

# Laboratory Safety

Audit Report # 18-109

March 16, 2018



The University of Texas at El Paso

**Office of Auditing and Consulting**

"Committed to Service, Independence and Quality"



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March 16, 2018

Dr. Diana Natalicio  
President, The University of Texas at El Paso  
Administration Building, Suite 500  
El Paso, Texas 79968

Dear Dr. Natalicio:

The Office of Auditing and Consulting Services has completed a limited scope audit of Laboratory Safety. During the audit, we identified opportunities for improvement and offered the corresponding recommendations in the audit report. The recommendations are intended to assist the department in strengthening controls and help ensure that the University's mission, goals and objectives are achieved.

We appreciate the cooperation and assistance provided by the Environmental Health and Safety staff during our audit.

Sincerely,

A handwritten signature in blue ink, reading "Lori Wertz", is positioned below the word "Sincerely,".

Lori Wertz  
Chief Audit Executive

# **Report Distribution:**

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## **EXECUTIVE SUMMARY**

The Office of Auditing and Consulting Services has completed a limited scope audit of Laboratory Safety.

During the audit we noted the following:

- The Department of Environmental Health and Safety (EH&S) has a robust Laboratory Inspection process resulting in a report that is clear, comprehensive, and addresses the safety requirements in the Texas Hazard Communication Act (THCA).
- EH&S does not inspect all laboratories on a timely basis. A risk assessment should be performed to rank the laboratories based on hazards, and laboratories with the greatest risk should be scheduled for inspection on an annual basis.
- The UTEP Laboratory Safety Manual does not include all requirements of the Texas Hazard Communication Act.
- Although the list of individuals working in a laboratory can be verified, there is no mechanism to determine if all individuals have completed the required trainings prior to their presence in the laboratory.

The results of our audit indicated EH&S has a laboratory inspection process in place; however, the process can be strengthened by implementing the audit recommendations.

## **BACKGROUND**

In 1985, the Texas Legislature promulgated the “Hazard Communication Act,” which is a “worker right to know law”. This act set forth the minimum requirements employers must meet when communicating chemical hazards to their workers. Chapter 502 of the Texas Health and Safety Code requires employers to provide specific information and training on hazardous chemicals to which employees may be exposed in the workplace. Each employer must:

- develop and maintain a list of hazardous chemicals normally present in the workplace,
- maintain a current Safety Data Sheet or for each hazardous chemical present,
- ensure all hazardous chemicals are labeled and stored appropriately, and
- provide an education and training program to all employees who routinely handle hazardous chemicals.

To help ensure laboratory safety requirements are met, Environmental Health and Safety (EH&S) conducts inspections of the laboratories on campus. EH&S offers suggestions on how to improve safe laboratory practices and reports deficiencies to management. EH&S is structured with added staff to provide routine consulting visits and support to the laboratories beyond the scheduled inspection and waste management rolls.

## **AUDIT OBJECTIVES**

The objective of the audit was to review the EH&S laboratory inspection process and determine compliance with federal, state and university guidelines. The audit focused on the following areas:

- Laboratory safety inspection process control and handling of hazardous materials,
- Training of laboratory personnel and students
- Laboratory security.

## SCOPE AND METHODOLOGY

The audit was conducted in accordance with the *International Standards for the Professional Practice of Internal Auditing* and the authoritative guidelines of the *International Professional Practice Framework* issued by the Institute of Internal Auditors.

The scope of the audit was all laboratories on campus excluding the Bio Safety Level 3 (BSL3). Audit methodology included interviewing key personnel, reviewing processes, observing laboratory inspections performed by EH&S, and performing limited testing of supporting documentation. Criteria used in the audit includes the Texas Health and Safety Code (HSC) Chapter 502 *Hazard Communication Act*.

## RANKING CRITERIA

All findings in this report are ranked based on an assessment of applicable qualitative, operational control and quantitative risk factors, as well as the probability of a negative outcome occurring if the risk is not adequately mitigated. The criteria for the rankings are as follows:

**Priority** - an issue identified by an internal audit that, if not addressed timely, could directly impact achievement of a strategic or important operational objective of a UT institution or the UT System as a whole.

**High** – A finding identified by internal audit that is considered to have a medium to high probability of adverse effects to the UT institution either as a whole or to a significant college/school/unit level.

**Medium** – A finding identified by internal audit that is considered to have a low to medium probability of adverse effects to the UT institution either as a whole or to a college/ school/unit level.

**Low** – A finding identified by internal audit that is considered to have minimal probability of adverse effects to the UT institution either as a whole or to a college/ school/unit level.

## AUDIT RESULTS

### A. Laboratory Inspections

#### A.1 Laboratory Inspection Process

EH&S has created and implemented a robust Laboratory Inspection process resulting in a report that is clear, comprehensive, and addresses the safety requirements in the Texas Hazard Communication Act (THCA). The inspection report addresses:

- Policies and Posting Information
- Fire and Life Safety
- General Safety
- Lab employee awareness
- Chemical hygiene
- Hazardous waste
- Workshop Safety

Each area is evaluated individually and a corresponding quality score is provided. Pictures of any safety findings are also included in the report. As part of the process, the inspector reviews a list of all lab workers provided by the lab owner and checks the EH&S database to ensure the workers are current with the institutional safety classes appropriate for their area. Recommended actions for any findings provide specific guidance and the offer of assistance from EH&S when applicable.

OACS accompanied EH&S on the initial inspection of four of the 252 labs that handle hazardous chemicals. The four labs were selected on a judgmental basis. Several issues were noted in the initial draft inspection reports provided to the lab owners.

