

## Waste Management

### Operation: Waste Management

#### Activity: Hazardous Waste Management

#### *Potential Environmental Impacts:*

- Contamination of air, soil, and/or surface and groundwater may result if hazardous waste is incorrectly disposed due to:
  - disposal of hazardous waste in the solid waste (i.e., the trash, a dumpster);
  - disposal of hazardous waste by pouring it down shop sinks, floor drains, sumps or other potential routes of exposure;
  - lack of knowledge as to whether or not a waste stream is hazardous waste.

(NOTE: Examples of commonly overlooked potential hazardous wastes include: metal filings, solvent-contaminated rags, oily rags, absorbent materials used in spill cleanup, welding stubs, aerosol paint cans, paint stripper, paint brushes, paint booth filters, waste refrigerant canisters, degreaser filters, fluorescent lightbulbs, nickel-cadmium batteries, storage tank residues, pesticides, analytical laboratory residues, and expired chemicals.)

- Contamination of soil, and/or surface and groundwater may result if hazardous wastes leak from containers or storage tanks during storage, shipment, or transportation due to:
  - structural failure (e.g., corrosion) of the container;
  - inadequate design (i.e., not DOT approved);
  - overfilling and spillage is not detected and properly contained;
  - incompatibility of the contents with the container or tank itself;
  - a tank is removed or exhumed without first removing all liquids and sludges;
  - spillage or leaks of hazardous wastes occurring during vehicle loading activities and/or while the waste shipment is in route to the destination facility;
  - improper off-site management and treatment of hazardous waste occurs;
  - incorrectly labeled containers of hazardous waste being disposed of according to the content label instead of what is actually in the container.
- Containers or tanks of hazardous wastes that are not closed or are improperly closed may result in the release of fugitive air emissions (i.e., vapors) that can degrade air quality.
- Contamination of soil and/or surface and groundwater may result if storm water flows through the hazardous waste storage areas resulting in the discharge of contaminated run-off to:
  - soil or surface and groundwater via drains, sumps, collection trenches, or runoff;
  - the facility waste water treatment works via floor drains, sumps or collection trenches.

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- Contamination of air, soil, and/or surface and groundwater may result if hazardous waste clean-up activities result in discharging contaminated run-off:
  - directly to the soil or surface and groundwater via floor drains, sumps or collection trenches;
  - to the facility waste water treatment works via floor drains, sumps or collection trenches.
- Contamination of air, soil, and/or surface and groundwater may result from the operation of hazardous waste incinerators due to:
  - overloading or under loading the amount of hazardous waste to be incinerated at one time;
  - the incorrect incineration temperature;
  - insufficient burning time;
  - burning of hazardous waste in an incinerator approved solely for solid waste;
  - incorrect disposal of ash from the hazardous waste incinerator due to lack of knowledge as to whether or not the waste ash is a hazardous waste;
  - not following manufacturer's instructions.

### **Operation:** Waste Management

#### **Activity:** Solid Waste Management

##### *Potential Environmental Impacts:*

- Employee and community health may be impacted if solid waste is stored in a manner that presents a fire hazard, encourages nesting by pests (e.g., rodents) or degrades land, habitat or natural resources.
- Impairment of human health and the environment may result if solid waste spills or leaks from collection equipment (e.g., trash dumpsters).
- Solid waste that is not segregated and recycled increases the volume of the waste requiring disposal at the landfill which may contribute to degradation of land, and loss of natural resources.
- Contamination of air, soil, and/or surface and groundwater may result if:
  - hazardous waste is incorrectly disposed of as nonhazardous solid waste via trash receptacles (e.g., dumpsters) or if poured down shop sinks, floor drains, or other potential routes of exposure. Examples of commonly overlooked potential hazardous wastes include: metal filings, solvent-contaminated rags, absorbent materials used in spill cleanup, welding stubs, aerosol paint cans, waste refrigerant canisters, baghouse dust, fluorescent lightbulbs, nickel-cadmium

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- batteries, storage tank residues, pesticides, analytical laboratory residues, or expired chemicals;
  - solid waste is not properly contained while in route to the disposal facility (e.g., fugitive dust from uncovered vehicles, leakage/spillage of liquid or solid waste from inadequate containers, etc.);
  - storm water run-off from compost piles is not properly contained and managed.
- Air quality degradation may result if refrigerant emissions leak from unused refrigeration units, air conditioning compressors.
  - Contamination of air, soil, and/or surface and groundwater may result from the incorrect operation of solid waste incinerators due to:
    - overloading or under loading the amount of solid waste to be incinerated at one time
    - the incorrect incineration temperature;
    - insufficient burning time;
    - burning of hazardous waste or pathological wastes in an incinerator approved solely for solid waste;
    - not following manufacturer's instructions.

## Hazardous Materials Management

### **Operation:** Hazardous Materials Management

#### **Activity:** Storage of Chemical Raw Materials

#### *Potential Environmental Impacts:*

- Contamination of soil and/or surface and groundwater may result if hazardous materials leak from containers or bulk storage tanks due to:
  - structural failure (e.g., corrosion) of the container, tank, or piping;
  - inadequate design;
  - incompatibility of the contents with the container or tank itself;
  - container or tank is overfilled and spillage is not detected and properly contained;
  - tank is removed or exhumed without first removing all liquids and sludge.
  
- Containers or tanks of hazardous materials that are not closed or are improperly closed may result in the release of fugitive air emissions (i.e., vapors) that can degrade air quality.
  
- Contamination of soil and/or surface and groundwater may result if storm water flows through the hazardous materials/waste storage areas resulting in the discharge of contaminated run-off to:
  - soil or surface and groundwater via drains, sumps, collection trenches, or runoff;
  - the facility waste water treatment works via floor drains, sumps or collection trenches.
  
- Contamination of air, soil, and/or surface and groundwater may result if hazardous materials clean-up activities result in discharging contaminated run-off:
  - directly to the soil or surface and groundwater via floor drains, sumps or collection trenches;
  - to the facility waste water treatment works via floor drains, sumps or collection trenches.

## Hazardous Materials Management

**Operation:** Hazardous Materials Management

**Activity:** Off-loading bulk and containerized chemicals

*Potential Environmental Impacts:*

- Contamination of soil, and/or surface and groundwater may result if chemicals leak from containers during off-loading due to:
  - structural failure (e.g., corrosion) of the container;
  - inadequate design (i.e., not DOT approved);
  - breakage of transfer hoses, pipes, manifolds or other related equipment.
  - containers being dropped and ruptured;
  - incompatibility of the contents with the container itself.
  
- Containers or tanks of chemicals that are not closed or are improperly closed may result in the release of fugitive air emissions (i.e., vapors) that can degrade air quality.
  
- Contamination of air, soil, and/or surface and groundwater may result if chemicals are not contained after being spilled or leaked.

