

Harper College

Environmental Management Plan (EMP)

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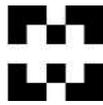
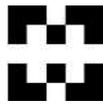


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SECTION 1 – INTRODUCTION

A. Objective

To describe and implement a comprehensive Environmental Management Plan (EMP).

B. Scope

Harper College will conduct affairs in a manner that safeguards the environmental health and safety of students, faculty, staff and community. The College will also strive to reduce pollutants released to the air, land, water, and properly dispose of all hazardous and non-hazardous waste. Environmental compliance and continuous improvement in waste reduction is our objective in all college operations.

C. References

Federal Environmental Protection Agency (EPA) Code of Federal Regulation Title 40-Protection of Environment and Illinois EPA -Title 35 of the Illinois Administrative Code. Harper College *Environmental Health & Safety Procedure Manual (EH&S Manual)* and *Chemical Hygiene Plan (CHP)*.

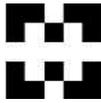
D. Responsibilities

1. All environmental releases, incidents, or problems at any of the Harper College facilities shall be reported in a timely fashion to the Manager of Environmental Health and Safety (Sara Gibson) or the Director of the Physical Plant (Jim Ma). The Manager of Environmental Health and Safety or the Director of Physical Plant will report environmental issues to the relevant agency within the time limits imposed by the agencies.
2. Other Supervisors and Department Heads must be aware of their environmental requirements identified within the EMP and shall provide documentation and or reports when requested by the Manager Environmental Health and Safety.

E. Environmental Management Plan (EMP)

The following is an outline of EMP elements:

- Clean Air Act (CAA)
 - Criteria Pollutants, Attainment and Non-Attainment
 - Chlorofluorocarbons (CFCs)
 - Emissions from Mobile Sources
 - Air Toxics Rules and Hazardous Air Pollutants (HAP's)
 - Emission Reports & Permit
- Clean Water Act (CWA)
 - Spill Prevention, Control and Countermeasures (SPCC) Plan
- Emergency Planning and Community Right-to-Know Act (EPCRA)
 - Planning for response or releases
 - Reporting of releases
- Federal Insecticide, Fungicide and Rodenticide Act (FIFRA)
 - Integrated Pest Management & Restricted Use Pesticides (RUP's)
 - State certified applicators and operators
- Resource Conservation and Recovery Act (RCRA)



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- Solid and Hazardous Waste Management
- Generator Status
- Universal Waste Management – batteries, mercury containing thermostats, pesticides, lights and computer wastes
- Waste from Labs, Art, Physical Plant
- Used Oil (except PCB's and cooking oils)
- Underground Storage Tanks
- Waste Minimization
- Toxic Substances Control Act (TSCA)
 - Asbestos Management Procedure

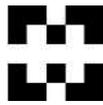
F. Sources of Additional Information

For additional information about the Harper College Environmental Management Plan or any other Environmental Health & Safety question contact the Manager of Environmental Health and Safety: Sara Gibson x6923 or sgibson@harpercollege.edu

Web pages:

EPA's Web site: <http://www.epa.gov>

Illinois EPA's Web site: <http://www.epa.state.il.us/>



SECTION 2- CLEAN AIR ACT (CAA)

A. Objective

For all of the College facilities to comply with environmental permitting, operating, response and reporting procedures with respect to air or gaseous emissions in accordance with applicable Environmental Protection Agency (EPA) and state regulations.

B. Scope

All Harper College owned and operated facilities.

C. References

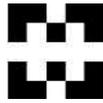
The Clean Air Act (CAA) EPA regulation: 40 CFR Subchapter C, Parts 50-99. Illinois Title 35, Subchapter B, Harper College *Environmental Health & Safety Procedure Manual (EH&S Manual)* and *Chemical Hygiene Plan (CHP)*.

D. Responsibilities

1. The Director of Physical Plant (Jim Ma), the Utilities Supervisor (Larry Olson) and the Manager of Environmental Health & Safety (Sara Gibson) must all be familiar with all potential air pollutant emission sources at the College.
2. If an unpermitted (usually associated with an accident) or uncontrolled (exceeding the permitted level) air pollutant emission episode occurs at a facility, the Manager of EH&S (Sara Gibson) shall be notified and must report the incident to the state air pollution control agency.
3. In the event of an unplanned release of an air pollutant, a Harper will follow these basic priorities:
 - a. protect students, employees and guests from injury;
 - b. prevent further release of air pollutants to the environment;
 - c. protect property from damage; and
 - d. report regulated air pollutant release to appropriate agencies.

E. Compliance

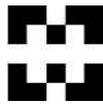
1. Harper College operations that require compliance procedures for air emissions include but are not limited to:
 - a. Boiler operation;
 - b. Refrigeration chemical management;
 - c. Emergency generator operation.
2. The most common air pollution emission incident that may require responsive action and agency reporting include:
 - a. Fire or explosion;
 - b. Improper dust suppression or isolation during construction or renovation activities;
 - c. Deficiency in chemical storage or chemical handling practice; and
 - d. Malfunction of fume hood or air control equipment.



F. Sources of Additional Information

For additional information about the Harper College Environmental Management Plan or any other Environmental Health & Safety question contact the Manager of Environmental Health and Safety: Sara Gibson x6923 or sgibson@harpercollege.edu

Illinois Environmental Protection Agency web page: <http://www.epa.state.il.us>



2.1 Criteria Pollutants, Attainment and Non-Attainment & Hazardous Air Pollutants (HAPs)

A. Background Information

The CAA of 1975 identified six common air pollutants of concern called “criteria pollutants”. Specific levels, called “primary standards”, these pollutants were set at levels the EPA felt were low enough to protect human health, and members of “sensitive populations”. EPA collects and analyzes air samples to determine whether a geographic region has “attained” these levels or has one of more of the criteria pollutants that continues to be present in the air above these standards.

Criteria pollutants are six common pollutants found in all communities and which come from a variety of sources. Ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, particulate matter, and lead are the six criteria pollutants. The pollution in the Cook county area is considered in “non-attainment” for ozone and in some areas, particulate matter.

Title III of the 1990 Amendments to the Clean Air Act (CAA) established National Emission Standards for Hazardous Air Pollutants (NESHAPs). Other names for these hazardous air pollutants (HAPs) are “toxic air pollutants” or “air toxics”. Prior to the 1990 amendments, the EPA had only regulated eight toxins, including asbestos, mercury and benzene, as HAPs. There are currently 188 carcinogens, mutagens and other toxins specifically listed as HAPs, but the law allows for additions. EPA must review and revise the list periodically.

The Air Toxics requirements apply to some specific industries, called “source categories” and other sources that emit 10 tons or more or a single HAP, or 25 tons of HAPs total. These are “major sources”. It also applies to industries, such as dry cleaners and auto body paint shops where only a few businesses would ever exceed the 10 and 25 ton limits individually, but the total emissions from the industry warrant control. These industries are “area sources”.

Asbestos NESHAP applies to demolition and renovation activities disturbing more than 260 linear or 160 square feet or specific types of asbestos-containing building materials within a calendar year.

B. Compliance

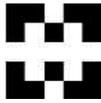
The College does not have processes that exceed the HAPs air emission limit of 10 tons. Air emissions of asbestos is in compliance, see Section 7.1 for Asbestos Management Procedure. The Illinois EPA and Cook County of Environmental Control are notified of any asbestos abatement or demolition on campus.

