

BOWDOIN COLLEGE

SOLVENT CONTAMINATED WIPERS MANAGEMENT PROGRAM

Purpose

This document meets the requirements outlined in Maine *Standards for Generators of Hazardous Waste* (38 MRSA Chapter 851) regarding the identification, handling, storage, and disposal of hazardous wastes. The purpose of this program specifically is to provide information to employees of Bowdoin College regarding the management of solvent-contaminated wipers (rags) as potential hazardous waste, as outlined Maine DEP guidance document dated March 31, 2005 (attached).

Scope

The wiper management program applies to all employees who generate wipers contaminated with F-class solvents, as listed in the Maine *Identification of Hazardous Waste Rules* (38 MRSA 850). The designation as hazardous waste is based on the USEPA's interpretation of the RCRA "mixture rule", which defines any neutral material mixed with a known hazardous material to be hazardous in its entirety; as there is no minimum level of contamination cited, this rule applies to all materials regardless of use or concentration.

Program Components

1. **Program Administrator.** The Manager of Environmental Health and Safety (EHS) will be the program administrator.
2. **Hazard Determination.** Supervisors are responsible for reviewing their operations to determine if F-class solvents are in use, and if spent wipers are being generated.
3. **Pollution Prevention Analysis.** The program administrator will assess and document the following pollution prevention options before implementing a wiper management program:
 - physical methods of cleaning, including but not limited to brushing, vacuuming, and dry wiping;
 - use of alternative, non-hazardous chemicals including steam or water; or
 - use of alternative non-F-listed chemicals.
4. **Management Options.** Depending on conditions, solvent contaminated wipers will be managed as follows:
 - **Non-Hazardous Waste.** To allow an exemption as non-hazardous waste, all the following conditions must be met:
 - The wipers must be non-saturated by the "one-drop" test.
 - Hand or mechanical wringing, compacting, or centrifuging may be repeated, and must be conducted according to OSHA regulations for employee chemical exposures (i.e., proper use of PPE, ventilation, etc.); air-drying is not allowed.
 - Collected liquids must either be disposed as hazardous waste (see below), or re-used onsite, within 90-days.
 - Non-saturated wipers must be stored in a closed, leak proof container that allows for inspection of liquids (no visible liquid may remain at the bottom of the wiper storage container) and is labeled for contents and full date.
 - Non-saturated wipers must be disposed by laundering (cloth) or incineration (paper) at a licensed facility.

- **Hazardous Waste.** If all of the above conditions cannot be met, then the saturated wipers must be managed as hazardous waste as outlined in the Bowdoin College *Hazardous Waste Management Program*, summarized as follows:
 - Wipers will be stored only in an area labeled “Hazardous Waste Satellite Accumulation Area” or similar, and by other appropriate means (*i.e.*, marking tape on the floor or countertop). The SAA will be kept off-limits to anyone but authorized personnel, and be capable of being secured (locked).
 - Wipers will be collected only in containers appropriate to the solvent being used. Containers will be kept closed, stored on an impervious surface to prevent reaction or physical damage, and use secondary containment precautions. No more than 55-gallons or 200 kg of hazardous waste may be stored in a SAA at any one time.
 - The storage containers will be labeled as follows:
 - Name and EPA waste code of the material;
 - Name and EPA generator number of the facility; and
 - Start- and full-dates.
 - When wastes are present, the SAA will be inspected daily by an authorized person for physical condition of the containers and any signs of a release. Inspections are to be logged on the form provided, and the forms kept in or immediately adjacent to the SAA location. Any evidence of a release must be reported to Security (x3500) and the EHS Office (x3763) immediately.
 - Full containers must be transferred to the central accumulation area (CAA) within 72-hours, or scheduled for a separate vendor pickup, to meet the 90-day disposal requirement. Only sealed and labeled containers may be transferred from building to building, and may not leave the campus. The wastes must be segregated by type, properly packaged in a clear plastic bag for visual inspection, labeled with waste type and the full date, and manifested by the vendor on a form acceptable to the ME DEP.

Regardless of other considerations, all wipers either testing as hazardous for characteristics other than the F-listed solvent, or used to clean up a hazardous waste spill, will always be managed as hazardous waste.

5. **Employee Training.** Supervisors will provide initial and annual training to employees of their departments engaged in the generation and management of solvent contaminated wipers. The training will consist of the contents of this program, the provisions of the Maine DEP guidance document, and workplace-specific information. A program summary will be provided as a posting in the workplace (attached).
6. **Reporting.** The volume of wipers generated will be reported to the DEP by inclusion in the annual hazardous waste generator’s report, on the form provided by the DEP.

Program Review

This program will be audited by the EHS Manager at least annually, by reviewing the status of solvent use and wiper management in the College departments. Supervisors in the affected departments will inform the EHS Manager immediately of any changes in usage.

Attachments

DEP *Solvent Contaminated Wipers Management* guidance document dated March 31, 2005.
Bowdoin College *Guidelines for Management of Solvent Rags*

BOWDOIN COLLEGE GUIDELINES FOR MANAGEMENT OF SOLVENT RAGS

- Determine if the products being used in the workplace contain any F-Listed solvents (most common are shown in **BOLD**):

F001 Halogenated degreasers	F002 Spent halogenated solvents	F003 Non-halogenated solvents	F004 Spent non- halogenated solvents	F005 Spent non- halogenated solvents
tetrachloroethylene trichloroethylene methylene chloride 1,1,1-trichloroethane carbon tetrachloride	chlorobenzene 1,1,2-trichloroethane 1,2,2-trifluoroethane ortho-dichlorobenzene trichlorofluoromethane	xylene acetone ethyl acetate ethyl benzene ethyl ether methyl isobutyl ketone n-butyl alcohol cyclohexanone methanol	cresols cresylic acid nitrobenzene	toluene methyl ethyl ketone carbon disulfide isobutanol pyridine benzene 2-ethoxyethanol 2-nitropropane

- Assess if the solvent can be replaced with a non-F-Listed or non-toxic product.
- If not, segregate all paper and cloth rags used with the F-Listed solvent from all others, to be managed as hazardous waste.
- Collect all saturated rags, and if possible remove excess solvent by hand-wringing into a properly labeled secondary container for re-use; use proper PPE to protect hands, eyes, and respiratory system while handling the solvent.
- Collect all non-saturated rags into a compatible container (i.e., 5-gallon pail with a lid, lined with a clear plastic bag); the container must be kept closed, and labeled as follows:

Bowdoin College
3800 College Station
Brunswick, ME 04011

(Solvent Type and F-Code)
EPA ID#: MED981062615
(Start Date – Full Date)

- The container will be stored in a Satellite Accumulation Area (SAA); this area will be:
 - Secured from unauthorized access
 - Posted with a sign saying "Hazardous Waste Satellite Accumulation Area"
 - Inspected every day that waste is present, and logged on the form provided
- When the container is full, the bag will be removed, sealed, labeled with the waste type and full-date, and transferred within 72-hours to the central accumulation area in Druckenmiller for disposal.