

## SECTION ONE: WORKERS' COMPENSATION PROGRAM

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# Workers' Compensation Program

## Chapter 1

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#### Overview of Workers' Compensation

This section of Risk Management for Texas State Agencies supplies general information regarding state agency workers' compensation exposures, and techniques and methods to manage and control those exposures. It also identifies additional resources that may be available to assist state agencies in developing or enhancing its workers' compensation program. This section is not intended in any way to be a substitute for the advice and guidance of legal counsel, who should always be consulted regarding rights, duties, and responsibilities under the law.

Workers' compensation legislation in the United States has resulted from social policies that grew out of the Industrial Revolution at the turn of the 20th century. As the nation became more industrialized, a significant rise in the number of industrial accidents and injuries occurred. As this sharp increase in the numbers of fatalities and disabling injuries occurred, it soon became apparent that the legal system, which was based on fault and negligence, was not capable of equitably handling these injuries. Most of the injuries were not the result of employer negligence. Therefore, an injured employee faced lengthy and costly litigation, and most employees were not compensated for their injuries.<sup>1</sup>

As a result of these conditions in the early 1900's, most states adopted some form of workers' compensation legislation that modified common law defenses of employers. Modern workers' compensation legislation reflects the view of society that the burden of industrial injuries should be shifted from the employee to the industry as a whole, as a cost of doing business. Under this concept employers agree to provide quick compensation for job-related injuries despite the lack of negligence on the employer's part, and employees agree to accept a limited, pre-established package of benefits and to forego their common law right to seek tort damages in civil suits.<sup>2</sup>

The Texas Legislature first enacted a workers' compensation law in 1913.<sup>3</sup> The intent of the Texas Employer's Liability Act of 1913 was to replace the common law system of liability with a new system of law that would provide quick and certain relief to injured workers. The means to this end consisted of limiting employers' common law defenses and specifying certain benefit payments to injured workers, regardless of fault. Participating employers could insure their risks in exchange for a limited and predictable liability in the event of on-the-job injuries. A system was provided by which workers' compensation insurance could be purchased by participating employers. A state regulatory agency, the

Industrial Accident Board, was created to administer the Act.<sup>4</sup>

The 1913 Act was revised in 1917. The revised Act provided the major body of law that remained in effect through December 1990.<sup>5</sup> However, several changes that escalated expenses and payments within the Texas workers' compensation system occurred from 1983 through 1987. The changes included the following:<sup>6</sup>

- A higher proportion of claims with indemnity payments;
- Among indemnity claims, a higher proportion with payments for permanent disability;
- Higher settlements, awards, and judgments on claims;
- Longer periods of temporary disability;
- An increase of almost 50% of attorney involvement in compensated lost time claims;
- An increase in the percentage of claims being controverted (denied) by insurance companies;
- An increase in the percentage of claims going to pre-hearing conferences for settlement;
- Workers' compensation medical costs rising faster than indemnity costs;
- Workers' compensation medical costs rising faster than medical costs outside of the workers' compensation system; and,
- Workers' compensation insurance rates increasing over 67% in 30 months. The State Board of Insurance approved additional increases of 25% and 19% in 1987 and 1988.

Because of these conditions, the 70th Texas Legislature appointed a Joint Select Committee to study the problems of the Texas workers' compensation system. On December 9, 1988, after a year of intensive study, the Joint Select Committee issued its report to the 71st Texas Legislature. The report detailed many problems within the system and recommended the Legislature enact sweeping changes to the law. Subsequently, on December 13, 1989, the 71st Texas Legislature enacted Senate Bill 1 in its second called session. The Texas Workers' Compensation Act, Article 8308, Vernon's Texas Civil Statutes, generally became effective on January 1, 1991. The Act, which has been recodified, may now be referenced in the Texas Labor Code, Title 5, Subtitle A.

The passage of the new law created a dual system for an indefinite period. Injuries that occurred on or before December 31, 1990, are handled by the Texas Workers' Compensation Commission according to the law in existence before passage of the new law. Injuries that occur on or after January 1, 1991, are



handled by the Texas Workers' Compensation Commission according to Title 5, Subtitle A, of the Texas Labor Code.

This section of *Risk Management for Texas State Agencies* generally describes the workers' compensation system in Texas as it applies to Texas state agencies. This section also suggests programs and procedures that state agencies may consider to better manage employees who are receiving workers' compensation benefits.

Section Two of this volume presents suggestions for a state agency employee safety and health program. This section discusses measures that may be taken by state agencies to prevent and control employee loss exposures.

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### *Endnotes*

1. Scoggins, Julius; "Basics of Workers' Compensation"; *Public Sector Risk Management*; Public Risk Management Association; January 17, 1991; Section VII, pp. 35-39.
2. Texas Workers' Compensation Commission; *Introduction to the Texas Workers' Compensation Act*; Texas Workers' Compensation Commission; November 1990; p. 1.
3. Texas Legislature; *Research Papers of the Joint Select Committee on Workers' Compensation Insurance*; September 1988; Chapter 1, pp. 1-6.
4. *Introduction to the Texas Workers' Compensation Act*; November 1990; p. 1.
5. Joint Select Committee on Workers' Compensation Insurance; *A Report to the 71st Texas Legislature*; December 9, 1988; pp. 1, 3-5.

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## Section One - Workers' Compensation Program

### Chapter 2

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#### Volume III:

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### The Texas Workers' Compensation Act, Texas Labor Code, Title 5, Subtitle A

This section of Risk Management for Texas State Agencies supplies general information regarding state agency workers' compensation exposures, and techniques and methods to manage and control those exposures. It also identifies additional resources that may be available to assist state agencies in developing or enhancing its workers' compensation program. This section is not intended in any way to be a substitute for the advice and guidance of legal counsel, who should always be consulted regarding rights, duties, and responsibilities under the law.

#### *Introduction*

The following discussion of the Texas Workers' Compensation Act is provided to acquaint Texas state agencies with the key provisions of the law that affect the agencies and employees. The Act is now codified in *Vernon's Texas Codes Annotated*, Labor Code, Title 5, Subtitle A.

**CAVEAT - These provisions are summarized. To ascertain the exact language of a provision of the law or rule, the primary source must be read.**

#### *Key Provisions of the Texas Workers' Compensation Act (for Accidents That Occur on or after 01/01/91)*

#### **Coverage**

Coverage is mandatory for Texas state agencies. A state employee who sustains an injury or an occupational disease while performing work during the course and scope of employment is covered by the state employee workers' compensation program.

- **Injury** - An injury is defined as damage or harm to the physical structure of the body and a disease or infection naturally resulting from the damage or harm. The term also includes occupational diseases.
- **Occupational Disease** - A disease arising out of and in the course of employment that causes

damage or harm to the physical structure of the body. The term includes a disease or infection that naturally results from the work-related disease. The term does not include an ordinary disease of life to which the general public is exposed outside of employment, unless that disease is incident to a compensable injury or occupational disease. The term includes repetitive trauma injuries.

- **Repetitive Trauma Injury** - Damage or harm to the physical structure of the body occurring as the result of repetitious, physically traumatic activities that occur over time and arise out of and in the course and scope of employment.
- **Course and Scope of Employment** - An activity of any kind or character that has to do with and originates in the work, business, trade, or profession of the employer and that is performed by an employee while engaged in or about the furtherance of the affairs or business of the employer. The term includes activities conducted on the premises of the employer or at other locations. The term does not include the following:
  - Transportation to and from the place or employment unless:
    - The transportation is furnished as a part of the contract of employment or is paid for by the employer.
    - The means of such transportation are under the control of the employer.
    - The employee is directed in the employee's employment to proceed from one place to another place.

**OR**

- Travel by the employee in the furtherance of the affairs or business of the employer if such is also in the furtherance of personal or private affairs of the employee unless:
  - The travel to the place of occurrence of the injury would have been made even had there been no personal or private affairs of the employee to be furthered by the travel.
  - The travel would not have been made had there been no affairs or business of the employer to be furthered by the trip.
- **Disability** - The inability because of a compensable injury to obtain and retain employment at wages equivalent to the pre-injury wage.<sup>1</sup>
- **Exclusive Remedy** - A recovery of workers' compensation benefits under this Act is the exclusive remedy of any employee or legal beneficiary against the employer or an agent or employee of the employer for death or a work-related injury sustained by a covered employee.<sup>2</sup>

## **Workers' Compensation Insurer**

The State of Texas is self-insured for workers' compensation. Before September 1, 1995, the Texas Workers' Compensation Act, Texas Labor Code designated the Workers' Compensation Division of the Office of the Attorney General to serve as the claims administrator and employer for most Texas state agencies. From September 1, 1995, the Texas Workers' Compensation Act, Texas Labor Code designated the Workers' Compensation Division of the Office of the Attorney General as insurer only, with individual agencies being the employer for their employees. From September 1, 1997, the State Office of Risk Management (Office) became the workers' compensation insurer with individual state agencies continuing to be the employer for their employees.<sup>3</sup> Exceptions are the Texas Department of Transportation, the University of Texas System, and the Texas A&M University System, who administer their own, independent self-insurance programs (reference: The Texas Workers' Compensation Act, Texas Labor Code, Chapters 502 through 505).

## Reporting Requirements

- **State Agency Reporting** - To comply with the Texas Workers' Compensation Act and the Texas Workers' Compensation Commission (TWCC) rules, the State Office of Risk Management (Office) has put forth specific actions that a state agency should initiate when an employee accident or injury occurs and/or when filing a claim for workers' compensation benefits. Most state agencies have a designated claims coordinator who is responsible for performing these actions. All necessary reporting requirements are detailed in the [\*Claims Coordinator Handbook\*](#) published by the State Office of Risk Management. A copy of the Claims Coordinator Handbook may be downloaded from the SORM website. All workers' compensation reporting requirements are contained in the Claims Coordinator Handbook and this handbook should be used for all claims.
- **Employer Reporting** - A state agency (employer) must report to the State Office of Risk Management (insurance carrier) if:
  - An injury results in the absence of an employee of the agency from work for more than one day, or
  - An employee of the agency notifies the agency of an occupational disease.

The state agency's report must be made not later than the fifth day after:

- The employee's absence from work for more than one day due to an injury,

**OR**

- The day on which the state agency receives notice that the employee has contracted an occupational disease.<sup>4</sup>

- **Record of Injury** - Employers (state agencies) must keep a record of every reported injury and must make this record available to TWCC on request. Failure to maintain such record could result in a Class D administrative violation.<sup>5</sup>
  
- **Employee Reporting** - A state employee or person acting for or on behalf of the employee must comply with the following reporting requirements:
  - Report an accidental injury to the employer not later than 30 days after the date of injury; and,
  - Report an occupational disease to the employer not later than 30 days after the employee knew or should have known the occupational disease may be related to employment.
  
- **TWCC-41, Employee's Notice of Injury or Occupational Disease and Claim for Compensation** - The employee is required to file this form with TWCC within one year after the date of injury or the date the employee knew or should have known the occupational disease may be related to employment. The form identifies the employee, employer, and health care providers and gives basic information on the claimant's injury or disease. Upon receipt of the electronic TWCC-1S from the employer carrier indicating lost time, TWCC will mail form TWCC-41 directly to the employee for completion. Employing state agencies are not required to provide this form to employees, although they may do so.
  
- **TWCC-42, Notice of Fatal Injury or Occupational Disease and Claim for Compensation for Death Benefits** - This form must be filed by the deceased employee's beneficiary(ies) within one year after a worker's date of death in order to claim death benefits. The form requests details of the worker's employment and the injury or illness leading to death, as well as information identifying the beneficiary(ies) claiming death benefits.

Employee noncompliance with the above reporting requirements bars the claim unless any of the following events occurred:

- Compensability of the claim is not contested by the employer or the carrier (the Office).
- Good cause exists for failure to file a claim in a timely manner.<sup>6</sup>

Other report forms are required by TWCC rules of the employee or person acting on behalf of the employee for the following purposes:

- Accelerating impairment income benefits (TWCC-46)
- Requesting payment of advanced compensation benefits (TWCC-47)
- Requesting or reinstating supplemental income benefits (TWCC-52)
- Requesting a change in treating doctor (TWCC-53)

## **Employer Bill of Rights**

The Texas Workers' Compensation Act provides an Employer Bill of Rights. The Employer Bill of Rights provides the following:

- The right to attend all administrative proceedings related to an employee's claim
- The right to present relevant evidence at any proceeding
- The right to report suspected fraud
- The right to contest compensability if the Office does not
- The right to receive notice from the Office of settlement offers and administrative and judicial proceedings upon written request to the Office.<sup>7</sup>

## **Employee Representation**

A claimant may be represented at a benefit review conference, a contested case hearing, or arbitration by an attorney or may be assisted by an individual of the claimant's choice who does not work for an attorney or receive a fee. An employee of an attorney may represent a claimant if that employee

- Is a relative of the claimant
- Does not receive a fee.

An insurance carrier may be represented by an attorney or adjuster.<sup>8</sup>

## **Compensability**

The Office is liable for compensation if the injury arises out of the course and scope of employment. The employee bears the burden of proving the compensability of the claim, and must do so by a preponderance of the evidence. The Office is not liable for compensation if the injury occurs as follows:

- From willful self-infliction
- While the employee is illegally attempting to injure another
- While the employee was engaged in horse-play

- While the employee is voluntarily participating in certain employer-sponsored, off-duty activities
- Due to an act of God
- While the employee is in a state of intoxication
- When a third person intends to injure the employee for personal reasons unrelated to the employment.<sup>9</sup>

Mental trauma injuries resulting from legitimate personnel actions are not compensable. A legitimate personnel action includes a transfer, promotion, demotion, or termination.

A heart attack is compensable if it

- Occurs at a definite time and place
- Is caused by a specific event, either physical strain or a "sudden stimulus," but not of mental or emotional stress
- The work, not a pre-existing condition or disease, is a substantial contributing factor.

## **Medical Benefits**

The following medical benefits are provided to a state employee who sustains a compensable injury.

- Based on the nature of the injury, the injured employee is entitled to all health care reasonably required to cure or relieve the effects of the injury, to promote recovery, or to enhance the employee's ability to return to work or keep working. Except in emergency situations, all health care is subject to the approval of the employee's treating doctor.
- Compensable health care includes the following:

- Medical, surgical, chiropractic, podiatric, optometric, dental, nursing, and physical therapy services provided by or at the direction of the treating doctor
- Physical rehabilitation services performed by a licensed occupational therapist under the direction of the treating doctor
- Psychological services prescribed by the treating doctor
- Hospital and other health facility services
- Prescription drugs

-Medical and surgical supplies, appliances, brace, artificial member, or prostheses, including training in the use of same.

Vocational rehabilitation is expressly excluded from the definition of compensable health care.

- The employee is entitled to an initial choice of a doctor but must obtain commission permission to change doctors. The commission is authorized to set the criteria used when allowing selection of an alternate doctor. Under no circumstances can an employee change treating doctors to obtain different medical diagnoses or impairment ratings. The employee's choice must be made from the commission-approved list of doctors. The commission is empowered (1) to set the criteria for adding or deleting a doctor from the list.
- The commission shall develop a list of doctors licensed in this state who are approved to provide health care services. Each doctor licensed in this state on, September 1, 2001, is eligible to be included on the commission's list of approved doctors if the doctor:
  1. Registers with the commission in the manner prescribed by commission rules; and
  2. Complies with the requirements adopted by the commission under section 409.023.
- Effects of noncompliance with restrictions on choice - The Office may be relieved of liability for health care if the employee does not comply with the law's choice provisions.
- If a health insurance company has provided medical and/or other health care services to the employee, and the Office refuses liability or entitlement of the health care provider to payment, the employee may assign the right to recover that amount to the health insurance company.

## **Income Benefits**

Weekly income benefits are based on the "average weekly wage" (AWW). The standard calculation for AWW is as follows:

- Thirteen weeks of the employee's pre-injury wages divided by 13.
- If the employee has not worked 13 weeks, use 13 weeks of the usual wages paid to an employee doing the same or a similar job divided by 13.
- If no same or similar employee exists, use the usual wage paid in that vicinity for the same or similar services.
- **Temporary Income Benefits (TIBs)** - TIBs begin to accrue on the eighth day of disability. The first week will be paid if the employee's disability extends beyond four weeks. TIBs are paid



weekly until the employee reaches maximum medical improvement (MMI) or 104 weeks have lapsed from the eighth day of disability, whichever occurs first. The standard calculation of the TIBs compensation rate is as follows: [(AWW minus actual/offered post-injury wage) x .70]. For low wage earners (employees earning \$8.50/hr. or less), the compensation rate for the first 26 weeks of TIBs is calculated as follows: [(AWW minus actual/offered post-injury wage) x .75]. After 26 weeks of benefits paid and employee continues to have disability, the calculation for TIB is AWW minus actual/offered post-injury wage X .70.

- **Impairment Income Benefits (IIBs)** - IIBs are calculated based upon an impairment rating. The impairment rating is a percentage of whole body impairment, as assessed by a doctor using the American Medical Association's *Guides to the Evaluation of Permanent Impairment*, Fourth edition. IIBs accrue from the day after the date the employee reaches MMI, as certified by a doctor. A doctor certifying MMI must also determine the employee's impairment rating. The employee is entitled to three weeks of IIBs for each percentage point of impairment; thus, IIBs duration is calculated by multiplying the impairment rating by 3. The IIBs compensation rate is 70 percent of AWW. The Office must initiate IIBs not later than five days after receiving the impairment rating.

**Commutation of IIBs** - The only benefits that may be commuted or paid in a lump sum are IIBs. Lump sum benefits are allowed only when the employee has returned to work for three months earning at least 80 percent of AWW. An employee who chooses to commute IIBs cannot claim supplemental income benefits (SIBs).

- **Supplemental Income Benefits (SIBs)** - an employee may become entitled to SIBs if the employee:

- Has an impairment rating of 15 percent or more
- Has not returned to work, or has returned to work and is earning less than 80 percent of AWW as a direct result of the impairment (the commission must determine annually that the unemployment or underemployment results from the impairment)
- Has not commuted IIBs
- Has made a good faith attempt to find work.

To request entitlement to SIBs the employee must file a quarterly Statement of Employment Status (TWCC-52). An employee can lose entitlement to SIBs if the employee refuses to cooperate with services offered by the Texas Rehabilitation Commission. Employees not entitled to SIBs for 12 consecutive months are barred from claiming SIBs thereafter, unless the employee is subsequently fired and can show that the employer discharged the employee with the intent to deprive the employee of SIBs. The SIBs compensation rate is as follows: [80 percent of AWW minus post-injury weekly wage during reporting period) x .80]. SIBs are calculated quarterly and paid monthly.

- **Lifetime Income Benefits (LIBs)** - LIBs are payable until the employee's death for any of the following conditions:

- Total and permanent loss of sight in both eyes
- Loss for both feet at or above the ankle
- Loss of both hands at or above the wrist
- Loss of one foot at or above the ankle and loss of one hand at or above the wrist
- A spinal injury resulting in permanent and complete paralysis of both arms, both legs, or one arm and one leg
- A skull injury resulting in incurable insanity or imbecility (for injuries on or before September 1, 1997), or a physically traumatic injury to the brain resulting in incurable insanity or imbecility (for injuries on or after September 1, 1997).

For injuries that occur on after June 17, 2001, third degree burns that cover at least 40 percent of the body and require grafting, or third degree burns covering the majority of either both hands or one hand and the face.

The total and permanent loss of use of a body part is considered equal to the loss of the body part. The compensation rate for LIBs is 75 percent of AWW. This must be increased annually by a 3 percent cost of living adjustment.

## **Death and Burial Benefits**

- **Death Benefits (DBs)** - Persons entitled to receive death benefits are called legal beneficiaries. The following are the decedent's legal beneficiaries:

1. Spouse
2. Minor child
3. A child who is not a minor but is enrolled full-time in an accredited educational institution and is under 25
4. Financially dependent adult child
5. Financially dependent grandchild whose parent is not eligible
6. Financially dependent parent or stepparent
7. Financially dependent sibling
8. Financially dependent grandparent.

The first five classes of survivors listed above are entitled to receive DBs simultaneously. If none of these survivors exist, survivors in classes six through eight receive the DBs simultaneously and in equal shares. If the decedent left no legal beneficiaries, the

Subsequent Injury Fund receives the DBs (TWCC rule 132.6(a)).

The duration of DBs depends on the identity of the legal beneficiary. A spouse receives DBs until death or remarriage. Upon remarriage a spouse is entitled to receive 104 weeks of DBs in lump sum. A minor child receives DBs until death or the child's eighteenth birthday. A child who is a full-time student receives DBs until death, leaving school, or the child's twenty-fifth birthday. A minor child who is mentally or physically handicapped receives DBs until death or recovery from the handicap. A minor dependent grandchild receives DBs until death or turning age 18. All other legal beneficiaries, including a financially dependent adult child who is not handicapped, receive benefits until death or the end of 364 weeks from the date of death, whichever is earlier. The Subsequent Injury Fund receives the remainder of the benefits or 364 weeks of benefits, if no benefits have been paid.

When one legal beneficiary's eligibility ends, DBs are redistributed among the remaining legal beneficiaries until 364 weeks are paid. The compensation rate for death benefits is 75 percent of AWW.

- **Burial Benefits** - If death results from a compensable injury, the carrier should pay the person who incurred the liability for the costs of burial the lesser of the actual costs of burial or \$2,500. The person who incurred liability for the costs of transporting the body of the employee is entitled to be reimbursed for the reasonable cost of transportation if the employee died away from the usual place of employment. The Office's liability for transportation costs under this subsection shall not exceed the cost equivalent to transporting the body from the place the employee died to the employee's usual place of employment (TWCC rule 132.13(c)).<sup>10</sup>

## Resolving Benefit Disputes

- **Benefit Review Conference (BRC)** - A BRC is an informal, nonadversarial proceeding conducted by a benefit review officer (BRO). The BRO must explain the rights of the parties, assist them in discussing the facts of the claim, and identify and attempt to mediate resolution of the disputed issues by agreement or settlement. The BRO will put in writing any agreement or settlement made during the BRC. If disputes remain unresolved at the end of the BRC, the BRO will prepare a written report detailing each unresolved issue.

At the time a BRC is scheduled, a contested case hearing is also scheduled to be held within 60 days of the BRC. A BRC is required before parties may proceed to arbitration or a contested case hearing, unless special circumstances exist.

- **Arbitration** - If issues remain unresolved after a BRC, the parties may elect, by mutual agreement, to engage in arbitration in lieu of a contested case hearing. To elect arbitration, the parties must file the election with the commission not later than the 20th day after the BRC. An election to engage in arbitration is binding and irrevocable. The arbitration proceeding must be held not later than 30 days after the arbitrator is assigned by the commission. The arbitrator may require witnesses to testify under oath and to produce necessary evidence. Not later than the seventh day after the last day of the arbitration proceeding, the arbitrator will enter the final, binding award. The award may be vacated only by a court, on a finding that it was (1) procured by corruption, fraud, or misrepresentation; (2) outside the commission's jurisdiction; or (3) arbitrary and capricious.
- **Contested Case Hearing** - A party who has participated in a BRC, and has not elected arbitration, may proceed to a contested case hearing. The hearing officer at a contested case hearing may not consider issues not raised at the BRC or issues resolved at the BRC, unless special circumstances exist. The Administrative Procedure and Texas Register Act (*Vernon's Texas Codes Annotated*, Government Code, Chapter 2002) applies to contested case hearings only to the extent that the commission, by rule, has found appropriate. Discovery is limited to commission-prescribed interrogatories for the parties, depositions on written questions for health care providers, and depositions of other witnesses as permitted by the hearing officer. The hearing officer receives sworn testimony and accepts documents and other tangible evidence. Conformity to the legal rules of evidence is not necessary. The hearing officer is the sole judge of the relevance and materiality of the evidence offered and of the weight and credibility to be given the evidence. Following the conclusion of the hearing, the hearing officer issues a written decision that includes findings of fact and conclusions of law, a determination of whether benefits are due, and an award of any benefits due. The hearing officer's decision is final in the absence of a timely appeal. The decision remains binding pending an appeal to the appeals panel.
- **Appeals** - A party (the appellant) may appeal a hearing officer's decision by filing a written request for review with the appeals panel not later than the 15th day after receiving the decision. The other party (the respondent) has 15 days to file a written response. After considering the record developed at the contested case hearing, the appellant's request for review, and the respondent's response, the appeals panel may (1) affirm the hearing officer's decision; (2) reverse that decision and render a new decision; or (3) reverse that decision and return it to the hearing officer no more than one time for further consideration and development of the evidence. The decision of the appeals panel is binding during the pendency of an appeal to the court. If an appeals panel decision awarding benefits is modified or reversed by a court of last resort, the carrier may recover any benefit overpayment from the Subsequent Injury Fund. During judicial review of an appeals panel decision on any disputed issue, the commission retains jurisdiction over all other issues related to the claim.
- **Judicial Review** - A party may seek judicial review of an appeal panel's decision by filing a petition with a trial court in the county where the employee resided at the time of the injury or death. The petition must be filed not later than the 40th day after the date the appeals panel's

decision was filed with the Hearings Division. A copy of the petition must be simultaneously filed with the commission and served on the opposing party or parties. The commission may intervene in the trial. The trial may be a jury trial or a bench trial (no jury). Judicial review is restricted to those issues decided by the appeals panel, which must be specifically set forth in the pleadings. The plaintiff bears the burden of proof by a preponderance of the evidence. The commission's record is admissible as permitted by the Rules of Evidence.*11*

## **Administrative Violations and Penalties**

An administrative violation is a breach of the Act or a commission rule. The Act expressly defines and classifies some administrative violations; others will be defined and classified by commission rule. A person who commits an administrative violation may be subject to an administrative penalty or fine, established according to the classification of the violation. There are four classes of administrative violations, ranked according to the seriousness of the violation.

