

**The University of Texas at San Antonio
Office of Environmental Health, Safety and Risk Management**

**Source Reduction/Waste Minimization
Pollution Prevention Plan
2011 - 2016**

i: SIGNATURE PAGE

This Source Reduction/Waste Minimization Pollution Prevention Plan has been reviewed for regulatory compliance and best management practices by the undersigned individuals and is hereby adopted for use and compliance by all employees at The University of Texas at San Antonio.

PRINTED NAME	SIGNATURE	TITLE	DATE
J. Brian Moroney	SIGNATURE ON FILE	Director, EHSRM	2/4/2014
Richard M. Garza	SIGNATURE ON FILE	Environmental and Construction Safety Manager	2/4/2014

Original: 12/07/2011

This plan was reviewed/revised on 8/16/2012

This plan was reviewed/revised 2/4/2014. Changes to this plan have been highlighted in "gray" and are summarized below:

iii. E, Shannon Marquez replaces Curtis Nesbit as the Radiation and Laser Safety Coordinator.

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iii. Emergency Procedures & Contacts

UTSA's emergency preparedness plan (http://utsa.edu/oep/OEP_Plan.htm) outlines various scenarios which UTSA personnel could encounter at any UTSA facility. It is imperative that all faculty, staff and students become familiar with this plan. Familiarity and knowing what immediate actions to take could help prevent serious bodily injury or facility damage.

A. EMERGENCY VERSUS NON-EMERGENCY SITUATIONS

1. Emergency

Release of hazardous substances that pose a significant threat to health and safety or that, by their very nature, require an emergency response regardless of the circumstances surrounding the release or the mitigating factors are emergency situations. The following definitions designate an emergency situation:

- a. The situation is unclear to the person causing or discovering the spill
- b. The release requires evacuation of persons
- c. The release involves or poses a threat
- d. Fire, suspected fire, explosion or other imminent danger
- e. Conditions that are Immediately Dangerous to Life and Health (IDLH)
- f. High levels of exposure to toxic substances
- g. The person(s) in the work area is uncertain they can handle the severity of the hazard with the personal protective equipment (PPE) and response equipment that has been provided and/or the exposure limit could easily be exceeded

2. Non-Emergency

Conversely, releases that do not pose significant safety or health hazards to person(s) in the immediate vicinity or to the person(s) cleaning releases, and do not have the potential to become emergencies within a short time frame are not emergency situations. The following situations are Not emergency situations:

- a. The person causing or discovering the release understands the properties and can make an informed decision as to the exposure level
- b. The release can be appropriately cleaned up by the lab personnel using authorized (certified) spill kits
- c. The materials are limited in quantity, exposure potential, or toxicity and present minor safety or health hazards to persons in the immediate work area or those assigned to clean up the activity
- d. Incidental releases of hazardous substances that are routinely cleaned up by EHSRM or trained custodians from outside the immediate release area need not be considered an emergency

B. EMERGENCY SITUATION - FIRE

The following steps are basic protocol for handling a fire or fire-related emergency in the laboratory:

1. Pull the fire alarm
2. Call 4-9-1-1 (UTSA Police Department) from a safe location
3. Verbally notify all personnel in the affected or immediate area
4. Evacuate

C. EMERGENCY SITUATION - SPILL

If the spill is of high toxicity or flammability, you are unsure of how to proceed or is more than one can easily contain, execute the following:

1. Call 4-9-1-1
2. Evacuate personnel from the spill area and alert neighbors to the spill
3. Isolate the spill area and close doors to the area of the spill
4. Remove ignition sources and shut down equipment
5. Establish exhaust ventilation to the outside of the building only
6. Turn on exhaust equipment
7. Open windows

D. EMERGENCY SITUATION – PERSONEL CONTAMINATION

If a person becomes contaminated due to an accidental splash or by a reaction which causes an explosion, quick action can minimize the damage caused by hazardous chemicals. It is important that the following actions be initiated:

1. Remove person(s) from spill area to fresh air only if an attempt to rescue victim(s) does not present a danger to the rescuers.
2. Remove contaminated clothing while under an emergency shower.
3. Flood affected area with cold water for at least 15 minutes or longer if pain persists.
4. Wash skin with mild soap and water - do not use neutralizing chemicals, unguents, creams or lotions.
5. Contact emergency response personnel and assure they know the chemical(s) involved.
6. Evacuation of the building is mandatory if chemicals or contaminants could enter the air circulation system of a building.