The following are emission sources at the College that are possible sources of criteria pollutants:

See page Section 2.4 for the following reports:

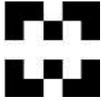
- a. Annual Emissions Report (*for boiler and unleaded gasoline underground storage tank emissions.*)

Air Operating Permit I.D. No. 031234ABL



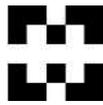
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1. Boilers – Harper College will has four (4) high pressure, natural gas-fired boilers and two (2) low pressure, natural-gas fire boilers. The following is a list of the boilers:
 - BLR-1 High Pressure Boiler (1970)–heat input capacity of 34 MMBtu/hr
 - BLR-2 High Pressure Boiler (1970) - heat input capacity of 34 MMBtu/hr
 - BLR-3 –High Pressure Boiler (2005) for heat input capacity of 30.4 MMBtu/hr
 - BLR-4- High Pressure Boiler (2005)-heat input capacity of 30.4 MMBtu/hr
 - BLR-5- Low Pressure Boiler (1970)– heat input capacity of 12.5 MMBtu/hr
 - BLR-6 -Low Pressure Boiler (2005) – heat input capacity of 19 MMBtu/hr
2. Underground Gasoline Storage – Harper has one (1) 6,000 gallon underground storage tank containing gasoline.
3. Exempt operations
 - a. Small Boilers <10 million BTU – Greenhouse boiler (capacity- 3.6 million BTU's per hour). This boiler is exempt under Section 201.146 (c) of IL regulations for boilers with capacity of less than 10 mmbtu/hr.
 - b. Spray Painting/ Water Based Glazing Operations – These operations are in the Art Department and Greenhouse. These spray booths are exempt from permit requirements per Section 201.146 (g), which exempts coating operations located at a source using not in excess of 5,000 gallons of coating (including thinner) per year. The combined total of coating used from these sources is well below the 5,000 gallons per year limit.
 - c. Print Shop- Section 201.146 (m) exempts printing operations with aggregate organic solvent usage that never exceeds 750 gallons per year from all printing lines at the source, including organic solvents from inks, dilutents, fountain solutions and cleaning materials.
 - d. Kilns- The Art Department has several kilns which are also exempt per Section 201.146 (d). This section exempts heating systems with a design heat input capacity of less than 10 million BTU per hour.
 - e. Diesel Fuel Underground Storage Tanks – Storage tanks of any size are exempt from air permit requirements per Section 201.146 (n) (3) if they contain the following materials: virgin or re-refined distillate oil, hydrocarbon condensate from natural gas pipeline or storage systems, lubricating oil or residual fuel oils.
 - f. Maintenance Shop Parts Washer Using Organic Solvent – Cold cleaning degreasers (that are not in line cleaning machines) are exempt from permit requirements if the vapor pressure of the solvent never exceeds 2kPa (15mmHg or 0.3psi) measured at 38°C (68°F). This parts washer should be exempt as solvents commonly used for degreasing in maintenance shops are well below the vapor pressure thresholds.
 - g. Welding & Brazing Equipment in Art Dept. – The welding and brazing equipment in the Art Department is ducted to an enclosed air cleaner system (electrostatic precipitator). Section 201.146 (y) exempts welding and brazing equipment and associated ventilation hoods.
 - h. Laboratory Hoods- Volatile organic compounds are used in the Chemistry and Science Departments in the lab hoods in small quantities. Section 201.146 (f) exempts several sources from permitting requirements including bench scale laboratory equipment and laboratory equipment used exclusively for chemical and physical analysis, including associated



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- laboratory fume hoods, vacuum producing devices and control devices installed primarily to address potential accidental releases.
- i. Wood Dust Collector – The Art Department has a dust collection system for the wood shop’s grinding and cutting operations. Equipment used for cutting, sawing, sanding, sand or shot blast cleaning is exempt per Section 201.146 (aa) if the equipment is either used for maintenance activity; manually operated; exhausted inside a building; or vented externally with emissions controlled by an appropriately operated cyclonic inertial separator (cyclone), filter, electro-static precipitator or scrubber.
 - j. Emergency Generators – The two (2) emergency generators located in the following areas: In the Boiler Plant (building B) a 350kW generator with a 600 gallon built in diesel tank and in the basement of building Z a 230kW with a 250 gallon built in diesel tank.



2.2 Chlorofluorocarbon (CFC)

A. Background Information

Refrigerants, including chlorofluorocarbons (CFC) and hydrochlorofluorocarbons (HCFC), are used in chillers, air conditioners, ice-makers, and refrigerators. Clean Air Act Amendments (CAAA) prohibits the release of CFCs to the atmosphere and requires that the use of these substances be phased out.

Summary of Requirements –40CFR85:415ILSC5/9.7:

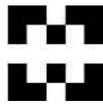
- Require service practices to maximize recycling of ozone-depleting compounds during the servicing and disposal of air conditioning and refrigeration equipment.
- Set certification requirements for recycling and recovery equipment, technicians, and reclaimers.
- Restrict the sale of refrigerant to certified technicians.
- Require persons servicing or disposing of air conditioning and refrigeration equipment to certify that they have acquired recycling or recovery equipment and are complying with this rule.
- Require repair of substantial leaks in air conditioning and refrigeration equipment with a charge of greater than 50 pounds.
- Establish safe disposal requirements to ensure removal of refrigerants from goods that enter the waste stream with the charge intact (motor vehicle air conditioners, home refrigerators, and room air conditioners).

B. Compliance

The Utilities Supervisor (Larry Olson) maintains and is currently revising the Harper's CFC Management Plan and Refrigerant Compliance Reports. The Refrigerant Compliance Report, identifies all units onsite, which contain CFCs along with the type of CFC and corresponding quantity. If a unit is no longer in working order, an outside service company, certified for CFC removal, removes the refrigerant, and provides documentation. All College personnel in the Utilities Dept. are CFC certified, in that they are familiar with the rules and regulations pertaining to refrigerants, but are not licensed to work on equipment with CFCs. (see Larry Olson for training certificates).

Chillers are serviced onsite by York via CFC recovery machines. York provides reports to the Utilities Dept. when units are serviced, these reports are kept in the Utilities Dept. There are also sensors that monitor for any possible release of refrigerants in the chiller rooms.

There are no campus vehicles that contain CFC air conditioning systems.



2.3 Emissions from Mobile Sources

A. Background Information

Mobile air pollution sources, such as cars, trucks, buses, aircraft, etc., release more than 90% of the carbon monoxide found in urban areas. Mobile source emissions are also responsible for half of all Hazardous Air Pollutants and half of the smog forming volatile organic compounds and nitrogen oxides. (See 40 CFR Parts 85-86 –vehicles and 40 CFR Parts 79-80-fuel requirements) This includes the following programs:

Clean Fleet Vehicles (Clean Cars)

These are cars that use alternative, cleaner fuels such as alcohol, natural gas, or electricity. Certain petroleum combustion engines that produce negligible tailpipe emissions are also low emission vehicles (LEVs). Other clean cars include Inherently-Low Emissions Vehicles (ILEVs), Ultra-Low Emission Vehicles (ULEVs) and Zero Emission Vehicles (ZEVs).

Vehicle Inspection and Maintenance Programs

These programs measure actual vehicle tailpipe emissions. If the emissions exceed those allowable, immediate repairs are required.

Small Engine Emission Standards

Spark ignition engines of 25 HP or less and manufactured after 1997 must bear labels that indicate compliance with EPA emission standards. This is usually lawn care equipment.

Ozone Action Days

The College refrains from operating landscaping equipment (mowers, edgers, leaf blowers, etc.) on Ozone Action Alert Days.

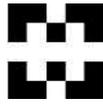
B. Compliance

Due to pollution regulations on new cars the IEPA no longer requires the College to submit a Clean Fuel Fleet Program Annual Report to IEPA per 35 ILL Admin. Code 241.140. All new fleet vehicles are required to be low emission vehicles (LEVs).

The College's Identification Number is: 0691-CFF

The following is a list of current (2006) vehicles that are included in the Clean Fuel Fleet Program, other campus vehicles are exempt:

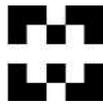
- Maintenance Van
- Utilities Van
- 2 Buses
- 2 Sedans
- Stake Truck
- 2 Mini Vans
- 2 Pick-ups
- 2 Mini Dumptrucks
- F750 Dumptruck
- "International" Dumptruck
- Forklift (2)
- Platform Lift (2)



2.4 CAA Reports & Emission Permit

A. Annual Emissions Reports are submitted to IEPA in May of each year. See the “AIR Environmental Program” for copies of these reports in the Manager of Environmental Health and Safety’s Office (Sara Gibson x6923).

B. Emissions Permit – Harper has a Lifetime Operating Permit ID N. 031234ABL. See the Manager of Environmental Health and Safety’s Office (Sara Gibson x6923).



SECTION 3 – CLEAN WATER ACT (CWA)

A. Objective

To protect all water sources from discharge of pollutants from College activities.

B. Scope

All College activities that create a pollutant that has the possibility of entering a water source.

C. References

The Clean Water Act (CWA) USEPA regulation: 40 CFR Subchapter D, Parts 50-99. Illinois Title 35, Subchapter C. Harper College *Environmental Health & Safety Procedure Manual (EH&S Manual)* and *Chemical Hygiene Plan (CHP)*.

D. General Information

The Clean Water Act (CWA) is a 1977 amendment to the Federal Water Pollution Control Act of 1972. The CWA's goal is to make all water fishable and swimmable, and ultimately, to eliminate the discharge of pollutants into surface waters. The CWA involves the following:

- Provides funding and control for publicly owned sewage treatment works (POTWs),
- Regulates discharges of pollutants into navigable waters through the National Pollution Discharge Elimination System (NPDES),
- Establishes requirements for developing water quality standards,
- Requires the preparation of Spill Prevention Control and Countermeasures (SPCC) plans for facilities that store specified amounts of oil,
- Establishes reporting requirements for spills of hazardous substances that are separate from those established under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) and
- Provides for the regulation of non-point sources of pollution, such as storm water runoff.

