

## **Chapter 3: Environmental**

- Fire Extinguishers
- Fire Protection and Burn Permits
- Disposing of Oily Rags
- Spill Cleanup
- Spill Prevention
- Storm Water Runoff
- Trash
- Equipment and Vehicle Leaks
- Washing Equipment

### FIRE EXTINGUISHERS

#### INTRODUCTION

- 1. Review any accidents or "near accidents" from the past week.
- 2. Describe the hazards of the work as they relate to your project. Explain or show the SAFE way of doing the job.
- 3. Give the TOOL BOX SAFETY TALK

Almost all fires are small in their early stage and can be put out quickly if the proper fire extinguisher is available, and the person discovering the fire has been trained to use the fire extinguisher at hand. There are basically three different types or classes of fire extinguishers, each of which extinguishes specific types of fire.

- Class A extinguishers will put out fires in ordinary combustibles, such as wood and paper. Extinguishers that are suitable for Class A fires should be identified by a triangle containing the letter "A." If in color, the triangle should be green.
- Class B extinguishers will put out fires in ordinary combustibles, such as wood, paper and plastic. Extinguishers that are suitable for Class B fires should be identified by a square containing the letter "B." If in color, the square should be red.



- Class C fire extinguishers is used on fires that involve energized electrical equipment which require the use of electrically nonconductive extinguishing. Extinguishers that are suitable for Class C fires should be identified by a circle containing the letter "C." If in color, the circle should be blue. The presence of the letter "C" indicates that the extinguishing agent is non-conductive.
- Every project should have ABC class fire extinguishers during construction. The number of extinguishers required is dependent upon the project size, materials and work activity.
- Be familiar with the location of the fire extinguishers on your jobsite.



### FIRE PROTECTION AND BURN PERMITS

#### INTRODUCTION

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Jurisdictions require outdoor burning permits to limit air pollution. While laws vary, the following may apply: State and local regulations may prohibit fires in burn barrels and burning stumps to clear land, and burning construction or demolition debris.

 Regulations may prohibit open burning of materials including treated lumber and timber, hazardous wastes, asbestos, automobile parts, wire insulation, rubber products, tires, styrofoam and other plastics, tar paper, wet garbage; oil, petroleum, or petroleum-treated products, including painted wood and wood treated with creosote or pentachlorophenol, asphalt, industrial wastes, food wastes, and any material that creates dense smoke or noxious odors.



- Regulations may prohibit burning in any areas of the state that exceed federal or state ambient air quality standards for pollutants emitted by outdoor burning.
- Individual fire districts may prohibit open burning based on local fire safety concerns. Many communities have local laws prohibiting or restricting open burning.
- It is the responsibility of the permit holder to become familiar with the rules and regulations before doing any burning. Failure to follow established regulations will result in revocation of your permit, fines, or possible jail time.
- Make sure any fire is completely out before leaving the jobsite.



### **DISPOSING OF OILY RAGS**

#### **INTRODUCTION**

- 1. Review any accidents or "near accidents" from the past week.
- 2. Describe the hazards of the work as they relate to your project. Explain or show the SAFE way of doing the job.
- Give the TOOL BOX SAFETY TALK

Oily rags are a serious fire hazard because they can spontaneously combust. Many states regulate the disposal of oily rags as "oily waste." The Environmental Protection Agency (EPA) does not regulate oily rags as waste as long as the rags do not have any freeflowing oil, contain hazardous contaminants, or meet the definition of a characteristic oil hazardous waste. Follow these procedures for safe disposal of oily rags:

- Properly dispose of oily rags or send to a rag cleaning service.
- Oily rags should be placed in an approved and clearly-labeled airtight container. Always keep containers closed securely.
- If the rags are contaminated with other chemicals, especially those that are "hazardous," (heavy metals, toxic chemicals, paint, etc.) do not burn them. Rather, treat the rags as a



hazardous waste and dispose of them accordingly.

If you are unsure whether the rags contain hazardous materials, consult the Material Safety Data Sheet for information proper disposal or contact your supervisor.



### SPILL CLEANUP

#### INTRODUCTION

- 1. Review any accidents or "near accidents" from the past week.
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Chemical spill prevention plans required by state and federal law must include provisions for spill cleanup. The following Best Management Practices will help prevent runoff in the event of a spill:

- Properly clean up and dispose of any spilled substance immediately to protect personnel from potential fire and health hazards and the environment.
- Ensure that no spilled materials are washed into the streets, gutters, storm drains, or creeks.
- If possible, use dry cleaning methods to clean up spills to minimize the use of water.



- Use a rag for small spills, a damp mop for general cleanup, and absorbent material for larger spills.
- Never hose down or bury dry material spills. Sweep up the material and dispose of properly.
- Clean up chemical materials with absorbents, gels, and foams. Use adsorbent materials on small spills rather than hosing down the spill. Remove the adsorbent materials promptly and dispose of properly.
- If the spilled material is hazardous, then used cleanup materials are also hazardous and must be handled as hazardous waste.