- Class A Violation - Penalty not to exceed \$10,000
- Class B Violation - Penalty not to exceed \$5,000
- Class C Violation - Penalty not to exceed \$1,000
- Class D Violation - Penalty not to exceed \$500

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### ***Additional Resources for Texas State Agencies***

#### ***Publications***

*Vernon's Texas Codes Annotated*, Labor Code, Title 5,  
Subtitle A - Texas Workers' Compensation Act\*

*Texas Administrative Code*, Title 28, Part II - Texas Workers' Compensation Commission\*

\*May be purchased from

Publications Section  
Texas Workers' Compensation Commission  
(512) 440-3618 (for current pricing)

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***Agencies and Organizations Providing  
Assistance***

**Texas Workers' Compensation Commission**

4000 South IH-35, Southfield Building

Austin, TX 78704-7491

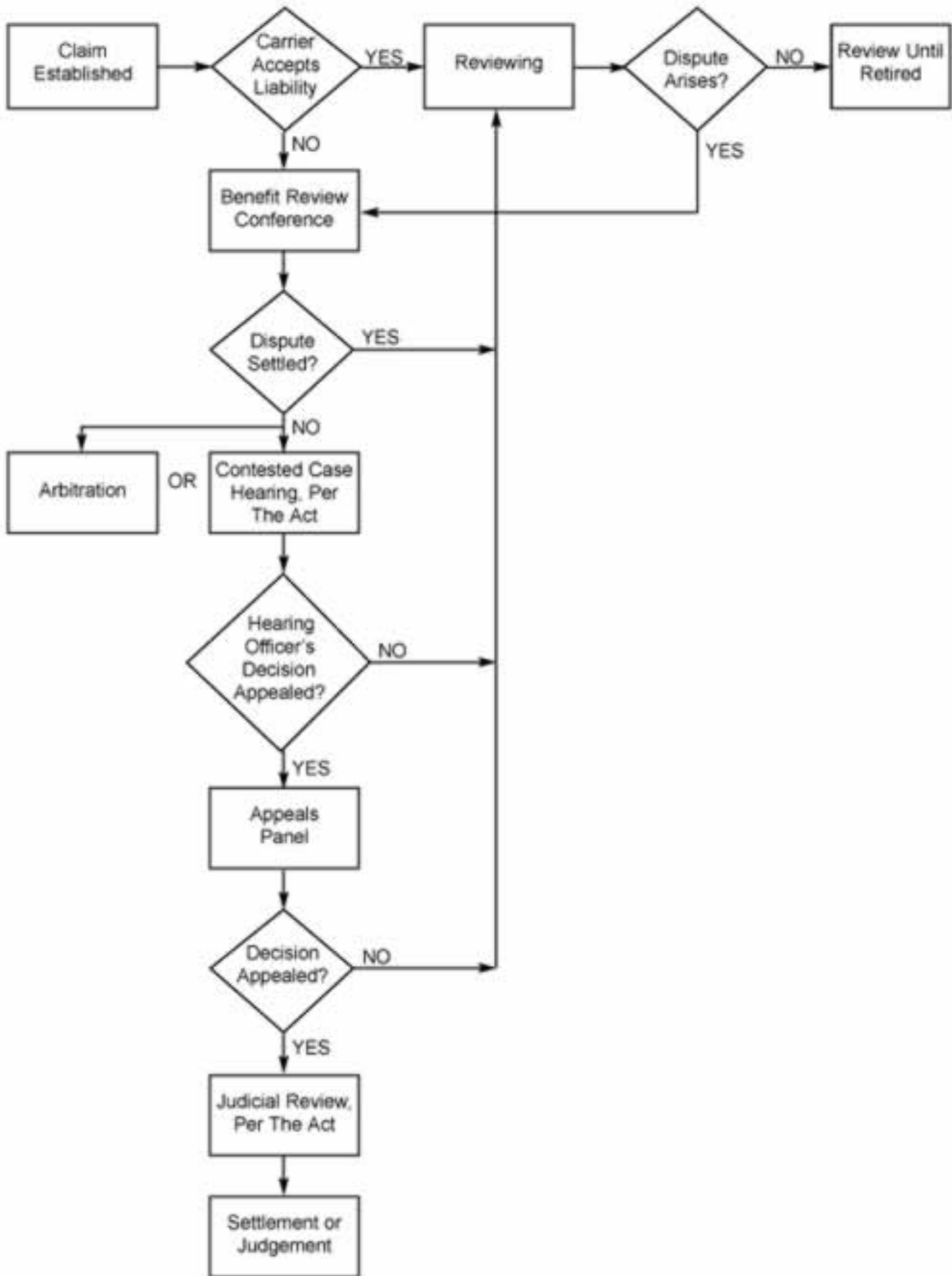
Customer Service: (512) 440-3789

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***Endnotes***

1. Texas Workers' Compensation Act, *Vernon's Texas Codes Annotated*, Labor Code, Title 5, Subtitle A, Section 401.011 (Vernon 1998).
  2. Labor Code, Title 5, Subtitle A, §408.001.
  3. Texas Workers' Compensation Act, *Vernon's Texas Codes Annotated*, Labor Code, Title 5, Subtitle C, Section 501.002 (Vernon 1998).
  4. Labor Code, Title 5, Subtitle A, §409.005.
  5. Labor Code, Title 5, Subtitle A, §409.006.
  6. Labor Code, Title 5, Subtitle A, §409.004.
  7. Labor Code, Title 5, Subtitle A, §409.011.
  8. Labor Code, Title 5, Subtitle A, §410.006.
  9. *Texas Administrative Code*, Title 28, Section 120.2.
  10. Labor Code, Title 5, Subtitle A, Chapter 408 (Vernon 1998).
  11. Labor Code, Title 5, Subtitle A, Chapter 410 (Vernon 1998).
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### Appendix B Proceeding to Resolve Benefit Disputes



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## Section One - Workers' Compensation Program

### Chapter 3

Texas Workers' Compensation Act, "Old Law"

Revised: January 1, 1995

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## Volume III:

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This section of Risk Management for Texas State Agencies supplies general information regarding state agency workers' compensation exposures, and techniques and methods to manage and control those exposures. It also identifies additional resources that may be available to assist state agencies in developing or enhancing its workers' compensation program. This section is not intended in any way to be a substitute for the advice and guidance of legal counsel, who should always be consulted regarding rights, duties, and responsibilities under the law.

### **KEY PROVISIONS OF THE "OLD LAW" (FOR ACCIDENTS THAT OCCURRED ON OR BEFORE 12/31/90)**

#### *Introduction*

The following discussion of the Texas Workers' Compensation Act "old law" is provided to acquaint Texas state agencies with the key provisions of the old law that may continue to affect the agencies. Claims for workers' compensation benefits resulting from accidents that occurred on or before December 31, 1990, will be handled according to this old law for an indefinite period of time.

**CAVEAT - These provisions are summarized. To ascertain the exact language of a provision, rule or instruction, the primary source should be read.**

**NOTE:** Article 8309g, V.T.C.S., designates the Workers' Compensation Division, Office of the Attorney General as both the employer and carrier for purposes of administering the workers' compensation program for state employees and state agencies. / Wherever the Texas Workers' Compensation Act, or wherever rules adopted by the Texas Workers' Compensation Commission specifies either "carrier" or "employer," it should be interpreted to mean the Workers' Compensation Division (WCD), Office of the Attorney General (OAG).

**Coverage<sup>2</sup>** - Mandatory for Texas state agencies. A state employee who sustains an injury or occupational disease while performing work during the "course and scope" of employment, (i.e., work of a kind and character that originates in the business affairs of the employer and if the injury occurs while the employee is actually engaged in furthering the employer's business or affairs) is covered.

The following types of injuries may be covered:<sup>2</sup>

- *Specific Injuries* - An injury to a specific limb or appendage of the body, and injuries to the eyes and ears.
- *General Injuries* - All other injuries to the head and torso that are not otherwise classified as a specific injury.
- *Pre-existing Conditions* - An injury includes an aggravation, incitement, or acceleration of a pre-existing condition. The pre-existing condition need not arise out of the employment. A disability that results from an on-the-job injury that worsens a pre-existing condition is considered compensable.
- *Repetitious Trauma* - An injury that results in a disability that can be directly traced to repeated performance of job duties is considered an occupational disease and is compensable. The date of injury is considered to be the date the employee became disabled.
- *Heart Attacks and Strokes* - Disability may be compensable if job activities were *a* cause (not necessarily *the* sole, primary cause) of the heart attack or stroke.
- *Arthritis/Degenerative Joint Disease* - Disability may be compensable if job activities aggravate, accelerate, or incite a pre-existing condition.
- *Hernia* - Compensable as a general injury if the hernia is caused by job activities. The hernia becomes a specific injury if a successful operation is performed and the following four specific criteria are also met:
  - An injury must have caused the hernia;
  - The hernia must have appeared suddenly and immediately after the injury;
  - The injury must be accompanied by pain; and,
  - The hernia cannot have been pre-existing in any degree prior to the accident.
- *Disfigurement* - Compensable as a specific injury, even if the disfigurement occurred to the trunk of the body.
- *Idiopathic Injuries* - An injury that results from an accident that has no obvious cause, such as a slip and fall for no apparent reason.

**Carrier** - The State of Texas is self-insured. The Workers' Compensation Division of the Office of the Attorney General is the carrier for all Texas state agencies<sup>1</sup> except for the Texas Department of Transportation, the University of Texas System, and the Texas A&M University System, who administer their own, independent self-insurance programs.

**Reporting Requirements** - The following requirements for reporting injuries and filing of reports must be met by state employees and state agencies (employers).

- **Employees** - A state employee must
  - Report an injury to the employer within 30 days of the injury;
  - Give notice of an occupational disease to the employer within 30 days from the date when the employee first knew of the occupational disease;
  - File a "Notice of Injury and Claim for Compensation" form with the Texas Workers' Compensation Commission within one year from the date of injury or first distinct manifestation of an occupational disease.
  - Failure to give the required notice of injury or to file a Notice of Injury and Claim for Compensation bars the claimant from recovery unless good cause can be demonstrated for the delay.
  
- **Employer** - A state agency must file the following reports:
  - "E-1, Employer's First Report of Injury" - Must be submitted to the Texas Workers' Compensation Commission within eight days of an employee's absence from work when an injury or occupational disease causes the employee to be absent from work for more than one day.
  - "E-2, Employer's Supplemental Report" - Must be submitted to the Texas Workers' Compensation Commission after the employee returns to work or after the employee's period of incapacity extends beyond 60 days.
  - "Wage Statement" - Must be provided to the carrier for filing with the Texas Workers' Compensation Commission for claims in which the reported weekly compensation rate is less than the maximum prescribed by law.

**Medical Benefits** - The following medical benefits<sup>2</sup> are provided to a state employee who sustains a compensable injury or occupational disease:

- Medical treatment that is reasonable in cost and necessary to cure the effects of the injury;
- Open medical benefits for the remainder of the employee's life unless the claim is settled by compromise agreement and the employee accepts a shortened medical benefit period; and,
- The right to choose the treating doctors without prior approval from the employer or carrier.<sup>2</sup>

**Compensation Benefits** - The following compensation benefits are provided to a state employee who sustains a compensable injury or occupational disease:<sup>2</sup>

- **Compensation Rate** - The claimant is paid compensation at the rate of 66 2/3 percent of the

employee's average weekly wage, or at the maximum statutory rate, whichever is less.

- *Disability Benefits* - Benefits are payable for a total disability and partial disabilities. A total disability is defined as the inability to obtain and retain employment performing usual worker tasks, not just a particular job or occupation. A partial disability is defined as any disability less than total. General injury disabilities are measured in terms of "loss of wage earning capacity." Specific injury disabilities are measured in terms of percentage of impairment to the injured member. Disability benefits are not payable unless the claimant loses more than one week from work. Disability benefits are payable for up to the following periods of time:
  - *Lifetime Benefits* - Payable to the spouse of a deceased worker unless subsequently remarried and to qualifying children of a deceased worker until age 18 (or 25 if enrolled in school), and to other beneficiaries as set forth in the law. Lifetime benefits are also payable to an employee who sustains a "statutory total and permanent" disability which is defined as an injury that causes any one of the following: total blindness; loss of both feet at or above the ankle; loss of both hands at or above the wrist; loss of one hand and one foot; paralysis to both arms, or to both legs, or to one arm and one leg; incurable insanity or imbecility. Total loss of use of the member is equivalent to loss of the member.
  - *401 Weeks* - Unless statutory total and permanent benefits are paid, all other total disability payments from general injuries are paid for a maximum of 401 weeks from the date of injury.
  - *360 Weeks* - In cases of fatalities, eligible family members other than spouses and minor children receive a maximum of 360 weeks of benefits.
  - *300 Weeks* - In cases of partial disability, a maximum of 300 weeks of compensation will be paid.
  - *26 Weeks* - In cases of hernia in which the four points as outlined in Article 8306, §12(b) are met, a maximum of 26 weeks of benefits will be paid.
  - *Schedule Benefits* - Specific injuries are paid according to a schedule outlined in Article 8306, §12. The schedule assigns each limb or member a value in terms of weeks. The employee is compensated for the percentage of disability to the injured limb or member.
- *Funeral Benefits* - A funeral benefit of up to \$2,500.00 will be paid by the carrier in case of a death.

***Administrative Review*** - The following administrative review process exists for old law claims:2

- *Prehearing Conference* - After a claim is reviewed by TWCC, it is referred to a regional office, at which time the claim file is referred to a review team. At an appropriate time the claim will be set for a prehearing conference before a TWCC hearing officer. The prehearing conference must be attended by the employee, his/her attorney (if any), and the insurance carrier representative. An employer may attend or may choose not to attend.

The purpose of a prehearing conference is to adjust and settle claims for compensation.

The TWCC is required to give at least 30 days notice of a prehearing conference unless circumstances permit the rule to be waived. No testimony is taken at a prehearing conference and cannot be used in a subsequent proceeding or trial of the case. An employee or employer attending the prehearing conference must respond to questions directed to him by the prehearing officer or the plaintiff's attorney if the information requested is relevant.

A prehearing conference may be set under the following conditions:

- Failure of the carrier to pay either compensation benefits or medical benefits when due;
  - After a Statement of Controversion is filed;
  - Upon request by the claimant;
  - Upon request by the carrier "upon a showing of good cause"; and,
  - After payment of 52 consecutive weeks of compensation benefits.
- *Formal Hearing* - If the case fails to settle at a prehearing conference, it is referred to the full Commission for a formal hearing. The prehearing examiner prepares an award recommendation and copies are provided to all interested parties. Each party must file a formal statement or position to each of the findings of the prehearing officer. Unrepresented claimants are exempt from this provision. TWCC must set a case for a formal hearing within a reasonable time. Based on the formal Statements of Position filed by the respective parties, the recommendation of the prehearing officer prepared at the time of the prehearing conference, oral testimony, subsequent filings of evidence, and arguments of legal counsel at a personal appearance, if any, the Commission issues an award that sets forth findings to the disputed issues.
  - *Awards* - When the Commission makes its final decision, an award or decision is given in writing. An award may be appealed by either party by filing a "Notice of Appeal of Intention to Set Aside Award" within 20 days of the award, and by filing suit in a court within 20 days of the date of filing the Notice of Appeal. The appeal is "de novo," meaning neither the award nor any decision of the Commission is admissible before a jury for any purpose.

**Settlements** - The following settlements commonly are awarded under old law claims:2

- *A-2 Lump Sum* - An employee may receive compensation for a total disability or partial disability in any degree through a lump sum payment from the insurance carrier. A lump sum payment redeems the carrier's liability, and the lump sum payment is accompanied by IAB form A-2. A lump sum payment redeems the carrier's current liability for compensation benefits, but medical benefits and additional future claims for compensation remain open before the Commission.
- *Compromise Settlement Agreement (CSA)* - In a situation where the liability of the insurance

carrier or the extent of injury to the employee is uncertain, indefinite, or incapable of being satisfactorily established, the Commission may approve any compromise, adjustment, settlement, or commutation thereof made between the parties. The terms of the settlement agreement may specify an expiration time for the payment of future health care benefits.

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### *Endnotes*

1. "Texas Workers' Compensation Act" (Old Law); Article 8309g, "Workers Compensation for State Employees."
2. "Texas Workers' Compensation Manual, Employer Edition"; Flahive, Ogden & Latson; P.O. Drawer 13367, Capitol Station; Austin, TX; May 1989. Workers' Compensation Commission; 1990.

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*Section One - Workers' Compensation Program*

**Chapter 4**

Workers' Compensation Claims Administration for State Agencies

Revised: December, 2004

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**Volume III:**

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This section of Risk Management for Texas State Agencies supplies general information regarding state agency workers' compensation exposures, and techniques and methods to manage and control those exposures. It also identifies additional resources that may be available to assist state agencies in developing or enhancing its workers' compensation program. This section is not intended in any way to be a substitute for the advice and guidance of legal counsel, who should always be consulted regarding rights, duties, and responsibilities under the law.

A safe and healthful environment in which to work is a beneficial and worthy goal for both state employees and the State of Texas. In spite of agency efforts to provide employees with a reasonably safe working environment, however, accidents, injuries, and occupational diseases may still occur. When such accidents, injuries, and diseases occur, a system should be provided to swiftly initiate the workers' compensation claims process.

Specifically regarding the workers' compensation program for state employees, the State Office of Risk Management (Office) is the responsible authority. The Office should be contacted for detailed information and assistance regarding workers' compensation claims administration and specific workers' compensation claims.

Claims administration should be conducted in accordance with the Office's *Claims Coordinator Handbook*. This comprehensive document is provided to all participating agencies and should be referenced for all claims.

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***Checklist for Essential Program Elements***

- |   |     |    |
|---|-----|----|
| 1. Does the state agency furnish the injured employee a summary of rights and responsibilities at the time an injury is reported? | Yes | No |
| 2. Does the agency have a designated workers' compensation claims coordinator?  | Yes | No |
| 3. Does the agency have written procedures for workers' compensation claims administration and claims processing?                 | Yes | No |

- |   |        |
|---|--------|
| 4. Is the agency involved in cost containment efforts with injured employees?   | Yes No |
| 5. Does the state agency post the required TWCC Notice 6 in English and Spanish "Notice to Employees Concerning Workers' Compensation in Texas?"  | Yes No |
| 6. Does the state agency post the required TWCC Notice 9 in English and Spanish "Notice Regarding Certain Work-Related Communicable Diseases and Eligibility for Workers' Compensation Benefits?" | Yes No |
| 7. Does the state agency provide written notice announcing coverage and the option to NOT to be covered by workers' compensation insurance to each new employee at time of hire?                  | Yes No |
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### *Additional Resources for Texas State Agencies*

#### *Publications*

##### *Claims Coordinator Handbook*

State Office of Risk Management

William P. Clements, Jr. Building,

6th Floor 300 W. 15th Street

P.O. Box 13777 Austin, TX 78711-3777

(512) 475-1440 FAX: (512) 472-4769

[www.sorm.state.tx.us](http://www.sorm.state.tx.us)

##### Texas Workers' Compensation Commission

###### Publications

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Austin, TX 78744-1609

(512) 804-4240

[www.twcc.state.tx.us/forms](http://www.twcc.state.tx.us/forms)

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## **Section One - Workers' Compensation Program**

### **Chapter 5**

#### **Return-To-Work Program**

**Revised: December 2004**

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#### **Volume III:**

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This section of Risk Management for Texas State Agencies supplies general information regarding state agency workers' compensation exposures, and techniques and methods to manage and control those exposures. It also identifies additional resources that may be available to assist state agencies in developing or enhancing its workers' compensation program. This section is not intended in any way to be a substitute for the advice and guidance of legal counsel, who should always be consulted regarding rights, duties, and responsibilities under the law.

#### **INTRODUCTION TO A RETURN-TO-WORK PROGRAM**

A return-to-work program provides a mechanism for an employer to encourage and allow employees to return to work as soon as possible after injury or illness. Return-to-work programs are designed for employees who sustain job-related injuries and illnesses who are receiving workers' compensation benefits, but may also be designed for employees who sustain injuries or illnesses off the job. This chapter of *Risk Management for Texas State Agencies* concentrates on a return-to-work program for state employees who are injured during the course and scope of their employment and are receiving workers' compensation benefits, but also provides the basis for an employee's return to work following off the job injuries and illnesses. The information presented in this chapter takes into account the requirements of both the Americans with Disabilities Act and the Family Medical Leave Act as they relate to injured employees.

A return-to-work program is a valuable loss control measure that helps control workers' compensation costs. The program helps control losses by directly reducing the amount of lost time away from work, and ultimately reduces workers' compensation indemnity benefits paid by the state. The return-to-work program emphasizes joint employer and employee efforts to quickly return the employee to the productive workforce. It emphasizes the abilities of the employee to resume the same or similar duties and tasks performed prior to the injury or to perform alternate duties and tasks. This enhances productivity, reduces employee turnover, and reduces employment-related costs.

Every state agency is required by the Texas Workers' Compensation Act (Labor Code, Title 5, Subtitle A, Section 412.051) to develop, implement, and maintain a program designed to assist employees who

sustain compensable injuries to return to work. Such a program should include appropriate, detailed procedures that identify specific responsibilities and actions that should be taken by designated return-to-work coordinators, supervisors, and employees. This chapter further discusses the concepts of a return-to-work program and the roles and responsibilities of all persons involved in the program.

## **Goal of a Return-to-Work Program**

The primary goal of a return-to-work program is to assist employees who sustain an injury or illness to safely return to work at the earliest possible time at either full duty or in a temporary (modified or alternate duty) assignment. If the employee is unable to perform his or her full, regular duties, the return-to-work program provides opportunities for the employee to perform a temporary work assignment within functional capacities and job demands that can be safely performed. By allowing an employee to perform modified regular duties or alternate duties, the employee remains a productive member of the workforce while recuperation and rehabilitation take place. *I*

## **Objectives of a Return-to-Work Program**

Some important objectives of implementing a return-to-work program are the following:

- Assist the employee to return to their normal work environment in an expedient manner.
- Reduce the monetary burden and emotional strain and return the employee to a work level as close as possible to pre-injury earnings and productivity.
- Demonstrate the employer's concern and fulfill obligations to the employee.
- Provide reasonable accommodation whenever necessary to enable the employee to perform the essential functions of the job.
- Ensure the employee's return to work is in compliance with all requirements of the Americans with Disabilities Act, Family Medical Leave Act, and the Texas Workers' Compensation Act, as appropriate and necessary.

## **Benefits of a Return-to-Work Program**

Employers who implement return-to-work programs are able to realize direct and indirect savings and enhance relations with their employees. Employees also benefit from the return-to-work program. The following identifies many of the potential benefits of a return-to-work program.

- **Benefits to the Employer - Direct Savings**
  - Workers' compensation costs are reduced when temporary income benefits cease.

- Productivity increases and human resources are utilized to the maximum extent
- Litigation costs are normally prevented or reduced
- Wage costs for substitute employees are saved.

#### ● **Benefits to the Employer - Indirect Savings**

- Recruitment and staff training costs of new or substitute employees are saved.
- Work delays and business interruptions are eliminated when the experienced employee returns to work.
- Co-workers are not required to perform extra duties to compensate for the absent employee.
- Goodwill and a positive image with the public and employees are created, as the employer is perceived as a caring employer.
- Communications and relations between employees and management are enhanced.

#### ● **Benefits to the Employee**

- Employees remain active and mobile when returned to the productive workforce.
- Full or partial wages are earned which brings the employee's income closer to pre-injury wages than workers' compensation temporary income benefits alone.
- Self-esteem, morale and personal security are maintained or restored through gainful employment and a productive life style.
- Stress, boredom, and depression of the injury/illness and being out of work are reduced or eliminated.
- Physical conditioning through a work-life discipline is maintained.
- The chances of returning the employee to work permanently are improved. Studies indicate that more than 50% of the injured employees who are away for five or six months do not return to work.
- Employee concerns about continued employment are resolved.<sup>2</sup>

### **Behavioral Aspects of Return to Work**

Managing employees with injuries or illness often involves having an understanding of behavioral forces that motivate an employee to be a productive participant in the workforce. Normally, an employee who is satisfied with his or her job and employment situation, and who suffers an injury or illness resulting in absence from work, is self-motivated to return to productive employment as quickly as possible. However, an employee's attitude and outlook regarding returning to work may change if the person remains out of the workforce for an extended period of time.

The longer an employee is off work the more difficult it becomes to return these individuals to employment. Certain factors may present barriers to return to work. Such factors may include personal fears and anxieties, decline of self-image or self-esteem, depletion of personal financial resources,

family problems, potential loss of position or status at work, lack of understanding about physical limitations, and lack of information about the workers' compensation system.<sup>3</sup>

Studies have shown that the longer an employee is away from work, the less likely he or she will ever return to full duty work status. Employees who return to work in a modified or alternate duty capacity are likely to recover more quickly and with less impairment. Additionally, employees who are offered modified regular duties, or alternative duties, while they are recuperating maintain higher levels of self-esteem and are less likely to become treatment dependent.<sup>2,3,4,5,6</sup>

A return-to-work policy and procedures, coordination among the claims and return to work coordinators, the employee's supervisor, the human resources officer, the claims adjuster, and the treating physician are necessary to overcome any barriers that may exist. The return-to-work program provides a proactive approach to assist employees to return to full duty as quickly as possible.<sup>2,7</sup>

## **INTERRELATIONSHIPS OF THE ADA, FMLA AND WORKERS' COMPENSATION IN RTW PROGRAMS**

The Texas Workers' Compensation Act was enacted in part to provide the mechanism for an injured worker who sustains a compensable injury in the course and scope of employment to receive medical and income benefits. The Americans with Disabilities Act (ADA) was enacted to protect people from discrimination on the basis of disability. The Family Medical Leave Act (FMLA) was enacted to provide job security to employees who have a serious medical condition or who must meet their personal and family obligations and tend to vital needs at home. These laws serve different purposes. However, they interrelate in a return-to-work context when an employee who sustains a compensable injury in the course and scope of employment also meets the criteria for protection under the ADA and/or the FMLA.

A return-to-work program must be in compliance with the Americans with Disabilities Act protections afforded a qualified individual with disability. The return-to-work program must also be in compliance with the Family Medical Leave Act protections afforded an eligible employee who has a serious medical condition. When the qualifying disability or serious medical condition is sustained in the course and scope of employment and state workers' compensation laws conflict with the Americans with Disabilities Act and/or the Family Medical Leave Act, the federal requirements and regulations supersede state law. It is also important to note that when the Americans with Disabilities Act offers greater protection to an employee than the Family and Medical Leave Act when both apply, the greater protections afforded by the ADA controls.

The discussion below summarizes the Americans with Disabilities Act and Family Medical Leave Act provisions that relate to a return-to-work program for employees. The discussion does not present all ADA or FMLA requirements, and state agencies should refer to the respective Acts and associated federal regulations for more specific details. More detailed information is also provided in Volume IV, Section Two, Chapters 3 and 5 of *Risk Management for Texas State Agencies*.

## The Americans with Disabilities Act

The Americans with Disabilities Act<sup>8</sup> is a comprehensive federal antidiscrimination law designed to remove barriers to employment and increase access to public accommodations and services for individuals with disabilities. The ADA contains five titles that prohibit discrimination in employment, public accommodations, public services, telecommunications, and miscellaneous provisions. With respect to the employment provisions, the ADA requires employers to determine whether reasonable accommodations can be made for qualified persons with disabilities. An individual with a disability, as defined by the ADA, must be able to perform the essential functions of the job with or without reasonable accommodation, in order to be considered a qualified individual with a disability. A more detailed discussion of the Americans with Disabilities Act is contained in Volume IV, Section Two, Chapter 3 of *Risk Management for Texas State Agencies*.

The following summarizes the interrelationship of the Americans with Disabilities Act as it affects workers' compensation in a return-to-work context:

- **Individual with Disability** - An employee who sustains a compensable workers' compensation injury is eligible for protection under the ADA if the employee is an "individual with a disability" that meets one of the following criteria:
  - A physical or mental impairment that substantially limits one or more major life activities,
  - A record of such an impairment, or
  - Is regarded by the employer as having an impairment.

If none of the above three criteria applies, then the ADA does not apply to the injured employee.

- **Essential Functions and Reasonable Accommodation** - Injured employees who meet the above definition of "individual with a disability" are covered under the ADA if the employee can perform the "essential functions of the job" "with or without reasonable accommodation".
- **Substantially Limits a Major Life Activity** - A work-related injury must cause physical or mental impairments severe enough to "substantially limit" a major life activity in order for the ADA to apply. Most job-related injuries cause non-chronic impairments which heal within a short period of time with little or no long-term or permanent impact. Such injuries in most circumstances are not considered disabilities under the ADA.
- **Disability** - The fact that an employee is awarded workers' compensation benefits, has disability as defined by the Texas Workers' Compensation Act, or is assigned an impairment rating by a physician under the workers' compensation system, does not automatically establish that the employee is protected by the ADA. "Disability" under state workers' compensation law is defined differently than disability under the ADA, because the state workers' compensation law serves a different purpose.

- **Regarded as Having a Record of Impairment** - An employee who is seriously injured and is unable to work for an extensive period of time may be regarded as "having a record of" a substantially limiting impairment. If an impairment or condition caused by a job-related injury does not substantially limit an employee's ability to work, but the employer regards the individual as having an impairment that makes the employee unable to perform a class of jobs, such as "heavy labor", then the employee would be "regarded as having a disability" by the employer.
  