The EH&S inspector reported that policies and procedures in three of the four labs were not uniformly followed. Specifically:

- All hazardous chemicals were not appropriately labeled in two out of four labs.
- Standard Operating Procedures were incomplete in one of the four labs.
- The chemical list and safety data sheets were not updated in three of the four labs. The three labs had not made the transition from the old MSDS format to the new Globally Harmonized System's 16 safety data sheets (SDS), which should have been completed by June 1, 2016. (See Appendix A)

Per DSHS, the Globally Harmonized System of Classification and Labeling of Chemicals (GHS)<sup>1</sup> is

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<sup>1</sup> See Appendix A for additional information on the Globally Harmonized System of Classification



*“a system for standardizing and harmonizing the classification and labeling of chemicals. It is a logical and comprehensive approach to:*

- Defining health, physical and environmental hazards of chemicals;*
- Creating classification processes that use available data on chemicals for comparison with the defined hazard criteria; and*
- Communicating hazard information, as well as protective measures, on labels and Safety Data Sheets (SDS).”*

The Texas DSHS also states that *“by June 1, 2016, all public employers must have updated their alternative workplace labeling and hazard communication program as necessary, and provide additional employee training for newly identified physical or health hazards to be in compliance with the THCA.”*

Follow up inspections were performed by EH&S on a timely basis, with the results being provided to the lab owner as well as to the Department Chair. The final inspection report noted the status of the safety issues from the initial report.

The major issues observed at the initial inspection were corrected in all four labs, which supports the effectiveness of EH&S inspections for improving lab safety.

No exceptions were noted.

### **Management Response:**

*EH&S agrees with OACS on finding the lab safety inspection process to be robust and with no exceptions noted. We would like to emphasize the purpose of the laboratory inspection process is to provide an evaluation of safety and to offer a scoring metric to motivate quality improvement in the laboratories. Beyond the lab inspection process described above, EH&S assigns several staff to safety advisory roles that support the laboratories. This affords opportunity for the quality of safety in the laboratories to be continually assessed and improved throughout the year.*

## A.2. Laboratory inspections are not timely

EH&S has one safety inspector assigned to inspect the 252 laboratories. In addition, EH&S has several safety specialists who routinely visit the laboratories and assist laboratory managers as needed. The specialists are typically present at the time of the inspections to help correct any compliance issues. Although EH&S has been working towards a goal of yearly inspections for all laboratories, they have not been able to inspect all laboratories on a timely basis. A judgmental sample of ten of 252 laboratories was chosen for testing to determine if inspections were being conducted on a yearly basis. As of the date of testing, four of the ten (40%) laboratories had not been inspected within one year. The average number of days since the last inspection for the four laboratories was 1,132.

The failure to identify and correct unsafe laboratory conditions in a timely manner could result in injury to laboratory personnel. University violations of safety requirements found in the THCA may also expose UTEP to potential administrative, criminal, and civil penalties per HSC § 502.014-16.

### Recommendation:

*EH&S should perform a risk assessment to rank all laboratories by risk. The laboratories with the greatest risk should be inspected on an annual basis. The risk assessment should take into consideration the growth in research and laboratories. Ideally, additional personnel would be assigned to perform laboratory inspections to increase the level of oversight throughout campus.*

**Level:** This finding is considered **MEDIUM** since EH&S does not have a mechanism to ensure high risk laboratories are inspected on a timely basis.

**Management Response:**

*The EH&S goal has been to attempt inspection of all active high risk areas once each year. EH&S will produce a risk-based laboratory inspection schedule that allows for teaching spaces and some lower risk research spaces to be inspected once every two years rather than every year. EH&S has essentially followed this practice informally and inspected high risk research labs annually while lower risk teaching labs have had reduced inspection frequency.*

*It should be noted that 60% of the laboratories sampled had been inspected during the stated goal period of 365 days. Inherent in our processes, the spaces that are evaluated through an inspection report are active research lab spaces that are assigned to faculty. Teaching labs tend to be inspected less frequently due to their lower risk environment when compared to a research lab. This is because teaching labs conduct the same teaching experiments every year and their hazards are well defined and lower in risk than an evolving research lab. EH&S frequently visits these teaching spaces in order to observe and collect waste materials and also to evaluate chemical fume hood performance. While undocumented, these visits inform EH&S of the performance of the space.*

**Responsible Party:**

*Emilio Rodriguez, Director of EH&S Lab Safety Services*

**Implementation Date:**

*April 30<sup>th</sup>, 2018*

## **B. The UTEP Written Hazard Communication Program does not address all the requirements of the THCA.**

According to HSC § 502.009 (b) Employee Education Program,

*“An employer shall develop, implement, and maintain at the workplace a written hazard communication program for the workplace that describes how the criteria specified in this chapter will be met.”*

In order to help meet the THCA requirements, EH&S has an Environmental Health and Safety Manual at its website, and provides a customized laboratory safety manual to each laboratory. All laboratory safety manuals contain the following sections,

- Laboratory Safety
- Emergency Management Plan
- Emergency Action Guide
- Occupational Health Program
- Hazardous Materials Shipping and Disposal

Although, a Written Hazard Communication Program was found on the EH&S website it is not included in the Laboratory Safety Manuals provided by EH&S. Additionally, it has not been updated since 2014. The current program does not address all requirements of the THCA such as employee notices informing them of their rights under the Act (Section 502.017). At the time of the audit, the Notice to Employees was posted on the Human Resources bulletin board in both English and Spanish. However, based on the specifications from the model program, the notices should be available in all laboratories.

A model written program<sup>2</sup>, provided by the Texas Department of State Health Services (DSHS), lists all the requirements of the program and includes the legal citations for these requirements. The model program also identifies the responsible person/position in charge of the:

- Written Hazard Communication Program
- Workplace Chemical Lists
- Safety Data Sheets (SDS) or Material Safety Data Sheets (MSDS)
- Hazardous Chemical Labeling System
- Employee Training Program
- Notice to Employee

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<sup>2</sup> See Appendix B for the model written program

**Recommendation:**

*Update the Written Hazard Communication Program using the model written program provided by DSHS (Appendix B) to ensure a specific position/person is assigned to all THCA requirements and employee obligations and rights are easily accessible to all employees. Include a copy of the program and the Notice to Employees in the Laboratory Safety Manual provided to each laboratory. Ensure that this information is readily available either in print or on-line during the inspection process.*

**Level:** This finding is considered **MEDIUM** since not all laboratories are following the various compliance requirements set forth by the THCA.