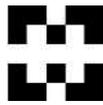
E. Compliance

Harper College drinking water is provided by the Village of Palatine, which gets water from the City of Evanston Water Plant, which takes water from Lake Michigan. The College sewage is sent to the Metropolitan Water Reclamation District of Greater Chicago. The campus storm drains empty into the north retention ponds.

F. Sources of Additional Information

For additional information about the Harper College Environmental Management Plan or any other Environmental Health & Safety question contact the Manager of Environmental Health and Safety: Sara Gibson x6923 or sgibson@harpercollege.edu

Illinois Environmental Protection Agency web page: <http://www.epa.state.il.us>



3.1 Spill Prevention, Control and Countermeasures (SPCC) Plan

A. Background

Title 40 part 112 of the code of Federal Regulations (40 CFR 112) implement the oil spill prevention provisions of the Clean Water Act of 1972. The oil spill prevention regulations have existed since 1973, but only included a portion of the current Spill Prevention Control and Countermeasures (SPCC) Plan requirements. The Oil Pollution Act of 1990 expanded these rules, and they became the current SPCC requirements.

The key concept is to prevent and control oil of any kind and any form from entering “navigable waters”.

B. Compliance

Harper College maintains a SPCC Plan as required by the EPA to prevent any discharges of oil into or upon navigable water of the US or adjoining shorelines. The SPCC Plan applies to non-transportation related onshore or offshore facilities engaged in drilling, producing, gathering, storing, processing, refining, transferring, distributing, using or consuming oil and oil products.

Harper College does meet the criteria for the requirement of an SPCC Plan. The criteria are as follows:

- The facility must be non-transportation related;
- There must be an aggregate aboveground storage capacity greater than 1,320 gallons or a completely buried storage capacity of greater than 42,000 gallons (excluding tanks and oil filled equipment less than 55 gallons in capacity); and
- If due to its location, the facility could reasonably be expected to discharge oil into or upon the navigable water or adjoining shorelines of the United States.

The College’s SPCC Plan addresses the following areas:

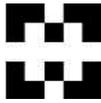
- Operating procedures the facility implements to prevent oil spills;
- Control measures installed to prevent oil from entering navigable water or adjoining shorelines; and
- Countermeasures to contain, cleanup and mitigate the effects of an oil spill.

The Harper College SPCC Plan is maintained in the Office of the Manager of Environmental Health & Safety.

C. Responsibilities

The Manger of Environmental Health & Safety is responsible for the following:

- Maintaining, modifying and amending the SPCC Plan as necessary;
- Provide training to personnel who work with any fuel oil storage; and
- Responding to a reported incident with appropriate action to control and remedy the incident. If the Manager is not available this responsibility will be done by the Director of Physical Plant.



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The Physical Plant is responsible for the following:

- Inspection of oil storage containers;
- Recordkeeping;
- Notifying Public Safety and the Manger of Environmental Health & Safety of a spill or release; and
- Attend training.

D. Spill Response Procedures

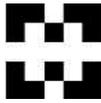
If an oil spill should occur, employees will take actions to limit the spread of oil and to contain any contaminated water for treatment and disposal. The following steps shall be taken to meet this objective:

Small Spills -less than 5 gallons that are contained to area and can be cleaned up using the spill clean up kit in the room.

1. The individual that discovers the accidental release shall immediately notify his/her supervisor and begin the clean up using the spill clean up kit.
2. All waste from the spill shall be collected for proper disposal.
3. Contact the Manger of EH&S for proper disposal.

Large Spill -greater than 5 gallons, and that cannot be contained to the area.

1. The individual that discovers the accidental release shall immediately notify his/her supervisor and Harper's Public Safety by radio or calling x6211.
2. The individual shall use the spill clean up kit in the room to isolate the spill until emergency help arrives.
3. Public Safety shall call the Palatine Fire Dept. at 911 and the Manger of EH&S.
4. Public Safety, the Manager of EH&S along with the Fire Dept. will determine if outside cleanup assistance is needed and if the building shall be evacuated. If outside assistance is needed – SET Environmental, Inc. (1-877-43SPILL) should be contacted. SET Environmental, Inc. will clean up the spill and take responsibility for disposing of any contaminated materials generated during the containment and clean up of the spill.
5. The Manger of EH&S or Director of Physical Plant in his/her absence shall perform a site reconnaissance to ensure that there is no oil contaminated runoff water in harmful quantities. Discharges of oil in harmful quantities are defined as those that violate applicable water quality standards, cause a film or sheen upon or discoloration of the surface of the water or adjoining shorelines, or causes sludge or emulsion to be deposited beneath the surface of the water. If a discharge of oil in harmful quantities reaches the surface water, the Manger of EH&S or the Director of Physical Plant will immediately notify the **National Response Center (1-800-424-8802) and the EPA Region V (312-353-2000)**. Every effort will be made to contain the spread of oil, including the use of floating booms and absorbent pads.
6. In the event of a release of oil to the MWRDGC, the Manger of EH&S or the Director of Physical Plant will immediately notify the MWRDGC Research and Development, Industrial Waste Division at (312-751-3044) during normal operating hours or the Systems Dispatcher at (312-787-3575) at all



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other times. Also, a notification report shall be submitted within five calendar days to the MWRDGC. (See Appendix E of the complete SPCC Plan).

7. In the event of a discharge of more than 1,000 gallons of oil into or upon the navigable waters of the US or adjoining shorelines in a single spill event **or** a discharge of more than 42 gallons of oil in each of two discharges within a 12 month period Harper shall submit to the Regional EPA Administrator within 60 days from the time of the discharge the information found on page 1-1 of the complete SPCC Plan in accordance with 40 CFR 112.4(a).

E. Fire Response Procedures

In the event that an oil release results in a fire or explosion, the following procedures shall be followed:

1. The employee that discovers the accidental release shall immediately notify the Harper Public Safety via radio or by calling 6211. They should exit the building immediately and activate the fire alarm by pulling a pull station if the alarm is not already sounding.
2. The Harper Public Safety shall notify the Palatine Fire Dept. by calling 911. Public Safety shall also notify the Manager EH&S and the Director of Physical Plant.

F. Evacuation Procedures

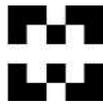
All employees and student should know and follow the College's emergency evacuation procedures and designated meeting locations.

G. Inspection and Records

Monthly visual inspections consist of a complete walk through of the facility property to check for equipment/drum damage or leakage, stained or discolored floors, or excessive collection of liquids in depressed areas. Records of the monthly visual inspections will be kept for three years. The inspection checklist in Appendix D of the complete SPCC Plan must be used for monthly inspections. The inspector shall record any comments in addition to his/her name and the inspection date directly onto the checklist

H. Training

Personnel are properly instructed in the operation and maintenance of equipment to prevent the discharge of oil. New employees receive orientation training. This training includes administrative rules, safety/health/environmental procedures, and quality training. Oil-handling personnel are trained in the operation and maintenance of equipment to prevent discharges, discharge procedure protocols, applicable pollution control laws, rules and regulations, general facility operations, and the contents of the facility SPCC Plan. Training records are maintained in with the Manager of EH&S.



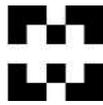
I. Oil Storage Locations

There are twenty-four areas where oil is stored on facility grounds. A total of 39 reservoirs, containers, tanks, and drums are located around the facility. See the following table for a lists the reservoirs, containers, tanks, and drums with a description and size. Spilled fluids from these areas eventually lead to drains connected to the MWRDGC.

Description	Size (gallons)
1. Waste Cooking Oil Dumpster (Building T)	250
2. New and Waste Drums (Building T)	660
3. Fluid Storage (Building T) - 9 Tanks	540
4. Diesel Tank (B111B) Emergency Generator	700
5. Elevator Reservoir (M108)	90
6. Elevator Reservoir (W206)	110
7. Elevator Reservoir (A007) - Passenger	150
8. Elevator Reservoir (A007) - Freight	110
9. Elevator Reservoir (R130) - Passenger	150
10. Elevator Reservoir (R130) - Freight	110
11. Elevator Reservoir (P004)	100
12. Elevator Reservoir (L110) - Passenger	120
13. Elevator Reservoir (L102D) - Freight	100
14. Elevator Reservoir (Z134)	110
15. Elevator Reservoir (F128A)	180
16. Diesel Tank (Z008) Emergency Generator	270
17. Elevator Reservoir (Z002) - Passenger	70
18. Elevator Reservoir (Z002) - Freight	250
19. Elevator Reservoir (D152)	130
20. Elevator Reservoir (Z005)	120
21. Elevator Reservoir (Y002 #4)	200
22. Elevator Reservoir (Y002 #5)	170
23. Elevator Reservoir (H003)	130
24. Elevator Reservoir (I120A)	80

The total amount of oil stored at the Harper facility is 4,900 gallons.