### SPILL PREVENTION

#### INTRODUCTION

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Typically, most businesses and public agencies that generate hazardous waste and/or produce, transport, or store petroleum products are required by state and federal law to prepare spill control and cleanup plans. A Spill Prevention Plan is applicable to facilities that transport, transfer, and/or store hazardous materials, petroleum products, or fertilizers that can contaminate storm water runoff. Regulations include the following provisions:

- Spill response and prevention plans should clearly state measures to stop the source of a spill, contain the spill, cleanup the spill, dispose of contaminated materials, and train personnel to prevent and control future spills.
- Spill prevention plans are most applicable to construction sites where hazardous wastes are stored or used.
- The preliminary steps include: (i) identifying potential spill or source areas such as loading and unloading, storage, and processing areas; places that generate dust or particulates; and areas designated for waste disposal; and, (ii) evaluating stationary facilities that include manufacturing areas, warehouses, service stations, parking lots, and access roads.



- Employees must be trained in spill control response procedures, post-spill response procedures and be provided with emergency phone numbers.
- Emergency spill containment and cleanup kits should be located at the facility site. The contents of the kit should be appropriate to the type and quantities of chemical or goods stored at the facility.
- Spill kits must be inspected and maintained in all activity areas.
- Re-fuel equipment in a designated area to minimize contamination. Pay attention to location so that spills would not enter water streams or storm water. Consider dikes or a secondary containment system.



### **STORM WATER RUNOFF**

#### INTRODUCTION

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- 2. Describe the hazards of the work as they relate to your project. Explain or show the SAFE way of doing the job.
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Operators of construction sites one acre or larger (including smaller sites that are part of a larger common plan of development) must obtain authorization to discharge storm water under an NPDES construction storm water permit. These facts help explain the requirements:

- Storm water runoff from construction activities can have a significant impact on water quality. In addition to sediment, as storm water flows over a construction site, it can pick up other pollutants like debris, pesticides, petroleum products, chemicals, solvents, asphalts and acids which also contribute to water quality problems.
- The EPA estimates that 20 to 150 tons of soil per acre is lost every year to storm water runoff from construction sites.



- Items installed for storm water pollution must be inspected regularly and maintained properly.
- Site owners and their construction operators of regulated construction sites are required to develop and implement a Storm Water Pollution Prevention Plan (SWPPP) to prevent storm water runoff and obtain permit coverage from an authorized state or from the EPA, if the state is not authorized by EPA to issue NPDES permits.
- The EPA recommends Best Management Practices to protect natural features, minimize exposure of soil, control erosion, and control sediment runoff.



### TRASH

#### INTRODUCTION

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Construction sites can present many hazards to employees. Keeping a construction site clean of debris can further reduce hazards. Also, managing waste can contain certain pollutants at their source before they can contaminate the ground or streams via storm water runoff. Use the following Best Management Practices when disposing of trash:

- Collect debris from work areas and place in containers on a daily basis.
- Separate potentially hazardous waste from nonhazardous construction site waste and place in approved containers with lids. Hazardous Wastes can include used oil, used oil filters, oily rags and flammable wastes as well as caustics, acids, harmful dusts, etc.



- Do not place collected litter and debris in or next to drain inlets, storm water drainage systems, or bodies of water.
- Provide dumpsters to contain the solid waste generated by the project.
- Make sure hazardous wastes are not disposed of in dumpsters designated for construction debris. This could include form oil, sealers, paint, curing compounds etc.
- Remove construction debris and waste from the site as frequently as necessary.
- Do not bury construction waste materials on site.
- Place proper trash receptacles throughout the construction site.
- Pull nails from lumber.
- Remove debris to prevent fire hazards.
- A clean jobsite allows for safe movement of workers materials and vehicles.



### EQUIPMENT AND VEHICLE LEAKS

#### INTRODUCTION

- 1. Review any accidents or "near accidents" from the past week.
- 2. Describe the hazards of the work as they relate to your project. Explain or show the SAFE way of doing the job.
- 3. Give the TOOL BOX SAFETY TALK

Equipment and Vehicle leaks are potential water and soil pollutants. Rain can wash contaminants to the nearest stream. A car leaking only a few drops a day can contribute to water pollution. For example, one pint of oil can contaminate an area larger than a football field. Follow these steps to reduce pollution caused by vehicle leaks:

- If you see a leak from a vehicle, contain it with a drip pan or absorbent material.
- Repair all fluid leaks as soon as possible to reduce discharge into the environment.
- Sweep up leaks using granular, absorbent material such as cat litter. Clean up residue and dispose of it properly.
- Properly dispose of fluids such as solvents, antifreeze, brake fluid, and motor oil.
- Report all leaks to your supervisor.
- Check equipment and vehicles on a daily basis.