**Management Response:**

*The elements of the written hazard communication program are currently contained in separate sections within the Environmental Health and Safety Manual, latest version March 27, 2017, which is applied as applicable across the campus. To address the recommendation and for ease of use and reference, EH&S will consolidate the Hazard Communication elements into a single chapter within the EH&S Manual, along with inclusion of the Notice to Employees. The EH&S Manual and the Hazard Communication Chapter will be available on-line during the inspection process.*

**Responsible Party:**

*Robert Moss, Assistant Vice President.*

**Implementation Date:**

*March 27th, 2018*

## C. Training of Laboratory Employees

### C.1 Training provided by EH&S

EH&S offers various laboratory safety classes for UTEP employees. The classes are listed on their website, and online registration is available. Sign in sheets are required at each training. EH&S uses the sign in sheets to maintain a database of training records.

### C.2 Lack of controls to ensure all lab employees receive timely and appropriate training

Per HSC §502.009(f)

*“An employer shall provide training to a new or newly assigned employee before the employee works with or in a work area containing a hazardous chemical.”*

Although EH&S provides training classes and maintains records of the employees who have attended training, the University does not have a tracking and monitoring system to ensure all employees receive the appropriate training prior to using or handling a hazardous chemical.

When EH&S conducts laboratory inspections, EH&S staff requests a list of all employees in a lab from the laboratory manager, but there is no assurance that the list is complete. Additionally, the review of training records may occur after the employee has already started working in the lab.

#### Recommendation:

*Document the methodology and assign a responsible party or position to ensure all laboratory employees are identified and provided training prior to working in a laboratory.*

**Level:** This finding is considered **MEDIUM** because there is no assurance employees receive laboratory safety training prior to working with hazardous chemicals.

**Management Response:**

*The training provided by EH&S related to hazardous chemicals is controlled and occurs at multiple levels, the first primarily being the requisite Texas Hazard Communication Act compliance module assigned to all newly appointed personnel upon hire.*

*In order to assure adequate risk training is provided for all lab personnel, EH&S also provides in-person Lab Safety Training that covers the risk categories and risk communication elements of THCA. This training is routinely offered multiple times each month throughout the year and is mandatory for laboratory workers.*

*To improve the timeliness of the Employee Education training EH&S is working with Information Technology (IT) and the Compliance Offices to identify new appointees in order that EH&S may direct these employees to complete the requisite training. EH&S believes this multi-tier process is rigorous and provides for multiple opportunities to identify and train the lab personnel.*

**Responsible Party:**

*Robert Moss, Assistant Vice President.*

**Implementation Date:**

*April 30, 2018*

**D. Access to Laboratories**

Controlled access to laboratories is necessary to ensure laboratory safety. Access to labs was not tested in the audit as building and room access controls for laboratories will be tested as part of a follow-up testing of Audit 16-10 Facilities Management and Audit 17-10 Key Shop.

## **CONCLUSION**

Based on the results of audit procedures performed, we believe that compliance with the THCA will be enhanced by implementing our recommendations.

We wish to thank the management and staff of EH&S for their assistance and cooperation provided throughout the audit.



## APENDIX A: THE IMPACT OF THE GHS ON THE THCA



### The Impact of the GHS on the THCA

Policy, Standards, & Quality Assurance Unit, Environmental Hazards Group

May 2014

#### Impact of the Globally Harmonized System of Classification and Labeling of Chemicals (GHS) on the Texas Hazard Communication Act (THCA)

The Texas Department of State Health Services (DSHS) does not anticipate any major conflicts with the current Texas Hazard Communication Act (THCA) and rules for the public (all government except federal government) workplace as a result of the Globally Harmonized System of Classification and Labeling of Chemicals (GHS). However, the new labeling and Safety Data Sheet (SDS), formerly Material Safety Data Sheet (MSDS), requirements must be down-streamed and included in the worker training given to employees as new labels and SDSs are received from the manufacturer or distributor of hazardous chemicals. These SDSs should replace the current MSDSs on file. Training modules used should be updated with these new requirements.

#### Background:

The GHS is a system for standardizing and harmonizing the classification and labeling of chemicals. It is a logical and comprehensive approach to:

- Defining health, physical and environmental hazards of chemicals;
- Creating classification processes that use available data on chemicals for comparison with the defined hazard criteria; and
- Communicating hazard information, as well as protective measures, on labels and Safety Data Sheets (SDS).

In the United States, the Occupational Safety and Health Administration (OSHA) has aligned the federal Hazard Communication Standard (HCS) with the GHS. The new HCS still requires chemical manufacturers and importers to evaluate the chemicals they produce or import and provide hazard information to employers and workers by putting labels on containers and preparing SDSs. Under the old standard, chemical manufacturers and importers were allowed to provide hazard information on labels and MSDSs in whatever format they chose. Under the new GHS aligned standard, there is a single set of standardized criteria for classifying chemicals according to their health and physical hazards and specifies hazard communication elements for labeling and SDSs.

The three major areas of change are in hazard classification, labels, and safety data sheets:

- **Hazard classification:** The definitions of hazard have been changed to provide specific criteria for classification of health and physical hazards, as well as classification of mixtures. These specific criteria will help to ensure that evaluations of hazardous effects are consistent across manufacturers, and that labels and safety data sheets are more accurate as a result.

Worker Right-to-Know Program  
Publication # E23-14117

- **Labels:** Chemical manufacturers and importers will be required to provide a label that includes a harmonized signal word, pictogram, and hazard statement for each hazard class and category. Precautionary statements must also be provided.
- **Safety Data Sheets:** Will now have a specified 16-section format.