- **Reasonable Accommodation** - Reasonable accommodations under ADA for an employee include work station modifications and work schedule modifications. Reasonable accommodations may also include reassignment to a vacant position if the employee is qualified to perform the essential functions of the job with or without accommodation. "Alternate duty" jobs or positions are not required to be created by the ADA as a reasonable accommodation. "Heavy duty" tasks which are marginal functions of the job may be reallocated. However, if the employer has vacant light duty positions, then assigning an employee to such a position may be a reasonable accommodation if the employee is a qualified individual with a disability. If the alternate duty position was created as a temporary job, then reassignment to that position need only be for a temporary period, but the temporary nature of the assignment should be communicated in writing to the employee at the outset.
  
- **Discrimination** - In a return-to-work program, consideration must be given to potential actions that, under the Americans with Disabilities Act are unlawful. According to the ADA, it is unlawful for a covered entity to:
  - discriminate on the basis of disability against a qualified individual with a disability in regard to:
    - (a) recruitment, advertising, and job application procedures;
    - (b) hiring, upgrading, promotion, award of tenure, demotion, transfer, layoff, termination, right of return from layoff, and rehiring;
    - (c) rates of pay or any other form of compensation and changes in compensation;
    - (d) job assignments, job classification, organizational structures, position descriptions, lines of progression, and seniority lists;
    - (e) leaves of absence, sick leave, or any other leave;
    - (f) fringe benefits available by virtue of employment, whether or not administered by the covered entity;
    - (g) selection and financial support for training, including: apprenticeships, professional meetings, conferences and other related activities, and selection for leaves of absence to pursue training;
    - (h) activities sponsored by a covered entity including social and recreational programs; and
    - (i) any other term, condition, or privilege of employment.
  
  - Limit, segregate, or classify a job applicant or employee in a way that adversely affects his

or her employment opportunities or status on the basis of disability.

- Require a medical examination of an employee unless the medical examination is job related and consistent with business necessity.
- Make inquiries as to whether an employee is an individual with a disability or as to the nature or severity of such disability.

If the injured employee is determined to be a "qualified individual with disability" and afforded protections under the ADA, then the employer may not discriminate against the employee in any employment decisions.

## The Family and Medical Leave Act

The Family and Medical Leave Act was enacted to provide federal entitlement to eligible employees to take up to 12 weeks of unpaid, job-protected leave each year for specified family and medical reasons. The Act contains provisions relating to employer coverage; employee eligibility for the benefits of the law; entitlement to leave, maintenance of health benefits during leave, and job restoration after leave; notice and certification of the need for FMLA leave; and protections for employees who request or take FMLA leave. A more detailed discussion of the Family Medical Leave Act is provided in Volume IV, Section Two, Chapter 5 of *Risk Management for Texas State Agencies*.

The following summarizes the interrelationship of the Family and Medical Leave Act as it affects workers' compensation in a return-to-work context:

- **FMLA Leave Entitlement** - The eligible employee is entitled to a total of 12 workweeks of unpaid leave during any 12-month period. A state employee is eligible if he or she has been employed by the employer for at least 12 months, for at least 1,250 hours of service during that 12-month period immediately preceding commencement of the leave. A state is considered to be a single public agency, and therefore a single employer. The absence from work must be a period of incapacity of more than three consecutive calendar days. The leave is normally continuous, but may be taken intermittently or on a reduced leave schedule.
- **Serious Health Condition** - A covered employer must grant FMLA leave when the employee is unable to work because of a serious health condition. A "serious health condition" means an illness, injury, impairment, or physical or mental condition that involves:
  - inpatient care in a hospital, hospice, or residential medical care facility, including any period of incapacity; or
  - continuing treatment by a health care provider, including any period of incapacity.

The serious health condition may result from injury to the employee either "on or off" the job. The FMLA definition of incapacity includes inability to work or perform other regular daily activities due to the serious health condition, treatment therefor, or recovery therefrom. Continuing treatment includes either two visits to a health care provider or one

visit followed by a regimen of continuing treatment under the supervision of the health care provider. If the serious health condition to the employee is the result of a compensable injury sustained in the course and scope of employment, the employee may receive workers' compensation benefits while on unpaid FMLA leave.

- **Designation of Leave** - The employer is responsible for designating if leave counts as FMLA leave, based on information provided by the employee. This should be accomplished within two business days of receiving notice that leave is requested. Oral notice is allowed but must be followed in writing no later than the next payday. If the employer designates the leave as FMLA leave, the employee's FMLA 12-week leave entitlement may run concurrently with a workers' compensation absence when the injury is one that meets the criteria for a serious health condition.
  
- **Unable to Perform the Functions of the Position** - Under the FMLA, an employee is "unable to perform the functions of the position" where the health care provider finds that the employee is unable to work at all, or is unable to perform any one of the essential functions of the employee's position as defined by the ADA and federal regulations. An employee who must be absent from work to receive medical treatment for a serious health condition is considered to be unable to perform the essential functions of the position during the absence for treatment. An employer has the option, in requiring certification from a health care provider, to provide a statement of the essential functions of the employee's position for the health care provider to review. For purposes of FMLA, the essential functions of the employee's position are to be determined with reference to the position the employee held at the time notice is given or leave commenced, whichever is earlier.
  
- **Prohibited Acts** - The FMLA states that it is unlawful for any employer to:
  - interfere with, restrain, or deny the exercise of or the attempt to exercise, any right provided by the Act;
  - discharge or in any other manner discriminate against any individual for opposing any practice made unlawful by the Act; or
  - discharge or any manner discriminate against an individual because such individual--
    - (1) has filed any charge, or has instituted or caused to be instituted any proceeding under or related to the Act;
    - (2) has given, or is about to give, any information in connection with any inquiry or proceeding relating to any right provided under the Act; or
    - (3) has testified, or is about to testify, in any inquiry or proceeding relating to any right provided under the Act.

### ***Comparisons of ADA, FMLA and Workers' Compensation***



## ● **Medical Inquiries or Examinations**

- Under the ADA, an employer may require an employee to submit to a medical examination, or may make inquiries regarding an employee's disability, only if the examination or inquiry is job-related and consistent with business necessity. The employer is prohibited from inquiring whether an employee has a disability, or inquiring about the nature or severity of the disability. If an employee has a job-related injury which appears to affect the employee's ability to perform essential job functions, then a medical examination or inquiry is considered job-related and consistent with business necessity. A medical examination may also be necessary in order for the employer to provide reasonable accommodation. However, the medical examination must be a "job-related" medical examination and not a full physical examination.
- Under FMLA, the employer may require an employee who requests or takes FMLA leave to provide in a timely manner certification issued by a health care provider that states:
  - the date on which the serious health condition commenced;
  - the probable duration of the condition;
  - the appropriate medical facts within the knowledge of the health care provider regarding the condition;
  - the employee is unable to perform the functions of the employee's position; and
  - if intermittent leave or leave on a reduced schedule is involved, the certification may include the medical necessity for the intermittent leave or reduced leave schedule and duration of the intermittent or reduced leave.
- However, if the employee is also a qualified individual with a disability under the ADA, and if the serious health condition is also a disability under the ADA, the ADA limits inquiries regarding the disability to those that are job-related and consistent with business necessity, such as the ability to perform the essential functions of the job. In this situation, the request for the certification should be limited to the opinion of the health care provider on whether the employee could perform the essential functions of the job with or without a reasonable accommodation, and whether the employee would pose a significant harm that could not be reduced to an acceptable level with a reasonable accommodation.
- Also under FMLA, the employer may require, at the expense of the employer, that the eligible employee obtain the opinion of a second health care provider designated or approved by the employer concerning any information contained in the health care provider's certification referenced above. The second opinion health care provider may not be employed on a regular basis by the employer. Again, if the employee qualifies for protection under the ADA, the second opinion should be limited as noted above.
- In contrast, under the Texas Workers' Compensation Act, communications with the employee's treating physician regarding the employee's medical condition and medical treatment are normally a function of the employer's insurance carrier rather than the employer. Requests for second medical opinions under the Texas Workers' Compensation Act are made by the insurance carrier and are limited to one every 180 day period, and/or designated doctor appointments. The Texas Workers' Compensation Commission issues required medical examination orders and designated doctor appointments.

- **Periodic Status Report**

- The FMLA does not prohibit an employer from requiring an employee on FMLA leave to periodically report to the employer the status and intention of the employee to return to work. If the employee is disabled under the ADA, the employer may not inquire about the nature or severity of the injury.

- **Return to Work**

- Under the ADA, the employer cannot refuse to let a qualified individual with disability return to work because the worker is not fully recovered from the injury unless the employee:
  - cannot perform the essential functions of the job the employee holds or desires with or without a reasonable accommodation; or
  - would pose a significant risk of substantial harm that could not be reduced to an acceptable level with reasonable accommodation.
- The FMLA specifies that an employee who takes FMLA leave is entitled on return from such leave to be restored by the employer to the position of employment held by the employee when the leave commenced; or be restored to an equivalent position with equivalent employment benefits, pay, and other terms and conditions of employment. The employer may have a uniformly applied practice or policy that requires each such employee to receive certification from the health care provider that the employee is able to resume work. However, if the employee is also a qualified individual with a disability under the ADA, the certification should be limited to the opinion of the health care provider on whether the employee could perform the essential functions of the job with or without a reasonable accommodation and whether the employee would pose a significant risk of substantial harm that could not be reduced to an acceptable level with a reasonable accommodation.
- Under the Texas Workers' Compensation Act, an employee may not be discharged or in any other manner discriminated against because the employee has:
  - Filed a workers' compensation claim in good faith;
  - Hired a lawyer to represent the employee in a claim;
  - Instituted or caused to be instituted in good faith a proceeding under the Texas Workers' Compensation Act; or,
  - Testified or is about to testify in a proceeding under the Texas Workers' Compensation Act.<sup>10</sup>

However, an employer may not be in violation of these statutory provisions if the employer terminates an employee for violation of a reasonable absence-control policy provided to employees if the policy is applicable to all employees and if the actions of the employee described above were not part of the reason for the termination.<sup>11</sup>

- **Offers of Alternate Duty in a Return-to-Work Program**

- The employee may decline the employer's offer of an alternate duty job and remain on

leave.

- However, the Texas Workers' Compensation Act allows income benefits to be reduced when an employee refuses a bona fide offer of employment. This reduction in benefits is permitted regardless of FMLA.

- **Substitution of Paid Leave**

- The employee is entitled to unpaid leave, but the employee may elect, or the employer may require the employee, to substitute accrued paid vacation leave, personal leave, or medical or sick leave for the required leave period. Leave taken with compensatory time or overtime cannot be designated as FMLA leave.
- An employee on FMLA leave who is receiving temporary disability benefit payments or workers' compensation benefits shall not be required to utilize paid vacation or sick leave. Under the Texas Workers' Compensation Act, a state employee may elect to use sick or annual leave, and if the use of sick leave is elected, the state employee must exhaust accrued sick leave before utilizing annual leave. Once all leave requested is exhausted, the employee may receive receiving workers' compensation income benefits. An employee on FMLA leave because of a compensable injury sustained in the course and scope of employment may receive workers' compensation while on unpaid FMLA leave.

## **ELEMENTS OF A RETURN-TO-WORK PROGRAM**

Successful return-to-work programs generally incorporate the following elements into the program:

- Full cooperation of all personnel and functional units or departments to support and participate in the return- to-work program.
- Analysis and evaluation of accidents, injuries, and workers' compensation claims data through an accurate information system.
- Job hazard analysis that identifies the physical requirements of a job, and that identifies specific hazardous operations to correct unsafe working conditions. The analysis should include an ergonomic evaluation of the duties and work station.
- Job descriptions for all positions that identify the essential functions of the job and its physical requirements.
- Identification of jobs on an on-going basis that are suitable for alternate duty assignments. The physical requirements of the job should be documented. These jobs may be established in a "job bank" of alternate duty jobs.
- Designation of a knowledgeable, proactive return to work coordinator to provide administrative support and direction to plan, lead, control, and monitor return-to- work program activities. For

many state agencies, it may be advantageous for the return-to-work coordinator to also perform the duties of workers' compensation claims coordinator.

- Return to work policy and procedures that are consistently applied across all functional operations of the organization, consistently applied to all employees, and in compliance with the ADA, FMLA, and the Texas Workers' Compensation Act.
- Forms (samples may be viewed on SORM's website under "[Return to Work Programs](#)") designed to accomplish return to work of employees, including:
  - "Position Description" that identifies the employee's regular job duties and physical requirements of the job, and which assists the treating physician to determine whether or not the employee can perform them, based upon the physician's evaluation of the employee's physical condition.
  - TWCC 73"Return-to-Work Status" form for periodic status reports regarding the employee's status and intention to return to work, and to identify any limitations or restrictions to duty imposed by the physician.
  - SORM 85 Return To Work Policy - This form is designed to give information to the provider, such as agency contact information and billing information. It also provides the provider with a statement on the agency's return-to-work policy, so the provider can determine if the patient is able to perform modified job duties.
  - Bonafide Job Offer of Employment notification -  
The bona fide offer of employment letter shall include the following information:
    - The type of position offered and the specific duties;
    - A statement that the agency is aware of and will abide by any physical limitations under which the treating doctor has authorized the employee to return to work;
    - The maximum physical requirements of the job;
    - The wage rate of the job;
    - The location of the temporary assignment;
    - The expected duration of the temporary assignment;

The consequences of not accepting a temporary assignment, in terms of duration and amount of temporary income benefits payable under the Texas Workers' Compensation Act, and if the leave has not been designated by the agency as FMLA leave, the appropriate administrative penalties/disciplinary measures by the agency as specified in the human resources procedures.

The person to contact if the employee has questions regarding the temporary assignment, job modifications, or questions regarding the FMLA or ADA. The employee may accept or reject this bona fide offer of employment.

The employee should be informed that rejection of the bona fide offer of employment may result in workers' compensation temporary income benefits (if applicable) being stopped by the State Office of Risk Management as the state's insurance carrier.

If the employee accepts the bona fide offer of employment, then the employee shall perform the duties of the temporary assignment position for the term of the assignment or until the employee is able to return to full duty, whichever is sooner.

If the employee rejects the bona fide offer of employment, then the employee remains off work until the end of the FMLA leave entitlement period or until the employee is certified by the health care provider to return to full duty.

If the employee is unable to return to full duty by the end of the temporary assignment period and/or by the end of the employee's FMLA leave entitlement period, then the employee's continued employment with the agency shall be considered based upon the business necessity of having the employee's position filled and whether any reasonable accommodation is required under the ADA.

- On-going education and training of managers, supervisors, and employees regarding the workers' compensation system, FMLA, ADA, and the return-to-work program.
- Early intervention and prompt, sympathetic regard for injured employees, often referred to as the "caring employer concept".
- Written communications to inform and educate newly hired employees of the agency's return-to-work program.
- Temporary assignments that take into consideration the employee's physical capabilities resulting from the medical condition and restrictions to duty specified by the health care provider.
- Documents and information obtained from an employee or a health care provider of that employee may contain medical information which is confidential under law. Such information must be kept in a file separate from an application for employment file and in a manner that will ensure its confidentiality.

### ***Return-to-Work Duty Assignments***

Three distinct categories of duty status are applicable to the return-to-work program:

- **Full Duty** - Performance of all duties and tasks of the position for which the employee is employed. Full duty entails performing all essential and non-essential functions of the employee's regular job.
- **Modified Duty** - Performance of all of the essential functions, but only a portion of the non-essential functions and tasks of the regular job duties for which the employee is employed. Modified duty allows the employee to return to current employment in his or her regular job, and

perform those duties and tasks that are within the capabilities of the employee, given the restrictions to duty imposed by the treating physician. Modified duty is a temporary arrangement until the injured employee can resume full duty. If the employee is a qualified individual with a disability as defined under the Americans with Disabilities Act, then modified duty may become a permanent arrangement as a reasonable accommodation, if the accommodation does not create an undue hardship on the agency.

- **Alternate Duty** - Performance of the essential functions of a job or position other than the position for which the employee is employed. Alternate duty allows the employee to temporarily perform other duties and tasks are within the restrictions to duty imposed by the treating doctor. Such alternate duty may be physically located in the same facility or in some other facility. Alternate duty is a temporary arrangement until the injured employee can resume full activities of his/her regular job. If the employee is a qualified individual with a disability as defined under the Americans with Disabilities Act, then alternate duty may become a permanent arrangement as a reasonable accommodation, if the accommodation does not create an undue hardship on the agency.

Alternate duty is intended to be a **temporary assignment** for a limited period of time. The duration of the assignment should be communicated to the employee at the outset of the assignment. The intent of the transitional duty assignment is twofold:

- To provide an interim means, prior to complete recovery from an injury, for the employee to return to the workplace in a productive capacity.
- To reduce the amount of indemnity payments (temporary income benefits) that are paid by the state under the workers' compensation program.

Temporary assignments are not intended to displace other employees, nor are they intended to consist of menial tasks or simply "busy work". The temporary assignment should consist of duties and tasks that constitute productive work for the agency.

### ***Types of Modifications***

Different types of modifications can be made to a job that can provide a temporary assignment for an employee. Some of these modification types are:

- Modify non-essential duties and tasks of the job to meet the injured employee's functional capacities as determined by the treating physician. This may involve a temporary reassignment of non-essential functions that the employee is unable to perform to another employee.
- Modify the work site or purchase equipment to enable the employee to perform essential job functions, if the employee qualifies under ADA, and the modification does not create an undue

hardship. The Job Accommodation Network estimates that 80% of accommodations cost less than \$500, and for every dollar spent on an accommodation, the employer receives nine dollars back. Examples of such modifications are:

- Raising or lowering furniture
  - Telephone headsets
  - Adaptive light switches
  - Addition of a detachable extension arm on a rake
- 
- Modify the work schedule which allows the employee to work reduced hours, attend doctor and physical therapy appointments, and receive rehabilitation services.

### ***Duration of Leave and Temporary Assignments***

The length of time that an employee may remain off work depends upon statutory requirements and upon business necessity to have the employee's position filled. If FMLA leave is designated, then the employee is entitled to a total of 12 weeks of leave annually, which may be taken at one time, or may be intermittent if certified by a health care provider that such intermittent leave is medically necessary. Neither the ADA nor Texas Workers' Compensation Act address duration of leave. Extending the length of leave beyond 12 weeks may be required as a reasonable accommodation under the ADA.

If all statutory requirements for leave time have been honored, and the employee has not returned to work, then business necessity of having the position filled may dictate that discontinuing employment is in the best interests of the agency. Statutory requirements that address accrued sick leave, extended sick leave and/or emergency leave, reasonable accommodations under the ADA, and internal agency policies regarding unpaid leave of absences should be considered. Before arriving at such a decision, the factual situation should be reviewed by legal counsel.

The length of time that an employee may be allowed to work in a temporary assignment should also be based on the business necessity of having the employee's position filled. In most cases, a full recovery can be expected within a thirty-day time period. However, more serious injuries may require longer periods of time. Therefore, each case should be handled on a case-by-case basis, and each employee informed at the outset of the duration of the temporary assignment.

The temporary assignment of an injured employee should be terminated prior to the end of the assignment when any one of the following circumstances occurs. The employee:

- Is authorized to return to full duty, with or without reasonable accommodation, by the treating physician;
- Finds other employment outside of the agency; or
- Is dismissed from employment by the agency.

At the end of a temporary assignment period, the agency should have the employee obtain from the health care provider documentation concerning the employee's duty status. If the employee cannot return to full duty but meets the requirements of the ADA and can perform the essential functions of the job, the agency should determine whether a reasonable accommodation can be made. If the employee cannot return to full duty and does not meet the requirements of the ADA, the employee may be considered for dismissal from employment.

### ***Importance of Timely Communications***

During the period of time an employee is on FMLA leave and/or workers' compensation lost time, there are several actions that the employee's supervisor, claims coordinator and/or return-to-work coordinator may take to help reduce the amount of time that the employee remains off work. These actions involve timely communications with the employee and claims adjuster. Close coordination and cooperation should be maintained between the supervisor and claims and/or return-to-work coordinator to routinely communicate with the employee. Such coordination and communications should include:

- Expressions of sincere regard for the injured employee's quick recovery and concern for the employee to return to productive work. Inform the employee that his or her efforts are needed by the team.
- Prompt initiation of benefits by processing documents and forms.
- Provide complete and timely information to the employee regarding the workers' compensation system or the ADA and FMLA, as appropriate.
- Frequent coordination with an employee on workers' compensation regarding any questions or requests for assistance.
- Appropriate communication with the health care provider regarding functional abilities, limitations and work restrictions.
- The importance of following the instructions of the health care provider while off work and during a temporary assignment.
- Information concerning the return-to-work program.

### **SAMPLE RETURN-TO-WORK POLICY AND PROCEDURES**

The following pages provide a sample policy and procedures that a state agency may incorporate into a return-to-work program. This "model" return-to-work program should be customized to the specific needs of the agency.



## ***Return-to-Work Policy Statement***

It is the policy of the (Agency name) to provide a return-to-work program as the means to return employees to meaningful, productive employment following injury or illness. In order to provide the highest level of quality service to the citizens of Texas, it is necessary for every employee of the (Agency name) to be available for work, ready, and capable of performing the duties and responsibilities for which the employee was hired.

The return-to-work program provides opportunities for any employee of this agency who sustains a compensable injury during the course and scope of employment, a disability as defined by the Americans with Disabilities Act, and/or a serious health condition as defined by the Family Medical Leave Act to return to work at full duty. If the employee is not physically capable of returning to full duty, the return-to-work program provides opportunities when available for the employee to perform a temporary assignment in which the employee's regular position is modified to accommodate the employee's physical capacities, or to perform an alternate duty position.

This return-to-work program shall not be construed as recognition by this agency, its management, or its employees that any employee who participates in the program has a disability as defined by the Americans with Disabilities Act of 1990. If an employee sustains an injury or illness that results in a disability under the ADA, it is the employee's responsibility to inform his or her supervisor or a person in a responsible management position when a disability under the ADA exists and that a reasonable accommodation is necessary to perform the essential functions of his or her job.

Specific procedures shall be provided to guide all employees regarding the return-to-work program. All employees, divisions, and facilities of the (Agency name) are expected to support and fully comply with this policy and the procedures provided to implement this policy.

---

(Signature of Agency Head, Date)

## ***Return-to-Work Procedures***

**Definitions** - The following definitions apply to this procedure:

1. *Serious Health Condition* - An illness, injury, impairment, or physical or mental condition that involves:

- inpatient care in a hospital, hospice, or residential medical care facility, including any period of incapacity; or
- continuing treatment by a health care provider, including a period of incapacity.

2. *FMLA Leave* - Federal leave entitlement of up to 12 weeks of unpaid leave when an eligible employee is unable to work because of a serious health condition. The absence from work must be a period of incapacity of more than three consecutive calendar days. The leave is normally continuous, but may be taken intermittently or on a reduced leave schedule.

3. *Lost Time* - Time spent away from work at the direction of the treating doctor as a result of a compensable injury sustained in the course and scope of employment. The term does not include time worked in a temporary assignment.

4. *Full Duty* - Performance of all duties and tasks of the position for which the employee is employed. Full duty entails performing all essential and non-essential functions of the employee's regular job.

5. *Temporary Assignment* - Performance of a temporary job assignment that is intended to return an injured employee to work at less than his or her full duties when a compensable injury or serious medical condition prevents the employee from working full duty. Two types of temporary assignments are modified duty and alternate duty.

6. *Modified Duty* - Performance of all of the essential functions, but only a portion of the non-essential functions and tasks of the regular job duties for which the employee is employed. Modified duty allows the employee to return to current employment in his or her regular job, and perform those duties and tasks that are within the capabilities of the employee, given the restrictions to duty imposed by the treating physician. Modified duty is a temporary arrangement until the injured employee can resume full duty. If the employee is a qualified individual with a disability as defined under the Americans with Disabilities Act, then modified duty may become a permanent arrangement as a reasonable accommodation, if the accommodation does not create an undue hardship on the agency.

7. *Alternate Duty* - Performance of the essential functions of a job or position other than the position for which the employee is employed. Alternate duty allows the employee to temporarily perform other duties and tasks of that are within the restrictions to duty imposed by the treating doctor. Such alternate duty may be physically located in the same facility or in some other facility. Alternate duty is a temporary arrangement until the injured employee can resume full activities of his/her regular job. If the employee is a qualified individual with a disability as defined under the Americans with Disabilities Act, then alternate duty may become a permanent arrangement as a reasonable accommodation, if the accommodation does not create an undue hardship on the agency.

**Prohibited Actions** - This return-to-work policy and procedure shall not be applied to any situation or circumstance in a manner that discriminates on the basis of race, color, sex, national origin, religion, or disability.

It is a violation of the return to work policy, procedures and state or federal law for any employee,

supervisor or manager of this agency to:

- Discharge or in any other manner discriminate against an employee of this agency because the employee:
  - Files a workers' compensation claim in good faith;
  - Hires a lawyer to represent the employee in a workers' compensation claim;
  - Institutes or causes to be instituted in good faith a proceeding under the Texas Workers' Compensation Act; or
  - Testifies or is about to testify in a proceeding under the Texas Workers' Compensation Act.
  
- Discharge or in any other manner discriminate against an employee of this agency because the employee:
  - opposes any practice made unlawful by the FMLA or ADA; or
  - has filed any charge, or has instituted or caused to be instituted any proceeding under or related to the FMLA;
  - has given, or is about to give, any information in connection with any inquiry or proceeding relating to any right provided under the FMLA; or
  - has testified, or is about to testify, in any inquiry or proceeding relating to any right provided under the FMLA.
  
- Interfere with, restrain, or deny the exercise of or the attempt to exercise, any right provided by the Family Medical Leave Act (FMLA).
  
- Discriminate on the basis of disability against an employee of this agency who is a qualified individual with a disability under the Americans with Disabilities Act (ADA) in regard to:
  - Job assignments, job classifications, organizational structures, position descriptions, lines of progression, and seniority lists;
  - Leaves of absence, sick leave, or any other leave;
  - Upgrading, promotion, award of tenure, demotion, transfer, layoff, termination, right of return from layoff, and rehiring;
  - Rates of pay or any other form of compensation, changes in compensation, and fringe benefits available;
  - Selection and financial support for training; or
  - Social and recreational activities.
  
- Limit, segregate, or classify a job applicant or employee in a way that adversely affects his or her employment opportunities or status on the basis of disability.
  
- Require a medical examination of an employee who is disabled as defined under the ADA unless the medical examination is job related and consistent with business necessity.

- Make inquiries as to whether an employee is an individual with a disability or as to the nature or severity of such disability.

**Position Descriptions of All Positions** - All supervisors and managers are responsible for identifying, documenting and maintaining the essential and non-essential functions in a position description for all positions for which they are responsible. The physical requirements of the position should be included in all position descriptions as either an essential or non-essential functions. All position descriptions shall be reviewed at least annually, and must be submitted for approval to the human resources manager.

**Designated Return-to-Work Coordinator** - A return-to-work coordinator shall be appointed in the \_\_\_\_\_ Division (Facility/Unit). The return-to-work coordinator shall be responsible for coordinating all activities associated with the return-to-work program, unless specific duties are otherwise assigned to another person or position.

**Education and Training** - The return-to-work coordinator shall develop, maintain and provide an appropriate training module for inclusion in orientation training for new employees. The return-to-work coordinator shall also develop, maintain and provide an appropriate refresher training module for presentation to employees on an as needed basis.