## Storage Tank Management

### **Operation:** Storage Tank Management

**Activity:** Storage of petroleum products in underground storage tanks

*Potential Environmental Impacts:*

- Contamination of soil and/or surface and groundwater may result if petroleum products leak from underground storage tanks due to:
  - structural failure (e.g., corrosion) of the tank or piping;
  - inadequate design;
  - incompatibility of the contents with the tank itself;
  - tank is overfilled and spillage is not detected and properly contained;
  - tank is removed or exhumed without first removing all liquids and sludge.
- Fugitive emissions (i.e., vapors) from tank vent pipes, tank filling and fuel dispensing activities may degrade air quality.

### **Operation:** Storage Tank Management

**Activity:** Storage of petroleum products in aboveground storage tanks

*Potential Environmental Impacts:*

- Contamination of soil and/or surface and groundwater may result if petroleum products leak from aboveground storage tanks due to:
  - structural failure (e.g., corrosion) of the tank or piping;
  - inadequate design;
  - incompatibility of the contents with the tank itself;
  - tank is overfilled and spillage is not detected and properly contained;
  - tank is removed without first removing all liquids and sludge.
- Fugitive emissions (i.e., vapors) from tank vent pipes, tank filling and fuel dispensing activities may degrade air quality.

## Automotive and Fleet Vehicle Repair and Service

**Operation:** Automotive and Fleet Vehicle Repair and Service

**Activity:** Air conditioning service and repair

*Potential Environmental Impacts:*

- Contamination of air quality may result due to releases of CFCs to the atmosphere when:
  - replacing refrigerant in motor vehicle air conditioners;
  - repairing motor vehicle air conditioners.

**Operation:** Automotive and Fleet Vehicle Repair and Service

**Activity:** Brake Work

*Potential Environmental Impacts:*

- Contamination of air, soil and/or surface and ground water may result from the disposal of:
  - asbestos brake shoes in the solid waste;
  - brake fluid in the solid waste or the storm drains.

**Operation:** Automotive and Fleet Vehicle Repair and Service

**Activity:** Facility Management

*Potential Environmental Impacts:*

- Contamination of soil and/or surface and ground water may result from:
  - petroleum products being discharged directly to the environment when washing floors in the maintenance area;
  - bypass or pass through at the local treatment works due to petroleum products being discharged directly to the local treatment works when washing floors in the maintenance area;
  - the discharge of petroleum products when using a soap that breaks up petroleum products in conjunction with an oil/water separator;
  - discharging petroleum to an over-full oil/water separator;
  - increased turbidity in surface water due to storm water runoff from parking lots and washracks.
- Impairment of human health and the environment may result if pesticides are used incorrectly.

## **Automotive and Fleet Vehicle Repair and Service**

**Operation:** Automotive and Fleet Vehicle Repair and Service

**Activity:** Fuel Storage

*Potential Environmental Impacts*

- Contamination of soil, and/or surface and groundwater may result if petroleum products leak from containers or tanks due to:
  - structural failure (e.g., corrosion) of the tank or piping;
  - inadequate design;
  - incompatibility of the contents with the tank itself;
  - container or tank is overfilled and spillage is not detected and properly contained;
  - tank is removed or exhumed without first removing all liquids and sludge.
- Fugitive emissions (i.e., vapors) from containers, tank vent pipes, tank filling and fuel dispensing activities may degrade air quality.

**Operation:** Automotive and Fleet Vehicle Repair and Service

**Activity:** Parts Cleaning and Degreasing Vehicle Parts

*Potential Environmental Impacts*

- Contamination of soil and/or surface and groundwater may result from the:
  - disposal of oily or solvent-contaminated rags, the degreasing fluid, filters, or the grit accumulated in the degreaser/parts cleaner as solid waste;
  - laundering of oily or solvent-contaminated rags or clothing.
- Fugitive emissions (i.e., vapors) from the degreaser-containing tank may degrade air quality.

**Operation:** Automotive and Fleet Vehicle Repair and Service

**Activity:** Repair or Replacement of Exhaust Systems and Catalytic Convertors

*Potential Environmental Impacts*

- Contamination of soil and/or surface and groundwater may result from the disposal of used convertors as solid waste.



## Automotive and Fleet Vehicle Repair and Service

### **Operation:** Automotive and Fleet Vehicle Repair and Service

#### **Activity:** Used Oil Management

##### *Potential Environmental Impacts*

- Contamination of air, soil, and/or surface and groundwater may result due to:
  - the disposal of used oil or used oil filters in the solid waste;
  - releases of used oil because of the poor condition of drums/tanks used for storing used oil;
  - used oil being consumed in a used oil burner;
  - a lack of absorbent materials to clean up a release of used oil;
  - laundering of oily rags or clothing;
  - burning of used oil with an excess amount of halogen in it;
  - the use of incorrect containers for transportation of used oil creating a spill hazard

### **Operation:** Automotive and Fleet Vehicle Repair and Service

#### **Activity:** Vehicle Bodywork

##### *Potential Environmental Impacts*

- Contamination of air quality may result due to:
  - paint booth filters not working correctly;
  - painting outside of an area with controlled air flow;
  - sandblasting or bead blasting emissions capturing systems not working correctly;
  - performing sandblasting or bead blasting outside of an area with a controlled air flow
  - containers of paints, strippers, and thinners that are not closed or are improperly closed.
- Contamination of soil and/or surface and ground water may occur due to the disposal of waste paint/stripper, paint or stripper-covered rags, brushes, paper, filters, absorbent materials used in spill cleanup, aerosol paint cans, expired chemicals, or sandblast waste as solid waste.

### **Operation:** Automotive and Fleet Vehicle Repair and Service

#### **Activity:** Vehicle Fueling

##### *Potential Environmental Impacts*

- Fugitive emissions (i.e., vapors) from the fuel dispensing hoses may degrade air quality.
- Contamination of soil and/or surface and ground water may occur due to:

## **Automotive and Fleet Vehicle Repair and Service**

- spillage to the environment during fueling operations;
- a lack of absorbent materials to clean up a release from a fuel dispensing operation..

### **Operation: Automotive and Fleet Vehicle Repair and Service**

#### **Activity: Vehicle Washing**

##### *Potential Environmental Impacts*

- Contamination of soil and/or surface and ground water may occur due to:
  - petroleum products being discharged directly to the environment when washing vehicles;
  - a bypass or pass through at the local treatment works of petroleum products being discharged directly to the local treatment works when washing vehicles;
  - the discharge of petroleum products when using a soap that breaks up petroleum products in conjunction with an oil/water separator;
  - when discharging petroleum to an over-full oil/water separator.

### **Operation: Automotive and Fleet Vehicle Repair and Service**

#### **Activity: Waste Management**

##### *Potential Environmental Impacts*

- Employee and community health may be impacted if solid waste is stored in a manner that presents a fire hazard, encourages nesting by pests (e.g., rodents) or degrades land, habitat or natural resources.
- Impairment of human health and the environment may result if solid waste spills or leaks from collection equipment (e.g., trash dumpsters).
- Solid waste that is not segregated and recycled increases the volume of the waste requiring disposal at the landfill which may contribute to degradation of land, and loss of natural resources.
- Air quality degradation may result if:
  - refrigerant emissions leak from refrigeration units, air conditioning compressors;
  - containers of hazardous waste are not closed or are closed improperly.
- Contamination of air, soil, and/or surface and groundwater may result if hazardous waste is incorrectly disposed of as nonhazardous solid waste via trash receptacles (e.g., dumpsters) or if poured down shop sinks, floor drains, or other potential routes of exposure. Examples of commonly overlooked potential hazardous wastes include: metal filings, solvent-contaminated rags, absorbent materials used in spill cleanup,

## **Automotive and Fleet Vehicle Repair and Service**

welding stubs, aerosol paint cans, paint stripper, filters (degreaser and paint booth), waste refrigerant canisters, baghouse dust, fluorescent lightbulbs, nickel-cadmium batteries, storage tank residues, pesticides, analytical laboratory residues, or expired chemicals.