The GHS does not include harmonized training provisions, but recognizes that training is essential to an effective hazard communication approach. The revised HCS requires that workers be re-trained within two years of the publication of the final rule to facilitate recognition and understanding of the new labels and safety data sheets.

The new labels must include the following: product identifier; signal word; hazard statement(s); precautionary statement(s); pictogram(s); and name, address and telephone number of the chemical manufacturer, importer, or other responsible party. The new SDSs must have 16 specific sections, ensuring consistency in presentation of important protection information.

Employers must train employees on the new label elements and the new Safety Data Sheet format by December 1, 2013. As SDSs are received from hazardous chemical manufacturers and distributors, they should replace the Material Safety Data Sheets on file. Training on both the old and the new labels, the old MSDSs and the new SDSs should continue throughout the transition period until employers no longer have any of the old labels or MSDSs on site.

Concerning SDSs, section 502.006 of the THCA states: “a) A chemical manufacturer or distributor shall provide appropriate material safety data sheets to employers who acquire hazardous chemicals in this state with each initial shipment and with the first shipment after an MSDS is updated. **The MSDSs must conform to the most current requirements of the OSHA standard.**”

Since chemical manufactures, importers, and distributors must comply by June 1, 2015, with all modified provisions of the HazCom Standard (except the Distributor shall not ship containers labeled by the chemical manufacturer or importer unless it is a GHS label after December 1, 2015), **a public employer must also receive the appropriate SDS by this date to be in compliance with the THCA.**

Concerning labeling, section 502.007 of the THCA states: (a) A label on an existing container of a hazardous chemical may not be removed or defaced unless it is illegible, inaccurate, or does not conform to the OSHA standard or other applicable labeling requirement.”

Since chemical manufactures, importers, and distributors must comply by June 1, 2015, with all modified provisions of the HazCom Standard (except the Distributor shall not ship containers labeled by the chemical manufacturer or importer unless it is a GHS label after December 1, 2015), **a public employer must also receive the appropriate label by this date to be in compliance with the THCA.**

Public employers in Texas are not regulated under OSHA. However, by June 1, 2016, all public employers must have updated their alternative workplace labeling and hazard communication program as necessary, and provide additional employee training for newly identified physical or health hazards to be in compliance with the THCA. If existing chemical stock cannot be updated with the correct label and SDS, its use must cease.

For more information on OSHA's Hazard Communication training requirements effective December 1, 2013, as a result of GHS, please see the OSHA Fact Sheet at: [www.osha.gov/Publications/OSHA3642.pdf](http://www.osha.gov/Publications/OSHA3642.pdf).

## **APENDIX B: MODEL WRITTEN HAZARD COMMUNICATION PROGRAM**



### **MODEL WRITTEN HAZARD COMMUNICATION PROGRAM**

**For Public Employers in Texas  
Subject to the Texas Hazard Communication Act**

Prepared by:  
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Division for Regulatory Services Policy,  
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Publication # E23-14162  
Revised 06/2015

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## I. General Information

- A. The Texas Hazard Communication Act (THCA), codified as Chapter 502 of the Texas Health and Safety Code (HSC), requires all public employers in Texas to provide their employees with information regarding hazardous chemicals to which employees may be exposed in their workplace. In order to comply with Section 502.009(b) of the THCA and Section 295.7(a) of the THCA Rules (Title 25 of the Texas Administrative Code (TAC), Section 295.1 – 295.13), the following written Hazard Communication Program has been established for \_\_\_\_\_ (name of public employer) \_\_\_\_\_.
- B. The master copy of the written hazard communication program will be maintained in \_\_\_\_ (location) \_\_\_\_\_. Copies of the written program will be modified as needed for each separate workplace where hazardous chemicals are used or stored and a copy maintained at each workplace. The written program will be available to all interested employees and their representatives upon request.
- C. To facilitate administration of and compliance with this Program, the following levels of responsibility have been established:
1. The \_\_\_\_ (position/person) \_\_\_\_ will have overall responsibility for administering and maintaining this program and ensuring that it meets all requirements of the THCA.
  2. Supervisors will be responsible for: \_\_\_\_\_.
  3. Individual employees will be responsible for: \_\_\_\_\_.

## II. Exemptions

Per Section 502.004(f), the following chemicals are exempt from the requirements of the THCA and are outside the scope of this written program:

- A. Hazardous waste that is subject to regulation by the Texas Commission on Environmental Quality (TCEQ) and/or the U.S. Environmental Protection Agency
- B. A chemical in a laboratory under the direct supervision or guidance of a **technically qualified individual** if:
  - 1. Labels on incoming containers of chemicals are not removed or defaced
  - 2. This employer complies with Sections 502.006 and 502.009 of the THCA with respect to laboratory employees; and
  - 3. The laboratory is not used primarily to produce hazardous chemicals in bulk for commercial purposes
- C. Tobacco or tobacco products
- D. Wood or wood products
- E. Articles formed to a specific shape or design during manufacture and that do not release or otherwise result in exposure to a hazardous chemical under normal conditions of use
- F. Food, drugs, cosmetics or alcoholic beverages
- G. Consumer products or hazardous substances used in the workplace in the same manner as normal consumer use and if the use results in a duration and frequency of exposure that is not greater than exposures experienced by a consumer
- H. Radioactive waste.