**Employee Participation in the Return to Work Program** - In order for an employee of this agency to be eligible to participate in this return-to-work program, the employee must have:

1. sustained a compensable injury as defined in the Texas Workers' Compensation Act that results in lost time away from work;
2. a serious health condition as defined by the Family and Medical Leave Act; and/or
3. a disability as defined by the Americans with Disabilities Act.

An employee who meets the above criteria shall be encouraged to participate in the program. However participation by the employee in the program is voluntary and the employee cannot be forced to participate.

**Notification of Injury or Illness** - An employee who sustains an injury or illness either on or off the job is expected to notify his/or her supervisor, or a person in a management position, that an injury or serious health condition exists. Such notification should occur at the earliest possible time after occurrence of injury or knowledge that a serious health condition exists. Such notification should ideally occur within 24 hours of the injury or when the serious health condition first manifests itself. In order to receive workers' compensation benefits, an employee must give notice of injury within 30 days.

**Authorization for Leave and Lost Time** - An employee who must miss work due to a compensable injury and/or a serious health condition must be certified or authorized by a health care provider to be

off work. It is the employee's responsibility to obtain such certification from the health care provider and to return the certification to his/her supervisor in a timely manner. A "Certification of Physician or Practitioner" form is attached to this procedure for this purpose. If an employee is disabled as defined under the ADA, the request must be job-related, consistent with business necessity and cannot inquire as to the nature or severity of the injury.

In general, the treating health care provider's certification should be provided by the employee to the supervisor according to the following timelines:

1. When the employee knows in advance that FMLA leave is necessary, the certification form should be provided to the supervisor a minimum of three work days prior to the time when leave will commence.
2. When the employee cannot know in advance that leave is necessary, the certification form should be provided to the supervisor within a maximum of three calendar days after the initial visit to the health care provider.

The employee's supervisor shall provide a copy of the employee's position description to employee to take to the health care provider to assist the health care provider to determine whether the employee can perform the essential functions of the job.

**Periodic Status Reports** - If an employee is certified by a health care provider to be off work, the employee is required to submit periodic status reports for FMLA leave to his/her supervisor to report the employee's status and intention to return to work.

**Communications with the Employee** - At the time of first communication with the employee, the return-to-work coordinator shall provide information to the employee that contains the following, as appropriate:

- The agency's return to work policy and procedures, and appropriate forms.
- If an job-related injury or occupational disease occurs:
  - Notification that the State of Texas provides workers' compensation benefits to employees who sustain compensable job-related injuries and/or occupational diseases;
  - How medical expenses and income payments are made;
  - How employee health benefits are continued;
  - The name, location and telephone number of the local Texas Workers' Compensation Commission's (TWCC) field office and the name of the TWCC ombudsman at that office. The notice should state that the employee has a right to information and assistance from the TWCC ombudsman with his/her claim; and
  - The rights available to the employee under the Texas Workers' Compensation Act.
- For FMLA leave:

- Information regarding the employee's FMLA leave entitlement;
- How employee health benefits are continued; and
- Required certifications from the health care provider.

The return-to-work coordinator is responsible for maintaining regular, weekly communications with the employee. The purposes of these communications are to: encourage the employee during recuperation from the injury; communicate the value of the employee to the agency; encourage return to work at the earliest possible date; and if the employee is on lost time for a workers' compensation claim, offer assistance to the employee if needed to attend health care provider visits.

**Communications with the State Office of Risk Management (Office)** - The claims coordinator is responsible for timely submission to the Office and/or to the Texas Workers' Compensation Commission, all required reports and other important documents in the agency's possession regarding a workers' compensation claim. Timely submission of reports and forms is necessary in order to promptly initiate workers' compensation benefits, or cease payment of benefits when the employee returns to work. Refer to the Office's *Claims Coordinator Handbook* for additional information on submission of forms and reports to the Office and to the Texas Workers' Compensation Commission. All reports and forms shall be submitted in a timely manner in accordance with the requirements of the Texas Workers' Compensation Act.

**Temporary Assignment Positions** - If an employee is certified by the health care provider to return to work, but in less than full duty, this agency may provide a temporary assignment position to the employee. Directors and managers are responsible for identifying temporary assignment positions to facilitate return to work based on the business necessity of filling the employee's position, the employee's entitlement to FMLA leave, the availability of temporary assignments, and other appropriate factors. These temporary assignments shall be coordinated with the return to work coordinator and/or human resources manager. The maximum length of time that a temporary assignment may last must be based on relevant factors including the business necessity of the employee's original position being filled. Temporary assignment positions shall be identified, assigned and managed on a case by case basis based upon the business necessity of the agency. The temporary assignment position shall be documented in a "bona fide offer of employment" letter to the employee.

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### ***Additional Resources for Texas State Agencies***

#### ***Publications***

Title 29, Code of Federal Regulations, Part 825, "The Family and Medical Leave Act of 1993"; WH Publication 1419; U.S. Department of Labor, Employment Standards Division, Wage and Hour Division; April, 1995.

Title 29, Code of Federal Regulations, Part 1630, "The Americans with Disabilities Act".

Texas Labor Code Annotated, Title 5, Subtitle A, "Texas Workers' Compensation Act".

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### ***Agencies and Organizations Providing Assistance***

#### **State Office of Risk Management**

William P. Clements, Jr. Building, 6th Floor  
300 W. 15th Street  
P.O. Box 13777  
Austin, TX 78711-3777  
(512) 475-1440  
FAX: (512) 472-4769

#### **U.S. Department of Labor**

Wage and Hour Division  
Federal Building, Room 578  
300 East 8th Street  
Austin, TX 78701  
(512) 482-5638

#### **Equal Employment Opportunity Commission**

San Antonio District Office  
5410 Fredericksburg Road  
San Antonio, TX 78229

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### ***Endnotes***

1. Welch, Edward M.; *Workers' Compensation: Strategies for Lowering Costs and Reducing Workers' Suffering*; Selected proceedings from conferences held in Lansing, Michigan on April 22, 1987 and May 12, 1988; LRP Publications; Fort Washington, PA.
2. Dent, Gene L.; *Return to Work by Design: Managing the Human and Financial Costs of Disability*; Martin-Dennison Press; Stockton, CA.; 1990.
3. *Crawford & Company Healthcare Management*; "Structured Return to work and the Americans with Disabilities Act"; *Healthcost Monitor*; Volume 2, Number 3; 1993.
4. *The Riskletter*; "North Carolina Study Shows Need for Return to work Programs in Workers Comp"; Volume 2, Number 2; 1993.
5. Derebery, V. Jane, M.D., and William H. Tullis, M.D.; "Delayed Recovery in the Patient with a Work Compensable Injury"; *Journal of Occupational Medicine*; Vol. 25, No. 11; November 1983.

6. Lipson, Fran; "How to Cut the Waste from Workers' Compensation"; *HR Magazine*; June 1993.
7. Burrous, Nikki L.; *Safe Workplace*; "Finding the Courage to Use Your Resources (and Control Costs)"; National Council on Compensation Insurance; Boca Raton, FL; Volume 1, Issue 1; January 1993.
8. 29 *Code of Federal Regulations*, Part 1630, "The Americans with Disabilities Act".
9. Title 29, Part 825, *Code of Federal Regulations*, "The Family and Medical Leave Act of 1993"; WH Publication 1419; U.S. Department of Labor, Employment Standards Division, Wage and Hour Division; April, 1995.
10. Texas Workers' Compensation Act, *Texas Labor Code Annotated*, Title 5, Subtitle A, Section §451.001.
11. *Texas Division - Tranter v. Carrozza*, 876 S.W. 2d 312 (Tex. 1994), *Gifford Hill American, Inc. v. Whittington*, 899 S.W. 2d 760 (Tex. App. Amarillo, 1995, *no writ*), *Trevino v. Corrections Corporation of America*, 850 S.W. 2d 806 (Tex. App. El Paso, 1993, *writ den'd*), *Palmer v. Miller Brewing Co.*, 852 S.W 2d 57 (Tex. App. Ft. Worth, 1993, *writ den'd*), and *Continental Coffee Products Co, v. Cazarez*, 903 S.W. 2d 70 (Tex. Ap. Houston [14th Dist.] 1995, *writ requested*).

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## Section One - Workers' Compensation Program

### Chapter 6

#### Reporting Requirements for Building or Construction Projects for Governmental Entities

Revised: December 2004

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### Volume III:

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This section of Risk Management for Texas State Agencies supplies general information regarding state agency workers' compensation exposures, and techniques and methods to manage and control those exposures. It also identifies additional resources that may be available to assist state agencies in developing or enhancing its workers' compensation program. This section is not intended in any way to be a substitute for the advice and guidance of legal counsel, who should always be consulted regarding rights, duties, and responsibilities under the law.

### Introduction

The Texas Workers' Compensation Commission adopted rule, §110.110, concerning requirements for governmental entities awarding a contract for a building or construction project, and for persons providing services on a building or construction project for a governmental entity, effective September 1, 1994. The commission amended the rule in 1995 in response to public comment and for clarity and consistency.

The Texas Labor Code, §406.096, requires workers' compensation insurance coverage for all persons providing services on a building or construction project for a governmental entity. This rule is designed to achieve compliance and to implement a recordkeeping process which will enable oversight of compliance. The rule does this by placing requirements on the governmental entity and on contractors and other persons providing services on a project. These requirements include coverage, certificates of coverage, posted notices of coverage, and notification of changes in coverage status. The rule does not create any duty or burden on anyone which the law does not establish.

The rule defines terms which apply to governmental entity building or construction projects and sets up a clear procedure for governmental entities and contractors that bid for building and construction projects to follow in complying with the requirements of the Texas Labor Code, §406.096. It also defines "persons who provide services on a project" who are subject to the statutory requirement of coverage and those who are excluded from the statutory requirements, and sets forth their requirements to comply with the statute and the rule. The rule puts persons on notice that providing false or misleading certificates of coverage, or failing to provide or maintain required coverage, or failing to report any change that materially affects the provision of coverage may subject the contractor or other persons providing services on the project to administrative penalties, civil

penalties, or other civil actions.

The rule requires a governmental entity to timely obtain certificates of coverage, retain them for the duration of the project plus three years, and provide them to the commission on request and to others entitled to them by law. It also requires the governmental entity, as a prerequisite to awarding a contract and as part of the contract, to require that the contractor: provide coverage and certificates of coverage for the contractor's employees; timely obtain and provide the governmental entity all required certificates of coverage for all persons providing services on the project; retain certificates of coverage on file for the duration of the project and for one year thereafter; notify the governmental entity in writing by certified mail or personal delivery, within 10 days after the contractor knew or should have known, of any change that materially affects the provision of coverage of any person providing services on the project; post notices on each project site; and contractually require persons with whom it contracts to do the same, with the certificates of coverage to be provided to the person for whom they are providing services. The rule also sets out the language to be included in bid specifications and in contracts awarded by a governmental entity and the information required to be in the posted notice to employees. It further establishes a method for obtaining the certificates from persons providing services on the project and providing them to the governmental entity.

It requires a contractor awarded a building or construction contract to: provide workers' compensation coverage to the contractor's employees for the duration of the project; file a certificate of coverage of the contractor's employees with the governmental entity prior to being awarded a contract; obtain and provide to the governmental entity, certificates of coverage from each other person with whom it has contracted to provide services on the project, prior to that person beginning work on the project; obtain and provide new certificates of coverage if the coverage period shown on the current certificate ends during the duration of the project; retain all certificates of coverage for the duration of the project and for one year thereafter; notify the governmental entity of material changes in coverage; contractually require each other person with whom it contracts to provide a certificate of coverage; and post notices on each project site.

All other persons providing services on a project have the same requirements as a contractor, with the exception of posting notices and with the exception that the certificate of coverage is given to the person for whom they contracted to provide services on the project. The rule uses the term "persons providing services on the project" in lieu of the statutory term "subcontractor" because the term "subcontractor" as used in the statute (§406.096) and in this rule is broader than standard industry usage. The use of the different terminology will prevent confusion.

The rule is adopted under the Texas Labor Code, §402.061, which authorizes the commission to adopt rules necessary to administer the Act, and Texas Labor Code, §406.096, which establishes requirements for governmental entities, contractors, and subcontractors ("persons providing services on the project") regarding workers' compensation coverage for workers on public building or construction projects.

### ***Rule 110.110 - Reporting Requirements for Building or Construction Projects for Governmental Entities***

(a) The following words and terms, when used in this rule, shall have the following meanings, unless the context clearly indicates otherwise. Terms not defined in this rule shall have the meaning defined in the Texas Labor Code, if so defined.

(1) Certificate of coverage ("certificate")- A copy of a certificate of insurance, a certificate of authority to self-insure issued by the commission, or a workers' compensation coverage agreement (TWCC-81, TWCC-82, TWCC-83, or TWCC-84), showing statutory workers' compensation insurance coverage for the person's or entity's employees (including those subject to a coverage agreement) providing services on a project, for the duration of the project.

(2) Building or construction - Has the meaning defined in the Texas Labor Code, §406.096(e)(1).

(3) Contractor - A person bidding for or awarded a building or construction project by a governmental entity.

(4) Coverage - Workers' compensation insurance meeting the statutory requirements of the Texas Labor Code, §401.011(44).

(5) Coverage agreement - A written agreement on form TWCC-81, form TWCC-82, form TWCC-83, or form TWCC-84, filed with the Texas Workers' Compensation Commission which establishes a relationship between the parties for purposes of the Workers' Compensation Act, pursuant to the Texas Labor Code, Chapter 406, Subchapters F and G as one of employer/employee and establishes who will be responsible for providing workers' compensation coverage for persons providing services on the project.

(6) Duration of the project - Includes the time from the beginning of work on the project until the work on the project has been completed and accepted by the governmental entity.

(7) Persons providing services on the project ("subcontractor" in §406.096 of the Act) - With the exception of persons excluded under subsections (h) and (i), includes all persons or entities performing all or part of the services the contractor has undertaken to perform on the project, regardless of whether that person contracted directly with the contractor and regardless of whether that person has employees. This includes but is not limited to independent contractors, subcontractors, leasing companies, motor carriers, owner-operators, employees of any such entity, or employees of any entity furnishing persons to perform services on the project. "Services" includes but is not limited to providing, hauling, or delivering equipment or materials, or providing labor, transportation, or other service related to a project. "Services" does not include activities unrelated to the project, such as food/beverage vendors, office supply

deliveries, and delivery of portable toilets.

(8) Project - Includes the provision of all services related to a building or construction contract for a governmental entity.

(b) Providing or causing to be provided a certificate of coverage pursuant to this rule is a representation by the insured that all employees of the insured who are providing services on the project are covered by workers' compensation coverage, that the coverage is based on proper reporting of classification codes and payroll amounts, and that all coverage agreements have been filed with the appropriate insurance carrier or, in the case of a self-insured, with the commission's Division of Self-Insurance Regulation. Providing false or misleading certificates of coverage, or failing to provide or maintain required coverage, or failing to report any change that materially affects the provision of coverage may subject the contractor or other person providing services on the project to administrative penalties, criminal penalties, civil penalties, or other civil actions.

(c) A governmental entity that enters into a building or construction contract on a project shall:

(1) include in the bid specifications, all the provisions of paragraph (7) of this subsection, using the language required by paragraph (7) of this subsection;

(2) as part of the contract, using the language required by paragraph (7) of this subsection, require the contractor to perform as required in subsection (d) of this rule;

(3) obtain from the contractor a certificate of coverage for each person providing services on the project, prior to that person beginning work on the project;

(4) obtain from the contractor a new certificate of coverage showing extension of coverage:

(A) before the end of the current coverage period, if the contractor's current certificate of coverage shows that the coverage period ends during the duration of the project; and

(B) no later than seven days after the expiration of the coverage for each other person providing services on the project whose current certificate shows that the coverage period ends during the duration of the project;

(5) retain certificates of coverage on file for the duration of the project and for three years thereafter;

(6) provide a copy of the certificates of coverage to the commission upon request and to any person entitled to them by law; and

(7) use the language contained in Figure 1 for bid specifications and contracts, without any additional words or changes, except those required to accommodate the specific document in which they are contained or to impose stricter standards of documentation (See Figure 1):

## **Figure 1**

### *Article \_\_\_\_\_. Workers' Compensation Insurance Coverage*

#### *A. Definitions:*

*Certificate of coverage ("certificate")- A copy of a certificate of insurance, a certificate of authority to self-insure issued by the commission, or a coverage agreement (TWCC-81, TWCC-82, TWCC-83, or TWCC-84), showing statutory workers' compensation insurance coverage for the person's or entity's employees providing services on a project, for the duration of the project.*

*Duration of the project - includes the time from the beginning of the work on the project until the contractor's/person's work on the project has been completed and accepted by the governmental entity.*

*Persons providing services on the project ("subcontractor" in §406.096) - includes all persons or entities performing all or part of the services the contractor has undertaken to perform on the project, regardless of whether that person contracted directly with the contractor and regardless of whether that person has employees. This includes, without limitation, independent contractors, subcontractors, leasing companies, motor carriers, owner-operators, employees of any such entity, or employees of any entity which furnishes persons to provide services on the project. "Services" include, without limitation, providing, hauling, or delivering equipment or materials, or providing labor, transportation, or other service related to a project. "Services" does not include activities unrelated to the project, such as food/beverage vendors, office supply deliveries, and delivery of portable toilets.*

*B. The contractor shall provide coverage, based on proper reporting of classification codes and payroll amounts and filing of any coverage agreements, which meets the statutory requirements of Texas Labor Code, Section 401.011(44) for all employees of the contractor providing services on the project, for the duration of the project.*

*C. The Contractor must provide a certificate of coverage to the governmental entity prior to being awarded the contract.*

*D. If the coverage period shown on the contractor's current certificate of coverage ends during the duration of the project, the contractor must, prior to the end of the coverage period, file a new certificate of coverage with the governmental entity showing that coverage has been extended.*

*E. The contractor shall obtain from each person providing services on a project, and provide to the*

*governmental entity:*

*(1) a certificate of coverage, prior to that person beginning work on the project, so the governmental entity will have on file certificates of coverage showing coverage for all persons providing services on the project; and*

*(2) no later than seven days after receipt by the contractor, a new certificate of coverage showing extension of coverage, if the coverage period shown on the current certificate of coverage ends during the duration of the project.*

*F. The contractor shall retain all required certificates of coverage for the duration of the project and for one year thereafter.*

*G. The contractor shall notify the governmental entity in writing by certified mail or personal delivery, within 10 days after the contractor knew or should have known, of any change that materially affects the provision of coverage of any person providing services on the project.*

*H. The contractor shall post on each project site a notice, in the text, form and manner prescribed by the Texas Workers' Compensation Commission, informing all persons providing services on the project that they are required to be covered, and stating how a person may verify coverage and report lack of coverage.*

*I. The contractor shall contractually require each person with whom it contracts to provide services on a project, to:*

*(1) provide coverage, based on proper reporting of classification codes and payroll amounts and filing of any coverage agreements, which meets the statutory requirements of Texas Labor Code, Section 401.011(44) for all of its employees providing services on the project, for the duration of the project;*

*(2) provide to the contractor, prior to that person beginning work on the project, a certificate of coverage showing that coverage is being provided for all employees of the person providing services on the project, for the duration of the project;*

*(3) provide the contractor, prior to the end of the coverage period, a new certificate of coverage showing extension of coverage, if the coverage period shown on the current certificate of coverage ends during the duration of the project;*

*(4) obtain from each other person with whom it contracts, and provide to the contractor:*

*(a) a certificate of coverage, prior to the other person beginning work on the project; and*

*(b) a new certificate of coverage showing extension of coverage, prior to the end of the coverage period, if the coverage period shown on the current certificate of coverage ends during the duration of the project;*

*(5) retain all required certificates of coverage on file for the duration of the project and for one year thereafter;*

*(6) notify the governmental entity in writing by certified mail or personal delivery, within 10 days after the person knew or should have known, of any change that materially affects the provision of coverage of any person providing services on the project; and*

*(7) contractually require each person with whom it contracts, to perform as required by paragraphs (1) - (7), with the certificates of coverage to be provided to the person for whom they are providing services.*

*J. By signing this contract or providing or causing to be provided a certificate of coverage, the contractor is representing to the governmental entity that all employees of the contractor who will provide services on the project will be covered by workers' compensation coverage for the duration of the project, that the coverage will be based on proper reporting of classification codes and payroll amounts, and that all coverage agreements will be filed with the appropriate insurance carrier or, in the case of a self-insured, with the commission's Division of Self-Insurance Regulation. Providing false or misleading information may subject the contractor to administrative penalties, criminal penalties, civil penalties, or other civil actions.*

*K. The contractor's failure to comply with any of these provisions is a breach of contract by the contractor which entitles the governmental entity to declare the contract void if the contractor does not remedy the breach within ten days after receipt of notice of breach from the governmental entity.*

(d) A contractor shall:

(1) provide coverage for its employees providing services on a project, for the duration of the project based on proper reporting of classification codes and payroll amounts and filing of any coverage agreements;

(2) provide a certificate of coverage showing workers' compensation coverage to the governmental entity prior to beginning work on the project;

(3) provide the governmental entity, prior to the end of the coverage period, a new certificate of coverage showing extension of coverage, if the coverage period shown on the contractor's current certificate of coverage ends during the duration of the project;

(4) obtain from each person providing services on a project, and provide to the governmental entity:

(A) a certificate of coverage, prior to that person beginning work on the project, so the governmental entity will have on file certificates of coverage showing coverage for all persons providing services on the project; and

(B) no later than seven days after receipt by the contractor, a new certificate of coverage showing extension of coverage, if the coverage period shown on the current certificate of coverage ends during the duration of the project;

(5) retain all required certificates of coverage on file for the duration of the project and for one year thereafter;

(6) notify the governmental entity in writing by certified mail or personal delivery, within 10 days after the contractor knew or should have known, of any change that materially affects the provision of coverage of any person providing services on the project;

(7) post a notice on each project site informing all persons providing services on the project that they are required to be covered, and stating how a person may verify current coverage and report failure to provide coverage. This notice does not satisfy other posting requirements imposed by the Act or other commission rules. This notice must be printed with a title in at least 30 point bold type and text in at least 19 point normal type, and shall be in both English and Spanish and any other language common to the worker population. The text for the notices shall be the following text provided by the commission on the sample notice, without any additional words or changes (*See Figure 2*):

## ***Figure 2***

### ***REQUIRED WORKERS' COMPENSATION COVERAGE***

*"The law requires that each person working on this site or providing services related to this construction project must be covered by workers' compensation insurance. This includes persons providing, hauling, or delivering equipment or materials, or providing labor or transportation or other service related to the project, regardless of the identity of their employer or status as an employee."*



*"Call the Texas Workers' Compensation Commission at 512-440-3789 to receive information on the legal requirement for coverage, to verify whether your employer has provided the required coverage, or to report an employer's failure to provide coverage."*

(8) contractually require each person with whom it contracts to provide services on a project, to:

(A) provide coverage based on proper reporting of classification codes and payroll amounts and filing of any coverage agreements for all of its employees providing services on the project, for the duration of the project;

(B) provide a certificate of coverage to the contractor prior to that person beginning work on the project;

(C) include in all contracts to provide services on the project the language in subsection (e)(3) of this rule;

(D) provide the contractor, prior to the end of the coverage period, a new certificate of coverage showing extension of coverage, if the coverage period shown on the current certificate of coverage ends during the duration of the project;

(E) obtain from each other person with whom it contracts, and provide to the contractor:

(i) a certificate of coverage, prior to the other person beginning work on the project; and

(ii) prior to the end of the coverage period, a new certificate of coverage showing extension of the coverage period, if the coverage period shown on the current certificate of coverage ends during the duration of the project;

(F) retain all required certificates of coverage on file for the duration of the project and for one year thereafter;

(G) notify the governmental entity in writing by certified mail or personal delivery, within 10 days after the person knew or should have known, of any change that materially affects the provision of coverage of any person providing services on the project; and

(H) contractually require each other person with whom it contracts, to perform as required by paragraphs (A) - (H), with the certificate of

coverage to be provided to the person for whom they are providing services.

(e) A person providing services on a project, other than a contractor, shall:

(1) provide coverage for its employees providing services on a project, for the duration of the project based on proper reporting of classification codes and payroll amounts and filing of any coverage agreements;

(2) provide a certificate of coverage as required by its contract to provide services on the project, prior to beginning work on the project;

(3) have the following language in its contract to provide services on the project:

"By signing this contract or providing or causing to be provided a certificate of coverage, the person signing this contract is representing to the governmental entity that all employees of the person signing this contract who will provide services on the project will be covered by workers' compensation coverage for the duration of the project, that the coverage will be based on proper reporting of classification codes and payroll amounts, and that all coverage agreements will be filed with the appropriate insurance carrier or, in the case of a self-insured, with the commission's Division of Self-Insurance Regulation. Providing false or misleading information may subject the contractor to administrative penalties, criminal penalties, civil penalties, or other civil actions."

(4) provide the person for whom it is providing services on the project, prior to the end of the coverage period shown on its current certificate of coverage, a new certificate showing extension of coverage, if the coverage period shown on the certificate of coverage ends during the duration of the project;

(5) obtain from each person providing services on a project under contract to it, and provide as required by its contract:

(A) a certificate of coverage, prior to the other person beginning work on the project; and

(B) prior to the end of the coverage period, a new certificate of coverage showing extension of the coverage period, if the coverage period shown on the current certificate of coverage ends during the duration of the project;

(6) retain all required certificates of coverage on file for the duration of the project and

for one year thereafter;

(7) notify the governmental entity in writing by certified mail or personal delivery, of any change that materially affects the provision of coverage of any person providing services on the project and send the notice within 10 days after the person knew or should have known of the change; and

(8) contractually require each other person with whom it contracts to:

(A) provide coverage based on proper reporting of classification codes and payroll amounts and filing of any coverage agreements for all of its employees providing services on the project, for the duration of the project;

(B) provide a certificate of coverage to it prior to that other person beginning work on the project;

(C) include in all contracts to provide services on the project the language in subsection (e)(3) of this rule;

(D) provide, prior to the end of the coverage period, a new certificate of coverage showing extension of the coverage period, if the coverage period shown on the current certificate of coverage ends during the duration of the project;

(E) obtain from each other person under contract to it to provide services on the project, and provide as required by its contract:

(i) a certificate of coverage, prior to the other person beginning work on the project; and

(ii) prior to the end of the coverage period, a new certificate of coverage showing extension of the coverage period, if the coverage period shown on the current certificate of coverage ends during the duration of the contract;

(F) retain all required certificates of coverage on file for the duration of the project and for one year thereafter;

(G) notify the governmental entity in writing by certified mail or personal delivery, within 10 days after the person knew or should have known, of any change that materially affects the provision of coverage of any person providing services on the project; and

(H) contractually require each person with whom it contracts, to perform as required by paragraphs (A) - (H), with the certificate of coverage to be

provided to the person for whom they are providing services.

(f) If any provision of this rule or its application to any person or circumstance is held invalid, the invalidity does not affect other provisions or applications of this rule that can be given effect without the invalid provision or application, and to this end the provisions of this rule are declared to be severable.

(g) This rule is applicable for building or construction contracts advertised for bid by a governmental entity on or after September 1, 1994. This rule is also applicable for those building or construction contracts entered into on or after September 1, 1994 which are not required by law to be advertised for bid.

(h) The coverage requirement in this rule does not apply to motor carriers who are required pursuant to Texas Civil Statutes, Article 6675c to register with the Texas Department of Transportation and who provide accidental insurance coverage pursuant to Texas Civil Statutes, Article 6675c, §4(j).