- Contamination of soil, and/or surface and groundwater may result if hazardous wastes leak from containers or storage tanks during storage, shipment, or transportation due to:
  - structural failure (e.g., corrosion) of the container;
  - inadequate design (i.e., not DOT approved);
  - overfilling and spillage is not detected and properly contained;
  - incompatibility of the contents with the container or tank itself;
  - a tank is removed or exhumed without first removing all liquids and sludges;
  - spillage or leaks of hazardous wastes occurring during vehicle loading activities and/or while the waste shipment is in route to the destination facility;
  - improper off-site management and treatment of hazardous waste occurs;
  - incorrectly labeled containers of hazardous waste being disposed of according to the content label instead of what is actually in the container.
  
- Contamination of soil and/or surface and groundwater may result if storm water flows through the waste storage areas resulting in the discharge of contaminated runoff to:
  - soil or surface and groundwater via drains, sumps, collection trenches, or runoff;
  - the facility waste water treatment works via floor drains, sumps or collection trenches.

## Wastewater Treatment

### Operation: Wastewater Treatment

#### Activity: Wastewater treatment processes

##### *Potential Environmental Impacts*

- Contamination of soil and/or surface or ground water may result from:
  - unpermitted discharges of wastewater into the environment;
  - discharges of wastewater to the environment in excess of NPDES permit limitations;
  - a pass-through at the wastewater treatment plant when storm water enters the sanitary sewer;
  - the improper disposal of grit;
  - the improper disposal of sludge.
- Air quality may be degraded by:
  - releases of chlorine gas;
  - fugitive emissions from sewage lagoons and/or sludge beds

### Operation: Wastewater Treatment

#### Activity: Facility Management

##### *Potential Environmental Impacts*

- Contamination of soil and/or surface and ground water from the disposal of hazardous waste in the trash or down the drain resulting in contamination to soil and/or surface and ground water. Commonly overlooked potential hazardous wastes are solvent-contaminated rags, absorbent materials used in spill cleanup, aerosol paint cans, fluorescent lightbulbs, storage tank residues, pesticides, or expired chemicals.
- Impairment of human health and the environment may result if pesticides are used incorrectly or excessively.
- Air quality degradation may result due to
  - refrigerant emissions leaking from refrigeration units, air conditioning compressors;
  - containers of hazardous waste not being kept closed or are closed improperly;
  - the spray application of paint.
- Contamination of soil and/or surface and ground water may result from:
  - petroleum products being discharged directly to the environment when washing floors in the maintenance area;
  - increased turbidity in surface water due to storm water runoff from parking lots and washracks.

## Wastewater Treatment

### Operation: Wastewater Treatment

#### Activity: Fuel Storage

##### *Potential Environmental Impacts*

- Contamination of soil and/or surface and groundwater may result if petroleum products leak from containers or tanks used to store fuel due to:
  - structural failure (e.g., corrosion) of the container, tank, or piping;
  - inadequate design;
  - incompatibility of the contents with the container or tank itself;
  - a container or tank is overfilled and spillage is not detected and properly contained;
  - tank is removed or exhumed without first removing all liquids and sludge.
- Fugitive emissions (i.e., vapors) from containers, tank vent pipes, tank filling and fuel dispensing activities may degrade air quality.

### Operation: Wastewater Treatment

#### Activity: Wastewater Laboratory Operations

##### *Potential Environmental Impacts*

- Contamination of soil and/or surface and ground water from the disposal of hazardous waste in the trash or down the drain resulting in contamination to soil and/or surface and ground water. Commonly overlooked potential hazardous wastes are solvent-contaminated rags, absorbent materials used in spill cleanup, aerosol paint cans, fluorescent lightbulbs, pesticides, or expired chemicals, or residues from wastewater analysis.
- Emissions from fume hood vents may degrade air quality.

### Operation: Wastewater Treatment

#### Activity: Biosolids Management and Disposal

##### *Potential Environmental Impacts*

- Contamination of soil and/or surface and groundwater may result due to:
  - surface disposal of contaminated sludge;
  - land application of contaminated sludge;
  - disposal of post-incineration by-products from the incineration of sludge;
  - putting contaminated sludge in a landfill;
  - putting sludge in a landfill not designed for sludge disposal..

## Wastewater Treatment

**Operation:** Wastewater Treatment

**Activity:** Septic Tanks

*Potential Environmental Impacts*

- Contamination of soil and/or surface and groundwater from septic tanks may result due to:
  - inadequate design to process the volume of waste being discharged to the septic system;
  - septic tanks not being cleaned as needed;
  - proximity to a source of ground or surface water used for drinking water.

## Water Supply and Treatment Activities

### Operation: Water Supply and Treatment Activities

#### Activity: Chemical Storage

##### *Potential Environmental Impacts*

- Contamination of soil and/or surface and groundwater may result if chemicals leak from containers or storage tanks due to:
  - structural failure (e.g., corrosion) of the container, tank, or piping;
  - inadequate design;
  - incompatibility of the contents with the container or tank itself;
  - container or tank is overfilled and spillage is not detected and properly contained;
  - tank is removed or exhumed without first removing all liquids and sludge.
  
- Containers or tanks of chemicals that are not closed or are improperly closed may result in the release of fugitive air emissions (i.e., vapors) that can degrade air quality.
  
- Contamination of soil and/or surface and groundwater may result if storm water flows through the chemical storage areas resulting in the discharge of contaminated run-off to:
  - soil or surface and groundwater via drains, sumps, collection trenches, or runoff;
  - the facility waste water treatment works via floor drains, sumps or collection trenches.
  
- Contamination of soil and/or surface and groundwater may result if chemical clean-up activities result in discharging contaminated run-off:
  - directly to the soil or surface and groundwater via floor drains, sumps or collection trenches;
  - to the facility waste water treatment works via floor drains, sumps or collection trenches.
  
- Air quality may be degraded due to:
  - releases of chlorine gas;
  - fugitive emissions (i.e., dust, vapors) from chemical storage tanks or containers

## Water Supply and Treatment Activities

### **Operation:** Water Supply and Treatment Activities

#### **Activity:** Water Treatment

##### *Potential Environmental Impacts*

- Contamination of soil and/or surface and ground water may result from:
  - excessive use of a ground or surface water source;
  - excessive use of chemicals to treat the drinking water.
- Impairment of human health may result if:
  - drinking water is not correctly treated for contaminants prior to distribution;
  - there is a structural failure in the distribution system that allows contamination of the water after treatment.

