting chemicals from one point to another, employees must wear protective boots, gloves, eye wear and apron.
- Wash hands often during work with chemicals as well as washing thoroughly after working with chemicals.
- Keep chemical containers closed when not in use.
- Make sure work areas are well ventilated.
- Chemicals should never be transported in pockets of your clothing.
- Contaminated clothing should be washed thoroughly if possible. If not possible, clothing should be thrown away.
- If corrosives touch you, wash immediately and thoroughly with water.

- If eyes are affected, wash for at least 15 minutes with lids held open. See a doctor.
- Make sure no flame, spark or smoke get near flammables.
- Keep only a small amount of flammables in work area.
- Store and dispose of flammables safely.
- Keep work area clean, wipe up spills and keep equipment in good condition.
- Investigate any odors before proceeding.

NOTE: Many chemicals can be hazardous in more than one way. For example, a chemical listed as “toxic” may also be flammable.

Keys to a safe working environment:
- Follow directions.
- Always read the label (even if you use the same chemicals often.)
- Know what to do in emergencies–antidotes, basic first aid, when to call a physician.
- Store chemicals safely.
- Close containers when not in use so the chemicals and atmosphere don’t become polluted.
- Dispose of chemicals safely.
- Flush into sewer only those chemicals approved for such disposal.

NOTE: If directions are not complete:
- Check the appropriate Safety Data Sheet (SDS).
- Ask your supervisor.

Used safely, chemicals provide efficient cleaning and sanitizing of our plant complex. How you deal with chemicals makes the difference between health and harm.
- Do not mix chlorine or chlorinated products with acid products. A dangerous chlorine gas will be produced.
- Do not add high caustic cleaners to hot water. A violent eruption may occur.