(i) The coverage requirement in this rule does not apply to sole proprietors, partners, and corporate officers who meet the requirements of the Act, §406.097(c) and who are explicitly excluded from coverage in accordance with the Act, §406.097(a) (as added by House Bill 1089, 74th Legislature, 1995, §1.20). This subsection applies only to sole proprietors, partners, and corporate executive officers who are excluded from coverage in an insurance policy or certificate of authority to self-insure that is delivered, issued for delivery, or renewed on or after January 1, 1996.

Effective Date: September 1, 1994

Amended Effective Date: November 6, 1995

***Checklist for Essential Program Elements***

1. Has the agency been involved or contracted for a building or construction project within the last three years? Yes No

2. Is any building or construction planned for the future? Yes No

If questions 1 and 2 are Yes:

3. Has the agency designated a person or committee to be responsible for workers' compensation reporting requirements? Yes No

4. Does the agency require contractors and subcontractors to maintain workers' compensation insurance on all persons performing services on the building project? Yes No

5. Does the agency review and monitor certificates of insurance as required by law? Yes No

6. Are certificates retained by the agency throughout the duration of the project and for three years thereafter? Yes No

- |  |     |    |
|--|-----|----|
| 7. Does the agency verify that the contractor is notifying the agency within 10 days of any change that materially affects provision of coverage for all persons providing services? | Yes | No |
| 8. Do bid specifications for building projects include the provisions of this law using the exact language of Rule 110.110(a) paragraph 7?   | Yes | No |
| 9. Does the agency verify that contractors are posting notices of the requirements for providing workers' compensation insurance at each project site as required by law?            | Yes | No |
- 

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## Section Two - Employee Safety and Health Program

### Chapter 1

#### Overview of an Employee Safety and Health Program

##### Subchapter 1.0

##### Introduction

Revised: December 2004

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### Volume III:

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This chapter of *Risk Management for Texas State Agencies* supplies general information regarding state agency employee safety and health exposures, and techniques and methods to manage and control those exposures. It also identifies additional resources that may be available to assist state agencies in developing or enhancing its employee safety and health program. This chapter is not intended in any way to be a substitute for the advice and guidance of legal counsel, who should always be consulted regarding rights, duties, and responsibilities under the law.

The primary objective of an employee safety and health program is the protection of employees from harm caused by occupational accident, injury, illness, and disease. Protection of an agency's greatest asset, its employees, may be achieved when the employee safety and health program receives strong support and commitment from top management, and when employees understand and practice all procedures to avoid safety and health risks. When employees are supported by management to prevent work-related accidents, the frequency and severity of occupational accidents, injuries, or diseases can be greatly improved.(1)

Expanded employee safety and health programs have become increasingly necessary to effectively address the risk of occupational accidents, injuries, and diseases in contemporary work environments. Issues involving employee safety and health have expanded considerably and now include occupational risk exposures and environmentally-induced disease exposures such as repetitive stress or bloodborne pathogens.

The Texas Workers' Compensation Act, (*Vernon's Texas Codes Annotated* [V.T.C.A.], Labor Code, Title 5, Subtitle A, Chapter 412) charges the executive director of the State Office of Risk Management with the development and administration of systems to identify, evaluate, and reduce workers' compensation losses.(2) The risk prevention and loss control process that has the most significant impact on reducing the frequency and severity of workers' compensation losses is a proactive, comprehensive employee safety and health program.

Safety, as defined in Webster's dictionary, is "the condition of being safe from undergoing or causing

hurt, injury, or loss.” The National Safety Council defines safety as the “control of recognized hazards to attain an acceptable level of risk.”(3) The American Society of Safety Engineers defines safety as “the art of performing any activity in the most accident-free manner, relatively free from hazard.”(4)

Safety is an essential component of an agency's risk management program because all agencies have employees and therefore inherently possess exposures to personnel risks. An agency's risk management program should include a strong employee safety and health program that implements risk prevention and loss control measures and techniques to prevent or reduce occupational accidents, injuries, illness, and disease.

An employee safety and health program is most successful when program elements are incorporated into all aspects of the agency's program operations. When this is accomplished, employees and management share similar goals to work safely and avoid and/or minimize losses. An organization maximizes its limited human and financial resources when safety and health are fully integrated into the program operations of the organization.

Prevention and reduction of occupational injuries, illnesses, and diseases and their associated workers' compensation costs are the primary reasons for the existence of an employee safety and health program. The obvious avoidance of employees' pain and suffering cannot be overstated. The benefits of maintaining a safe work environment include increased employee productivity, reduced operating costs and continued production, performance, and services provided to the public. Additional cost savings and benefits result in lower workers' compensation claims, increased productivity, and improved levels of employee motivation. Property conservation and avoidance of third-party claims may also accrue from an employee safety and health program.(5)

Money expended on state workers' compensation claims and all other related costs represent a considerable lost “opportunity cost” for all Texas state agencies and consequently, the citizens of Texas. Therefore, controlling workers' compensation losses through an employee safety and health program is an issue of significant economic importance to Texas state agencies, as well as having an impact upon government services and programs.

### ***Nonduplication of Programs***

The State Office of Risk Management prefers to cite standards, guidelines, rules and regulations of other agencies and organizations where feasible and appropriate. This practice of referencing and referral to other agencies and programs recognizes and emphasizes the authority, responsibility, and expertise of that agency or organization. This practice also avoids duplication of programs, reporting and compliance with separate sets of guidelines, standards, rules and regulations.

Therefore, appropriate state or federal agencies and other organizations that have specialized knowledge and expertise regarding a particular safety and health topic or program or that have the

authority and responsibility for a specific safety or health related program, are referenced throughout this section of *Risk Management for Texas State Agencies*. State agencies are encouraged to refer to these agencies and organizations for more specific details or requirements of such programs.

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### ***Endnotes***

1. *OSHA Compliance Encyclopedia*; Business and Legal Reports, Inc.; 1993.
  2. Texas Workers' Compensation Act, *Vernon's Texas Codes Annotated*, Labor Code, Title 5, Subtitle A, Chapter 412, Section 412.041 (Vernon 1998).
  3. Laing, Patricia M., ed.; "Glossary" in *Accident Prevention Manual for Business & Industry, Administration & Programs*, 10th Edition; National Safety Council; 1992; p. 755.
  4. Petersen, Dan; *Techniques of Safety Management*, Second Edition; McGraw-Hill; 1978.
  5. Laing, Patricia M., ed.; "Introduction to Safety and Health" in *Accident Prevention Manual for Business & Industry, Administration & Programs*, 10th Edition; National Safety Council; 1992; pp. 3-22.
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## Section Two - Employee Safety and Health Program

### Chapter 1

#### Overview of an Employee Safety and Health Program

##### Subchapter 1.1

#### Causes of Occupational Accidents, Injuries, Illnesses and Diseases

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This chapter of Risk Management for Texas State Agencies supplies general information regarding state agency employee safety and health exposures, and techniques and methods to manage and control those exposures. It also identifies additional resources that may be available to assist state agencies in developing or enhancing its employee safety and health program. This chapter is not intended in any way to be a substitute for the advice and guidance of legal counsel, who should always be consulted regarding rights, duties, and responsibilities under the law.

All state agencies inherently possess personnel risk exposures to accidents, injury and disease. No agency is exempt, because all state agencies have employees. Therefore, an employee safety and health program is an essential component of an agency's risk management program.

Comprehensive safety and health related policies, procedures, standards, rules, regulations and training give employees the basic guidance and instruction required to safely perform job duties with minimum exposure to risk.(1) The extent to which an agency's management anticipates specific exposures and losses and establishes appropriate policies, procedures and training determines the program's success in effectively avoiding occupational accidents, injuries, illnesses and diseases. Management must implement the systems necessary to avoid or reduce the exposures to personnel risk.

It is a common assumption that employees engaged in unsafe acts are the primary cause of accidents. Although employee carelessness or reckless behavior increases the probability that an accident will occur, other factors also contribute to the likelihood of an accident.(2) Employee inattention or fatigue, inadequate or unsafe equipment and a lack of adequate training are other examples of accident causes. Unsafe work *conditions* may include improper ventilation, poorly designed equipment, unsafe design or inadequate safety devices. Unsafe work *practices* include failure to use personal protective equipment, horseplay, driving at excessive speeds, or tampering with safety devices to render them inoperative.(3)

Causes of occupational accidents may be attributed either directly or indirectly to oversights,

omissions, or process and equipment malfunctions as they apply to one or more of the following:

- human factors due to the employee, other employees, clients served, or other individuals;
- situational work factors and practices contributed to by tools, facilities, equipment, and materials;
- environmental factors or conditions caused by noise, vibration, temperature extremes and/or illumination.(3)

An employee safety and health program is directed at eliminating the risks of occupational accidents, injuries and diseases. The program allows intervention in a chain of events that may lead to accidents, injuries and occupational diseases. By preventing or controlling occupational accidents, injuries and diseases through safety and loss control programs, the overall safety of people, equipment and the environment are protected. (4)

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### *Endnotes*

1. *BLR OSHA Compliance Encyclopedia*; Business and Legal Reports, Inc.; Madison, CT. 1993.
2. *Accident Prevention Manual for Industrial Operations - Administration and Programs*; 10th Edition; National Safety Council; 1992.
3. Petersen, Dan; *Techniques of Safety Management*; Second Edition; McGraw Hill Book Company; Newark, NJ. 1978.
4. Bird, Frank E. Jr. and Loftus, Robert G.; *Loss Control Management*; Institute Press; Internal Loss Control Institute; Loganville, GA 30249; 1989; p. 28.

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## Section Two - Employee Safety and Health Program

### Chapter 1

#### Overview of an Employee Safety and Health Program

##### Subchapter 1.2

#### Costs Associated with an Employee Safety and Health Program

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This chapter of Risk Management for Texas State Agencies supplies general information regarding state agency employee safety and health exposures, and techniques and methods to manage and control those exposures. It also identifies additional resources that may be available to assist state agencies in developing or enhancing its employee safety and health program. This chapter is not intended in any way to be a substitute for the advice and guidance of legal counsel, who should always be consulted regarding rights, duties, and responsibilities under the law.

Financial costs associated with implementing an employee safety and health program are reduced considerably if program elements are supported and fully integrated in the agency's organizational structure, standard operating procedures, and if all agency personnel are active participants.<sup>1</sup> Cost considerations that may impact a state agency's employee safety and health program include, but are not necessarily limited to, the following:

- Salary for professional safety staff and administrative support staff;
- Training equipment and training aids;
- Testing and monitoring instruments to detect hazardous or harmful substances, or to monitor illumination, noise or other environmental risk factors;
- Correction of physical hazards that may cause occupational accidents, injuries or diseases;
- Printing costs of forms, checklists, procedures or training materials and manuals;
- Technical books, subscriptions to occupational safety and health publications, lesson plans or other materials;
- Registration fees and travel expenses for attendance at professional development conferences, meetings or seminars;

- Membership dues in professional organizations, such as the Texas Safety Association and the American Society of Safety Engineers.(2,3)

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### *Endnotes*

1. *Public Employees Safety and Health Management*; National Safety Council. 1990.
2. Head, George, L., Editor, Ph.D., CPCU, ARM, CSP, CLU; *Essentials of Loss Control, Volume I & II*; Insurance Institute of America; Malvern, PA. 1989.

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## Section Two - Employee Safety and Health Program

### Chapter 1

#### Overview of an Employee Safety and Health Program

##### Subchapter 1.3

#### Benefits of an Employee Safety and Health Program

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This chapter of Risk Management for Texas State Agencies supplies general information regarding state agency employee safety and health exposures, and techniques and methods to manage and control those exposures. It also identifies additional resources that may be available to assist state agencies in developing or enhancing its employee safety and health program. This chapter is not intended in any way to be a substitute for the advice and guidance of legal counsel, who should always be consulted regarding rights, duties, and responsibilities under the law.

A state agency's employee safety and health program endeavors to protect state employees against harm to life and health, and indirectly to protect agency clients and the public. When an agency takes all the precautions necessary to prevent occupational accidents, injuries and diseases, its efficiency and productivity are also increased. At the same time, the agency sends the positive message to its employees that the agency and the State are concerned about their safety and health on the job.

Benefits of an employee safety and health program are most evident when viewed in terms of cost avoidance and cost savings. Costs associated with occupational accidents, injuries, illnesses and diseases include both direct and indirect costs. Direct costs for the State of Texas and state agencies include workers' compensation administration costs, claim settlement costs, legal defense fees, indemnity payments, medical payments, employee lost time, and replacement costs of damaged property or equipment.(1) Indirect costs include a variety of administrative and management actions devoted to dealing with the consequences of losses.

Efforts to control the frequency and severity of employee safety and health losses are especially beneficial when the hidden or indirect costs typically associated with occupational accidents and injuries are considered. These costs may be substantial and it is to an agency's advantage to consider the long-term savings and cost avoidance that may accrue by implementing a proactive employee safety and health program. Some of these indirect benefits include the following:

- Savings of employees' earning power and avoidance of economic loss to an injured employee and family;
- Avoidance of production schedule delays and workplace inefficiencies resulting from accident-

related down-time, supervisory and/or management time involved in investigating the accident, interviewing witnesses, and analyzing possible causes and corrective actions;

- Avoidance of compensatory time or overtime pay to employees who would have to assume the injured employees' job responsibilities;
- Avoidance of costs and loss of productivity due to the need for additional training and/or initial hire of a temporary or new employee to replace the injured employee;
- Avoidance of administrative and legal time and resources that would have to be spent completing paperwork or engaging in claim procedures;
- Cost avoidance because tools, equipment, facilities or buildings would not sustain damage; and,
- Improved employee morale.(2)

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### *Endnotes*

1. *Public Employees Safety and Health Management*; National Safety Council; 1990

2. Head George, L., Editor, Ph.D., CPCU, ARM, CSP, CLU; *Essentials of Risk Control*, Volume I, Insurance Institute of America; Malvern, PA. 1989.

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## Section Two - Employee Safety and Health Program

### Chapter 1

#### Overview of an Employee Safety and Health Program

##### Subchapter 1.4

##### Technical Safety and Health Operations

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This chapter of Risk Management for Texas State Agencies supplies general information regarding state agency employee safety and health exposures, and techniques and methods to manage and control those exposures. It also identifies additional resources that may be available to assist state agencies in developing or enhancing its employee safety and health program. This chapter is not intended in any way to be a substitute for the advice and guidance of legal counsel, who should always be consulted regarding rights, duties, and responsibilities under the law.

The management specialty commonly known as "safety" is usually made up of two major components: technical safety operations and safety management programs.(1) Although many other titles and various responsibilities are often also included in the term "safety", it is useful to approach the discipline from this dual aspect perspective because necessary resources often fall within these two areas. Occupational health also consists of both technical and management components.

Technical aspects of safety are often catalogued into at least three main parts: engineering; program implementation; and fire science. All three of these primary categories encompass specialties and subspecialties. Specialty practitioners and consultants deal with both broad and narrow safety and health issues.(2)

- **Engineering Specialties** - Engineering specialties are often the domain of the engineer and many safety professionals are either licensed or registered in their state as a Professional Engineer (PE). Local, state and national engineering societies can be a valuable resource, as well as colleges and universities with schools of engineering. In addition, there is a national specialty board, the Board of Certified Safety Professionals, which administers certification exams and continuing education programs.
- **Program Implementation** - Safety and health program implementation is often gained by years of experience in the field or profession, often with a particular industry. In addition, there are a number of national and local safety and health societies and associations where continuing education and training are important components of membership services.

Consultants are also available who are experienced in all or certain aspects of safety and health program implementation or specific industry safety risk exposures and loss control methods.

- **Fire Specialization** - Fire specialization is primarily defined by the multi-volume National Fire Code, as well as additional volumes from the National Fire Protection Association (NFPA).(3,4) Practitioners range from fire prevention to fire suppression to post-fire arson investigation. There is no one academic curriculum, since few colleges offer specific fire science courses, except for the education of firefighters. There are many local chapters of The Society of Fire Prevention Engineers. An extensive listing of organizations that provide assistance to safety professionals is provided at the end of this chapter.

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### *Endnotes*

1. Head, George L., Editor, Ph.D., CPCU, ARM, CSP, CLU; *Essentials of Risk Control, Volume I*; Second Edition; Insurance Institute of America; Malvern, PA. 1989.

2. Laing, Patricia, Editor; *Accident Prevention Manual For Business & Industry: Administration and Programs*; National Safety Council; 1992.

3. *National Fire Codes*; The National Fire Protection Association; 1 Batterymarch Park; P.O. Box 9101; Quincy, MA. 02269-9101.

4. Cote, Arthur, PE, Editor; *Fire Protection Handbook*; National Fire Protection Association; Quincy, MA. 1991.

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## Section Two - Employee Safety and Health Program

### Chapter 1

#### Overview of an Employee Safety and Health Program

##### Subchapter 1.5

#### Safety and Health Management Programs

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### Volume III:

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This chapter of Risk Management for Texas State Agencies supplies general information regarding state agency employee safety and health exposures, and techniques and methods to manage and control those exposures. It also identifies additional resources that may be available to assist state agencies in developing or enhancing its employee safety and health program. This chapter is not intended in any way to be a substitute for the advice and guidance of legal counsel, who should always be consulted regarding rights, duties, and responsibilities under the law.

Safety Management Programs are the counterpart to Technical Safety Operations, and were discussed in the previous section of this chapter as one of the two primary integral components in the field of "safety". Safety management programs are often catalogued into at least four main parts:

- Safety training;
- Risk prevention and loss control;
- Program design; and,
- Motivational programs.(1)

### SAFETY TRAINING

Many accident investigations identify lack of training or inadequate training as a precipitating factor. Supervisors often list additional training as an "action item" on incident/accident reporting forms. Top management often does not understand why the supervisor or "additional duty safety officer" (ADSO) does not provide the proper training to the employee. Although not every supervisor or ADSO is a "natural trainer", the agency safety officer is able to provide resources. There is a safety training "revolution" occurring, with professional safety managers identifying needed training areas and providing the appropriate resource and support to supervisors and ADSOs to conduct the training. Videotapes and preprinted handouts enable trainers to provide effective initial and follow-up training sessions at very low or minimal costs. In addition, networking with other safety management professionals greatly enlarges the "lending library" available to safety managers. Safety training is discussed in greater detail in Chapter 4 of this Section.

## ***RISK PREVENTION AND LOSS CONTROL***

Risk prevention has always been an integral part of an effective employee safety and health program. It is one component of the broader discipline of "risk management" and focuses on methods to prevent a peril or loss from occurring. Prevention measures focus on reducing the frequency of losses. Loss control methods reduce and control the impact a peril has upon an exposure so that the ultimate loss can be eliminated, reduced or controlled.(2) Chapters 6 and 7 of these Guidelines detail specific prevention and loss control measures for certain risk exposures and hazards.

## **PROGRAM DESIGN**

Program design begins with management commitment to a successful employee safety and health program, and often incorporates a team or committee with diverse membership. A consultant with specialized experience can often save valuable time and aid in the initial design of the agency's program. Risk Management Specialists from the Loss Control Section of the State Risk Management Division are available to consult or provide resources to the agency risk manager or safety manager.

## **MOTIVATIONAL PROGRAMS**

A number of factors should be examined by agencies that are considering establishing motivational or incentive programs for safety. The current *General Appropriations Act* provisions, and other pertinent enabling legislation should be reviewed. The culture of the agency and the agency's preference for team motivation versus individual recognition programs are also factors to consider. On a broader perspective, the agency's strategic plan should be reviewed to ensure that the motivational program is in harmony with the agency's strategic planning initiatives. Finally, those agencies that have established a "Texas Quality Service" (TQS) program (known by some agencies as Total Quality Management, Total Quality Service, Continuous Improvement Process, or other similar conventions) should structure the motivational program in keeping with its TQS initiatives.

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### ***Endnotes***

1. Slote, Lawrence, Editor, Eng., ScD., Ph.D., Editor; *Handbook of Occupational Safety and Health*; John Wiley & Sons; New York, NY. 1987.
2. Head, George, L., Editor, Ph.D., CPCU, ARM, CSP, CLU; *Essentials of Risk Control, Volume I*; Insurance Institute of America; Malvern, PA. 1989.

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## Section Two - Employee Safety and Health Program

### Chapter 1

#### Overview of an Employee Safety and Health Program

##### Subchapter 1.6

#### Elements of an Employee Safety and Health Program

Revised: December 2004

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### Volume III:

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This chapter of Risk Management for Texas State Agencies supplies general information regarding state agency employee safety and health exposures, and techniques and methods to manage and control those exposures. It also identifies additional resources that may be available to assist state agencies in developing or enhancing its employee safety and health program. This chapter is not intended in any way to be a substitute for the advice and guidance of legal counsel, who should always be consulted regarding rights, duties, and responsibilities under the law.

Employee safety and health programs usually have a number of elements in common. These common elements are those features that generally are recognized as being necessary for the program to be successful. These common elements may be presented in different ways in different programs, however these elements usually are present in successful programs. Some of the different presentation methods are identified below.

### NATIONAL SAFETY COUNCIL'S FOURTEEN BASIC ELEMENTS

The National Safety Council outlines fourteen basic elements that are common to a successful safety, health and environmental program:

- Senior management commitment and leadership;
- Assignment of responsibility;
- Hazard recognition, evaluation and control;
- Workplace design and engineering;
- Regulation compliance management;
- Occupational health services;
- Information collection;
- Employee involvement;
- Motivation, behavior and attitude recognition, assessment and reinforcement;
- Orientation and training;
- Organizational communication;
- Management and control of external exposures;
- Environmental management;
- Assessments, audits and evaluations.(1)

## **TWCC WORKERS' HEALTH AND SAFETY DIVISION'S SEVEN COMPONENTS**

The Workers' Health and Safety Division, Texas Workers' Compensation Commission, has identified seven components of an effective accident prevention plan for employers of the State:

- A management component with a written safety policy statement and assignment, by position or title, of safety responsibilities and authority;
- An analysis component which includes identified operational and safety hazards;
- A safety program recordkeeping system component;
- A safety and health education and training component;
- A safety audit/review component which includes the identification, by title or position of a qualified person(s) to conduct the audits/reviews;
- An accident investigation component to identify the cause factors of injuries; and,
- A periodic review and revision of the safety program and operational procedures component to determine the effectiveness of abatement measures.(2)

## **OSHA VOLUNTARY GUIDELINES**

The U.S. Occupational Safety and Health Administration has developed voluntary guidelines to assist employers develop and implement safety and health programs. The guidelines are part of OSHA's objective to encourage cooperative, voluntary safety and health activities. These voluntary guidelines provide employers with a model for developing and implementing an employee safety and health program. The guidelines identify four key elements in a safety and health program:

- **Management Commitment and Employee Involvement**(3) - These two items are complementary. Without management commitment, employees will not follow. Without employee involvement, management's desires for an effective employee safety and health program are unfulfilled. In an effective program, employee safety and health are fundamental values of the organization, and therefore management vigorously supports the program. Employee involvement means safety and health protection for all employees.<sup>7</sup> Management commitment and employee involvement are accomplished through the following actions.

- Clearly state the policy;
- Establish goals and objectives;
- Provide visible top-management involvement;
- Insist on employee involvement;
- Assign clear responsibilities;
- Delegate authority and provide resources;
- Provide for accountability; and
- Regularly evaluate and review the program.<sup>3</sup>

- **Worksite Analysis**(4) - This involves a variety of analysis mechanisms designed to identify

existing hazards, and conditions and operations which may create hazards. Effective management actively pursues worksite analysis to anticipate and prevent hazardous occurrences.<sup>7</sup> Worksite analysis is accomplished through the following actions:

- Conduct comprehensive baseline worksite surveys for safety and health;
- Analyze planned and new facilities, processes, materials and equipment;
- Perform routine job hazard analyses;
- Provide for regular on-site safety and health inspections;
- Provide a system for employees to notify management about hazards;
- Provide for investigation of accidents and near-misses; and
- Analyze injury and illness trends over time.<sup>7</sup>

- **Hazard Prevention and Control**(5) - When hazards are identified, the identification process should trigger hazard prevention and control measures. Where practical, hazards are prevented by effective design of the job and job site. Where elimination of the hazard is not possible, the hazards should be controlled to prevent unsafe or unhealthful exposures.<sup>7</sup> Hazard prevention and control are accomplished by the following actions:

- Establish procedures to ensure prevention and control;
- Use engineering techniques where feasible and appropriate;
- Establish procedures for safe work through training, positive reinforcement, correction of unsafe performance, and enforcement through a clearly communicated disciplinary system;
- Use personal protective equipment;
- Establish administrative controls;
- Perform facility and equipment maintenance;
- Plan and prepare for emergencies; and
- Establish a medical program.<sup>5</sup>

- **Safety and Health Training**(6) - Responsibilities of employees with respect to safety and health are addressed by the training program. Training is most effective when incorporated into performance requirements and job practices.<sup>7</sup> Safety and health training are accomplished through the following actions:

- Ensure that employees understand their responsibilities;
- Ensure that supervisors understand their responsibilities; and
- Ensure that managers understand their responsibilities.<sup>6</sup>

The Appendix to this chapter contains a "Safety and Health Program Self-Evaluation Worksheet." This self-rating worksheet may be used to quickly evaluate the overall effectiveness of the agency employee

safety and health program. This self-evaluation should be performed at least annually.

## SUMMARY

A comprehensive employee safety and health program encompasses a broad range of topics and issues. These topics and issues are often presented in different forms, formats and presentation methods. The most prevalent formats are those suggested by the National Safety Council, Workers' Health and Safety Division of the Texas Workers' Compensation Commission, and the U.S. Occupational Safety and Health Administration. However, these programs present the same or similar basic elements for an effective employee safety and health program. This Section of *Risk Management for Texas State Agencies* presents guidelines for the development of a comprehensive employee safety and health program for use by Texas state agencies. In developing these guidelines, the suggestions of the National Safety Council, TWCC Workers' Health and Safety Division, and U.S. Occupational Safety and Health Administration were taken into consideration.

The major components of an employee safety and health program for Texas state agencies, as provided in Volume III, Section Two of *Risk Management For Texas State Agencies* (RMTSA) , include the following:

- Safety Management and Administration;
- Safety Responsibilities;
- Safety Training, Education, and Certification Programs;
- Hazard Identification, Analysis and Accident Reporting;
- Occupational Safety Program; and,
- Occupational Health Program.

Chapters included in this Section provide both general and specific information for the administration of employee safety and health programs by Texas state agencies. Agency executives, risk managers and safety managers should use Section Two of this Volume as a reference and guidance document for work-related safety and health concerns that may affect Texas state agency employees. Although it is not feasible to address every safety and health topic of potential concern to all state agencies, the information contained within this Section should be sufficiently comprehensive to serve as a basic source document which can be supplemented with agency-specific information, as needed.

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## ENDNOTES

1. Gilcrest, T. C., President National Safety Council; *Financial World*; "Reflections on the National Safety Council's 80 Years of Service;" October 26, 1993.

2. *Texas Administrative Code*, TAC 164.4, 'Formulation of Accident Prevention Plan;' Texas Workers' Compensation Commission, Workers' Health and Safety Division.

3. "Safety and Health Program Management Guidelines; Issuance of Voluntary Guidelines"; U.S. Department of Labor, Occupational Safety and Health Administration; *Federal Register 54 (16): 3904 - 3916*; January 25, 1989; Section (c)(1).
4. OSHA Voluntary Guidelines; Section (c)(2).
5. OSHA Voluntary Guidelines; Section (c)(3).
6. OSHA Voluntary Guidelines; Section (c)(4).
7. Bruce, Stephen D., Ph.D.; *How to Meet OSHA's Safety & Health Guidelines*; Business & Legal Reports, Inc.; 39 Academy Street; Madison, CT 06443-1513; p. 1-5 through 1-9.