### III. Definitions

- A. **“Appropriate Hazard Warning”** – Any words, pictures, symbols, or combination thereof appearing on a label or other appropriate form of warning which convey the health and physical hazards, including the target organ effects of the chemical(s) in the container(s).
- B. **“Categories of Hazardous Chemicals”** – A grouping of hazardous chemicals with similar properties.
- C. **“Container”** – Any bag, barrel, bottle, box, can, cylinder, drum, reaction vessel, storage tank, or the like that contains a hazardous chemical or contains multiple smaller containers of an identical hazardous chemical. The term “container” does not mean pipes or piping systems, nor does it mean engines, fuel tanks, or other operating systems in a vehicle. A **primary container** is one in which the hazardous chemical is received from the supplier. A **secondary container** is one to which the hazardous chemical is transferred after receipt from the supplier.
- D. **“Employee”** – A person who may be or may have been exposed to hazardous chemicals in the person’s workplace under normal operating conditions or foreseeable emergencies. Workers such as office workers or accountants who encounter hazardous chemicals only in non-routine, isolated instances are not employees for the purposes of this Act.
- E. **“Expose”** – Subjecting an employee to a hazardous chemical in the course of employment through any route of entry, including inhalation, ingestion, skin contact, or absorption. The term includes potential, possible, or accidental exposure under normal conditions of use or in a reasonably foreseeable emergency.

- F. **“Hazardous Chemical”** or **“Chemical”** – An element, compound, or mixture of elements or compounds that is a physical hazard or a health hazard.
- G. **“Health Hazard”** – A chemical for which acute or chronic health effects may occur in exposed employees and which is a toxic agent, irritant, corrosive, or sensitizer.
- H. **“Label”** – Any written, printed, or graphic material displayed on or affixed to containers of hazardous chemicals, and which includes the same name as on the Safety Data Sheet (SDS) or Material Safety Data Sheet (MSDS).
- I. **“Material Safety Data Sheet” (“MSDS”)** – A document containing chemical hazard and safe handling information for the hazardous chemical as determined by the chemical’s manufacturer.
- J. **“Physical Hazard”** – A chemical which is a combustible liquid, a compressed gas, explosive, flammable, an organic peroxide, an oxidizer, pyrophoric, unstable (reactive), or water-reactive.
- K. **“Personal Protective Equipment”** – Protective equipment provided to an employee by the employer which provides a level of protection to chemicals to which an employee may be exposed that will be adequate to ensure their health and safety based on current industry standards.
- L. **“Safety Data Sheet” (“SDS”)** – The Hazard Communication Standard (HCS) (29 CFR 1910.1200(g)), aligned with the GHS in 2012, requires that the chemical manufacturer, distributor, or importer provide Safety Data Sheets (SDSs) for each hazardous chemical to downstream users to communicate information on these hazards. Safety Data Sheets were formerly called Material Safety Data Sheets, or MSDSs. The information contained in the



SDS is largely the same as the MSDS, except now the SDSs are required to be presented in a consistent, user-friendly, 16 section format.

- M. **“Stationary Process Container”** – A tank, vat, or other such container which holds different hazardous chemicals at different times.
- N. **“Technically Qualified Individual”** – An individual with a professional education and background working in the research or medical fields, such as a physician or registered nurse, or an individual holding a minimum of a bachelor’s degree in a physical or natural science.
- O. **“Work Area”** – A room, defined space, utility structure, or emergency response site in a workplace where hazardous chemicals are present, produced, or used, and where employees are present.
- P. **“Workplace”** – A contiguous facility that is staffed 20 hours or more per week, unless such a facility is subdivided by the employer. Normally this subdivision would be a building, cluster of buildings or other structures, or a complex of buildings, but could be for a portion of a building if the employer chooses. Noncontiguous properties are always separate workplaces unless they are temporary workplaces, in which case they can be either work areas or a headquarters’ workplace or separate workplaces, which is at the discretion of the employer.

#### **IV. Workplace Chemical List..... (HSC §502.005 and 25 TAC §295.4)**

- A. The \_\_\_\_\_ will develop and maintain a list of hazardous chemicals normally present in the workplace in excess of 55 gallons or 500 pounds. This Workplace Chemical List will be developed for each workplace where such quantities of hazardous chemicals are used or stored and will be available for review by employees and their designated representatives. (Employers may use Attachment A, *Model Workplace Chemical List*, to comply with this requirement.)
- B. The \_\_\_\_\_ will be responsible for reviewing and updating the Workplace Chemical List(s) for the \_\_\_\_\_ as necessary, but at least by December 31 of each year.
- C. The Workplace Chemical List will be maintained for at least 30 years.
- D. Further information on chemicals list on the Workplace Chemical List can be obtained by referring to the Safety Data Sheet (SDS) or Material Safety Data Sheet (MSDS) located in each workplace where these chemicals are used or stored.

## **V. Safety Data Sheets and/or Material Safety Data Sheets (HSC §502.006 and TAC §295.5)**

- A. The \_\_\_\_ (name of employer or workplace) \_\_\_\_ will maintain a current and appropriate Safety Data Sheet (SDS) or Material Safety Data Sheet (MSDS) for each hazardous chemical purchased.
- B. The \_\_\_\_ (position/person) \_\_\_\_ will be responsible for the SDS/MSDS system for \_\_\_\_ (name of employer or workplace) \_\_\_\_ and will ensure that:
1. Incoming SDSs/MSDSs are reviewed for new and significant health/safety information and that any new information is passed on to the affected employees.
  2. Hazardous chemicals received without an SDS or MSDS are withheld from use until a current SDS or MSDS is obtained.
  3. Missing SDSs or MSDSs are requested from an appropriate source (e.g. chemical manufacturer, distributor, or electronic database) within 30 days from receipt of the hazardous chemical.
  4. Affected employees are provided a description of any alternative system (such as electronic databases) being used in lieu of hard copy SDSs/MSDSs.
  5. As SDSs are received from hazardous chemical manufacturers and distributors, they replace the Material Safety Data Sheets on file. Training on both the old MSDSs and the new SDSs should continue throughout the transition period until employers no longer have any of the old MSDSs on site.
  6. Emergency responders are provided SDSs/MSDSs as soon as practical upon request.