### **Operation:** Water Supply and Treatment Activities

#### **Activity:** Laboratory operations

##### *Potential Environmental Impacts*

- Contamination of soil and/or surface and ground water from the disposal of hazardous waste in the trash or down the drain resulting in contamination to soil and/or surface and ground water. Commonly overlooked potential hazardous wastes are solvent-contaminated rags, absorbent materials used in spill cleanup, aerosol paint cans, fluorescent lightbulbs, pesticides, expired chemicals, or residues from drinking water analysis.
- Emissions from fume hood vents may degrade air quality.

### **Operation:** Water Supply and Treatment Activities

#### **Activity:** Treatment sludge (iron)

##### *Potential Environmental Impacts*

- Contamination of soil and/or surface and groundwater may result due to:
  - surface disposal of contaminated sludge;
  - land application of contaminated sludge;
  - disposal of post-incineration by-products from the incineration of sludge;
  - depositing contaminated sludge in a landfill;
  - Depositing sludge in a landfill not designed for sludge disposal..



## Water Supply and Treatment Activities

**Operation:** Water Supply and Treatment Activities

**Activity:** Disposal of spent activated carbon and spent deionization column

*Potential Environmental Impacts*

- Contamination of soil and/or surface and ground water from the disposal of hazardous waste in the trash or down the drain resulting in contamination to soil and/or surface and ground water. Whether or not the activated carbon or the deionization column contains hazardous waste depends on the contaminants being captured.

**Operation:** Water Supply and Treatment Activities

**Activity:** Flushing

*Potential Environmental Impacts*

- Impairment of human health may when either excessive or inadequate flushing is done.
- Air quality may be degraded due to releases of chlorine gas.

**New Construction or Expansion of Buildings and  
Renovation and Demolition of Old Buildings**

**Operation:** New Construction or Expansion of Buildings and Renovation and Demolition of Old Buildings

**Activity:** Clearing and Grading

*Potential Environmental Impacts*

- Loss of endangered/threatened species habitat.
- Contamination of soil and/or surface and ground water may result if the requirements of a storm water permit are not followed.
- Increased turbidity in surface water sources may result from storm water flow over unvegetated land.

**Operation:** New Construction or Expansion of Buildings and Renovation and Demolition of Old Buildings

**Activity:** Storm water Management

*Potential Environmental Impacts*

- Soil and/or surface and groundwater contamination due to a pass-through at the wastewater treatment plant when storm water gets into the sanitary system through existing drains at the site.
- Contamination of soil and/or surface and ground water may result if the requirements of a storm water permit are not followed.
- Increased turbidity in surface water sources may result from storm water flow over unvegetated land.

**Operation:** New Construction or Expansion of Buildings and Renovation and Demolition of Old Buildings

**Activity:** Wetlands

*Potential Environmental Impacts*

- Loss of endangered/threatened species habitat
- Increased flooding due to loss of drainage area.

**New Construction or Expansion of Buildings and  
Renovation and Demolition of Old Buildings**

**Operation:** New Construction or Expansion of Buildings and Renovation and Demolition of Old Buildings

**Activity:** Redoing utility power, gas, water supply and sewer lines

*Potential Environmental Impacts*

- Contamination of air, soil, and/or surface and groundwater may result if:
  - hazardous waste is incorrectly disposed of as nonhazardous solid waste via trash receptacles (e.g., dumpsters) or if poured down shop sinks, floor drains, or other potential routes of exposure. Examples of commonly overlooked potential hazardous wastes include: metal filings, solvent-contaminated rags, absorbent materials used in spill cleanup, welding stubs, aerosol paint cans, fluorescent lightbulbs, or nickel-cadmium batteries;
  - asbestos is removed without appropriate wetting;
  - removed asbestos is disposed of in a landfill not approved for asbestos disposal;
  - improper disposal of PCB-contaminated structural components;
  - alternate flow paths are not provided prior to removal of an existing portion of the sewer line.
  
- Air quality may be degraded by the venting of natural gas.

**Operation:** New Construction or Expansion of Buildings and Renovation and Demolition of Old Buildings

**Activity:** Well construction

*Potential Environmental Impacts*

- Contamination of soil and/or surface and groundwater may result due to:
  - inadequate well construction techniques or materials;
  - improper siting of a well.

**Operation:** New Construction or Expansion of Buildings and Renovation and Demolition of Old Buildings

**Activity:** Fly ash in concrete

*Potential Environmental Impacts*

- Contamination of soil and/or surface and groundwater may result due to the use of concrete containing excessive amounts of fly ash.

## **New Construction or Expansion of Buildings and Renovation and Demolition of Old Buildings**

**Operation:** New Construction or Expansion of Buildings and Renovation and Demolition of Old Buildings

**Activity:** Laying asphalt

### *Potential Environmental Impacts*

- Air quality may be degraded due to emissions from the asphalt surfacing process.
- Contamination of soil and/or surface and ground water may occur due to improper disposal of waste (solid and hazardous) from the asphaltting process.

**Operation:** New Construction or Expansion of Buildings and Renovation and Demolition of Old Buildings

**Activity:** Solid waste disposal

### *Potential Environmental Impacts*

- Employee and community health may be impacted if solid waste is stored in a manner that presents a fire hazard, encourages nesting by pests (e.g., rodents) or degrades land, habitat or natural resources.
- Impairment of human health and the environment may result if solid waste spills or leaks from collection equipment (e.g., trash dumpsters).
- Solid waste that is not segregated and recycled increases the volume of the waste requiring disposal at the landfill which may contribute to degradation of land, and loss of natural resources.
- Contamination of air, soil, and/or surface and groundwater may result if:
  - hazardous waste is incorrectly disposed of as nonhazardous solid waste via trash receptacles (e.g., dumpsters) or if poured down shop sinks, floor drains, or other potential routes of exposure. Examples of commonly overlooked potential hazardous wastes include: metal filings, solvent-contaminated rags, absorbent materials used in spill cleanup, welding stubs, aerosol paint cans, waste refrigerant canisters, baghouse dust, fluorescent lightbulbs, nickel-cadmium batteries, storage tank residues, pesticides, or expired chemicals;
  - solid waste is not properly contained while in route to the disposal facility (e.g., fugitive dust from uncovered vehicles, leakage/spillage of liquid or solid waste from inadequate containers, etc.);
  - storm water run-off from compost piles is not properly contained and managed.

## **New Construction or Expansion of Buildings and Renovation and Demolition of Old Buildings**

- Contamination of soil and/or surface and groundwater may result if storm water flows through the waste storage areas resulting in the discharge of contaminated run-off to:
  - soil or surface and groundwater via drains, sumps, collection trenches, or runoff;
  - the facility waste water treatment works via floor drains, sumps or collection trenches.
  
- Air quality degradation may result if refrigerant emissions leak from refrigeration units, air conditioning compressors.