All sanitary waste and are routed to the MWRDGC. Other than the sanitary sewers, there is no path for a discharge of oil to the waters outside the facility boundaries.



SECTION 4- EMERGENCY PLANNING AND COMMUNITY RIGHT-TO-KNOW (EPCRA)

A. Objective

To provide emergency responders and the public access to information on hazardous chemical on the Harper College campus.

B. Scope

All Harper College owned and operated facilities.

C. References

Emergency Planning and Community Right-to-Know (EPCRA) USEPA regulation: 40 CFR Subchapter J, Illinois Title 35, Subchapter H. Harper College *Environmental Health & Safety Procedure Manual (EH&S Manual) and Chemical Hygiene Plan (CHP)*.

D. General Information

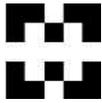
Title III of the Superfund Amendments and Reauthorization Act (SARA) created the Emergency Planning and Community Right-to-Know Act (EPCRA). This law helps to provide emergency responders and the public access to information on hazardous chemicals in their communities.

E. Compliance

Reporting requirements under EPCRA include:

- Emergency Planning (Section 302): The requirements of this section apply to any facility which has an amount of any extremely hazardous substance equal to or in excess of a threshold planning quantity. ***Harper College does not have extremely hazardous substances equal to or in excess of the threshold planning quantity.***
- Emergency Release Notification (Section 304): Reporting requirements for accidental releases of certain hazardous substances, extremely hazardous substances or oil in greater than threshold quantities. ***Harper College does not have extremely hazardous substances or oil in greater than threshold quantities.***
- Community Right-to-Know Reporting Requirements (Section 311 and 312): Requirements to keep an chemical inventory if the facility (1) is required by OSHA to have a Material Safety Data Sheet (MSDS) for a hazardous chemical **and** (2) has hazardous chemicals on-site greater than threshold quantities. ***Harper College has all MSDS on-site in the areas that use the chemicals. Harper College does not have any hazardous chemicals on-site greater than the threshold quantities.***

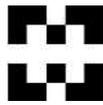
The College has an Emergency Response Plan established with Palatine Fire Department and involves the Fire Department in emergency training activities on campus.



F. Sources of Additional Information

For additional information about the Harper College Environmental Management Plan or any other Environmental Health & Safety question contact the Manager of Environmental Health and Safety: Sara Gibson x6923 or sgibson@harpercollege.edu

Illinois Environmental Protection Agency web page: <http://www.epa.state.il.us>



SECTION 5- FEDERAL INSECTICIDE, FUNGICIDE AND RODENTICIDE ACT (FIFRA)

A. Objective

To protect consumers, applicators, and the environment when working with or applying pesticides

B. Scope

All Harper College owned and operated facilities.

C. References

FIFRA- USEPA 40 CFR 152-180 regulation: 40 CFR Subchapter J, Illinois Title 35, Subchapter H. Harper College *Environmental Health & Safety Procedure Manual (EH&S Manual)* and *Chemical Hygiene Plan (CHP)*.

D. General Information

In 1947 the FIFRA law was enacted. The purpose of this law is to protect consumers, applicators, and the environment. The US Dept. of Agriculture operated the FIFRA program until 1970, when Congress passed control to the EPA. The EPA seeks to meet the goals of the act by controlling the production, sale, distribution, and use of pesticides.

Under FIFRA , all pesticide manufacturing plans and all pesticides sold or distributed in commerce, must be registered with the EPA. Labels on pesticide containers include important safety information, instructions for applying the pesticide, and the intervals at which applicators can re-enter application work areas. Workers must follow the safety standards (the Worker Protection Standard) when they mix and apply pesticides.

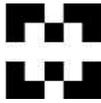
The Illinois Department of Agriculture certifies and licenses those using pesticides in outdoor environments. The Illinois Department of Public Health certifies and licenses individuals using pesticides in and on manmade structures. Under the Illinois Pesticide Licensing Act a pesticide license is required for:

- Anyone using a Restricted Use Pesticide (RUP)
- Anyone applying any Restricted Use or General Use pesticides (any pesticide) in the course of employment.

E. Integrated Pest Management (IPM) and Restricted Use Pesticides (RUPs)

The College supports Integrated Pest Management (IPM) Plan for utilizing structural, cultural, biological, and chemical controls in an organized manner for results in reduced usage of chemicals, selection of least toxic pesticides, more effective pest control, and decreased health and environmental concerns.

An IPM plan helps minimize the amount of pesticide necessary to provide satisfactory control by first considering the use of non-chemical controls:



1. Structural deficiencies:
 - Identify pest entry points and eliminate using barriers such as self-closing doors, screens, and other physical controls;
 - Minimize pest harborage by the use of heat, cold, light, electricity, desiccants, traps, and other mechanical controls;
 - Remove plants that attract pests, trim bushes, and remove excess mulch;
 - Identify and repair sources of moisture such as leaking roofs, pipes, etc.
1. Sanitation deficiencies:
 - Eliminate sources of food by keeping food preparation areas clean at all times and garbage disposed of in sealed containers;
 - Avoid moisture areas by keeping kitchens and bathrooms clean and dry.
2. Cultural controls:
 - Replace plants with more resistant varieties;
 - For landscaping, select plants that are compatible with local weather and soil conditions and resistant to common pests.
3. Biological controls:
 - Introduce species-specific parasitic and predatory insects or microorganisms to reduce or control a specific pest;
 - Use pheromones (chemical sex attractants secreted by special glands of one or both sexes of insect species) to attract pests to traps;
 - Use bird or bat houses at a specific location to attract birds or bats that will feed on pests.

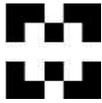
When chemical controls are necessary, an IPM will guide the applicator in taking into account the following factors when selecting chemicals:

- Active ingredients with the lowest practical toxicity to humans and non-target organisms; shortest practical persistence in the environment; and least potential for movement through the soil and contamination of groundwater;
- Formulations (dust, spray, aerosol, granule, etc.) that are suitable for the application site, can effectively target the pest organism, and that can minimize the impact of the toxicant on humans and the environment;
- Application equipment and associated adjuvants (chemicals added to the tank mix to increase effectiveness or safety) that are appropriate for the application site;
- Application techniques (crack and crevice, spot treatment, space spray, etc.) that can increase the effectiveness of the material while minimizing the impact of the product on humans and the environment.

The College rarely, if ever has used RUPs on campus. A log of RUP use is kept in the Campus Horticulturist (Elissa Anderson). If a Contractor is on campus to apply an RUP, they must provide all the following information to Elissa Anderson: MSDS, label, amount to be applied, date applied and any follow up application information.

F. Training and Licensing

Employees that are required to apply pesticides at the College are trained and licensed. This training includes handling, understanding labels and applying pesticides. Section 5.1 has a list and license information of State Certified Applicators and Operators on campus. Indoor plant management and indoor pest control is conducted by an outside contractor only.



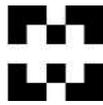
G. Sources of Additional Information

For additional information about the Harper College Environmental Management Plan or any other Environmental Health & Safety question contact the Manager of Environmental Health and Safety: Sara Gibson x6923 or sgibson@harpercollege.edu

License verification may be obtained through the Illinois Department of Agriculture's web page:
<http://www.agr.state.il.us/Environment/Pesticide/aplicatorsearch.php>

Additional information may be obtained through the Illinois Department of Agriculture's web page: <http://www.agr.state.il.us/index.html> (Dept. of Agriculture oversees and enforces the EPA FIFRA regulations) or

Illinois Environmental Protection Agency web page: <http://www.epa.state.il.us>
Environmental Protection Agency web page: <http://www.epa.gov>



5.1 State Certified Applicators & Operators

The College's Roads and Grounds Personnel are licensed Public Operators (in GS and Ornamental applications) and work under the direction of Campus Horticulturist (Elissa Anderson), Public Applicator. The following is a list and their license numbers:

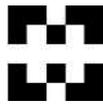
- Campus Horticulturist- Elissa Anderson
Public Applicator License ID: PA03114144
- Raul Arteaga License ID: PO03115868
- Michael Cebulski License ID: PO03189295
- Richard Cowan License ID: PO03184300
- Richard Geary License ID: PO3128440

Restricted use pesticides (RUPs) are rarely if ever used, a log of their use would be kept in the Campus Horticulturist office (Elissa Anderson).