C. SDS and MSDS files for \_\_ (name of employer or workplace) \_\_\_\_ will be kept in  
\_\_\_\_ (location) \_\_\_\_.

D. SDSs/MSDSs will be readily available for review by employees or their  
designated representatives upon request.

## VI. Chemical Container Labels.....(HSC §502.007 and TAC §295.6)

- A. All containers of hazardous chemicals used or stored by \_\_\_\_\_ (name of employer or workplace) \_\_\_ will be appropriately labeled.
- B. The \_ (position/person) \_\_\_ will be responsible for the hazardous chemical labeling system and will verify that:
1. All **primary containers** of hazardous chemicals are clearly labeled to include:
    - a. The identity of the chemical as it appears on the SDS/MSDS
    - b. The appropriate hazard warnings
    - c. The name and address of the manufacturer
  2. All **secondary containers** of hazardous chemicals are clearly labeled to include:
    - a. The identity of the chemicals as it appears on the SDS/MSDS
    - b. The appropriate hazard warnings
  3. A description of alternative labeling systems, if used, is provided to employees. Examples of alternative labeling systems are the National Fire Protection Association(NFPA) 704m Standard and the Hazardous Materials Information Systems (HMIS) Standard
- C. The \_\_\_ (name of employer or workplace) \_\_\_\_\_ will rely on the chemical manufacturers or distributors to provide labels which meet the above requirements for primary containers of all hazardous chemicals purchased, and will re-label containers only when the label is illegible or otherwise does not meet the above requirements.

## **VII. Employee Training Program.....(HSC §502.009 and 25 TAC §295.7)**

- A. The \_\_\_\_\_ (name of employer or workplace)\_\_\_\_\_ will provide an education and training program to all employees who routinely use or handle hazardous chemicals in their workplace.
- B. The \_\_\_\_ (position/person) \_\_\_\_\_ will be responsible for the employee-training program and will ensure that:
1. Appropriate training is provided to all covered employees and includes:
    - a. The use of information provided on SDSs/MSDS and chemical container labels
    - b. The location of hazardous chemicals present in the employees' work areas
    - c. The physical and health effects of exposure
    - d. Proper use of personal protective equipment
    - e. Safe handling of hazardous chemicals
    - f. First aid treatment for exposure to hazardous chemicals
    - g. Safety instruction on clean-up and disposal of hazardous chemicals
  2. Required training records are maintained and include:
    - a. The date of the training session

- b. A legible list of all employees attending the training session
    - c. The subjects covered
    - d. The name of the instructors (Employers may use either Attachment B, *Employee Training Roster*, or Attachment C, *Employee Training Sheet*, to comply with this requirement)
  - 3. All covered employees are identified and incorporated into the training program.
  - 4. Employees are provided information concerning the hazardous chemicals to which they may be exposed during the performance of non-routine tasks.
  - 4. New employees are trained prior to their being required to use or handle a hazardous chemical.
  - 6. The need and frequency for periodic/refreshers training is assessed.
- C. Employees subject to these training requirements will sign an attendance roster for each training session attended, verifying that they received and understood the information.

## **VIII. Reporting Employee Deaths and Injuries...(HSC §502.012 and 25 TAC §295.9)**

- A. The \_\_\_\_ (name of employer or workplace) \_\_\_\_\_ will notify the Texas Department of State Health Services, Division for Regulatory Services, Policy, Standards & Quality Assurance Unit, Environmental Hazards Group, of any employee accident that involves a hazardous chemical exposure or asphyxiation, and that is fatal to one or more employees or results in the hospitalization of five or more employees.
- B. The \_\_\_\_ (position/person)\_\_\_\_\_ will be responsible for reporting all such accidents to the Texas Department of State Health Services, Division for Regulatory Services, Policy, Standard & Quality Assurance Unit, Environmental Hazards Group, within 48 hours after their occurrence. Notifications will be made either orally or in writing to:

Texas Department of State Health Services  
Division for Regulatory Services Policy,  
Standards & Quality Assurance Unit  
Environmental Hazards Group  
PO Box 149347, MC 1987  
Austin, TX 78714-9347  
Phone: (512) 834-6787  
Fax: (512) 834-6726

- C. Employees will be responsible for reporting all accidents involving a hazardous chemical to their supervisor.
- D. Supervisors will be responsible for reporting all accidents involving a hazardous chemical to \_\_\_\_ (position/person)\_\_\_\_\_.



## **IX. Posting the *Notice to Employees*...(HSC §502.0017 and 25 TAC§295.12)**

- A. The \_\_\_\_\_ will post and maintain in all workplaces where hazardous chemicals are used or stored the most current version of the THCA *Notice to Employees*, informing employees of their rights under the THCA. (See attachment D, *Notice to Employees*)
- B. The *Notice to Employees* shall be clearly posted and unobstructed at all locations in the workplace where notices are normally posted, and with at least one location in each workplace.
- C. In workplaces where employees that have difficulty reading or understanding English may be present, a copy of the *Notice to Employees*, printed in Spanish, will be posted together with the English version. (See attachment E, *Notice to Employees*, Spanish version (*Aviso Al Empleado*))
- D. Additional copies of the *Notice to Employees*, in both English and Spanish, are available on the Hazard Communication Worker Right-To-Know website at <http://www.dshs.state.tx.us/hazcom/> or on request from the Policy, Standards & Quality Assurance Unit, Environmental Hazards Group, at the address or telephone number listed on the cover page of this written program.

## **X. Personal Protective Equipment...(HSC §502.017 and 25 TAC §295.12)**

- A. The \_\_\_\_\_ (name of employer or workplace) \_\_\_\_\_ will provide appropriate personal protective equipment (PPE) to all employees who use or handle hazardous chemicals.
- B. The \_\_\_\_ (position/person) \_\_\_\_\_ will assume overall responsibility for the PPE program and will ensure that appropriate equipment and training are provided, to include:
  - 1. Proper selection of PPE based on:
    - a. Routes of entry
    - b. Permeability of PPE material
    - c. Duties being performed by the employee
    - d. Hazardous chemicals present
  - 2. Proper fit and functionality of PPE as described by the manufacturer's specifications
  - 3. Appropriate maintenance and storage of PPE

## **XI. Maintaining Employee Rights.....(HSC §502.017 and TAC §295.12)**

- A. The \_\_\_\_ (name of employer or workplace) \_\_\_\_ shall not discipline, harass, or discriminate against any employee for filing complaints, assisting inspectors of the Texas Department of State Health Services, participating in proceedings related to the Texas Hazard Communication Act, or exercising any rights under the Act.
  