### **Operation:** New Construction or Expansion of Buildings and Renovation and Demolition of Old Buildings

#### **Activity:** Storage of chemicals used for construction

##### *Potential Environmental Impacts*

- Contamination of soil and/or surface and groundwater may result if hazardous materials leak from containers or storage tanks due to:
  - structural failure (e.g., corrosion) of the container, tank, or piping;
  - inadequate design;
  - incompatibility of the contents with the container or tank itself;
  - container or tank is overfilled and spillage is not detected and properly contained;
  - tank is removed or exhumed without first removing all liquids and sludge.
  
- Containers or tanks of hazardous materials that are not closed or are improperly closed may result in the release of fugitive air emissions (i.e., vapors) that can degrade air quality.
  
- Contamination of soil and/or surface and groundwater may result if storm water flows through the hazardous materials storage areas resulting in the discharge of contaminated run-off to:
  - soil or surface and groundwater via drains, sumps, collection trenches, or runoff;
  - the facility waste water treatment works via floor drains, sumps or collection trenches.
  
- Contamination of air, soil, and/or surface and groundwater may result if hazardous materials clean-up activities result in discharging contaminated run-off:
  - directly to the soil or surface and groundwater via floor drains, sumps or collection trenches;

## **New Construction or Expansion of Buildings and Renovation and Demolition of Old Buildings**

- to the facility waste water treatment works via floor drains, sumps or collection trenches.
- Contamination of air, soil, and/or surface and groundwater may result if expired or waste chemicals are incorrectly disposed of as nonhazardous solid waste via trash receptacles (e.g., dumpsters) or if poured down drains, or other potential routes of exposure. Examples of commonly overlooked potential hazardous wastes include: adhesives, solvent-contaminated rags, oily rags, absorbent materials used in spill cleanup, aerosol paint cans, paint stripper, paint brushes, fluorescent lightbulbs, pesticides, and expired chemicals.

### **Operation:** New Construction or Expansion of Buildings and Renovation and Demolition of Old Buildings

**Activity:** Disposal of PCB containing items

#### *Potential Environmental Impacts*

- Contamination of soil and/or surface and groundwater may result if:
  - PCB-containing items are disposed of in a landfill not approved for PCB disposal;
  - leaking PCB-contaminated structural components are not drained prior to disposal;
  - leaks from PCB-contaminated structural components are not detected and properly contained.

### **Operation:** New Construction or Expansion of Buildings and Renovation and Demolition of Old Buildings

**Activity:** Disposal of hazardous wastes or RCRA regulated universal waste.

#### *Potential Environmental Impacts*

- Contamination of air, soil, and/or surface and groundwater may result if hazardous waste or universal waste is incorrectly disposed due to:
  - disposal in the solid waste (i.e., the trash, a dumpster);
  - disposal by pouring it down shop sinks, floor drains, sumps or other potential routes of exposure;
  - lack of knowledge as to whether or not a waste stream is hazardous waste or a universal waste.

(NOTE: Examples of commonly overlooked potential hazardous wastes include: adhesives, solvent-contaminated rags, oily rags, absorbent materials used in spill cleanup, welding stubs, aerosol paint cans, paint stripper, paint brushes, waste refrigerant

## **New Construction or Expansion of Buildings and Renovation and Demolition of Old Buildings**

canisters, fluorescent lightbulbs, pesticides, and expired chemicals.)

(NOTE: Universal waste includes mercury-containing fluorescent lightbulbs; high intensity discharge, neon, mercury vapor, high pressure sodium, and metal halide lamps; excess pesticides; batteries other than lead-acid; and mercury-containing thermostats.)

- Contamination of soil, and/or surface and groundwater may result if hazardous wastes or universal wastes leak from containers or storage tanks during storage, shipment, or transportation due to:
  - structural failure (e.g., corrosion) of the container;
  - inadequate design (i.e., not DOT approved);
  - overfilling and spillage is not detected and properly contained;
  - incompatibility of the contents with the container or tank itself;
  - a tank is removed or exhumed without first removing all liquids and sludges;
  - spillage or leaks of hazardous wastes or universal waste occurring during vehicle loading activities and/or while the waste shipment is in route to the destination facility;
  - improper off-site management and treatment of hazardous waste or universal waste occurs;
  - incorrectly labeled containers of hazardous waste or universal waste being disposed of according to the content label instead of what is actually in the container.
  
- Containers or tanks of hazardous wastes or universal wastes that are not closed or are improperly closed may result in the release of fugitive air emissions (i.e., vapors) that can degrade air quality.
  
- Contamination of soil and/or surface and groundwater may result if storm water flows through the hazardous waste or universal waste storage areas resulting in the discharge of contaminated run-off to:
  - soil or surface and groundwater via drains, sumps, collection trenches, or runoff;
  - the facility waste water treatment works via floor drains, sumps or collection trenches.
  
- Contamination of soil and/or surface and groundwater may result if hazardous waste or universal waste clean-up activities result in discharging contaminated run-off:
  - directly to the soil or surface and groundwater via floor drains, sumps or collection trenches;
  - to the facility waste water treatment works via floor drains, sumps or collection trenches.

**New Construction or Expansion of Buildings and  
Renovation and Demolition of Old Buildings**

**Operation:** New Construction or Expansion of Buildings and Renovation and  
Demolition of Old Buildings

**Activity:** Dust control

*Potential Environmental Impacts*

- Degradation of air quality may occur due to lack of dust control.



## Facility Engineering and Maintenance

### **Operation:** Facility Engineering and Maintenance

#### **Activity:** Metal and woodworking shops

##### *Potential Environmental Impacts*

- Contamination of soil and/or surface and ground water may result due to the disposal of hazardous waste in the trash or down the drain. Commonly overlooked potentially hazardous wastes are metal filings, paint or solvent-contaminated rags, absorbent materials used in spill cleanup, welding stubs, aerosol paint cans, fluorescent lightbulbs, paint booth filters, sand or bead blasting wastes, or expired materials.
- Contamination of air quality may result due to:
  - paint booth filters not working correctly;
  - painting outside of an area with controlled air flow;
  - sandblasting or bead blasting emissions capturing systems not working correctly;
  - performing sandblasting or bead blasting outside of an area with a controlled air flow;
  - containers of paints, strippers, and thinners that are not closed or are improperly closed;
  - a lack of dust control from woodworking operations
  - releases of compressed gases such as acetylene used for welding.

### **Operation:** Facility Engineering and Maintenance

#### **Activity:** Management and disposal of waste lubricating and cutting oils/fluids

##### *Potential Environmental Impacts*

- Contamination of air, soil, and/or surface and groundwater may result due to:
  - the disposal of used oil or used oil filters in the solid waste;
  - releases of used oil because of the poor condition of drums/tanks used for storing used oil;
  - a lack of absorbent materials to clean up a release of used oil;
  - laundering of oily rags or clothing;
  - burning of used oil with an excess amount of halogen in it;
  - the use of incorrect containers for transportation of used oil creating a spill hazard
- Contamination of soil and/or surface and ground water due to the disposal of hazardous waste in the trash or down the drain. Commonly overlooked potentially hazardous wastes are contaminated used oil, oil-contaminated rags, absorbent materials used in spill cleanup, or expired chemicals.