The Biology Department maintains a natural prairie on the east side of the campus. Randall Schietzelt is the licensed Public Applicator (License ID: PA03107959 – GS and Right-of-way) for that area.

Inside plant management and inside pest control (Smithereen) is conducted by a licensed outside company, information can be provide upon request.

Contractors on campus to apply an RUP, must provide all the following information to Campus Horticulturist (Elissa Anderson): MSDS, label, amount to be applied, date applied and any follow up application information.



SECTION 6- RESOURCE CONSERVATION AND RECOVERY ACT (RCRA)

A. Objective

To properly minimize production of all solid and chemical waste, identify Hazardous Wastes and the proper disposal and storage of all wastes.

B. Scope

All Harper College owned and operated facilities.

C. References

Resource Conservation and Recovery Act (RCRA) USEPA 40 CFR 260-265, Illinois Administrative Code: Title 35 Ill. Adm. Code, Subtitle G. Harper College's *Environmental Health & Safety Procedure Manual (EH&S Manual)*, and *Chemical Hygiene Plan (CHP)*.

D. General Information

The U.S. Environmental Protection Agency regulates Hazardous Waste under the Resource Conservation and Recovery Act, commonly known as RCRA. Enacted in 1976 and modified in 1978, 1980, and 1984 (by the Hazardous and Solid Waste Amendments) RCRA established a "cradle-to-grave" system for managing Hazardous Wastes. This means that from the time a Hazardous Waste is created until it is finally destroyed; a paperwork trail makes sure someone is responsible for safeguarding it. The law also provides specific requirements for those who generate, transport, treat, store, or dispose of Hazardous Wastes. Training personnel in Hazardous Waste management and emergency procedures is required under RCRA.

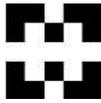
Other regulations such as the Clean Air Act and the Clean Water Act govern the disposal of waste into the air and the sewer system. Consult the Laboratory Chemical Hygiene Officer (Chemistry-Kelly Jones x6408 & Biology-Jennifer Jennings x6708) for identification, collection, storage and disposal of laboratory wastes. Consult the Manager of Environmental Health & Safety (Sara Gibson x6923) for disposal, storage or collection of chemical waste in other area of the College.

E. Types of Waste

Solid Waste or Chemical Waste

Anything a campus or other entity no longer has a need for or no longer wants is *Solid Waste*, even if it is liquid or gaseous. More common terms for *Solid Waste* would be "garbage", "trash" or "refuse". Certain materials that are "legitimately recycled", such as scrap metals, are exempt from the RCRA definition of Solid Wastes, other recycled materials are not exempt. The lengthy RCRA definition of solid and Hazardous Waste is in 40 CFR 261.3.

Federal RCRA encouraged individual states to develop specific requirements for management of Solid Wastes. In Illinois, tires, medical wastes and petroleum



wastes are examples of Solid Wastes that are regulated under the RCRA-Universal Waste, see Section 6.3- Universal Waste Management. *Chemical wastes* are those typically liquid wastes that must be evaluated as to their hazardous characteristics and may be determined to be Hazardous Wastes.

Hazardous Waste

Hazardous Wastes are a specific category of Solid Wastes. RCRA identified two general categories of Hazardous Waste, those that are specifically “listed” in the regulations, and those that exhibit a hazardous “characteristic” by being flammable, corrosive, reactive or toxic. *Table 6.1 Characteristics of Hazardous Wastes*” provides additional detail on these categories and lists some typical campus Hazardous Wastes. The Table also identifies the waste codes that are alphanumeric codes the EPA uses for accounting purposes to code different types of wastes. Most **empty** containers are not hazardous waste under federal RCRA rules.

Mixed Waste

A mixture of a listed hazardous waste and a solid (non-hazardous) waste is considered a hazardous waste. However, if the hazardous waste contained in the mixture is hazardous solely because it exhibits a hazardous characteristic, and the resultant mixture no longer retains that characteristic, it is not considered a hazardous waste.

Land Disposal Restrictions (Land-Banned Wastes)

In an effort to minimize future soil and groundwater remediation, the 1984 Hazardous and Solid Waste Amendments to RCRA phased out disposal of certain Hazardous Wastes into landfills. These “land-banned” wastes must be treated or stabilized before landfilling.

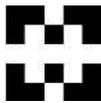
Waste Determination:

Making the decision that something is a waste, be it solid or hazardous, is a *waste determination*. This is the point as which the waste becomes subject to regulation. Failure to make a waste determination is a serious and common breach of the RCRA regulations. It can also result in unknown wastes, which can be very expensive to manage. This is why it is so important that containers must be labeled at ALL times. In the laboratories the waste determinations should be made by the Chemistry (Kelly Jones x6408) and Biology (Christina Fitzgerald x6708) Chemical Hygiene Officers. If you have are not sure about a waste in your area call the Manager of Environmental Health and Safety (Sara Gibson x6923) to assist in the waste determination.

F. Generator Status

The entity that creates the waste is the *Generator*. The vast majority of the liability associated with Hazardous Waste lies with the generator. The College or perhaps even Departments are the generator when campus activities generate Hazardous Waste.

The College is considered a **Conditionally Exempt Small Quantity Generator** – in that monthly generation of Hazardous Waste, other than Acute Hazardous Waste is Less than 100 kilograms (220 pounds) about one half of a 55 gallon



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drum. Storage of Hazardous Waste (not Acute Hazardous Waste) is limited to less than 2,200 pounds. Chemical waste pick-ups are scheduled at the end of every semester to limit the amount of waste accumulated in any area of the College.

The College's US EPA Generator ID No. ILD 113 586 739

The College's Illinois Generator ID No. 0312340010

To encourage waste reduction, the level of RCRA regulation is a function of the amount of waste generated. Regardless of the College's generator status, there is no amount of a Hazardous Waste deemed so small as to be exempt from regulations.

G. Waste Manifest

The manifest is a multi-copy document used to identify, quantify and track chemical waste from the generator to the point of destruction. Generators, transporters and waste disposal facilities must transmit copies of this document to the EPA or state environmental protection agency. The generator must maintain other copies. All waste manifests are kept in the Manager of EH&S Office (Sara Gibson x6923).

H. Waste Container Management

All waste containers must be closed at all times, unless waste is being added or removed. Containers must be in good condition. There may not be severe rusting, dents or other conditions that could cause leaks. Organic waste jugs must have the flame arrestor in place and in good condition. Containers must be compatible with the waste stored within them. The use of peanut butter jars and plastic pop bottles is not acceptable. Containers must be inspected by supervisory personnel to ensure that they are properly labeled, in good condition and meet the criteria described above.

Hazardous Waste Containers that accumulate and store Hazardous Waste must additionally be labeled with the following information:

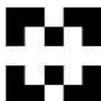
- The words "Hazardous Waste";
- The waste type in words (spent non-halogenated solvents, waste oil, solid metal waste, etc.);
- The date upon which the container became filled.

I. Waste Storage Areas

The following are two types of areas on a campus where chemical waste may be stored:

1. Satellite Accumulation Area (SAA)

An SAA is a small storage area within a room, (but not a dedicated storage room) for chemical wastes and Hazardous Wastes at or near the point where the waste is created. An example of SAA's on campus would be waste containers in a laboratory, shop or studio. The federal RCRA regulations specifically limit the amount of Hazardous Waste that can be stored in a SAA to no more than 55 gallons of waste or 1 quart of Acutely Hazardous Waste, but there are no applicable time limits.



2. Exempt Storage Areas (ESA)

Waste that is removed from the Satellite Accumulation Area (SAA) may be stored in a designated Exempt Storage Area (ESA). This is a central storage area in a department or shop, that has been designed to store chemicals. These ESA contain product as well as waste so, shelves or areas within the area should be labeled and designated for waste storage.

If the waste in this area is classified as “Hazardous Waste”, the container must be labeled as such and with the date the filled container was placed in the ESA. A log should also be kept as to the date, type and quantity of waste in the ESA.