- B. Employees cannot waive their rights under the Texas Hazard Communication Act. A request or requirement for such a waiver by an employer is a violation of the Act.

**The Division for Regulatory Services, Policy, Standards & Quality Assurance Unit, Environmental Hazards Group welcomes your questions or comments regarding this Model Written Hazard Communication Program, the Texas Hazard Communication Act, or any aspect related to the administration and enforcement of the Act. You may contact the Texas Department of State Health Services, Policy, Standards & Quality Assurance Unit, Environmental Hazards Group, at:**

Texas Department of State Health Services  
Division for Regulatory Services Policy,  
Standards & Quality Assurance Unit  
Environmental Hazards Group  
PO Box 149347, MC 1987  
Austin, TX 78714-9347  
Phone: (512) 834-6787  
Fax: (512) 834-6726

## **XII. Attachments**

- A. Workplace Chemical List
- B. Employee Training Roster
- C. Employee Training Sheet
- D. *Notice to Employees* (English version)
- E. *Notice to Employees* (Spanish version)

## Workplace Chemical List

Name of Workplace, Work Area, or Temporary Workplace:

Identity Used on the Safety Data Sheet & Container Label	Work Area	Quantity (optional)	Unit Size (optional)

Workplace Chemical List Prepared By:

Name (Printed)

Signature (Required)

Date of Preparation (This form must be revised annually):

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**EMPLOYEE TRAINING ROSTER**  
Texas Hazard Communication Act, Section 502.009(g)

Department/Work Area:

Instructor:

Date:

Employee Name (Print)	Employee Signature	Job Title

### **Employee Training Roster (continued)**

A. Per Sections 502.009(c) and (g) of the Texas Hazard Communication Act (THCA), the following subject(s) were covered in this training:

- ☐ Reading and interpreting chemical container labels
- ☐ Reading and interpreting alternative labeling systems, if such labeling systems are being used by the employer
- ☐ Reading and interpreting Safety Data Sheets (SDSs) and/or Material Safety Data Sheets (MSDSs)
- ☐ Location of hazardous chemicals in the workplace
- ☐ Physical and health effects of exposure
- ☐ Proper use of personal protective equipment
- ☐ First aid treatment for exposure
- ☐ Safety instruction on handling, cleanup and disposal procedures

B. Per Section 502.009(g) of the THCA, training was conducted based on:

- ☐ Categories of hazardous chemicals
- ☐ Individual hazardous chemicals

C. This hazard communication training was provided as:

- ☐ Initial training per Section 502.009(a) and (f) of the THCA
- ☐ Periodic/refreshers training per Section VII(B)(6) of this Written Hazard Communication Program



**EMPLOYEE TRAINING SHEET**  
**Texas Hazard Communication Act, Section 502.009(g)**

Department/Work Area: \_\_\_\_\_

Instructor: \_\_\_\_\_

Date: \_\_\_\_\_

Per Sections 502.009(c) and (g) of the Texas Hazard Communication Act (THCA), the following subject(s) were covered in this training:

- ☐ Reading and interpreting chemical container labels
- ☐ Reading and interpreting alternative labeling systems, if such labeling systems are being used by the employer
- ☐ Reading and interpreting Safety Data Sheets (SDSs) and/or Material Safety Data Sheets (MSDSs)
- ☐ Location of hazardous chemicals in the workplace
- ☐ Physical and health effects of exposure
- ☐ Proper use of personal protective equipment
- ☐ First aid treatment for exposure
- ☐ Safety instruction on handling, cleanup and disposal procedures

Per Section 502.009(g) of the THCA, training was conducted based on:

- ☐ Categories of hazardous chemicals
- ☐ Individual hazardous chemicals

This hazard communication training was provided as:

- ☐ Initial training per Section 502.009(a) and (f) of the THCA
- ☐ Periodic/refreshers training per Section VII(B)(6) of this Written Hazard Communication Program

Employee: \_\_\_\_\_

(Printed)

Date: \_\_\_\_\_

Employee: \_\_\_\_\_

(Signature)

Instructor: \_\_\_\_\_

(Signature)

# NOTICE TO EMPLOYEES

The Texas Hazard Communication Act, codified as Chapter 502 of the Texas Health and Safety Code, requires public employers to provide employees with specific information on the hazards of chemicals to which employees may be exposed in the workplace. As required by law, your employer must provide you with certain information and training. A brief summary of the law follows.

## HAZARDOUS CHEMICALS

Hazardous chemicals are any products or materials that present any physical or health hazards when used, unless they are exempted under the law. Some examples of more commonly used hazardous chemicals are fuels, cleaning products, solvents, many types of oils, compressed gases, many types of paints, pesticides, herbicides, refrigerants, laboratory chemicals, cement, welding rods, etc.

## WORKPLACE CHEMICAL LIST

Employers must develop a list of hazardous chemicals used or stored in the workplace in excess of 55 gallons or 500 pounds. This list shall be updated by the employer as necessary, but at least annually, and be made readily available for employees and their representatives on request.

## EMPLOYEE EDUCATION PROGRAM

Employers shall provide training to newly assigned employees before the employees work in a work area containing a hazardous chemical. Covered employees shall receive training from the employer on the hazards of the chemicals and on the measures they can take to protect themselves from those hazards. This training shall be repeated as needed, but at least whenever new hazards are introduced into the workplace or new information is received on the chemicals which are already present.