## Facility Engineering and Maintenance

- Contamination of soil and/or surface and groundwater may result if waste lubricating and/or cutting oils leak from containers or storage tanks due to:
  - structural failure (e.g., corrosion) of the container, tank, or piping;
  - inadequate design;
  - incompatibility of the contents with the container or tank itself;
  - container or tank is overfilled and spillage is not detected and properly contained;
  - tank is removed or exhumed without first removing all liquids and sludge.
- Containers or tanks of waste lubricating and/or cutting oils that are not closed or are improperly closed may result in the release of fugitive air emissions (i.e., vapors) that can degrade air quality.
- Contamination of soil and/or surface and groundwater may result if storm water flows through the waste lubricating and/or cutting oils storage areas resulting in the discharge of contaminated run-off to:
  - soil or surface and groundwater via drains, sumps, collection trenches, or runoff;
  - the facility waste water treatment works via floor drains, sumps or collection trenches.
- Contamination of air, soil, and/or surface and groundwater may result if waste lubricating and/or cutting oils clean-up activities result in discharging contaminated run-off:
  - directly to the soil or surface and groundwater via floor drains, sumps or collection trenches;
  - to the facility waste water treatment works via floor drains, sumps or collection trenches.

### **Operation:** Facility Engineering and Maintenance

#### **Activity:** Operation and management of degreasing stations

##### *Potential Environmental Impacts*

- Contamination of soil and/or surface and groundwater may result from the:
  - disposal of oily or solvent-contaminated rags, the degreasing fluid, filters, or the grit accumulated in the degreaser/parts cleaner as solid waste;
  - laundering of oily or solvent-contaminated rags or clothing.
- Air quality may be degraded due to fugitive emissions (i.e., vapors) from the:
  - degreaser/solvent in the degreaser equipment;
  - inadequate draining of parts/equipment being cleaned.

## Facility Engineering and Maintenance

### **Operation:** Facility Engineering and Maintenance

#### **Activity:** Paint/Coating Spraying

##### *Potential Environmental Impacts*

- Contamination of soil and/or surface and ground water may result due to the disposal of hazardous waste in the trash or down the drain. Commonly overlooked potentially hazardous wastes are paint or thinner-contaminated rags, used brushes, absorbent materials used in spill cleanup, aerosol paint cans, paint-covered craft paper, blast booth filters, sand or bead blasting residues, or expired paint/coatings.
- Contamination of air quality may result due to:
  - paint booth filters not working correctly;
  - painting outside of an area with controlled air flow;
  - containers of paints and thinners that are not closed or are improperly closed.
- Contamination of soil and/or surface and groundwater may result if paints or thinners leak from containers due to:
  - structural failure (e.g., corrosion) of the container;
  - inadequate design;
  - incompatibility of the contents with the container itself;
  - container is overfilled and spillage is not detected and properly contained.

### **Operation:** Facility Engineering and Maintenance

#### **Activity:** Paint/Coating removals

##### *Potential Environmental Impacts*

- Contamination of soil and/or surface and ground water due to the disposal of hazardous waste in the trash or down the drain. Commonly overlooked potentially hazardous wastes are stripper-contaminated rags, used brushes, absorbent materials used in spill cleanup, paint booth filters, sand or bead blasting residues, paint residue, or expired/unusable hazardous materials
- Contamination of air quality may result due to:
  - sandblasting or bead blasting emissions capturing systems not working correctly;
  - performing sandblasting or bead blasting outside of an area with a controlled air flow;
  - containers of strippers, and thinners that are not closed or are improperly closed.

## Facility Engineering and Maintenance

- Contamination of soil and/or surface and groundwater may result if liquid paint strippers leak from containers due to:
  - structural failure (e.g., corrosion) of the container;
  - inadequate design;
  - incompatibility of the contents with the container itself;
  - container is overfilled and spillage is not detected and properly contained.

### **Operation:** Facility Engineering and Maintenance

#### **Activity:** Boiler Operations

##### *Potential Environmental Impacts*

- Degradation of air quality may result from the operation of boilers due to:
  - inadequate maintenance of the boiler;
  - burning inappropriate fuel in the boiler;
  - not complying with operating permit requirements;
  - not following manufacturer's operating instructions.
- Contamination of soil and/or surface and ground water may result due to the disposal of hazardous waste generated from boiler operation activities (descaler, blowdown) in the trash or down the drain;

### **Operation:** Facility Engineering and Maintenance

#### **Activity:** Maintenance and Repair of Cooling Systems and refrigeration systems

##### *Potential Environmental Impacts*

- Contamination of air quality may result due to releases of CFCs to the atmosphere when:
  - replacing refrigerant in cooling systems or refrigeration systems;
  - repairing cooling systems or refrigerant systems.
- Contamination of soil and/or surface and ground water due to the disposal of hazardous waste generated from cooling systems and refrigerant systems (waste canisters, chiller oil contaminated with CFCs) in the trash or down the drain.

## Facility Engineering and Maintenance

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**Operation:** Facility Engineering and Maintenance

**Activity:** Management, storage, and applications of pesticides and vector controls

### *Potential Environmental Impacts*

- Impairment of human health and the environment may result if pesticides are:
  - used incorrectly or excessively;
  - not applied by a certified applicator.
  
- Contamination of air, soil, and/or surface and groundwater may result if waste pesticides are incorrectly disposed due of:
  - in the solid waste (i.e., the trash, a dumpster);
  - by pouring it down shop sinks, floor drains, sumps or other potential routes of exposure.
  
- Contamination of soil, and/or surface and groundwater may result if pesticides leak from containers or storage tanks during storage, shipment, or transportation due to:
  - structural failure (e.g., corrosion) of the container;
  - inadequate design (i.e., not DOT approved);
  - overfilling and spillage is not detected and properly contained;
  - incompatibility of the contents with the container or tank itself;
  - a tank is removed or exhumed without first removing all liquids and sludges;
  - spillage or leaks of pesticides occurring during vehicle loading activities and/or while the shipment is in route to the destination facility;
  - incorrectly labeled containers of pesticides being disposed of according to the content label instead of what is actually in the container.
  
- Containers or tanks of pesticides that are not closed or are improperly closed may result in the release of fugitive air emissions (i.e., vapors) that can degrade air quality.
  
- Contamination of soil and/or surface and groundwater may result if storm water flows through the pesticide storage areas resulting in the discharge of contaminated run-off to:
  - soil or surface and groundwater via drains, sumps, collection trenches, or runoff;
  - the facility waste water treatment works via floor drains, sumps or collection trenches.
  
- Contamination of soil and/or surface and groundwater may result if pesticide clean-up activities result in discharging contaminated run-off:

## Facility Engineering and Maintenance

- directly to the soil or surface and groundwater via floor drains, sumps or collection trenches;
- to the facility waste water treatment works via floor drains, sumps or collection trenches.

### **Operation:** Facility Engineering and Maintenance

#### **Activity:** Operation and management of chillers and cooling towers

##### *Potential Environmental Impacts*

- Contamination of air quality may result due to releases of CFCs to the atmosphere when:
  - replacing refrigerant in chillers or cooling towers;
  - repairing chillers or cooling towers.
- Contamination of soil and/or surface and ground water due to the:
  - disposal of hazardous waste generated from chillers or cooling towers (waste canisters, chiller oil contaminated with CFCs) in the trash or down the drain
  - discharge of contaminated wastewater to the environment or the local treatment works.