***Safety & Health Program Self-Evaluation Worksheet***

Name of Agency/Campus/Institution:

\_\_\_\_\_

Name of Safety Manager: \_\_\_\_\_ Address: \_\_\_\_\_ Phone: \_\_\_\_\_ Fax #: \_\_\_\_\_

\_\_\_\_\_

This self-rating worksheet may be used to help evaluate the effectiveness of your workplace safety and health program. This evaluation should be performed at least annually.

Required Elements per State Risk Management Guidelines	(0) Poor	(1) Fair	(2) Good	(3) Very Good	(4) Excellent
1) Written policy/mission statement signed by agency head.					
2) Written performance standards for managers/supervisors/employees.					
3) Worksite safety plans and compliance activities required by State Risk Management Division and all other applicable federal, state and local statutes, rules or standards.					



4) Designated safety manager (full-time or additional duty) with adequate training/resources.					
5) Active safety committees.					
6) Enforced safety standards and practices.					
7) Periodic job-specific health and safety training for employees/supervisors.					
8) Planned periodic safety inspections.					
9) Loss prevention and loss control techniques to minimize risk.					
10) Periodic safety promotion/awareness activities.					
11) Thorough accident investigations and reporting.					
12) Effective claims management policy and procedures.					
13) Return-to-work programs.					
14) New employee safety orientation.					
15) Effective coordination with agency risk manager and agency claims coordinator.					
<b>TOTALS</b>					

Comments:

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Overall Rating:

Combined Total: \_\_\_\_\_ Poor: 0-14; Fair: 15-29; Good: 30-44; Very Good: 45-52; Excellent: 53-60

Name of Rater:

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Division and Phone Number:

---

Signature of Rater: \_\_\_\_\_ Date: \_\_\_\_\_

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## *Section Two - Employee Safety and Health Program*

### **Chapter 1**

#### Overview of an Employee Safety and Health Program

##### Subchapter 1.7

#### Available Resources for Texas State Agencies

Revised: December 2004

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### **Volume III:**

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This chapter of Risk Management for Texas State Agencies supplies general information regarding state agency employee safety and health exposures, and techniques and methods to manage and control those exposures. It also identifies additional resources that may be available to assist state agencies in developing or enhancing its employee safety and health program. This chapter is not intended in any way to be a substitute for the advice and guidance of legal counsel, who should always be consulted regarding rights, duties, and responsibilities under the law.

Throughout the Employee Safety and Health Program section of *Risk Management for Texas State Agencies* (RMTSA),, numerous publications, trade journals, and articles written by professionals in the fields of occupational safety and health are referenced. Furthermore, a number of industry trade associations, professional management associations, nonprofit organizations, and other state agencies have specific expertise, knowledge, and resources relating to occupational safety and health that may provide information and assistance to Texas state agencies. The State Office of Risk Management encourages state agency risk managers and safety officers to use additional resources in developing and implementing their employee safety and health program.

For convenience and ease of reference, the following list includes publications, agencies, and organizations that state agencies may find useful. This list is not intended to be exhaustive or all-inclusive. State agencies are encouraged to identify other resources that are helpful to them in developing and administering their employee safety and health program and inform the State Office of Risk Management of those resources. As additional resources are identified, State Risk Management Program staff will include them in future updates of this chapter of *Risk Management for Texas State Agencies*.

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### **PUBLICATIONS**

InjuryAccident Facts, 20041992 Edition; National Safety Council (also available on CD-ROM)

Accident Prevention Manual for Business & Industry, Administration & Programs, 12th10th Edition; Laing, Patricia, ed.; National Safety Council; 1992.

Accident Prevention Manual for Business & Industry, Engineering & Technology, 12th10th Edition; Laing, Patricia, ed.; National Safety Council; 1992.

*Note: Both Accident Prevention Manuals are available from NSC on CD-ROM*

*Compliance Audits: Essential Checklists for OSHA, EPA & Other Key Agencies*; J. J. Keller & Assoc.; P.O. Box 368; Neenah, WI 54947-0368.

*Encyclopedia of Safety & Health Training, An OSHA Compliance Handbook*; Bruce, Stephen D.; Business & Legal Reports, Inc.; 39 Academy Street; Madison, CT 06443; 1992.

*Essentials of Risk Control, Volumes I & II*; Head, George L., ed.; Insurance Institute of America; P.O. Box 3016; Malvern, PA 19355-0716; 1989.

*Factory Mutual System, Loss Prevention Data*; Factory Mutual Engineering Corporation; 1151 Boston Providence Highway; Norwood, MA 02062.

*Fire Protection Guide to Hazardous Materials*, 10th Edition; National Fire Protection Association; P. O. Box 9101; Quincy, MA 02269-9101; 1991.

*Fire Protection Handbook*, 17th Edition; National Fire Protection Association; P.O. Box 9101; Quincy, MA 02269-9101; 1991.

*Fundamentals of Industrial Hygiene*, Third Edition; Plog, Barbara A., ed.; National Safety Council; Itasca, NY; 1988.

*Governmental Risk Management Manual*; Gerber, J. and N. Roos; Risk Management Publishing Company; 1986.

*Guidebook to Basic Safety Programming*; Colvin, Raymond J.; Safety Training Dynamics, Inc.; P.O. Box 2213; Brockton, MA; 1984.

*Guidebook to Successful Safety Programming*; Colvin, Raymond J.; Lewis Publishers, Inc.; P.O. Drawer 519; Chelsea, MI 48818; 1992.

*Handbook of Training Techniques: How to Develop & Deliver Effective Programs*; Gallup, David A.; Business & Legal Reports, Inc.; 39 Academy Street; Madison, CT 06443; 1992.

*How to Meet OSHA's Safety & Health Guidelines*; Bruce, Stephen D.; Business & Legal Reports, Inc.; 39 Academy Street; Madison, CT 06443; 1992.

*How to Write a Company Safety Manual*; Tompkins, Neville C., ed.; Standard Publishing Corporation; 155 Federal Street; Boston, MS 02110; 1993.

*Industrial Safety Data Sheets*; National Safety Council; 444 North Michigan Ave; Chicago, IL 60611.

*Industrial Hygiene Management*; Garrett, J. and L. Cralley; John Wiley & Sons Publishers; New York, NY; 1988.

*Life Safety Code*; National Fire Protection Association; 1 Batterymarch Park; Quincy, MA 02269; 1991.

*Loss Control Management*; Bird, Frank E. Jr. and Robert G. Loftus; Institute Press Division, International Loss Control Institute; P.O. Box 345; Loganville, GA 30249; 1989.

*Occupational and Environmental Safety Engineering and Management*; Kavanian, H.R. and C. A. Wentz, Jr.; Van Nostrand Reinhold Publishers; New York; 1990.

*OSHA Compliance Encyclopedia*; Business & Legal Reports, Inc.; 39 Academy Street; Madison, CT 06443.

*OSHA Reference Manual, Volume I - Occupational Safety & Health Compliance Simplified*; The Merritt Company; P.O. Box 955; Santa Monica, CA 90406-9943; 1991.

*OSHA Reference Manual, Volume II - Safety Programming*; The Merritt Company; P.O. Box 955; Santa Monica, CA 90406-9943; 1991.

*Out in Front: Effective Supervision in the Workplace*; Dennis, Leslie E. and L. Meredith; National Safety Council; 1990.

*Practical Risk Management*; Warren, David and Ros McIntosh; Practical Risk Management, Inc.; P.O. Box 10093; Oakland, CA 94610; 1989.

*Public Employee Safety & Health Management*; North, Carol and Patricia Laing, eds.; National Safety Council; Itasca, IL 60143-3201; 1990.

*Public Sector Risk Management*; Public Risk Management Association; 1117 N. 19th St., Suite 900; Arlington, VA 22209; 1990.

*Risk Management and Loss Control Manual for Local Government*; Morrison, Don; The Local Government Institute; P.O. Box 88762; Seattle, WA 98138-2762; 1988.

*Risk Management Manual*; The Merritt Company; P.O. Box 955; Santa Monica, CA 90406.

*Safety & Health Guidelines*; Bruce, Stephen D.; Business & Legal Reports; 39 Academy Street; Madison, CT 06443; 1990.

*Safety Committee Handbook*; Business & Legal Reports, Inc.; 39 Academy Street; Madison, CT 06443; 1993.

*Supervisors Safety Manual*, Seventh Edition; National Safety Council; Chicago, IL 60611; 1991.

*Supervisor's Safety Meetings Handbook*; Kelly, Barbara; Business & Legal Reports, Inc.; 39 Academy Street; Madison, CT 06443; 1992.

*System Safety Engineering and Management*, 2nd Edition; Roland, Harold E. and Brian Moriarty; John Wiley & Sons, Inc.; New York.

*Techniques of Safety Management*, 2nd Edition; Petersen, Dan; McGraw Hill, Inc.; New York, NY; 1978.

*Training and Development Handbook*, Third Edition; American Society for Training and Development; Craig, Robert L., ed.; McGraw Hill Book Company; New York, NY; 1987.

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## **STATE AGENCIES**

### **General Services Commission**

Fire and Safety Office  
1711 San Jacinto  
P.O. Box 13047  
Austin, TX 78711-3047  
(512) 463-3445

### **State Office of Risk Management**

William P. Clements, Jr. Building, 6th Floor  
300 W. 15th St.  
P.O. Box 13777  
Austin, TX 78711  
(512) 475-1440

### **Texas Department of Insurance**

State Fire Marshall  
333 Guadalupe Street  
P.O. Box  
149104 Austin, TX 78714-9104  
(512) 463-6169

## **Texas Department of Health**

1100 West 49th Street  
Austin, TX 78756  
(512) 458-7111

## **Texas Natural Resources Conservation Commission**

12100 Park 35 Circle  
P.O. Box 13087  
Austin, TX 78711-3087  
(512) 239-1000

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## **OTHER ORGANIZATIONS**

### **American Board of Industrial Hygiene**

4600 West Saginaw, Suite 101  
Lansing, MI 48917

### **American Chemical Society**

1155 16th Street, NW  
Washington, DC 20036

### **American Conference of Governmental Industrial Hygienist**

6500 Glenway Avenue, Bldg. D-7  
Cincinnati, OH 45211

### **American Federation of State, County and Municipal Employees (AFSCME)**

Health and Safety-Department of Research  
1625 L Street NW  
Washington, DC 20036  
(202) 429-1232

### **American Industrial Hygiene Association**

P.O. Box 8390  
345 White Pond Drive  
Akron, OH 44320  
(216) 873-2442

### **American Institute of Hazardous Materials Management**

900 Isom Road  
San Antonio, TX 78216-4102  
(210) 340-9016

### **American National Red Cross**

17th and "D" Streets, NW

Washington, DC 20006

**American National Standards Institute(ANSI)**

1430 Broadway  
New York, NY 10018  
(212) 642-4900

**American Public Health Association**

1015 15th Street, NW  
Washington, DC 20005

**American Society For Testing and Materials(ASTM)**

1916 Race Street  
Philadelphia, PA 19103  
(215) 299-5400

**American Society of Safety Engineers**

1800 East Oakton Street  
Des Plaines, IL 60018-2187  
(708) 692-4121

**American Society for Training and Development**

Box 1433, 1630 Duke Street  
Alexandria, VA 22313

**Board of Certified Hazard Control Management**

8009 Carita Court  
Bethesda, MD 20817

**Board of Certified Safety Professionals**

208 Burwash Avenue  
Savoy, IL 61874-9510  
(217) 359-9263

**Environmental Protection Agency**

Region 6 - Allied Bank Tower  
1445 Ross Avenue  
Dallas, TX 75202  
(214) 655-6700

**Environmental Protection Agency, Public Information Center**

401 M. Street, NW  
Washington, DC 20460  
(202) 260-2080



**Factory Mutual Engineering**

1151 Boston-Providence Turnpike  
Norwood, MA 02062

**Industrial Health Foundation, Inc.**

34 Penn Circle W  
Pittsburgh, PA 15206

**Industrial Risk Insurers**

85 Woodland Street  
Hartford, CT 06102

**Insurance Institute of America**

720 Providence Road  
Malvern, PA 19355-2100  
(215) 644-2100

**National Fire Protection Association**

1 Batterymarch Park  
P.O. Box 9101  
Quincy, MA 02269-9101  
800) 344-3555

**National Institute for Occupational Safety and Health (NIOSH)**

Office of Publications Dissemination  
4676 Columbia Parkway  
Cincinnati, OH 45226  
(513) 533-8287

**National Institute for Occupational Safety & Health**

1200 Main Tower Building  
Room 1835  
Dallas, TX 75202  
(214) 320-2400

**National Mine Health and Safety Academy**

U.S. Department of Labor  
P.O. Box 1166  
Beckley, WV 25802-1166  
(304) 256-3257

**National Safety Council**

(Texas Affiliate - Texas Safety Association)  
1121 Spring Lake Drive  
Itasca, IL 60143-3201

(800) 621-7619

**National Safety Management Society**

3871 Piedmont Avenue  
Oakland, CA 94611  
(704) 645-5229

**National Safe Workplace Institute**

122 South Michigan Avenue, Suite 1450  
Chicago, IL 60603

**Occupational Safety and Health Administration (OSHA)**

Region VI  
525 Griffin Street, Room 602  
Dallas, TX 75202  
(214) 767-4758

**Public Risk Management Association (PRIMA)**

1815 N. Fort Myer Drive, Suite 1020  
Arlington, VA 22209-1805  
(703) 528-7701

**Risk and Insurance Management Society, Inc.® (RIMS)**

655 Third Avenue  
New York, NY 10017-5637  
(212) 286-9292

**Society of Fire Protection Engineers**

60 Batterymarch Street  
Boston, MA 02210  
(617) 482-0686

**System Safety Society**

Technology Trading Park  
Five Export Drive, Suite A  
Sterling, VA 22170-4421

**Texas Safety Association**

(Texas Affiliate of the National Safety Council)  
P.O. Box 149179  
Austin, TX 78714-9179  
15803 Windermere Drive, Suite 401  
Pflugerville, TX 78660  
(800) 688-1005  
(512) 374-9186

**Underwriters Laboratories, Inc. (UL)**

333 Pfingsten Road  
Northbrook, IL 60062  
(708) 272-8800

**World Health Organization**

Avenue Appia  
1211 Geneva 27  
Switzerland  
22 791-2111

**World Safety Organization**

P.O. Box 518  
Warrensburg, MO 64093  
(816) 747-3132

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## Section Two - Employee Safety and Health Program

### **Chapter 1**

#### Overview of an Employee Safety and Health Program

##### Subchapter 1.8

##### Executive Order

Released: December 2004

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### **Volume III:**

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This chapter of Risk Management for Texas State Agencies supplies general information regarding state agency employee safety and health exposures, and techniques and methods to manage and control those exposures. It also identifies additional resources that may be available to assist state agencies in developing or enhancing its employee safety and health program. This chapter is not intended in any way to be a substitute for the advice and guidance of legal counsel, who should always be consulted regarding rights, duties, and responsibilities under the law.

On June 29, 1995, George W. Bush, Governor of the State of Texas, signed Executive Order GWB 95-8.

The Executive Order relates to the protection of the health and safety of the employees of the State of Texas, as well as the citizens served by those employees. The Order promotes a safe work environment and the preservation of state property by requiring the development and implementation of comprehensive, written risk management and safety programs by state agencies.

A copy of Executive Order GWB 95-8 is attached. All state employees should be informed of the intent and purpose of the Executive Order.

**EXECUTIVE ORDER  
BY THE  
GOVERNOR OF THE STATE OF TEXAS**

**THE STATE OF TEXAS  
EXECUTIVE DEPARTMENT  
OFFICE OF THE GOVERNOR  
AUSTIN, TEXAS**

**EXECUTIVE ORDER  
GWB 95-8**

**RELATING TO WORKPLACE SAFETY AND HEALTH OF STATE EMPLOYEES,  
CITIZENS SERVED, AND PRESERVATION OF STATE PROPERTY**

**WHEREAS**, it is the policy of the State of Texas to provide a safe and healthy workplace for all state employees, citizens served, and to preserve state property; and

**WHEREAS**, workplace deaths, injuries and illness and destruction of property produce human suffering, economic and social losses and impair the operating efficiency of state government; and

**WHEREAS**, workplace deaths, injuries, illnesses, and loss of state property can be reduced or eliminated by systematic planning, training, safe work practices and the effective use of prevention and control measures; and

**WHEREAS**, occupational death, accident, illness, and property loss prevention requires management and employee commitment, accountability, cooperation, and leadership at all levels of state government; and

**WHEREAS**, laws, regulations and sound business practices pertaining to safety and health in the workplace and preservation of property apply to the operation of state government; and

**WHEREAS**, state government should lead by example by complying with all applicable federal, and state laws, standards, rules, regulations and guidelines;

**NOW, THEREFORE, I, GEORGE W. BUSH**, Governor of the State of Texas, by the authority vested in me by the Constitution and the laws of this state, do hereby:

Proclaim that all state agencies, institutions and universities of higher education must develop and implement comprehensive written risk management/safety programs whose purpose is to attain the following objectives:

1. Minimize the risk of accidental job related deaths, occupational injuries and illnesses, and state property losses by the use of recognized loss prevention and control techniques.

2. Establish written performance/accountability standards and objectives to reduce deaths of both employees and citizens served, injuries and illnesses, and to conserve property resources of the state.
3. Provide adequate safety and health and property preservation training and education for managers, supervisors and employees.
4. Establish risk management/safety and health committees consisting of representatives from all levels and functional areas of the organization.
5. Promote work practices that ensure preservation of state property and safety of employees and citizens.
6. Establish a procedure for conducting periodic risk management/safety and health inspections so that potential hazards are detected and corrected or controlled in a timely manner.
7. Comply with all state and applicable federal laws, standards, rules, regulations and guidelines regarding employee and citizen safety and health and property preservation.
8. Designate an individual to serve as the organization's risk manager/safety officer to assist in directing its loss prevention program.
9. Promote effective investigation and management of workers' compensation claims and the prompt return to work of injured employees.

**FURTHER**, all state agencies' written risk management/safety and health programs must be reviewed and approved by the State Risk Management Division.

The State Risk Management Division will report biennially to the Legislature for agencies within their jurisdiction on progress in achieving improved workplace safety and health and property preservation in state government.

All state employees must be informed of the **Executive Order**, of its intent and requirements for fostering a safe and healthy workplace and preservation of state property throughout state government.

IN TESTIMONY WHEREOF, I have  
hereunto set my hand and caused the Great  
Seal of the State of Texas to be affixed.  
Done at the Capitol in the City of Austin  
this 29 day of June, 1995.

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GEORGE W. BUSH  
Governor of Texas

By the Governor

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ANTONIO GARZA, JR.  
Secretary of State

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## Section Two - Employee Safety and Health Program

### Chapter 2

#### Safety Management and Administration

##### Subchapter 2.0

##### Introduction

Revised: December 2004

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### Volume III:

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This chapter of Risk Management for Texas State Agencies supplies general information regarding state agency employee safety and health exposures, and techniques and methods to manage and control those exposures. It also identifies additional resources that may be available to assist state agencies in developing or enhancing its employee safety and health program. This chapter is not intended in any way to be a substitute for the advice and guidance of legal counsel, who should always be consulted regarding rights, duties, and responsibilities under the law.

Safety and health programs have been in existence for many years and consequently have been extensively evaluated. Successful programs typically are formal systems that encourage all employees to participate actively, report hazards, and contribute to safety solutions. These successful programs all have one thing in common, which is active, visible support and involvement in the program by top-level management.(1) Commitment, guidance, and direction from top-level executive management are essential to convey the message to employees that management actively supports the program. Management support and employee involvement is the one common thread that runs throughout successful employee safety and health programs.(2)

Factors that are critical to the employee safety and health program's success are:

1. endorsement of a safety policy by top management;
2. understanding and compliance with safety and health policy objectives and program activities by all employees; and
3. the consistency of program elements with other agency goals and objectives.(3)

This chapter provides assistance for Texas state agencies in establishing a successful employee safety and health program. The chapter concentrates on management and administration of the program. Proven techniques of safety management are discussed, as well as administrative matters unique to Texas state agencies.

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### *Endnotes*



1. Bruce, Stephen D., ed.; “Model Safety Policies” in *OSHA Compliance Encyclopedia*, Volume I; Business & Legal Reports, Inc.; July 1993; pp. 510-1 - 510-5.
  2. Colvin, Raymond J.; “Resources” in *The Guidebook to Successful Safety Programming*; Lewis Publishers, Inc.; 1992; pp. 197-199.
  3. Bruce, Stephen D., ed.; pp. 510-1 - 510-5.
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## Section Two - Employee Safety and Health Program

### Chapter 2

#### Safety Management and Administration

##### Subchapter 2.1

#### The Safety and Health Policy Statement

Revised: December 2004

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### Volume III:

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This chapter of Risk Management for Texas State Agencies supplies general information regarding state agency employee safety and health exposures, and techniques and methods to manage and control those exposures. It also identifies additional resources that may be available to assist state agencies in developing or enhancing its employee safety and health program. This chapter is not intended in any way to be a substitute for the advice and guidance of legal counsel, who should always be consulted regarding rights, duties, and responsibilities under the law.

The underlying theme presented in this chapter underscores the entire program: Although management makes the decisions and provides the impetus for developing and implementing the program, the employees ultimately make the program successful. Therefore, the challenge to management is to establish a program in which the employees participate in ownership of the program. Unless the employees perceive the need for a safety and health program, and unless the employees take responsibility to ensure that safety policies, procedures, and practices are followed, the program will not be successful. The program must become an *employees* safety and health program.

The OSHA voluntary guidelines for employee safety and health program management provides the following recommendation regarding a safety and health policy statement:

- State clearly a worksite policy on safe and healthful work and working conditions, so that all personnel with responsibility at the site and personnel at other locations with responsibility for the site understand the priority of safety and health protection in relation to other organization values.(1)

The above OSHA guideline emphasizes the fact that a statement of policy is the foundation of safety and health management. The policy communicates the value in which safety and health protection is held within the culture of the organization, and it becomes the point of reference for all decisions affecting safety and health.(2)

Many safety professionals recognize that the first step toward developing a safety and health program is the development of a written policy statement.<sup>3</sup> The safety and health policy statement provides

employees with a clear message that their employer supports the establishment and maintenance of a safe and healthful work environment. The policy statement serves as a declaration of the agency's commitment to take action to reduce the incidence of work-related injury, illness and disease. A policy statement also provides management with a tool to clearly define and communicate its commitment to provide employees with a safe and healthful workplace. The policy statement is an opportunity to openly communicate support of the employee safety and health program throughout all levels of the organization.

There is a considerable amount of flexibility in the way in which a policy statement is written. Policy statements may be brief (4) or they may be more comprehensive. The approach an agency takes will typically be determined by the types of safety and health exposures and issues prevalent within that organization. The text of most policy statements are usually short. A sample policy of 248 words in length is provided at the end of this chapter. The document's language is directed toward the majority of the workforce and is simply and concisely worded. The message is conveyed that the agency as an employer is concerned about the safety and well-being of its employees within the work environment. (5)

Because the policy statement is usually brief, inclusion of other program elements, such as listing management and employee's responsibilities, are generally not explained in this document. Employee responsibilities, procedures and an outline of the program are usually provided in other program documents which are developed and published separately. Other program documents include such materials as safety and health manuals, procedures, workrules, or other relevant information that become part of the program. Refer to Chapter 3 for a detailed discussion of safety responsibilities.

Some examples of statements that may be incorporated into an agency's safety policy are the following:

- The primary concern and objective of the agency's employee safety and health program is to provide a safe and healthy work environment for its employees.
- All reasonable efforts will be made to provide a safe and healthy environment for all employees.
- The agency head agrees to personally support and be actively involved in the program.
- The agency intends at a minimum to comply with all applicable safety and health laws, rules, regulations and standards.
- Agency employees are expected to follow all applicable safety and health laws, and agency safety procedures and standards.<sup>5</sup>

Ideally, the policy statement should be signed by the agency's top executive. The policy statement and the entire employee safety and health program should be explained to all new employees during the initial employee orientation. The policy statement should also be included in the employee handbook or

manual, if supplied by the agency. The policy statement should also be periodically printed in employee newsletters or publications, and should be prominently displayed in appropriate locations within the agency.

### **SAMPLE SAFETY POLICY**

As an employee of (agency name), you are the most valuable and important resource of this agency. The (agency name) cannot perform its vital public mission for the citizens of Texas without the enthusiastic, energetic, professional, and dedicated work performed by every one of our employees.

The safety and health of all employees are a major concern at (agency name). I/We promise to make every reasonable effort to provide all employees with a safe and healthy workplace. Each year accidents, injuries and illnesses have caused suffering and financial loss to employees of this agency and their families. In addition, accidents, injuries and illness keep us from providing full service to the people of Texas who depend on us. A safe and healthy workplace is important for everyone. A safe and healthy workplace cannot happen by itself. Therefore, safety is everyone's responsibility, and everyone, without exception, is personally accountable to help and support the employee safety and health program of this agency.

I/We personally am/are committed to safety and health, and will do everything I/we can to support and promote a safe and healthy workplace. It is my/our intent that this agency, at a minimum, comply with all applicable safety and health laws, rules, regulations and standards; to take no shortcuts when it comes to safety and health; and to give safety and health priority consideration when it comes to making decisions. If everyone does their part, (agency name) will become an even safer place for everyone to work.

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Signature, Agency Head

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Signature, Head of Governing Board (optional)

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#### ***Checklist For Texas State Agencies***

- |   |     |    |
|---|-----|----|
| 1. Does the agency have a safety and health policy statement? | Yes | No |
| 2. Is the policy in writing and signed by the agency head?    | Yes | No |

3. Does the policy statement address management's commitment to provide employees with a reasonably safe and healthful workplace?	Yes	No
4. Does the policy statement specify that safety is the responsibility of each individual?	Yes	No
5. Is the safety and health policy statement communicated to all employees?	Yes	No

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### *Endnotes*

1. "Safety and Health Program Management Guidelines; Issuance of Voluntary Guidelines"; U.S. Department of Labor, Occupational Safety and Health Administration; *Federal Register* 54 (16): 3904 - 3916; January 25, 1989; Section (c)(1)(i).
  2. Bruce, Stephen D., Ph.D.; *How to Meet OSHA's Safety & Health Guidelines*; Business & Legal Reports, Inc.; 39 Academy Street; Madison, CT 06443-1513; p. 3-2.
  3. Tompkins, Neville C.; "Safety Management"; *Occupational Health & Safety*; January 1992; pp. 29-35, 59.
  4. Colvin, Raymond J.; *The Guidebook to Successful Safety Programming*; Lewis Publishers; Chelsea MI, 1992; p. 198
  5. Potemkin, Peter E.; "How To Set Up a Loss Prevention Program;" *Public Sector Risk Management*; Public Risk Management Association; Arlington, VA. 22209; 1990. pp 1-IV through 4-IV.
  6. Colvin, Raymond J., P.E., C.S.P.; *The Guidebook to Basic Safety Programming*; Safety Training Dynamics, Inc.; P.O. Box 2213; Brockton, MA. 1984. 17.1-1.
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## Section Two - Employee Safety and Health Program

### **Chapter 2**

#### Safety Management and Administration

##### Subchapter 2.2

#### Agency Safety and Health Manual

Revised: December 2004

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### **Volume III:**

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This chapter of Risk Management for Texas State Agencies supplies general information regarding state agency employee safety and health exposures, and techniques and methods to manage and control those exposures. It also identifies additional resources that may be available to assist state agencies in developing or enhancing its employee safety and health program. This chapter is not intended in any way to be a substitute for the advice and guidance of legal counsel, who should always be consulted regarding rights, duties, and responsibilities under the law.