The following is a list of Exempt Storage Areas on Campus:

- Chemistry –Chemical Store Room Z304 and Z304a
- Biology – Chemical Store Room Z228c
- Physical Plant – Flammable Store Room S137b

J. Disposal of Chemical Waste

At the end of every semester there is a pick up and disposal by a professional waste hauler coordinated by the Manager of Environmental Health and Safety. **Disposal of Hazardous Wastes in any sink, in the normal trash or evaporation into the atmosphere is strictly prohibited by law.**

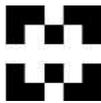
The local municipality regulates the **disposal of Non-Hazardous Waste in the normal trash**. Certain precautions should be observed when disposing of Non-Hazardous Waste. Because custodians, who usually empty the trash containers, are not usually familiar with specific classroom operations, no objects that could cause harm to them should be disposed of in those containers. Sharp metal and broken glassware, even though they may be considered Non-Hazardous trash, should be collected in specially marked containers.

The Metropolitan Water Reclamation District regulates the **disposal of Non-Hazardous Waste into the sewer system** (down the drain of sinks). Certain chemicals may be permissible for sewer disposal. These include aqueous solutions that readily biodegrade and low-toxicity solutions of inorganic substances. Water-immiscible chemicals and organic solvents should never go down the drain. Water-miscible flammable liquids are prohibited from disposal in the sewer system.

M. Waste Minimization

Federal law requires generators of Hazardous Waste to implement measures to limit and reduce the volume and toxicity of Hazardous Waste. Waste minimization techniques include:

- Process/equipment adjustment or modification;
- Toxic material substitution;
- Waste segregation, separation, concentration; and
- Recycling.



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Where possible, reducing waste volume has the added benefit of minimizing health and safety concerns. The exercise of prudence in ordering new chemicals will also ensure that excess chemical does not become subject to disposal as Hazardous Waste. Always check your inventory supplies, prior to purchasing any new chemicals. Only purchase the quantities that are needed. Furthermore, always obtain and review Material Safety Data Sheets (MSDS) for any new substances. MSDSs contain disposal instructions as well as toxicity information that you may want to consider before actually purchasing a new chemical.

N. Spill Response

Chemical spill clean up should only be performed when it is safe to do so, when all the appropriate precautions are taken and when the proper amount of spill cleanup material is available. There are spill clean up kits in designated areas in Chemistry and Biology. There are written procedures with the spill kits and in the Chemical Hygiene Plan.

If you are not comfortable cleaning up a spill, contact Public Safety at extension x6211 so that they can notify the Fire Department Hazardous Material Response Team to handle the spill. Provide as much information as possible to Public Safety and have a copy of the MSDS available for the Fire Department. Public Safety should also notify the Manager of Environmental Health & Safety (Sara Gibson) of the chemical spill.

Clean up of the spill maybe required by the Fire Dept. to be conducted by an outside agency. The Manager of EH&S (Sara Gibson), the Director of Physical Plant (Jim Ma) or the Supervisor of Public Safety (Mike Alsup) should call SET Environmental in Wheeling, IL at 1-877-43SPILL or 1-877-437-7455.

O. Training

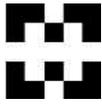
Laboratory Instructors should be trained on the Chemical Hygiene Plan including Section 10- Waste Identification and Disposal, Appendix 12- Department of Chemistry Waste Management, Appendix 13- Department of Biology Waste Management and Appendix 9- Spill Clean-up Procedures. Training is conducted to Instructors by the Laboratory Chemical Hygiene Officer upon hire (Chemistry – Kelly Jones x6408, Biology – Jennifer Jennings x6708).

Training on waste identification and disposal for other areas of the College, including but not limited to Art and Physical Plant, is given to the Supervisors of each area, by the Manager of Environmental Health & Safety (Sara Gibson x6923).

P. Sources of Additional Information

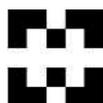
For additional information about the Harper College Environmental Management Plan contact the Manager of Environmental Health and Safety: Sara Gibson x6923 or sgibson@harpercollege.edu

Harper's Laboratory *Chemical Hygiene Plan (CHP)* -Section 10- Waste Identification and Disposal, Appendix 12- Department of Chemistry Waste Management, Appendix 13- Department of Biology Waste Management and Appendix 9- Spill Clean-up Procedures. Questions on the CHP should be



Harper College
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directed to the Laboratory Chemical Hygiene Officers-Chemistry – Kelly Jones
x6408, Biology – Jennifer Jennings x6708.



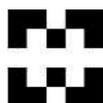
6.1 Characteristics and Identification of Hazardous Wastes

Table 6.1 Characteristic Hazardous Waste

If the waste exhibits a hazardous characteristic, it is a <i>characteristic hazardous waste</i>			
Characteristic	Description	Examples	Waste Codes
Ignitable	Flashpoint < 140F, solid oxidizers	Solvents, alcohols, aerosol can residues, pool sanitizers	D001
Corrosive (acidic or caustic)	pH < 2 or pH > 12.5	Drain cleaners, lab and pool acids, rust removers, water treatment chemicals, etc.	D002
Reactive	Cyanides, sulfides, compressed gasses, materials that react spontaneously or with water	Explosives, old unstable chemicals (old ethers, picric acid), water-reactive metals, some nitrogen compounds (including some fertilizers), aerosol cans	D003
Toxic: Test a sample of the material to determine if it contains metals or pesticides at levels above those listed in 40 CFR 261.24		Lead paint, photographic fixers, some fluorescent lamps, chromium-based corrosion inhibitors, solders, pesticides	D004-D043

Table 6.2 Listed Hazardous Wastes

These are specific wastes or kinds of wastes. The chemicals or constituents of the waste appear in lists in the regulations. Thus, these are <i>Listed Hazardous Wastes</i> . There are four lists of hazardous chemicals; three may occur on your campus. The fourth list, the K-list, is wastes from specific industrial processes.			
List	Description (see 40 CFR 261.25)	Examples	Waste Codes
Waste solvents (F-list)	Specific solvents and mixtures	Parts cleaners, methylene chloride, xylol, acetone, alcohol used as a solvent, etc.	F001-F006
Waste chemicals (U-list)	Chemicals, when they are outdated or no longer needed, and in which the listed chemical is the sole active ingredient.	Outdated photo products, excess lab chemicals, unused pesticides, etc.	U001-U409
Acute Hazardous Waste chemicals (P-list)		Unused poisons, unused toxins, unused pesticides, etc	P001-P205



6.2 Waste from Labs, Art and Physical Plant

Physical Plant

- **Maintenance Department**

Wastes generated from the Maintenance Department include empty containers including paint spray cans, waste paint and solvent. Empty containers are verified as “empty”, checked to ensure they contain no free liquids, and are then disposed in the trash. Oil paints and solvents, such as paint thinners, shall be collected and disposed of with the “Semester End Chemical Waste Pick Up”. Universal wastes include the recycling of mercury containing lamps, see section 6.3.

- **Roads & Ground Department**

These wastes include Universal Wastes, see section 6.3: used oils (see following section 7.5 Used Oil), tires, spent batteries, and pesticides. Tires and batteries are returned to the vendors, which supply them. Pesticides and rinsates are handled according to the labels instructions. If there is a case where disposal is needed, of any recalled stocks of a suspended and canceled pesticide, it would be disposed of through an environmental waste contractor. Waste oils are recycled through Safety Kleen, an environmental waste contractor. Safety Kleen is called by the EH&S Manger when oil has accumulated to 2 full drums of waste oil in the Auto Shop.

- **Utilities Department**

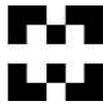
Universal Wastes include antifreeze and lubricating oil. Both the antifreeze and lubricating oil are recycled through Safety Kleen, an environmental waste contractor. Safety Kleen should be called by the EH&S Manger when oil has accumulated to 2 full drums of waste oil in the Auto Shop and in the spring when the antifreeze is changed in the chillers.

Art Department

- **3D Studio & 2D Studio**

Wastes include paint thinner and solvents used in painting and printmaking. All solvents and oil based products are collected in a flammable waste container and picked up every semester with the “Semester End Chemical Waste Pick up”.

Laboratories – See the Chemical Hygiene Plan for detailed Waste Management Plan for Chemistry and Biology. Waste chemicals are picked up every semester with the “Semester End Chemical Waste Pick up”, by an environmental waste contractor.



6.3 Universal Waste Management

A. General Information

To encourage recycling of low-toxicity, high volume waste items, EPA created a separate category of regulated waste, Universal Waste. These are wastes that would otherwise be Hazardous Waste. When recycled under the Universal Waste Rules, batteries, certain light bulbs, mercury from thermostats, old computers and FIFRA-recalled pesticides can utilize the Universal Waste Management option. All waste records, recycling certificates and manifests are kept in the Manager of Environmental Health & Safety Office (Sara Gibson x6923).