### **Operation:** Facility Engineering and Maintenance

#### **Activity:** Boiler Maintenance

##### *Potential Environmental Impacts*

- Degradation of air quality may result from the maintenance of boilers due to:
  - not complying with operating permit requirements for maintenance schedules;
  - asbestos removal without appropriate wetting;
  - not following manufacturer's maintenance instructions.
- Contamination of soil and/or surface and ground water due to:
  - the disposal of hazardous waste generated from boiler maintenance activities (descaler, blowdown) in the trash or down the drain;
  - removed asbestos being disposed of in a landfill not approved for asbestos disposal.

## Facility Engineering and Maintenance

**Operation:** Facility Engineering and Maintenance

**Activity:** Management and disposal of PCB Items

### *Potential Environmental Impacts*

- Contamination of soil and/or surface and groundwater may result if:
  - PCB-containing items are disposed of in a landfill not approved for PCB disposal;
  - leaking PCB-contaminated structural components are not drained prior to disposal;
  - leaks from PCB-contaminated structural components are not detected and properly contained.

**Operation:** Facility Engineering and Maintenance

**Activity:** Management and disposal of mercury containing light ballasts, wall switches, fluorescent bulbs, and mercury containing thermostats

### *Potential Environmental Impacts*

- Impairment of human health may result if mercury spills or leaks from equipment (e.g., light ballasts, switches, fluorescent bulbs, thermostats).
- Contamination of soil and/or surface and groundwater may result if mercury leaks from containers during storage, shipment, or transportation due to:
  - structural failure (e.g., corrosion) of the container;
  - inadequate design (i.e., not DOT approved);
  - spillage is not detected and properly contained;
  - spillage or leaks of mercury occurring during vehicle loading activities and/or while the waste shipment is in route to the destination facility;
  - improper off-site management and treatment of mercury waste occurs;
  - incorrectly labeled containers of mercury-containing equipment being disposed of according to the content label instead of what is actually in the container.
- Containers mercury-containing waste that are not closed or are improperly closed may result in the release of fugitive air emissions (i.e., vapors) that can degrade air quality.

## Facility Engineering and Maintenance

**Operation:** Facility Engineering and Maintenance

**Activity:** Energy Conservation

*Potential Environmental Impacts*

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**Operation:** Facility Engineering and Maintenance

**Activity:** Food Wastes

*Potential Environmental Impacts*

- Employee and community health may be impacted if food waste is stored in a manner that presents a fire hazard, encourages nesting by pests (e.g., rodents) or degrades land, habitat or natural resources.
- Impairment of human health and the environment may result if food waste spills or leaks from collection equipment (e.g., trash dumpsters).
- Contamination of soil and/or surface and groundwater may result from the excessive discharge of grease from food preparation down drains to a treatment works or the environment due to:
  - the lack of a grease trap;
  - a grease trap that is not routinely maintained.
- Contamination of soil and/or surface and groundwater may result if food waste is not properly contained while in route to the disposal facility (e.g., fugitive dust from uncovered vehicles, leakage/spillage of liquid or solid waste from inadequate containers, etc.);

**Operation:** Facility Engineering and Maintenance

**Activity:** Management and disposal of waste chemicals, medical wastes associated with R&D laboratories.

*Potential Environmental Impacts*

- Contamination of air, soil, and/or surface and groundwater may result if waste chemicals are incorrectly disposed due to:
  - disposal in the solid waste (i.e., the trash, a dumpster);
  - disposal by pouring it down shop sinks, floor drains, sumps or other potential routes of exposure;
  - lack of knowledge as to whether or not a waste stream is hazardous waste.



## Facility Engineering and Maintenance

(NOTE: Examples of commonly overlooked potential hazardous wastes include analytical laboratory residues, and expired chemicals.)

- Endangerment to human health and contamination of air, soil, and/or surface and groundwater may result from the incorrect disposal of sharps, pathological wastes, and/or infectious wastes due to:
  - inadequate time, pressure, and/or temperature used when autoclaving medical waste
  - disposal in the trash without being in appropriate containers
  - inadequate time and/or temperature used when incinerating medical waste.
  
- Contamination of soil, and/or surface and groundwater may result if waste chemicals or medical wastes leak from containers or storage tanks during storage, shipment, or transportation due to:
  - structural failure (e.g., corrosion) of the container;
  - inadequate design (i.e., not DOT approved);
  - overfilling and spillage is not detected and properly contained;
  - incompatibility of the contents with the container or tank itself;
  - a tank is removed or exhumed without first removing all liquids and sludges;
  - spillage or leaks of hazardous wastes or medical waste occurring during vehicle loading activities and/or while the waste shipment is in route to the destination facility;
  - improper off-site management and treatment of hazardous waste or medical waste occurs;
  - incorrectly labeled containers of hazardous waste or medical waste being disposed of according to the content label instead of what is actually in the container.
  
- Air quality may be degraded when:
  - containers of waste chemicals or medical wastes are not closed or are improperly closed
  - medical waste incinerators are not operated according to operating permit requirements
  - medical waste incinerators are not operated according to manufacturer's operating instructions.

## Facility Engineering and Maintenance

### **Operation:** Facility Engineering and Maintenance

#### **Activity:** Parking lots, storm water management

##### *Potential Environmental Impacts*

- Soil and/or surface and groundwater contamination may occur due to a pass-through at the wastewater treatment plant when storm water gets into the sanitary system through existing drains at the site.
- Contamination of soil and/or surface and groundwater may result if storm water flows through the hazardous materials/waste storage areas resulting in the discharge of contaminated run-off to:
  - soil or surface and groundwater via drains, sumps, collection trenches, or runoff;
  - the facility waste water treatment works via floor drains, sumps or collection trenches.
- Contamination of soil and/or surface and ground water may result if the requirements of a storm water permit are not followed.
- Increased turbidity in surface water sources may result from storm water flow over unvegetated land.

### **Operation:** Facility Engineering and Maintenance

#### **Activity:** Management or firefighting and fire training areas

##### *Potential Environmental Impacts*

- Contamination of air, soil, and/or surface and groundwater may result if hazardous waste is incorrectly disposed due to:
  - disposal of hazardous waste in the solid waste (i.e., the trash, a dumpster);
  - disposal of hazardous waste by pouring it down shop sinks, floor drains, sumps or other potential routes of exposure;
  - lack of knowledge as to whether or not a waste stream is hazardous waste.

(NOTE: Examples of commonly overlooked potential hazardous wastes include: absorbent materials used in spill cleanup, firefighting foam, and expired chemicals.)