E. EMERGENCY CONTACT PERSONNEL INCLUDE:

Steven Barrera, Chief of Police, UTSA Police Department 458-4242

Brian Moroney, Director, EHSRM 458-5250

Richard Garza, Environmental & Construction Safety Manager, EHSRM
458-5808

Wendy McCoy, Lab Safety Manager, EHSRM 458-6101

Shannon Marquez, Radiation and Laser Safety Coordinator, EHSRM 458-6697

I. UTSA Overview & Purpose

This plan describes The University of Texas at San Antonio's (UTSA) Source Reduction/Waste Minimization (SR/WM) Program. The plan also shows how the SR/WM Program at the University will be in support of and in compliance with the Waste Reduction Policy Act of 1991, also known as Senate Bill 1099, adopted by the Texas Legislature to prevent pollution in Texas.

II. Scope

The scope of the plan includes source reduction, recycling, treatment, and disposal as described below:

Source Reduction: Product Changes/Substitution
Source Elimination
Inventory Control

Recycling: Reuse (e.g. solvent reuse)
Reclamation (e.g. mercury recovery, silver recovery)

Treatment: Neutralization
Stabilization
Decontamination

III. Periodic Review

This plan will be reviewed and updated annually to reflect changes in the plan elements, implementation schedules, and/or new initiatives.

IV. Organization and Responsibilities

Below are the organizations involved in implementing The University of Texas at San Antonio Source Reduction/Waste Minimization Pollution Prevention Plan.

A. ENVIRONMENTAL HEALTH, SAFETY AND RISK MANAGEMENT (EHSRM) PROGRAMS

The Office of EHSRM is responsible for overseeing the program and ensuring that all generators understand and comply with the requirements of this program. All SR/WM efforts will be monitored and faculty and staff briefed on how the program impacts all of us. Elements included in the SR/WM are:

-Annual SR/WM goals

-SR/WM Opportunity Assessment documentation

This document must be reviewed annually by EHSRM and continually updated as appropriate. This will ensure that regulatory developments are addressed in an ongoing manner. Program coordination will occur through continual briefings during visits to departments. These visits will provide a forum for sharing and exchanging important information with all program-related personnel.

B. DEPARTMENTAL DIRECTORS/MANAGERS:

Each department is responsible for managing the operational aspects of the SR/WM plan. These include:

- Identify chemical needs and order only what is actually needed for class room teaching or research project.
- Reduce waste by eliminating practice of storing chemicals past shelf life.
- Do not allow staff to accumulate waste in large quantities.
- No faculty can terminate without first cleaning out all of his/her laboratories
- Incorporate a chemical exchange program with other departments
- Provide SR/WM communications both inside and outside the departments
- Maintain an interactive staff suggestion line of communication

V. Regulatory Requirements

The regulatory requirements for this plan include, but are not limited to, the laws and policies listed below as well as the laws, regulations, and Executive Orders.

- The Hazardous and Solid Waste Amendments of 1984 to the Resource Conservation and Recovery Act of 1976 (RCRA): requires generator certification that a waste minimization program is in place for hazardous waste. Also required is identification of efforts to reduce volume and toxicity of waste.
- The Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA): establishes reporting requirements for the use, storage, and onsite and offsite transfers of hazardous and toxic chemicals.
- The Pollution Prevention Act of 1990: establishes Pollution Prevention as first choice in environmental management; EPCRA reporting requirements expanded to include source reduction/recycling information; increased public access to waste minimization/pollution prevention information.

VI. Policy

Source Reduction/Waste Minimization Pollution Prevention opportunities within UTSA are deliberate efforts to minimize the volume or toxicity of waste by avoiding its creation or by recycling material. Waste minimization can be accomplished by reducing the source of waste, such as substituting materials, practicing good housekeeping, modifying processes, or recycling. Waste minimization's goal is to avoid creating all waste types and forms. Our goal in calendar years 2011- 2016 is to reduce, reuse, and recycle materials from daily operations (e.g. office waste and hazardous chemicals) in such a way that UTSA is recognized as a leader in environmental sustainability. The SR/WM Executive Summary and Certification of Completeness and Correction is signed by the Office of the Vice President for Business Affairs and as such, demonstrates a high level of management commitment for SR/WM.