B. Fluorescent Light Bulbs

Used fluorescent and high-intensity-discharge (HID) lamps (mercury-vapor, metal-halide and high-pressure sodium) may be classified as hazardous waste due to their mercury content and are thus regulated under RCRA-Universal Wastes.

Spent fluorescent light tubes should be packaged in cardboard boxes specifically designed for individual tube types to prevent breakage. The boxes are stored in the Maintenance shop and are properly labeled as "Waste Lamps". When a box is filled the "filled date" should be marked on the box, waste lamps shall not be stored for more than one year. Care should be taken not to break lamps when placing them into the box. If a used lamp does break, the remains must be cleaned up immediately. These remains should be held in a closed plastic container (such as a 5 gallon bucket) until the box is nearly full and ready to be shipped. These remains can then be transferred into the box, *provided* the number of broken lamps is less than 5% of the capacity of the box. The open end of the box must be completely sealed. When one pallet, or approximately 12 boxes are filled, Maintenance should notify the Manager of EH&S (Sara Gibson x6923) to coordinate pick up by Flourecycle, the contracted bulb recycler. The sealed boxes should then be taken to Shipping and Receiving to be picked up Flourecycle.

C. Batteries

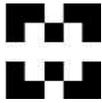
Lead acid and nickel-cadmium batteries from sources such as automatic floor scrubbers and the computer back up system are collected and sent for recycling to Illinois Battery in Chicago.

D. Mercury Switches, Thermostats and Thermometers

Mercury switches, thermostats and thermometers that are no longer needed or have been replaced should be collected for disposal at the Semester End Chemical Waste Pick Up.

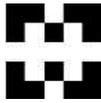
E. Pesticides

Pesticides and rinsates are handled according to the labels instructions. If there is a case where disposal is needed, of any recalled stocks of a suspended and canceled pesticide, it would be disposed of through an environmental waste contractor.



F. Electronic or Computer Wastes

Computers, televisions, and other electronic equipment may have heavy metals in their monitors and circuitry. The College does not throw this type of equipment into the garbage, but rather recycles all equipment through an outside contractor. This program is coordinated by the Information Technology (IT) department. Terry Engle is coordinator and has a log of recycling activities.



6.4 Used Oil (except PCBs and cooking oil)

A. Background Information:

Used oil is any petroleum-based or synthetic oil that has been contaminated with dirt, metals, water, or other chemicals such as solvents during use in a process. Used oil is not the same as waste oil. Waste oil includes oils which have not been used, such as virgin oil tank bottoms or cleanup residues from a product spill. In addition, used oil must be recycled or burned for energy recovery. Used oils commonly generated by small businesses include materials such as used motor oil, transmission fluid, refrigeration oil, compressor oil, hydraulic fluid, metal working fluid, and other lubricants.

The following materials are also regulated as used oil:

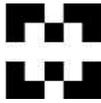
- Materials burned for energy recovery that contain or are contaminated with used oil such as oil-soaked rags or sorbent materials.
- Oil generated from abnormal operations. Substantial leaks of oil from pipes, pumps, and machinery such as an overflowing tank or ruptured pipe.
- Oil removed from wastewater such as through an oil water separator.

B. Compliance

Used oil is collected in the Auto Shop and picked up on a regular basis by Safety Kleen, an environmental waste contractor. Safety Kleen is called by the EH&S Manager when the oil has accumulated to 2 full drums of waste oil in the Auto shop.

Oily rags are picked up and cleaned by an outside contractor.

There is an oil water separator that serves the Auto Shop and is pumped out on a regular basis.



6.5 Medical Wastes

A. Background Information

Medical Waste is generally defined as any solid waste that is generated in the diagnosis, treatment, or immunization of human beings or animals, in research pertaining thereto, or in the production or testing of biologicals, including *but not limited to*:

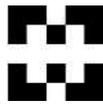
- soiled or blood-soaked bandages
- culture dishes and other glassware
- discarded surgical gloves - after surgery
- discarded surgical instruments - scalpels
- needles - used to give shots or draw blood
- cultures, stocks, swabs used to inoculate cultures
- removed body organs - tonsils, appendices, limbs, etc.
- lancets - the little blades the doctor pricks your finger with to get a drop of blood

The Medical Waste program is to protect the environment as well as Harper employees that handle such waste from potential bloodborne pathogens (BBP).

The Harper College Bloodborne Pathogens program as required by Occupational Safety & Health Administrations (OSHA) regulations, is included in the Environmental Health & Safety Procedure Manual.

B. Compliance

Medical wastes, including sharps, blood soaked material and cultures of *Ascaris* is collected separately in red bags and sharps containers and is sent off for incineration. The Medical Wastes are collected in U building, disposal is coordinated by the Manager of Environmental Health & Safety (Sara Gibson). The Medical Wastes is picked up and incinerated by an outside contractor: Stericycle. Manifests and Certificates of Destruction are on file in the Manger of Environmental Health & Safety Office (Sara Gibson x6923).



6.5 Underground Storage Tanks

A. Background

Underground storage tanks can leak and damage groundwater and endanger public health. Congress added the Underground Storage Tank (UST) requirement to RCRA in 1984 as part of the Hazardous and Solid Waste Amendments (HSWA). The UST regulations are in 40 CFR Part 280, effective in 1988.

B. Compliance

Harper College has two (2) USTs:

1. 2,500 gallon diesel tank – at the west side fueling station.
2. 6,000 gallon unleaded tank – at the west side fueling station.

The tanks were installed in the summer of 1991. They are all constructed of double wall fiberglass, they have spill containment and overfill prevention devices, and the tanks and piping have proper leak detection. The tank monitoring system was upgraded in 2001 to an EMCO Monitoring System.

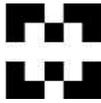
Harper History:

Three underground storage tanks were removed in August 8, 1991 and included a 550 gallon #2 heating oil tank, a 1,000 gallon diesel tank, and a 5,000 gallon gasoline tank. These tanks were found to be leaking, thus a soil remediation project was conducted and approximately 1,350 cubic yards of petroleum contaminated soil were removed and disposed. Additionally a fourth underground tank and its associated piping were abandoned in place in July of 1991 per Office of the State Fire Marshall (OSFM) permit. It is a 40,000 gallons in size and formerly held heating oil. See the removal and closure report by Albert Halff in Physical Plant project files.

In 2006 the College performed soil and groundwater testing in the area of the above mentioned soil contamination. A Corrective Action Completion Report was submitted and received by the IEPA on July 24, 2006. The IEPA responded on November 16, 2006, with a the issuance of a No Further Remediation Letter (NFR letter), that states that “(1) all statutory and regulatory corrective action requirements applicable to the occurrence have been complied with; (2) all corrective action concerning the remediation of the occurrence has been completed; and (3) no further corrective action concerning the occurrence is necessary for the protection of human health, safety, and the environment.” The NFR letter was filed with the College’s property deed.

The UST monitoring system was upgraded and replace with an EMCO System 1500 Series Plus Line Leak Detector in December 2001. See the file in Physical Plant project files for project specifications and evaluation of the EMCO 1500 System. The new system performs tank monitoring and line leak detection. Additionally, in April 2006, there was cathode protection installed on the sump system.

A 600 gallon diesel tank on the east side of the Boiler Plant (bldg. B) was removed in April 2005. This UST held fuel for the emergency generator for building M. This



generator was replaced with a built-in fuel storage tank with the renovations of the Boiler Plant in 2005. See the removal report by Integrity Environmental Services in Physical Plant files.

UST Monitoring System

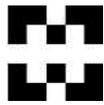
The EMCO tank and line monitor is located on the west wall of the Auto Shop (bldg. T). The Manager of EH&S reviews the tank and line test reports monthly. There are manual line and leak test and cathode protection tests conducted annually. This test is conducted by Tanknology (847-888-4836). Every 4 years the Office of the State Fire Marshall will inspect the monitoring system and will renew our operating permit (referred to as a "Green Sticker") that is located at the fuel pumps.

IF the UST monitoring system goes into alarm or trouble the following steps must be taken:

Notify the Manager of Environmental Health & Safety (Sara Gibson x6923) immediately if the Manager of EH&S is not on campus, notify Palatine Oil at 1-847-358-3600-tell them what the monitoring display is reading.