- Contamination of soil, and/or surface and groundwater may result if usable chemicals or hazardous wastes leak from containers or storage tanks during storage, shipment, or transportation due to:
  - structural failure (e.g., corrosion) of the container;
  - inadequate design (i.e., not DOT approved);

## Facility Engineering and Maintenance

- overfilling and spillage is not detected and properly contained;
  - incompatibility of the contents with the container or tank itself;
  - a tank is removed or exhumed without first removing all liquids and sludges;
  - spillage or leaks of usable chemicals or hazardous wastes occurring during vehicle loading activities and/or while the shipment is in route to the destination facility;
  - improper off-site management and treatment of hazardous waste occurs;
  - incorrectly labeled containers of usable chemicals or hazardous waste being disposed of according to the content label instead of what is actually in the container.
- Containers or tanks of usable chemicals or hazardous wastes that are not closed or are improperly closed may result in the release of fugitive air emissions (i.e., vapors) that can degrade air quality.
  - Contamination of soil and/or surface and groundwater may result if storm water flows through the fire training area (including chemicals and waste storage) resulting in the discharge of contaminated run-off to:
    - soil or surface and groundwater via drains, sumps, collection trenches, or runoff;
    - the facility waste water treatment works via floor drains, sumps or collection trenches.
  - Contamination of soil and/or surface and groundwater may result if fire training area clean-up activities result in discharging contaminated run-off:
    - directly to the soil or surface and groundwater via floor drains, sumps or collection trenches;
    - to the facility waste water treatment works via floor drains, sumps or collection trenches.
  - Employee and community health may be impacted if solid waste is stored in a manner that presents a fire hazard, encourages nesting by pests (e.g., rodents) or degrades land, habitat or natural resources.
  - Air quality degradation may result due to emissions from fires set for firefighter training.
  - Soil and/or surface or ground water contamination may result due to a discharge of petroleum from
    - an oil/water separator not working correctly at the firefighting training area;
    - fire training area runoff.

## Landscaping and Grounds Keeping

**Operation:** Landscaping and Grounds Keeping

**Activity:** Pesticide and Vector Management

### *Potential Environmental Impacts*

- Impairment of human health and the environment may result if pesticides are:
  - used incorrectly or excessively;
  - not applied by a certified applicator.
- Contamination of air, soil, and/or surface and groundwater may result if waste or excess pesticides are incorrectly disposed of:
  - in the solid waste (i.e., the trash, a dumpster);
  - by pouring it down shop sinks, floor drains, sumps or other potential routes of exposure.
- Contamination of soil, and/or surface and groundwater may result if pesticides leak from containers or storage tanks during storage, shipment, or transportation due to:
  - structural failure (e.g., corrosion) of the container;
  - inadequate design (i.e., not DOT approved);
  - overfilling and spillage is not detected and properly contained;
  - incompatibility of the contents with the container or tank itself;
  - a tank is removed or exhumed without first removing all liquids and sludges;
  - spillage or leaks of pesticides occurring during vehicle loading activities and/or while the shipment is in route to the destination facility;
  - incorrectly labeled containers of pesticides being disposed of according to the content label instead of what is actually in the container.
- Containers or tanks of pesticides that are not closed or are improperly closed may result in the release of fugitive air emissions (i.e., vapors) that can degrade air quality.
- Contamination of soil and/or surface and groundwater may result if storm water flows through the pesticide storage areas resulting in the discharge of contaminated run-off to:
  - soil or surface and groundwater via drains, sumps, collection trenches, or runoff;
  - the facility waste water treatment works via floor drains, sumps or collection trenches.
- Contamination of air, soil, and/or surface and groundwater may result if pesticide clean-up activities result in discharging contaminated run-off:
  - directly to the soil or surface and groundwater via floor drains, sumps or collection trenches;

## Landscaping and Grounds Keeping

- to the facility waste water treatment works via floor drains, sumps or collection trenches.
- Degradation of air quality may occur due to the improper aerial application of pesticides.

### **Operation:** Landscaping and Grounds Keeping

#### **Activity:** Use of unregistered pesticides

#### *Potential Environmental Impacts*

- Impairment of human health and the environment may result from the use of unregistered pesticides without an meeting the conditions of an experimental use permit.

### **Operation:** Landscaping and Grounds Keeping

#### **Activity:** Cleaning application equipment

#### *Potential Environmental Impacts*

- Contamination of air, soil, and/or surface and groundwater may result due to pesticide-contaminated water with excess concentrations of pesticides from the cleaning of application equipment being discharged to the environment or the local treatment works.

### **Operation:** Landscaping and Grounds Keeping

#### **Activity:** Storage of pesticides

#### *Potential Environmental Impacts*

- Contamination of soil, and/or surface and groundwater may result if pesticides leak from containers or storage tanks during storage due to:
  - structural failure (e.g., corrosion) of the container;
  - inadequate design (i.e., not DOT approved);
  - overfilling and spillage is not detected and properly contained;
  - incompatibility of the contents with the container or tank itself;
  - a tank is removed or exhumed without first removing all liquids and sludges;
  - spillage or leaks of pesticides occurring during vehicle loading activities and/or while the shipment is in route to the destination facility;
  - incorrectly labeled containers of pesticides being disposed of according to the content label instead of what is actually in the container.

## Landscaping and Grounds Keeping

- Containers or tanks of pesticides that are not closed or are improperly closed may result in the release of fugitive air emissions (i.e., vapors) that can degrade air quality.
- Contamination of soil and/or surface and groundwater may result if storm water flows through the pesticide storage areas resulting in the discharge of contaminated run-off to:
  - soil or surface and groundwater via drains, sumps, collection trenches, or runoff;
  - the facility waste water treatment works via floor drains, sumps or collection trenches.
- Impairment of human health and the environment may result from inadequate ventilation in pesticide storage areas.

### **Operation:** Landscaping and Grounds Keeping

#### **Activity:** Composting

##### *Potential Environmental Impacts*

- Soil and/or surface and ground water contamination may result when storm water run-off from compost piles is not properly contained and managed.
- Impairment of human health and the environment may result from managing compost piles in a manner that is a fire hazard, provides nesting for pests, or becomes a dump.

### **Operation:** Landscaping and Grounds Keeping

#### **Activity:** Lawn and brush removal

##### *Potential Environmental Impacts*

- Air quality degradation may occur due to the open burning of brush or other vegetation.
- Impairment of human health and the environment may result from storing lawn or brush waste in a manner that is a fire hazard, provides nesting for pests, or becomes a dump.

## Landscaping and Grounds Keeping

**Operation:** Landscaping and Grounds Keeping

**Activity:** Lawn trimmings

### *Potential Environmental Impacts*

- Air quality degradation may occur due to the open burning of lawn trimmings or other vegetation.
- Impairment of human health and the environment may result from storing lawn trimmings in a manner that is a fire hazard, provides nesting for pests, or becomes a dump.

**Operation:** Landscaping and Grounds Keeping

**Activity:** Storm water management

### *Potential Environmental Impacts*

- Contamination of soil and/or surface and groundwater may result if storm water flows through the hazardous materials/waste storage areas resulting in the discharge of contaminated run-off to:
  - soil or surface and groundwater via drains, sumps, collection trenches, or runoff;
  - the facility waste water treatment works via floor drains, sumps or collection trenches.
- Contamination of soil and/or surface and ground water may result if the requirements of a storm water permit are not followed.
- Increased turbidity in surface water sources may result from storm water over unvegetated land.