An essential requirement of an employee safety and health program is that every employee understand the elements of workplace safety and health programs, procedures and practices. A safety and health manual is a convenient format for documenting these elements. A safety and health manual also provides information about particular work situations that have a risk or loss potential. Therefore, a safety and health manual should be developed to reflect the specific needs of the agency. It should be flexible and proactive to respond to situations that may arise in the work environment.

### **PURPOSE OF A SAFETY AND HEALTH MANUAL**

The safety and health manual is a reference document that serves as an important resource for general and specific safety and health program information. A safety manual alone cannot be expected to influence or change the behaviors of employees and supervisors regarding safety and health. However, a well-prepared manual can provide valuable information upon which a safety and health education and training program can be developed. Without an agency-specific safety and health manual, the safety and health staff will have difficulty communicating program elements to employees. Since the manual is a communications tool, it should be made accessible to all employees.

No two safety manuals are alike. However, all manuals serve a common purpose to provide employees with access to safety and health-related resources and information. The primary function of the manual is to present information regarding safety and health programs, policies, procedures, and standards. This information is developed to assist employees in their efforts to prevent accidents and reduce occupational safety and health risk exposures. The manual also is an indication of the emphasis given by the agency to employee safety and health. The manual serves as a record that the agency takes the

employee safety and health program seriously. Employees should be expected to understand and follow all safety policies, procedures, and practices provided in the manual.<sup>1</sup>

The following are several additional reasons to develop a safety and health manual:

- **Present information** - Presenting safety and health information is perhaps the most basic and obvious purpose of the manual. Information presented can vary widely, as can the depth of treatment in each area. The manual should do a thorough job of presenting relevant safety and health information that is specific to the agency's needs and the needs of employees.
- **Stress the importance of safety to employees** - A major component of the employee safety and health program is to reinforce the practice of safe behavior. The safety and health manual sets forth standards of safe conduct employees are expected to follow in carrying out their jobs.
- **Save time and money** - Time savings result because less time is spent handling accidents and emergencies, filling out forms and answering questions about safety. Safety information provided in the safety and health manual is an investment because accidents that are avoided save time and money that would be spent paying for associated costs.
- **Boost morale** - Following distribution of a safety and health manual, morale generally improves in a safety-conscious organization because employees feel positive about management's concerns for safety.
- **Meet legal and procedural needs** - The manual helps meet legal and procedural requirements for the agency by providing a written record of safety and health policies, procedures and standards.<sup>1</sup>

Regarding legal considerations, the manual provides a definite policy statement and specific procedures that reflect the agency's philosophy toward safety and health. The manual shows the agency's intent that employees have ready access to safety information. Therefore, the manual can provide good faith evidence that the agency promotes and encourages safety and health in the workplace. However, the manual also can become a "two-edged sword" if the agency does not fulfill its responsibilities as stated in the manual. Because of the legal implications associated with the manual, legal counsel should be consulted when developing or revising employee safety and health manuals.

## **FORMATTING AND STRUCTURAL CONSIDERATIONS WHEN WRITING A MANUAL**

There are several items which, if considered prior to starting the writing process, will aid the actual preparation and subsequent updates of the manual. These formatting and structural considerations include the following:

- **Ease of Use** - If the manual or handbook is easy to use, update and locate, employees are more likely to use it. One practical, popular format is a three-ring binder, which is easy to update. The outline and structure of the manual, whether it is functional or alphabetical, is another important consideration relative to ease of use.
- **Design** - Some consideration should be given to the physical design of the document. A distinctive color with an easy to read title printed on both the spine and cover of the binder is helpful. Cover art, chapter or section headings and subheadings, typefaces, page layout and graphics are several design considerations to take into account.
- **Page Numbering System** - This apparently insignificant item may become a major problem when it comes time to prepare updates. If pages are numbered consecutively, it is hard to make changes without redoing the entire book. To overcome this problem, a decimal system allows new pages to be easily inserted. For instance, the first chapter might have section or page numbers 1.1, 1.2, 1.3 and so on, while the next chapter has numbers 2.1, 2.2, 2.3, etc.
- **Date System** - For ease of updating, each page of the manual should contain the date of approval or adoption of the topic being presented. By providing this date, and the dates of subsequent revisions, it becomes easier to update the manual.
- **Writing** - All writing should be clear, concise, complete and consistent. Avoid phrases such as "Employees are encouraged to wear eye protection." Emphasis should be placed on direct communication of what is expected of employees, such as "All employees are expected to wear eye protection in the shop area."
- **Organization** - In addition to specific subject and topical materials, some or all of the following may be included in the manual:
  - *Title page.*
  - *Introduction* - May include a purpose statement.
  - *Table of Contents* - Detailed enough to allow readers to go directly to the section or chapter containing information they are seeking.
  - *Index* - In some cases more than one entry per topic may be helpful to the user, such as cross-referencing.
  - *Authorization* - Individual content materials should be officially signed by the agency safety officer or other appropriate agency officials.
  - *Updating* - Include a standard page for changes in which recipients can document all changes that are made in the manual. This will assist in confirming that all manual updates have been made.(2,3) The safety and health manual should be updated on an annual basis.

## MANUAL TOPICS



Because of the diversity of size, scope of operations, number of separate geographical locations, and unique agency needs, the content of one agency's manual may be different from that of other agencies. However, certain subjects and topics should be common to all state agencies. The following should be included in every state agency's safety and health manual:

- **Safety and Health Policy Statement** - The most important source document that is fundamental to the safety and health program is the safety and health policy statement. Chapter 2.1 discusses the policy statement in greater detail.
- **Assignment of Duties, Responsibility, Authority, and Staffing** - Employees at every level have a responsibility for making the safety and health program a success. Individual duties and responsibilities should be spelled out. Levels of responsibility include, but are not limited to: governing board, agency head, division heads, risk manager, supervisors, employees, safety officers and additional duty safety officers (ADSOs). All employees, regardless of level, have responsibility for safety and health as outlined in the policy. Responsible safety and health positions should be identified and assigned specific duties and responsibilities for program management and administration. This subject is discussed in further detail in Chapter 3 of this Section.
- **Hazard Identification, Reporting and Evaluation** - The program should have a systematic method to identify, report and evaluate all safety and health hazards present in the workplace. This requires a mechanism for employees to report unsafe conditions and a regular, ongoing program to inspect and survey the workplace for new or changing conditions in work processes. Refer to Chapter 5 for further details.
- **Employee Education, Training, and Safety Professional Certification** - Employee training begins when a new employee is hired and continues on a regular basis throughout an employee's career. Certain safety training is required by law, and includes record-keeping requirements. It is a good practice to keep records of all training. Furthermore, key employees involved in management and administration of the program should be encouraged to participate in continuing professional education and certification as safety professionals. Chapter 4 of this Section provides additional information.
- **Safety and Health Committee** - An active safety committee is also important to the success of the safety and health program. The committee should represent a broad cross section of the agency workforce in order to involve employees at all levels and in all divisions, departments, and sections. Chapter 2.9 discusses this topic in more detail.
- **Occupational Safety Program** - Every aspect of the work environment should be analyzed and appropriate standards or procedures developed to address occupational safety and accident prevention for all employees exposed to potentially hazardous conditions. Chapter 6 presents occupational safety information that may be relevant to state agencies.

- **Occupational Health Program** - As with occupational safety, all aspects of the work environment should be analyzed for exposure to potential health hazards, and appropriate procedures or standards developed to prevent or minimize employee exposure.(5) Chapter 7 discusses many of the occupational health exposures that may be of concern to state agencies.

### ***CHECKLIST FOR TEXAS STATE AGENCIES***

1. Does the agency have a safety and health manual that specifically addresses the agency's unique exposures and hazards?	Yes	No
2. Is the manual in a format that is easy to update?	Yes	No
3. Does the manual include the following:	Yes	No
A. A policy statement signed by the agency head?	Yes	No
B. Assignment of duties, responsibilities, authority and staffing?	Yes	No
C. A hazard identification, reporting and evaluation system?	Yes	No
D. An employee education, training and professional certification program?	Yes	No
E. A safety and health committee?	Yes	No
F. Specific workplace procedures, regulations, standards and practices that address occupational safety exposures?	Yes	No
G. Specific workplace procedures, regulations, standards and practices that address occupational health exposures?	Yes	No

### ***Endnotes***

1. "How To Write Your Company Safety Manual"; *BLR OSHA Compliance Encyclopedia*; Business and Legal Reports, Inc.; Madison, CT. 1993. Section 320.
2. *Public Employee Safety and Health Management*; National Safety Council; 1990. p. 104.
3. Barbieri, John P.; "Employee Safety Manuals"; *Public Sector Risk Management*; 21-IV to 22-IV.
4. Thompkins, Neville C.; *How to Write a Safety Policy Manual*; Standard Publishing Corp.; Boston, MA 1993; pp. 231

5. Bruce, Stephen D., Ph.D.; *How To Meet OSHA's Safety and Health Guidelines*; Business & Legal Reports, Inc.; Madison, CT. 1992.

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## Section Two - Employee Safety and Health Program

### Chapter 2

#### Safety Management and Administration

##### Subchapter 2.3

#### Safety and Risk Management Relationship

Revised: December 2004

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### Volume III:

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This chapter of Risk Management for Texas State Agencies supplies general information regarding state agency employee safety and health exposures, and techniques and methods to manage and control those exposures. It also identifies additional resources that may be available to assist state agencies in developing or enhancing its employee safety and health program. This chapter is not intended in any way to be a substitute for the advice and guidance of legal counsel, who should always be consulted regarding rights, duties, and responsibilities under the law.

"Risk management" is one of the many specialties that exists within the field of general management. "Management" is typically defined as the process of planning, organizing, staffing, leading, and controlling human and physical resources in order to achieve the organization's objectives and goals.<sup>1</sup> A "risk exposure" is the possibility of loss or injury because of some peril or other cause of a loss.<sup>2</sup> Therefore, "risk management" by definition of its component terms is the management process of planning, organizing, staffing, leading, and controlling an organization's resources to minimize the possibility of loss or injury from various causes of loss. Simply stated, risk management is the process of identifying and controlling an organization's losses. An organization that controls risks seeks to minimize and control its exposures to loss.

"Safety" is one of the many specialty fields that exists within general management. When used in its most commonly recognized sense, "safety" is the condition of being secure from the threat of danger, physical harm, injury or loss.<sup>3</sup> Extending the definition to the work environment, safety is a condition or practice that seeks to protect individuals and organizations from accidental or physical harm, injury or loss. The field of "occupational safety" as a profession, therefore, is defined as the discipline that seeks to plan, organize, staff, lead and control an organization's resources to make the organization free or secure from the threat of physical danger, harm or loss.

To safety and health professionals, prevention of occupational accidents, injuries and diseases is the primary focus of their work. In a purely technical and philosophical sense, all accidents and most exposures to disease can be prevented from occurring through some type of risk prevention or control method. Realistically however, all accidents and exposures to disease are not prevented, and as a result employee injuries and occupational diseases do occur. The risk management professional recognizes the importance of risk prevention and pre-injury loss control efforts. The risk management professional

also plans for the eventuality of employee injuries and occupational diseases occurring, and therefore provides post-injury loss control mechanisms to minimize and control losses after the injury occurs. Post-injury efforts of the risk manager also include all aspects of risk financing to provide adequate financing mechanisms for incurred losses.

The fields of risk management and safety are inter-related and inter-dependent with respect to occupational accidents and occupational diseases. Risk prevention and loss reduction are primary objectives of all risk management programs and apply to employee safety and health programs as well. A safety and health program provides management, supervisors and employees with risk prevention and loss control methods.

State agencies are exposed to various loss events or perils, among which are employee exposures that may result in occupational injury, disease or death. When state employees are exposed to safety and health risks, state agencies have an increased exposure to workers' compensation claims and losses. Losses incurred by the State as a result of compensable, job-related accidental injury or disease result in payment of workers' compensation medical and indemnity benefits. These benefit payments and associated loss of productivity directly detract from the efficiency of state programs.

The concept of risk management encompasses all aspects of workforce protection, including the physical environment and agency operations. Risk management reaches far beyond the traditional boundaries of safety and security to include other issues. Many risk managers come to the profession from a variety of backgrounds, including insurance, safety, general management, finance, or legal. Often a risk manager is selected from the agency's staff. A successful risk manager benefits from a diverse background that includes at least a working knowledge of such disciplines as accounting and finance, property management, auditing, human resources, tort liability, contractual liability and environmental liability.

Risk management methodology can be applied effectively to the elimination or reduction of workers' compensation losses. A risk prevention and loss control program must be designed to eliminate or reduce the source of human injury, illness or disease.<sup>4</sup> An employee safety and health program is designed to address risk prevention and loss control of occupational safety and health exposures. An occupational safety and health program is an important, necessary part of a comprehensive risk management program for Texas state agencies.

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### ***Checklist For Texas State Agencies***

- |   |     |    |
|---|-----|----|
| 1. Does the agency have an established comprehensive employee safety and health program that addresses unique occupational safety and health exposures of the agency? | Yes | No |
| 2. Has the employee safety and health program been incorporated as part of a more comprehensive risk management program?  | Yes | No |

3. Has an appropriate organization structure been developed to incorporate safety and health and risk management into the routine operations of the agency?                      Yes                      No

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***Endnotes***

1. Kountz, Harold and Heinz, Weilrich; *Management*, Ninth Edition; McGraw-Hill Book Company; Oklahoma City; 1988 p. 4.
  2. Head, George L., Ph.D., CPCU, ARM, CSP, CLU and Stephen Horn II, CPCU, ARM, AAI; *"Essentials of Risk Management - Volume I"*; Insurance Institute of America; Malvern, PA. 1991.
  3. Laing, Patricia, Editor; *Accident Prevention Manual for Business & Industry: Administration & Programs*; 10th Edition; National Safety Council; 1992.
  4. Head, George L., Ph.D., CPCU, ARM, CSP, CLU and Stephen Horn II, CPCU, ARM, AAI; *"Essentials of Risk Control - Volume I"*; Insurance Institute of America; Malvern, PA. 1991.
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## Section Two - Employee Safety and Health Program

### Chapter 2

#### Safety Management and Administration

##### Subchapter 2.4

#### Safety Staffing and Classification

Revised: December 2004

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### Volume III:

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This chapter of Risk Management for Texas State Agencies supplies general information regarding state agency employee safety and health exposures, and techniques and methods to manage and control those exposures. It also identifies additional resources that may be available to assist state agencies in developing or enhancing its employee safety and health program. This chapter is not intended in any way to be a substitute for the advice and guidance of legal counsel, who should always be consulted regarding rights, duties, and responsibilities under the law.

Certain key safety positions within an agency contribute greatly to the overall success of the employee safety and health program. The duties and responsibilities of these positions directly influence the program's effectiveness.

#### *Organization Structure*

Since the safety and health function falls within an agency's comprehensive risk management program, most organizations that have established risk management programs include the employee safety and health program within the risk management organizational structure. In these organizations, the safety officer or manager usually reports to the risk manager. A sample organization structure is presented in Volume I, Section Three, Chapter 3 - of *Risk Management For Texas State Agencies*. Alternatively, when the safety officer or manager and the agency risk manager are not located within the same part of the organization, they should build close coordination and communication lines to provide the best service to the agency.

Every state agency should formally appoint or hire an employee to serve as the safety officer. Such an appointment may be a full-time safety professional, or the appointment can be an "additional duty" for the designated position. An individual who is assigned to manage the safety and health program on an additional duty basis is expected to perform other duties in addition to serving as the safety officer.

There are no absolute guidelines or rules to indicate when a full-time safety professional or staff is necessary. At some point when the agency's safety and health program requirements consume more time and resources than the employee's other responsibilities, the need for providing a full-time safety

position or staff becomes more apparent. The decision to have a full time employee as a safety officer depends on many factors including, but not limited to:

- size of the agency;
- number of employees;
- nature of the work performed by the agency;
- the agency's occupational safety and health exposures;
- number and type of facilities and their locations; and,
- workers' compensation claims and loss experience.

A state agency may also appoint "Additional Duty Safety Officers" (ADSOs) in service regions and field offices, or within divisions, departments, units or facilities. While ADSOs report directly to their line supervisor for operational matters, they should receive oversight from the safety officer or manager in matters concerning safety and health. Some agencies have the ADSOs serve on the agency safety committee; other agencies staff these as separate responsibilities. Such decisions are up to the individual agency, as long as both functions are proactive and effective within the agency.

***State Classification of Safety Personnel***

The statewide "Uniform Classification System" for Texas state agencies, administered by the State Classification Officer of the State Auditor's Office, includes four position classifications specifically relating to safety. Full time safety officers should carry the appropriate position classification that is referenced in this classification system. The four position classifications are:

<i>Class #</i>	<i>Position Title</i>	<i>Salary Group</i>
#2730 -	Safety Officer I	B7
#2731 -	Safety Officer II	B9
#2732 -	Safety Officer III	B11
#2733 -	Safety Officer IV	B13

Further information about this classification system and specific position descriptions can be obtained from the agency's human resources/personnel department.

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***Checklist For Texas State Agencies***

- |   |     |    |
|---|-----|----|
| 1. Has the agency formally appointed or hired an appropriate employee to serve as the agency's safety officer or manager? | Yes | No |
|---|-----|----|



2. If the appointment is a full-time position, does the safety officer report to the risk manager or, in the absence of a full-time risk manager, to senior management or the agency head for accountability concerning safety and health matters?	Yes	No
3. Are full-time safety officers classified according to the State Uniform Classification System for safety classifications?	Yes	No
4. Are additional duty safety officers appointed as appropriate in regions, divisions, facilities or units?	Yes	No
5. Do ADSOs report to the agency safety officer in matters concerning safety?	Yes	No

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## Section Two - Employee Safety and Health Program

### Chapter 2

#### Safety Management and Administration

##### Subchapter 2.5

#### Budgeting for the Safety and Health Program

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This chapter of Risk Management for Texas State Agencies supplies general information regarding state agency employee safety and health exposures, and techniques and methods to manage and control those exposures. It also identifies additional resources that may be available to assist state agencies in developing or enhancing its employee safety and health program. This chapter is not intended in any way to be a substitute for the advice and guidance of legal counsel, who should always be consulted regarding rights, duties, and responsibilities under the law.

An agency's budget should include specific funds to accomplish the goals and objectives of the employee safety and health program. The employee safety and health program budget at a minimum should include the following items:

- **Departmental Costs** - Department costs include all costs associated with personnel and administration of the safety and health program, including salaries, telephones, computers and office equipment, office supplies, and any intra-agency transfers for service or support.
- **Safety Training** - Safety training program costs may include any of the following: instructor time, car rental and mileage, training materials and supplies. Chapter 4 discusses elements of safety and health training programs in additional detail.
- **Safety Programs** - Special programs such as safety incentives and awards, and materials associated with safety promotional programs will need to be included in the safety budget.
- **Safety Equipment/Systems** - Costs of specialized safety equipment or safety systems should be included. Specialized safety equipment includes personal protective equipment and testing/monitoring equipment. A safety budget may also include the costs of acquiring or upgrading systems such as a fire suppression or detection system, if these costs are not included in the facility's management budget.
- **Association Membership Dues** - Agency membership in professional associations such as the Texas Safety Association should also be included in the budget. The publications supplied by

professional associations are an aid to safety professionals to stay current in their field. Typically memberships for public entities are very reasonable and may include significant discounts when ordering books or materials or attending conferences.

- **Registration Fees for Safety Conferences, Seminars, Meetings** - Professional safety associations often present regularly scheduled conferences, seminars, and meetings and provide an excellent source of education, training, and professional contacts. Agency safety professionals should attend these professional development opportunities whenever possible.
- **Books, Publications and Subscriptions** - A professional safety and health program should include a basic reference library of safety and health publications, reference books, standards, etc. Funds for expenses of this nature should be included in the safety budget.

An alternate funding mechanism may be to establish a line item in the budget of each part of the organization for safety and health program-related expenses. The agency's administrative, budget or financial management division or department should be consulted regarding an appropriate funding mechanism.<sup>1,2</sup>

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### *Checklist For Texas State Agencies*

1. Does the agency include safety and health-related expenses in the formal budget preparation process?	Yes	No
2. Are safety and health-related expenses included in the annual operating budget to support the agency's health and safety program?	Yes	No
3. Does the safety and health budget include the following:	Yes	No
A. Safety department salaries and office expenses?	Yes	No
B. Safety training?	Yes	No
C. Safety programs?	Yes	No
D. Safety equipment or systems?	Yes	No
E. Association membership dues?	Yes	No
F. Registration fees for professional seminars, conferences and meetings?	Yes	No
G. Safety books, publications and subscriptions?	Yes	No
4. Are employee safety and health program expenses allocated to agency divisions or units on a pro-rata basis?	Yes	No

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### *Endnotes*

1. *Accident Prevention Manual for Business & Industry; Administration and Programs*; National Safety Council; 12th Edition.

*Note: Also available from NSC on CD-ROM*

2. Colvin, Raymond J., P.E., CSP; *Guidebook to Basic Safety Programming*; Safety Training Dynamics, Inc.; P.O.Box 2213, Brockton, MA. 1984.

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## Section Two - Employee Safety and Health Program

### Chapter 2

#### Safety Management and Administration

##### Subchapter 2.6

##### Purchasing for Safety

Revised: December 2004

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### Volume III:

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This chapter of Risk Management for Texas State Agencies supplies general information regarding state agency employee safety and health exposures, and techniques and methods to manage and control those exposures. It also identifies additional resources that may be available to assist state agencies in developing or enhancing its employee safety and health program. This chapter is not intended in any way to be a substitute for the advice and guidance of legal counsel, who should always be consulted regarding rights, duties, and responsibilities under the law.

Consideration of safety factors in purchasing requires cooperation among the safety, purchasing and other departments of the agency. A cooperative relationship between the purchasing and safety departments enhances the purchase of equipment that meets safety standards and performance codes. Good communications between the safety officer and purchasing officer are necessary to make sound purchasing decisions that incorporate safety factors.

#### *General Purchasing Goals For State Agencies*

Purchasing activities generally are intended to achieve the following:

- Purchase the proper material or service to meet the intended need;
- Obtain the best possible price for the material or service;
- Make the material or service available where and when it is needed;
- Assure a continuing supply of needed materials and services;
- Guard against any misuse of funds and resources;
- Assure that responsible bidders are given the opportunity to compete for business. This is accomplished in the public sector by statutory requirements for competitive bids and proposals, and by implementing specific purchasing procedures; and

- Ensure that government employees do not receive any personal benefits from public spending.  
(1)

### ***Purchasing Role of the Safety Officer***

The agency safety officer should have thorough knowledge of the agency's accident history, costs associated with those accidents, and the benefits of product and equipment safety features in reducing accident exposures. The safety officer should evaluate whether the equipment and products that are purchased by their agency include the proper safety factors and safeguarding in their design. It should also be determined if personal protective equipment is needed in conjunction with usage of any equipment or products. Other safety concerns address whether the equipment or machinery is intended for use in the proper areas and if adequate guards and ventilation have been considered. Price considerations may affect which brand or class of product or equipment is purchased. However, safety designs and devices should be detailed in the specifications and should not be eliminated to cut costs.

(2)

### ***Safety - Purchasing Liaison***

When effective coordination and communication exists between the safety and purchasing departments, safety factors are integrated into decisions to purchase certain equipment, materials and products.

Improved understanding between the two occurs when the purchasing officer becomes:

- Familiar with departmental, facility and/or process hazards, particularly in relation to equipment, machinery and materials;
- Knowledgeable of federal and state safety requirements and lists of approved safety devices or safety features of equipment and machinery;
- Acquainted with the specific location and departmental use of machinery or equipment; and
- Knowledgeable of the causes of employee injuries that may have been caused by failure of machinery, equipment or materials, or inadequate machine safeguarding or safety devices.(1)

Therefore, the safety officer should provide all necessary information and assistance to educate and improve the purchasing officer's knowledge and understanding of safety factors.

Any equipment that does not meet OSHA standards or established safety standards of other regulatory or testing authorities for proper safety factors should not be purchased. Safeguards planned and built as integral parts of a machine are the most efficient and durable, and makeshift or "retrofit" guards should be avoided whenever possible.(1) The purchasing officer should coordinate with the safety officer to ensure that safety engineering factors are included in the design of the specified equipment. The safety

officer should be able to provide the following assistance and information to the purchasing officer:

- Process and machine hazards that can be eliminated by change in design or by installing manufacturer-designed guarding;
- Safe use of equipment, tools, and materials;
- Health and fire hazards in the workplace;
- Federal and state safety requirements or standards;
- Agency accident experience data relative to specific machines, equipment, or materials; and,
- Lists of equipment and materials requiring safety coordination and/or approval.

### *Codes and Standards*

The safety officer should develop a list of codes and standards that should be considered by purchasing officers when making purchases. When developing this list, the safety officer should consult with all involved parties to ensure that their needs are addressed.

The safety officer should become familiar with codes, specifications, standards, guidelines and assistance that are provided by the following organizations and agencies. This is not an all-inclusive list, and other organizations may provide additional information or assistance.

- **Standards and specifications groups** - American National Standards Institute (ANSI), and American Society for Testing and Materials (ASTM).
- **Fire protection groups** - National Fire Protection Association (NFPA); Industrial Risk Insurers; Factory Mutual System; and Underwriters Laboratories (UL).
- **Federal Agencies** - Occupational Safety and Health Administration (OSHA); and National Institute for Occupational Safety and Health (NIOSH).
- **Non-Profit Organizations** - National Safety Council, trade and industrial associations and labor union organizations.1

### *Safety and Price Considerations*

Price considerations and cost savings are important and interact with safety and design factors. However, safety officers and purchasing officers should always include safety requirements and standards for safety performance in agency bid specifications.<sup>1</sup> Factors to be considered include but are not limited to:

- maximum load strength;
- long life without deterioration;
- reduction of sharp, rough or pointed edges;
- less frequent need for adjustments;
- need for personal protective equipment;
- ease of maintenance;
- reduction of fatigue-causing characteristics; and,
- minimal hazard to employees' health.

An excellent example of purchasing for safety is the substitution of a safer product that performs as well as a more hazardous product. In many cases, a safer product or material may be available which poses fewer health or accident hazards. When substituted for the hazardous product or material the substitute often performs as well or better than the more hazardous product. Alternatives should be explored, especially in the case of chemicals.<sup>1</sup>

Personal protective equipment and machine safeguarding are two cost saving risk prevention mechanisms. When accidents are prevented, there is the obvious benefit of reduced employee injuries. In addition, the State of Texas saves money in the form of fewer workers' compensation claims and less loss of employee productivity. Purchasing with concern for safety is a proven and effective cost saving measure and is recommended as a responsible risk management method for Texas state agencies.

***Checklist For Texas State Agencies***

1. Does the purchasing manager work closely with the safety manager when purchasing new equipment and materials?	Yes	No
2. Do all purchased items meet safety and health standards?	Yes	No
3. Are alternative products or materials considered and purchased if excessive health or safety hazards are posed?	Yes	No
4. Is all machinery adequately safeguarded?	Yes	No
5. Are safety requirements written into the bid specifications?	Yes	No



## *Endnotes*

1. *Accident Prevention Manual for Business & Industry; Administration and Programs*; National Safety Council; 12th Edition.