If the Manager of EH&S or Palatine Oil company confirms that the monitoring system has identified a leak or there is some other evidence of a leak the following steps should be followed:

- Take immediate action to stop and contain the release.
- Make sure the release poses no immediate hazard to human health and safety by removing explosive vapors and fire hazards.
- Notify the Palatine Fire Department of the release.
- If the leak is determined to be more than 25 gallons, the Manager of EH&S or Director of Physical Plant will notify the IL EPA LUST Section (217-782-6760) within 24 hours. If the leak is less than 25 gallons and can be immediately contained and cleaned up, the IL EPA LUST Section can be notified later, but all leaks must be reported to IL EPA LUST no later than 20 days after confirming a release.
- Contact Palatine Oil to remove the petroleum from the UST system to prevent further release in the environment.
- Find out how far the petroleum has moved and begin to recover the leaked petroleum.
- Investigate to determine if the release has damaged or might damage the environment. This investigation must determine the extent of the contamination both in soils and groundwater.
- Long term action and clean up requirements will be determined by IL EPA LUST Section.



SECTION 7- TOXIC SUBSTANCES CONTROL ACT (TSCA)

A. Objective

To provide information to the EPA on the production, distribution, and implementation of new and existing chemicals; to establish specific disposal rules; and to control specific substances such as PCBs, lead and asbestos.

B. Scope

All Harper College owned and operated facilities.

C. References

Toxic Substances Control Act (TSCA) USEPA 40 CFR Subchapter R. Harper College *Environmental Health & Safety Procedure Manual (EH&S Manual)* and *Chemical Hygiene Plan (CHP)*.

D. General Information

TSCA was enacted in 1976 to give the EPA the ability to track the 75,000 industrial chemicals produced in the US or imported into the US. The EPA collects data on these chemicals and can require the manufacturer or importer to determine the risks that these chemicals pose to human health or the environment. Under TSCA the EPA can:

- Control the production, distribution and importation of new and existing chemicals,
- Establish specific disposal rules, and
- Ban the use of high-risk chemicals, such as PCB's.

TSCA also controls specific substances, such as PCBs, lead, asbestos and biotechnology. TSCA excludes tobacco, foods, food additives, drugs, and cosmetics. The TSCA program also excludes nuclear materials, ammunitions and chemicals used solely as pesticides.

E. Compliance

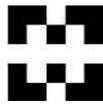
Currently the College does not import, export or produce any chemicals. The College also does not use or maintain sources of lead based paint or PCB's. The campus does have an Asbestos Management Procedure, see the following Section 7.1, for management of current installations of asbestos containing materials, but the College does not use or purchase new asbestos containing materials.

F. Sources of Additional Information

For additional information about the Harper College Environmental Management Plan or any other Environmental Health & Safety question contact the Manager of Environmental Health and Safety: Sara Gibson x6923 or sgibson@harpercollege.edu

EPA's Web site: <http://www.epa.gov>

Illinois EPA's Web site: <http://www.epa.state.il.us/>



7.1 –Asbestos Management Procedure

This section is repeated Section 16.1 of the Environmental Health & Safety Procedure Manual (EH&S Manual).

A. Objective

To ensure that asbestos exposures of all Harper College personnel, students, guests, visitors, and contract personnel are minimized by assuring that all activities that may impact, disturb or dislodge asbestos containing materials are managed and all building conditions that could allow exposure to asbestos fibers are abated, in a manner consistent with established safety practices.

B. Scope

This procedure is established to address the health concerns posed by exposure to asbestos in College owned buildings.

C. References

Department of Labor, Occupational Health and Safety Administration (OSHA) 29 Code of Federal Regulations 1910.1001, Illinois Department of Labor 820 ILCS 225 Health and Safety Act., Illinois Department of Public Health, and IL Environmental Protection Agency (IEPA) 40 CFR Part 61.

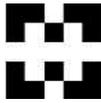
D. Responsibilities

- Harper employees shall not perform any type of asbestos work that includes to disturb, dislodge, remove or repair any asbestos containing materials. All work of this type will be conducted under controlled conditions by asbestos abatement workers appropriately trained and licensed by the Illinois Department of Public Health.
- The Asbestos Program Manger (APM) is the Manager of Environmental Health & Safety. The APM or a designated representative, will oversee and manage all work impacting Asbestos Containing Materials (ACM).
- The Manager of Environmental Health & Safety, or designated training representative, will provide training to inform, provide knowledge and basic awareness to Harper College employees on asbestos issues.

E. General Information

Asbestos is a common, naturally occurring group of fibrous minerals. It was widely used in building materials prior to 1980 because it is heat resistant, strong and not easily degraded. Common products that contain asbestos include, but are limited to: pipe insulation, tank insulation, floor tile and fireproofing. Materials such as these in buildings built prior to 1980 shall be Presumed Asbestos Containing Material (PACM), until tested and proven otherwise.

Asbestos is a concern when fibers become airborne such as when Asbestos Containing Materials (ACM) are crumbled or reduced to powder. Intact, sealed,



and undisturbed materials do not present an opportunity for exposure. When asbestos fibers become airborne, exposure may occur by the fibers being inhaled and deposited into the lungs. Studies have shown that some individuals exposed to asbestos fibers have developed lung cancer, asbestosis (scarring of the lungs), and mesothelioma (cancer of the lining of the lung or abdomen). These diseases have generally been observed after long-term exposures from activities that directly disturb asbestos containing materials. Typically, the diseases do not develop until 10 to 40 years after exposure.

F. Procedure

In campus buildings built before 1980 all building materials will be Presumed Asbestos Containing Materials (PACM), unless tested to prove otherwise. The Manager of Environmental Health & Safety has an Asbestos Inventory also referred to at the College's Asbestos Management Plan (AMP). The AMP has detailed building floor plans of areas of abatement and where there is existing asbestos. The AMP also has sample data of locations and laboratory analysis in which determines if asbestos is present, the type and amount. *Most* of the samples have identified asbestos in the floor tile, floor tile mastic and pipe joint compound, only, but additional sampling may be conducted if PACM is identified.

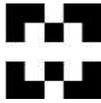
Campus buildings that were built before 1980 include the following:

- A Building (1969) – Student Administration Center (& K wing addition)
- B Building (1969) – Public Safety Center
- C Building (1969) – New Student Services and Art Center
- D Building (1969) Science, Math and Health Careers Center
- E Building (1969) – Instructional Delivery Center
- F Building (1969) – Academic Resources Center
- G/H Buildings (1977) – Engineering and Applied Technology Center
- I/J Buildings (1980) – Business and Social Science Center
- M Building (1980) – Wellness and Sports Center
- P Building (1974) – Music Instruction Center
- T Building (1973) – Park Management Shop & Roads and Grounds Shop
- U Building (1974) – Custodial Storage
- V Building (1975) – Plant Science Center
- Northeast Center (197?)

The College adheres to the Environmental Protection Agency's (EPA) recommendation to manage asbestos in place. This strategy involves maintaining existing ACM in good condition, and removing it only during demolition, renovation or maintenance activities.

Prior to the start of any renovation or demolition project, the APM, the project manager, construction manager or other person responsible for the project must determine if any PACM may be disturbed during the operation. If there is any PACM identified in the project areas that may be impacted or disturbed, if it has not already been tested, it must be tested to determine its asbestos content following established protocols or assume the material contains asbestos and is managed as ACM.

PACM that have the possibility of containing asbestos and should be sampled before being disturbed include, but are not limited to the following:



Harper College Environmental Management Plan

Floor Tile	Floor tile mastic	Ceiling Tile
Wall Plaster	Pipe Insulation	Pipe Joint Compound
Lab Hoods	Lab Tops	Ceiling Plaster
Duct Insulation	Cementitious Ridged Panels (Transite Panels)	

Examples of activities which may result in the disturbance of PACM include:

- Removing or repairing floor tile;
- Removing pipe insulation or pipe joint compound to access pipes;
- Knocking holes in plaster ceilings or walls; and/or
- Carpet removal, which has floor tile underneath it.

If these activities, renovation and/or demolition disturb PACM, then the APM/Mgr. EH&S must be notified. If sampling data is not already on file and is needed on the suspect material, a licensed asbestos building inspector will be contacted to take samples of the suspect ACM for laboratory analysis to determine the asbestos content of the material. If the laboratory analysis shows that the PACM is greater than 1% asbestos containing then the material must be handled as asbestos. A licensed asbestos contractor must be called to abate the ACM prior to any activities, renovation and/or demolition.

Building occupants shall be notified prior to the abatement activities. The notification occurs through correspondence and/or signage at the job site. The information shall include the type of asbestos (i.e.; floor tile, ceiling tile), amount of asbestos, and the location of the material to be disturbed as well as who is conducting the work, the air monitoring and who can be contacted in Physical Plant if there are any questions.

Section 16.2 of the Environmental Health & Safety Procedure Manual (EH&S Manual) has the College's Operations and Maintenance Procedure.