A. The following objectives for the SR/WM plan are applicable to the University:

1. Reduce the volume and toxicity of waste produced by research, development, and faculty support activities to as low as reasonably achievable
2. Raise the consciousness of the University staff members so they perform their job functions in such a manner as to minimize waste generation and prevent adverse environmental impact
3. Promote the use of non-hazardous materials in laboratory activities to minimize the potential risks to human health and the environment
4. Emphasize the need for faculty and staff members to plan, design, and implement waste minimization measures within each work activity
5. Comply with federal and state regulations and DOE requirements for waste minimization, waste reduction, and pollution prevention
6. Gather data on all types of waste generations and environmental releases and establish a baseline of this data
7. Promote SR/WM incentives, training, and awareness
8. Disseminate SR/WM information through onsite and off-site meeting, seminars, workshops, and bulletin boards
9. Promote internal chemical exchange and participate in UT Systems chemical exchange efforts
10. Maintain our current status with TCEQ and the EPA as a small quantity generator (SQG) for the Main Campus and conditionally exempt small quantity generator (CESQG) for both the Downtown Campus and Institute for Texan Cultures.
11. Promote recycling and participate in UT System wide recycling efforts

B. EMPLOYEE INVOLVEMENT

EHSRM will provide training to faculty and staff on a continual on-going basis. This is accomplished by visiting all laboratories and research departments and informing the generators of University policies as well as during the hazard communication training (SA 443) hazardous waste generator training (SA 401) and radiation safety training (SA 433). All UTSA employees will be given the opportunity to provide feedback to EHSRM on the SR/WM plan and adjustments will be made to the plan as appropriate.

C. MATERIAL INVENTORY TRACKING

An electronic database management program to track and inventory hazardous materials is currently in use at UTSA. Additionally, guidance from EHSRM and UT System Office of Risk Management allow UTSA to limit quantities of hazardous chemicals to minimal use.

D. WASTE TRACKING

EHSRM tracks waste by physical department, location, and responsible person. A Hazardous Waste Disposal Form is filled out by the generator via our computer web page link and tracked from cradle to grave. This form contains:

- generator/name
- bldg/room
- date requested
- chemical contents
- concentration/volume
- weight
- hazards: flammable, corrosive, toxic/poison, reactive
- date of pickup
- waste storage #
- stream #
- neutralization date

1. The following is the list of UTSA Hazardous Waste Streams and Quantity generated for 2011:

<u>Waste Stream #</u>	<u>Description</u>	<u>Quantity (tons)</u>
2	Lab-Pack Chemicals (non-bulkable)	0.75
5	Inorganic Acids (except chromic acid)	0.58
7	Non-halogenated flammable org. solvents	2.56
9	Halogenated organic solvents	0.56
10	Photo fixer	0.36
11	Aqueous w/trace non-halogenated org. sol.	0.89
12	Aqueous w/trace toxic heavy metals	1.02

2. The following list contains non-reportable regulated waste and quantity generated for 2011

Waste Stream#	Description	Quantity (tons)
1	Lab Pack	0.19
13	Paint	3.60
14	Waste Oil	0.11
15	Formalin	0.06
16	Ethidium Bromide	0.11

3. Disposal and associated labor costs for both non-radioactive and radioactive waste are supported by EHSRM. Charge-back systems are not currently employed for any of this waste.

E. RECYCLING

EHSRM recycles the following articles

<u>Waste Type</u>	<u>Amount</u>
Lead Acid Batteries	48/yr
Paint Thinner	2/55 gal drums/yr
Used Tires	96/yr
Used Oil	220 gal/yr
Office Paper/Aluminum	461.5 tons/yr
Plastic/Glass/Cardboard/ Scrap Metal	

F. AFFIRMATIVE PROCUREMENT

UTSA seeks to implement SR/WM initiatives through the UTSA procurement system.

Specific items include the following:

- buying recycled products
- seeking to establish guidelines for procurement staff in the areas of recycled products and hazardous materials
- increase staff awareness of using recycled materials

G. REPORTING & RECORD KEEPING

EHSRM is responsible for developing and reporting all regulated waste generated at UTSA to the proper agencies. All documentation is maintained for the prescribed period in the departmental office files for retrieval and review.