## SAFETY DATA SHEETS

Employees who may be exposed to hazardous chemicals shall be informed of the exposure by the employer and shall have ready access to the most current Safety Data Sheets (SDSs) or Material Safety Data Sheets (MSDSs) if an SDS is not available yet, which detail physical and health hazards and other pertinent information on those chemicals.

## LABELS

Employees shall not be required to work with hazardous chemicals from unlabeled containers except portable containers for immediate use, the contents of which are known to the user.

## EMPLOYEE RIGHTS

Employees have rights to:

- access copies of SDSs (or an MSDS if an SDS is not available yet)
- information on their chemical exposures
- receive training on chemical hazards
- receive appropriate protective equipment
- file complaints, assist inspectors, or testify against their employer

Employees may not be discharged or discriminated against in any manner for the exercise of any rights provided by this Act. A waiver of employee rights is void; an employer's request for such a waiver is a violation of the Act. Employees may file complaints with the Texas Department of State Health Services at the telephone numbers provided below.

## EMPLOYERS MAY BE SUBJECT TO ADMINISTRATIVE PENALTIES AND CIVIL OR CRIMINAL FINES RANGING FROM \$50 TO \$100,000 FOR EACH VIOLATION OF THIS ACT

Further information may be obtained from:

Texas Department of State Health Services  
Division for Regulatory Services  
Policy, Standards, & Quality Assurance Unit  
Environmental Hazards Group  
PO Box 149347, MC 1987  
Austin, TX 78714-9347

(800) 293-0753 (toll-free in Texas)

(512) 834-6787

Fax: (512) 834-6726

[TXHazComHelp@dshs.texas.gov](mailto:TXHazComHelp@dshs.texas.gov)



Worker Right-To-Know Program  
Publication# E23-14173  
Revised 03/2014



# AVISO AL EMPLEADO

La Ley de Comunicación sobre Peligros de Texas, codificada como el capítulo 502 del Código de Salud y Seguridad de Texas, exige que los empleadores públicos le provean a los empleados información específica sobre los peligros de los químicos a los que los empleados podrían estar expuestos en el centro de trabajo. Según exige la ley, su empleador debe proveerle cierta información y capacitación. A continuación presentamos un breve resumen de la ley.

## QUÍMICOS PELIGROSOS

Los químicos peligrosos son cualquier producto o material que represente algún peligro físico o de salud al ser usado, a menos que este quede exento bajo la ley. Como ejemplos de químicos peligrosos más comúnmente usados están los combustibles, los productos de limpieza, los solventes, muchos tipos de aceite, los gases comprimidos, muchos tipos de pintura, los pesticidas, los herbicidas, los refrigerantes, los químicos de laboratorio, el cemento, las varillas de soldadura, etc.

## LISTA DE QUÍMICOS EN EL CENTRO DE TRABAJO

Los empleadores deben desarrollar una lista de los químicos peligrosos usados o almacenados en el centro de trabajo que sobrepasen los 55 galones o las 500 libras. El empleador debe renovar la lista de ser necesario, y al menos anualmente, y debe ponerla a fácil disposición de los empleados y de sus representantes al esta ser solicitada.

## PROGRAMA DE INSTRUCCIÓN DEL EMPLEADO

Los empleadores deben proveerle capacitación a los empleados recién asignados antes de que los empleados trabajen en un área de trabajo que contenga químicos peligrosos. Los empleados contemplados en la ley deben recibir capacitación del empleador sobre los peligros de los químicos y sobre las medidas que ellos mismos pueden tomar para protegerse de dichos peligros. La capacitación debe repetirse de ser necesario, y al menos cuando se introduzcan nuevos peligros en el centro de trabajo o se reciba nueva información sobre los químicos que ya están presentes.

## HOJAS DE DATOS DE SEGURIDAD

El empleador debe informar de la exposición a los empleados que pudieran estar expuestos a químicos peligrosos y ellos deben tener acceso fácil a las hojas de datos de seguridad (SDS) o las hojas de datos de seguridad del material (MSDS) más recientes si es que todavía no hay una SDS disponible, las cuales detallan los peligros físicos y de salud y cualquier otra información pertinente sobre dichos químicos.

## ETIQUETAS

No se requerirá que los empleados trabajen con químicos peligrosos provenientes de contenedores que no están etiquetados con excepción de los contenedores portátiles de uso inmediato, el contenido de los cuales el usuario conoce.

## DERECHOS DEL EMPLEADO

Los empleados tienen derecho a:

- acceder a copias de las SDS (o una MSDS si es que todavía no hay una SDS disponible)
- la información sobre sus exposiciones químicas
- recibir capacitación sobre los peligros químicos
- recibir el equipo protector apropiado
- presentar quejas, asistir a los inspectores y testificar en contra de su empleador

No se despedirá a los empleados ni se les discriminará de ninguna manera por ellos ejercer cualquiera de los derechos que esta ley estipula. Las renunciaciones de derechos del empleado no tienen ninguna validez; el que el empleador solicite ese tipo de renuncia infringe esta ley. Los empleados pueden presentar sus quejas ante el Departamento Estatal de Servicios de Salud de Texas llamando al teléfono sin costo provisto abajo.

## LOS EMPLEADORES PODRIAN ESTAR SUJETOS A SANCIONES ADMINISTRATIVAS Y A MULTAS CIVILES O PENALES QUE VAN DESDE LOS \$50 HASTA LOS \$100,000 DÓLARES POR CADA INFRACCIÓN DE ESTA LEY

Puede obtener mayor información en:  
Texas Department of State Health Services  
Division for Regulatory Services  
Policy, Standards, & Quality Assurance Unit  
Environmental Hazards Group  
PO Box 149347, MC 1987  
Austin, TX 78714-9347

(800) 293-0753 (llamada gratuita dentro de Texas)  
(512) 834-6787  
Fax: (512) 834-6726  
[TXHazComHelp@dshs.texas.gov](mailto:TXHazComHelp@dshs.texas.gov)



Worker Right to Know Program  
Publication # E23- 14173  
Revised 03/2014