*Also available from NSC on CD-ROM*

2. Head, George L., Ph.D., CPCU, CLU, ARM; *Essentials of Risk Management*; Insurance Institute of America; Malvern, PA 1991.

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## Section Two - Employee Safety and Health Program

### Chapter 2

#### Safety Management and Administration

##### Subchapter 2.7

#### Employee Performance Appraisals

Revised: December 2004

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This chapter of Risk Management for Texas State Agencies supplies general information regarding state agency employee safety and health exposures, and techniques and methods to manage and control those exposures. It also identifies additional resources that may be available to assist state agencies in developing or enhancing its employee safety and health program. This chapter is not intended in any way to be a substitute for the advice and guidance of legal counsel, who should always be consulted regarding rights, duties, and responsibilities under the law.

An agency's employee performance appraisal system should include provisions for evaluating an employee's safety performance. Employees who exhibit positive safety performance should be recognized for such performance during performance appraisals. The performance appraisal should include a specific statement or rating category concerning safety performance, and examples of actual safety performance should be cited during the appraisal.(1)

Responsibility for safety should be required of all levels of agency personnel. Employees who are supervisors or managers should be held responsible and evaluated for safety program implementation, safety training and the safety performance of their work group in the same way they are held responsible for production concerns and quality assurance.

#### *Positive Safety Performance Indicators*

Some examples of positive safety performance that may be reflected in a performance appraisal are:

- The employee consistently follows standard operating procedures, job safety procedures, standards, and general employee safety responsibilities.
- An employee prevents an accident by removing a hazard from the workplace or reports a hazard to proper authorities.
- The employee participates in safety and health programs, and/or serves on safety-related committees and work groups.

- An employee or an entire work group remains accident-free over an extended period of time.
- A supervisor or manager actively supports and implements safety programs, training and safe performance of tasks by employees.2,3,4

### ***Negative Safety Performance Indicators***

Employees who do not actively support and participate in the safety and health program and/or who have poor safety performance should be counseled. Some examples of negative safety performance indicators are the following:

- An employee is careless, and must be corrected or counseled concerning adherence to safety standards, programs, procedures, or policies.
- An employee contributes to or experiences an accident which results in injury to the employee or another person, or property damage or destruction. Subsequent accident review determines that the employee purposely ignored or did not heed a safety standard, practice, or procedure and/or was careless, negligent, or reckless.
- An employee contributes to or experiences a non-injury producing accident which may or may not involve property damage or destruction. A subsequent accident review determines that the employee purposely ignored or did not heed a safety standard, practice, or procedure or that a contributing degree of carelessness, negligence, or recklessness may be attributed to the employee.(2,3,4)

Most state agencies have either an employee handbook, supervisors' handbook, or human resources policies and procedures that usually address employee relations and performance appraisals at considerable length. Article V of the current Texas Appropriations Act permits a state agency to reduce an employee's salary for disciplinary reasons, if performance warrants. A supervisor should always refer to agency policy and procedures for specific direction, and should also consult with the agency human resources division or legal counsel prior to taking any action that involves significant discipline of an employee.

In addition, the agency's performance appraisal procedures should provide guidance and direction about how to address safety performance during an employee performance appraisal. Safety performance standards and expectations should be integrated into job descriptions, and also integrated into standard operating procedures. By making employees accountable and responsible for their safety performance, an additional incentive to follow the agency's safety and health program is provided.

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### ***Checklist For Texas State Agencies***

1. Does the agency conduct formal appraisals of employee performance?	Yes	No
2. Does the performance appraisal program include provisions to evaluate individual safety performance or responsibility?	Yes	No
3. Do agency position descriptions include safety performance standards or expectations upon which a safety performance appraisal is based?	Yes	No
4. Are safety factors incorporated into standard operating procedures?	Yes	No

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### *Endnotes*

1. Lee, Charles; *HR Magazine*; "Smoothing out Appraisal Systems;" March, 1990.
2. Griffin, Ricky W.; *Management*; CPCU Edition; American Institute for Chartered Property Casualty Underwriters; Houghton Mifflin Co.; Malvern, PA. 1990.
3. Head, George L., Editor, Ph.D., CPCU, CLU, ARM; *Essentials of Risk Management*; Insurance Institute of America; Malvern, PA. 1991.
4. Culbertson, Charles V., CSP; *Managing Your Safety Manager*; "Hiring a Competent Safety Manager." Risk and Insurance Management Society, Inc.; New York, NY; 10017.

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## Section Two - Employee Safety and Health Program

### Chapter 2

#### Safety Management and Administration

##### Subchapter 2.8

##### Job Descriptions and Hiring

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### Volume III:

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This chapter of Risk Management for Texas State Agencies supplies general information regarding state agency employee safety and health exposures, and techniques and methods to manage and control those exposures. It also identifies additional resources that may be available to assist state agencies in developing or enhancing its employee safety and health program. This chapter is not intended in any way to be a substitute for the advice and guidance of legal counsel, who should always be consulted regarding rights, duties, and responsibilities under the law.

An agency should have its own policy and procedure that applies to writing job descriptions and hiring. The safety and health performance requirements of each position should be written into every job description.(1) Preparation, periodic review, revision, and appropriate distribution of job descriptions generally falls under the purview of the human resources or personnel function.

Potentially hazardous duties and operations should be described in the position description. Examples of hazardous duties and operations include: operating vehicles or heavy equipment, being armed to use deadly force, working with hazardous materials or hazardous waste, and exposure to potential health hazards such as those in medical, laboratory, or emergency first response operations.(2) If specific physical exertion requirements are necessary for the job, they should be described in the position description. Job descriptions should be written in accordance with Americans with Disabilities Act (ADA) requirements that include specific reference to essential job functions. (Refer to Volume IV, Section Two, Chapter 3 for additional information on the ADA).

Some of the safety factors or requirements that may need to be analyzed and included in the position description are:

- Professional training required, such as that for fire, law enforcement and emergency response personnel.
- Job-related physical exertion requirements, working conditions, health hazards and accident hazards.
- Driving experience required, and appropriate driver's license and driving record evaluation requirements if operation of state vehicles or private vehicles on state business is required.
- Any safety-related job requirements specified by state or federal law.2,3

Additional legal requirements which may be necessary for employment are addressed in Volume IV of *Risk Management For Texas State Agencies*.

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***Checklist For Texas State Agencies***

1. Does the agency have a policy or procedure regarding writing job descriptions?	Yes	No
2. Do job or position descriptions include specific physical exertion requirements of the position?	Yes	No
3. Are safety requirements analyzed for inclusion in the position description?	Yes	No

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***Endnotes***

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  2. Culbertson, Charles V., CSP; *Managing Your Safety Manager*; "Hiring a Competent Safety Manager;" Risk and Insurance Management Society, Inc.; New York, NY; 10017.
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## Section Two - Employee Safety and Health Program

### Chapter 2

#### Safety Management and Administration

##### Subchapter 2.9

#### Safety and Health Committee

Revised: December 2004

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### Volume III:

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This chapter of Risk Management for Texas State Agencies supplies general information regarding state agency employee safety and health exposures, and techniques and methods to manage and control those exposures. It also identifies additional resources that may be available to assist state agencies in developing or enhancing its employee safety and health program. This chapter is not intended in any way to be a substitute for the advice and guidance of legal counsel, who should always be consulted regarding rights, duties, and responsibilities under the law.

The primary purposes of a safety and health committee are to assist in defining the goals and objectives of the employee safety and health program, developing safety and health policies and procedures, increasing employee awareness concerning safety, and monitoring the effectiveness of safety program activities. The safety and health committee has been described as the "eyes and ears" of a good employee safety and health program.(1) A safety and health committee can have a positive influence on agency business operations by reducing the frequency and severity of losses. Additional positive results such as the following may also be achieved by a safety and health committee:

- Provide a feedback mechanism for organizational safety issues
- Develop alternative operational solutions for complex safety problems
- Consider employee safety suggestions and concerns
- Reduce loss exposures
- Enhance worker satisfaction and well-being through participation on the committee
- Reduce loss control costs.2

The need for a safety and health committee can be evaluated by examining certain factors. If the agency has a recurring pattern of on-the-job accidents, frequent workplace injuries, illnesses or diseases, significant property damage to agency-owned vehicles, excessive equipment downtime, or other

hazards that have been identified, then a safety and health committee will be of value.

If a safety and health committee is established, a formal, written procedure should be developed. The procedure should address the elements of a safety and health committee, as discussed in the remainder of this subchapter.

### ***Composition of the Safety and Health Committee***

The safety and health committee should be appointed by and report to the agency head. An alternative is to have the committee chair appointed by the agency head and other members of the committee appointed by the division or unit directors. The size of the committee should be kept relatively small in number. Larger committees tend to become ineffective in their ability to function as a unit and to stay focused on established objectives.(3) The composition of the committee should be specific to the agency, and committee membership should represent the general make-up of the agency to provide a well-balanced mix of both line employees and management. Involving line employees in the committee is important because obtaining input and ideas from those persons whose safety and health are at stake and who have first-hand knowledge of potential hazards can contribute to an effective employee safety and health program.(4) Equal representation by management and employees can help achieve continuous improvement in the employee safety and health program.(5)

The chair of the safety and health committee should be a person who possesses leadership abilities. The chair should be granted the authority to perform the duties of the position. Duties of the chair may include: preparing an agenda, arranging for the meeting place, selecting support materials for each discussion, and notifying members of the meeting. During the meeting, the chairperson may be responsible for eliciting members' input, clarifying statements, maintaining order, reporting on the status of prior recommendations, and bringing issues to closure.

The safety officer should serve as a technical adviser to the safety and health committee. The safety officer is a professional resource to the other members of the committee and often does not serve as a member of the committee. The safety officer should provide support to the chair and assist in the preparation of an agenda, conduct or arrange for training of the committee members, or provide educational materials to the committee. Volume III, Section Two, Chapter 3.2 of these guidelines provides further information on the responsibilities of the safety officer.

### ***Safety and Health Committee Meetings***

The following are suggestions for conducting a successful safety and health committee meeting:

- Follow an established agenda
- Determine the priority of items introduced for discussion
- State specific objectives
- Establish a direction to proceed



- Delegate responsibilities to individuals
- Set target dates
- Develop proposals for submission to management
- Record information
- Have the meeting minutes approved or reviewed by the agency head.

How often a committee meets will depend on the content and scope of the agenda. Members should demonstrate their active support of the committee with regular attendance.(6)

### ***Responsibilities and Operations of the Safety and Health Committee***

The safety and health committee should establish policies and procedures to provide committee members with clear guidance on what is expected of them. Once goals and objectives have been established, specific strategies may be formulated to achieve those goals. One example of a goal is to establish, evaluate, and enforce a comprehensive employee safety and health program, and ensure acceptable compliance with appropriate federal, state, and local safety and health standards. In addition, the committee may be charged with the responsibilities of the following:

- Evaluating and recommending to the agency head requested changes to the employee safety and health program
- Updating the program as new laws, standards, and regulations evolve
- Promoting safety and health education and training
- Coordinating or performing regular inspections, observing safety behavior, evaluating the adequacy of systems, and working with hazard control programs
- Reviewing accidents and near-miss incidents, evaluating causes, and recommending corrective actions, such as additional education or training
- Evaluating and making recommendations on specific safety and health issues
- Assisting line management and staff to devise and implement activities that ensure action plans are completed satisfactorily.<sup>7</sup>

The safety and health committee should be involved in the actual planning and development of the employee safety and health program as well as involvement in implementing and monitoring the program. Some suggested activities for committee involvement are the following:

- Establishing procedures for handling suggestions and committee recommendations

- Conducting regularly scheduled safety meetings to discuss accident and occupational illness prevention methods, promotion of safety and health issues, hazards noted during inspections, subjects arising from safety and health committee meetings, and other related subjects
- Providing information on safe and healthful working practices to supervisors
- Recommending changes or additions to improve personal protective clothing and equipment
- Developing or revising regulations to comply with current safety and health standards
- Promoting first-aid training
- Organizing safety and health fairs, exhibitions, or tours
- Promoting safety and health programs for all employees.<sup>8</sup>

Safety and health committees may also serve as a resource in the following areas:

- Hazard analysis
- Safety discussions between employees and management
- Safety audits or peer reviews
- Publications and communications
- Safety public relations.<sup>9</sup>

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***Checklist for Essential Program Elements***

1. Does the agency have a safety and health committee?	Yes	No
If Yes:		
2. Does the safety officer serve as an advisor to the committee?	Yes	No
3. Does a formal procedure exist for the establishment and operation of a safety and health committee?	Yes	No
4. Does the procedure address membership?	Yes	No
5. Does the safety and health committee meet on a regularly scheduled basis?	Yes	No
6. Is a meeting agenda issued for each safety and health committee meeting?	Yes	No
7. Are meeting minutes kept and reviewed and approved by the agency head?	Yes	No

8. Are minutes made available to all employees?	Yes	No
9. Are approved minutes kept on file by the agency safety officer?	Yes	No
10. Are action item(s) specifically assigned to individuals and do they include a completion or status review date?	Yes	No
11. Are follow-up action(s) monitored by the safety and health committee?	Yes	No
12. Do the safety and health committee and appropriate management review and evaluate accident reports and take appropriate corrective action(s)?	Yes	No
13. Does the safety and health committee review the agency's accident/loss experience data to identify trends and recommend appropriate actions?	Yes	No
14. Does the committee conduct and/or review safety inspections?	Yes	No
15. Does the committee conduct, arrange for, or recommend appropriate safety and health education and training programs?	Yes	No

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### *Endnotes*

1. Etter, Irvin B.; "Safety Committees: The Eyes and Ears of a Good Safety Program"; *Safety & Health*; November 1993; Volume 148, No. 5; p. 3.
2. Mahoney, Cynthia; "Loss Prevention and Control - Developing a Safety Committee" in *Public Sector Risk Management*; Public Risk Management Association; 1990; p. 40.
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7. Mahoney, Cynthia; pp. 40-41.
8. Bruce, Stephen D., ed.; "Key Element--Management Commitment and Employee Involvement" in *How to Meet OSHA's Safety and Health Guidelines*; Business & Legal Reports, Inc.; 1990; pp. 3-1 - 3-10;

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Bruce, Stephen D. and Eleanor H. McKernan, eds.; "Typical Roles of the Safety Committee" in *BLR's Safety Committee Handbook*; Business & Legal Reports, Inc.; Rev. January 1995; pp. 7-1 - 7-2.

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## Section Two - Employee Safety and Health Program

### Chapter 2

#### Safety Management and Administration

##### Subchapter 2.10

#### Accident Prevention Regulations and Standards

Revised: December 2004

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### Volume III:

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This chapter of Risk Management for Texas State Agencies supplies general information regarding state agency employee safety and health exposures, and techniques and methods to manage and control those exposures. It also identifies additional resources that may be available to assist state agencies in developing or enhancing its employee safety and health program. This chapter is not intended in any way to be a substitute for the advice and guidance of legal counsel, who should always be consulted regarding rights, duties, and responsibilities under the law.

Safety and health policies, regulations, and standards provide valuable information and guidance regarding employee safety and health programs. Many Texas state agencies incorporate various elements of federal standards, regulations, and state rules into their employee safety and health programs. State agencies should comply with all applicable federal, state, and local statutes, rules, standards, regulations and guidelines, and ordinances to prevent injuries to state employees, agency clients, and the general public. Applicability of particular laws, rules, regulations, standards, and ordinances should be referred to the agency's legal counsel.

The following provides a brief discussion of most safety- and health-related regulations and standards with which an agency may be required to comply in their individual employee safety and health programs.

#### *Federal Standards*

In 1970, the Occupational Safety and Health Act (P.L. 91- 596, now codified in 29 U.S.C. §§651-678) was signed into law. The purpose of the OSHAct, as declared by Congress, was to "assure so far as possible every working man and woman in the nation safe and healthful working conditions..."(1) Each employer covered under this Act has the

- General duty to furnish each employee with employment and places of employment free from recognized hazards causing or likely to cause death or serious harm; and

- Specific duty of complying with safety and health standards promulgated under the Act.(2)

In return for this level of participation and compliance by employers, the employees have the duty to comply with the safety and health standards and with all rules, regulations, and orders that apply to employee actions and conduct on the job.(3)

The OSHAct created the National Institute for Occupational Safety and Health (NIOSH) to conduct research, education, and training regarding occupational safety and health; and to develop and recommend standards relative to occupational safety and health issues.(4) The OSHAct also created the federal Occupational Safety and Health Administration (OSHA) to perform the following functions:

- Promulgate, modify, and revoke safety and health standards
- Conduct inspections, investigations, and issue citations, including penalties
- Require employers to keep records of safety and health data
- Petition the courts to restrain imminent danger situations
- Approve or reject state plans or programs under the Act
- Provide training and education to employers and employees
- Consult with employers, employees, and organizations regarding prevention of injuries and illnesses
- Grant funds to the states for identification of program needs and for plan development
- Develop and maintain statistics for occupational safety and health.(5)

The OSHAct has general applicability to the nation's employers and employees. Specifically excluded (at this publication/revision date) by the Act are the states and political subdivisions of the states. All federal, state, and local government employees likewise are specifically excluded from coverage. However, states that have an approved "state plan" as defined by the OSHAct and OSHA regulations are required to provide coverage for these public employees.(6) The State of Texas does *not* currently have an approved OSHA state plan. Therefore, the State of Texas and its political subdivisions are technically exempt from compliance with the OSHAct and OSHA regulations. Although technically exempt, however, most OSHA standards still apply to Texas state agencies, either by specific standards included in *Risk Management for Texas State Agencies* (RMTSA) guidelines or by reference in the State Office of Risk Management rules.

## ***History of Rules for Accident Prevention***

Based upon its rule-making authority at the time, the Office of the Texas Attorney General (OAG), in January 1976, adopted "Accident Prevention Rules" applicable to those Texas state agencies for which the OAG provided workers' compensation insurance coverage. The *Code of Federal Regulations*, Title 29, Parts 1910 and 1926, as well as National Safety Council guidelines, were adopted by reference. In 1995, this rule-making authority was transferred to the State Risk Management Division of the Texas Workers' Compensation Commission. In 1997, the authority was transferred to the State Office of Risk Management.

Texas state agencies shall comply with *RMTSA* guidelines or other appropriate nationally recognized standards, including OSHA standards. See also Volume III, Section Two, Chapter 1.6 of *RMTSA* guidelines, which presents the elements of an employee safety and health program for Texas state agencies.

## ***Additional Safety- and Health-Related Laws, Rules, Standards, and Regulations***

Texas state agencies may also have to comply with additional federal and state laws, rules, standards, and regulations that cover public safety and environmental health issues that target specific areas of compliance. For example, federal environmental and hazardous waste disposal laws and regulations have been enacted that may have an impact on certain agencies and their implementation of an employee safety and health program. The Texas Department of Health, Texas Natural Resource Conservation Commission, Texas Workers' Compensation Commission, Texas Department of Agriculture, and Texas Structural Pest Control Board have all promulgated rules and regulations that implement state safety- or health- related statutes. These rules and regulations may have a significant impact on certain state agency workplaces. Volume IV, Section Three, Environmental Liability Exposures of *RMTSA* guidelines will contain more detailed information regarding environmental laws and regulations that may be of concern to agencies.

Local governmental codes and standards that address life safety, fire safety, health requirements, and building or zoning restrictions also may be applicable to state agencies. Specific concerns regarding applicability of all federal and state laws, rules, regulations, and local ordinances should be directed to the agency's legal counsel. In addition, the General Services Commission should be contacted concerning state-owned or leased buildings and properties.

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### ***Checklist for Essential Program Elements***

1. Does the agency's employee safety and health program comply with appropriate and applicable laws, rules, regulations, standards, guidelines, and ordinances?	Yes	No
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5. Laing, Patricia M., ed.; p. 26.

6. Laing, Patricia M., ed.; p. 28.

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## Section Two - Employee Safety and Health Program

### Chapter 2

#### Safety Management and Administration

##### Subchapter 2.11

#### State Office of Risk Management Safety Program Evaluation

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### Volume III:

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This chapter of Risk Management for Texas State Agencies supplies general information regarding state agency employee safety and health exposures, and techniques and methods to manage and control those exposures. It also identifies additional resources that may be available to assist state agencies in developing or enhancing its employee safety and health program. This chapter is not intended in any way to be a substitute for the advice and guidance of legal counsel, who should always be consulted regarding rights, duties, and responsibilities under the law.

The Texas Workers' Compensation Act (*Vernon's Texas Codes Annotated* [V.T.C.A.], Labor Code, Title 5, Subtitle A) establishes the State Office of Risk Management (Office) and charges the executive director of the Office, the "state risk manager," with certain responsibilities. These responsibilities include supervising the development and administration of systems to: (1) identify the property and liability losses, including workers' compensation losses, of each state agency; (2) identify the administrative costs of risk management incurred by each state agency; (3) identify and evaluate the exposure of each state agency to claims for property and liability losses, including workers' compensation; and (4) reduce the property and liability losses, including workers' compensation, incurred by each state agency. The Act also specifies that the Office shall provide assistance to a state agency that has not implemented an effective risk management program that meets the Office's guidelines.

To fulfill the above legislative mandates, the State Office of Risk Management has developed and implemented On Site Consultation (OSC) or Risk Management Program Review (RMPR) procedures as a mechanisms to accomplish (in part) the above objectives. Either the OSC or RMPR is utilized by the Office to evaluate the employee safety and health programs of state agencies to determine if an agency's program meets the legislative intent. During a SORM visit, Risk Management Program staff determines if an agency has a comprehensive, documented employee safety and health program, and has implemented applicable elements of the Office's guidelines, as provided in *Risk Management for Texas State Agencies* (RMTSA) guidelines (Volume III, Section Two).

The focus of SORM's visit is on the development and implementation of the agency's employee safety and health program with emphasis on consistency in application of elements contained in the guidelines and supporting documentation. The evaluation is not an exhaustive facility safety inspection or audit

and may not include a detailed evaluation of working conditions or hazards that may exist. The evaluation does include a walk-through of the facilities, and the Office's risk management specialists will make suggestions for improvement of safety-related exposures noted during the walk-through.

### ***Frequency of SORM Visit's***

When scheduling state agencies for OSCs or RMPR's, the Office takes various factors into consideration. These factors include, but are not limited to, the following:

- Date of last OSC or RMPR
- Accident experience data of the agency (injury frequency and severity)
- Compelling or serious safety or health conditions or problems
- Texas Workers' Compensation Commission, Workers' Health and Safety telephone hotline calls and referrals
- Requests by an agency for assistance
- Statutory change(s)

### ***The SORM Visit***

The following procedure generally is followed by the Office to conduct a Risk Management Program Review (RMPR):

- A risk management specialist from the Office will contact the state agency's risk manager or risk management contact by telephone to establish a mutually acceptable date and time for the RMPR.
- Approximately 60 days prior to the RMPR, a letter is sent to the agency's risk manager or risk management contact to confirm the time and date of the visit. A copy of the letter is sent to the agency's safety officer and/or agency head. Prior to the risk management specialist's arrival, the Agency will be asked to complete a Risk Management Program Review survey questionnaire.
- A RMPR survey questionnaire is used to organize and guide the evaluation. Due to the diversity in size and complexity of state agency operations, every element of the survey may not have an application for each agency. The survey is itself a guide, and efforts are made to address unique aspects of individual agency operations and the employee safety and health program.

- During the RMPR, state agency representatives may be requested to thoroughly explain certain operations of the agency. This enables the risk management specialist to have a better understanding of the operations that the agency's employee safety and health program is designed to address.
- A walk-through of the agency's facilities enables the risk management specialist to become familiar with and better informed about the nature and scope of agency operations. Physical plant and facility locations and exposures, areas of unique concern, or operations that the employee safety and health program may impact are also important.
- During the walk-through and/or in an informal meeting, the risk management specialist will discuss various aspects of the employee safety and health program with employees of the agency. Included will be a survey of employee awareness concerning the agency's employee safety and health program.

An On Site Consultation, on the other hand, can vary in both duration and scope. An OSC could be as extensive and in-depth as a RMPR or take the form of a simple follow-up to assist with or verify compliance of an issue identified during a previous RMPR. OSCs are commonly conducted at the satellite locations of large Agencies. OSCs are also conducted in lieu of RMPRs during the yearly cycles of the SORM visit schedule. OSCs may occur as the result of an Agency request for assistance or can be scheduled in advance at mutually agreed upon time and date between the SORM risk management specialist and the Agency's designated contact.

### ***RMPR and OSC Report***

After completion of the a review or consultation at the agency's location or facilities, the risk management specialist will prepare a summary report containing observations and recommendations regarding the agency's employee safety and health program. The report is forwarded to the agency risk manager or risk management contact, with copies to the agency head and safety manager.

The purpose of the summary report is to provide the agency risk manager and safety officer with specific observations and recommendation(s) that The State Office Risk Management considers appropriate and necessary for the agency to develop, document, and/or implement a formal, comprehensive employee safety and health program. All recommendations are based upon the *Risk Management for Texas State Agencies* guidelines (RMTSA). When a risk exposure is not covered by the guidelines, appropriate nationally recognized standards, including Occupational Safety and Health Administration standards, are used as the basis for a recommendation.

A written response to the report from the agency is requested. The response is an action plan that should include time lines which specify actions the agency will take to address the issues contained in the report. The risk management specialist will follow up with the agency risk manager or risk

management contact to provide technical assistance and other resources.

The safety program evaluation process is continuous and each when the agency's entire risk management program will be periodically reviewed by SORM. Because of the large losses incurred by the state in the form of workers' compensation claims, the State Office of Risk Management places special emphasis upon the employee safety and health program. Therefore, an agency's employee safety and health program will be reviewed more frequently than other risk management program areas.

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***Available Resources for Texas State  
Agencies***

***Publications***

*Vernon's Texas Codes Annotated*, Labor Code, Title 5, Subtitle A - Texas Workers' Compensation Act, Chapter 412 - State Office of Risk Management

***Agencies and Organizations Providing Assistance***

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## Section Two - Employee Safety and Health Program

### Chapter 2

#### Safety Management and Administration

##### Subchapter 2.12

##### Measuring Safety Performance

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This chapter of Risk Management for Texas State Agencies supplies general information regarding state agency employee safety and health exposures, and techniques and methods to manage and control those exposures. It also identifies additional resources that may be available to assist state agencies in developing or enhancing its employee safety and health program. This chapter is not intended in any way to be a substitute for the advice and guidance of legal counsel, who should always be consulted regarding rights, duties, and responsibilities under the law.

The objective of measuring safety program performance is to provide a monitoring and feedback mechanism that encourages continuous safety program improvement. The effectiveness of the feedback system depends upon the reliability of the information sources and selection of the right information sources. Improvement in the performance of a safety and health program may be evidenced by a direct reduction in the number of work-related injuries, accidents and diseases, and the amount of workers' compensation- related leave time used.

#### *Establishing Goals and Objectives*

The OSHA voluntary guidelines for employee safety and health program management provides the following recommendation regarding the establishment of goals and objectives:

"Establish and communicate a clear goal for the safety and health program and objectives for meeting that goal, so that all members of the organization understand the results desired and the measures planned for achieving them."(1)

Establishing goals and objectives make the employee safety and health program policy more specific. By communicating the goals and objectives, all employees of the agency should better understand the direction established for the safety and health program.

Goals are broad, long-term achievements, while objectives are specific actions and targets that are

established to support the goals. Goals usually are statements of aspirations that management would like to achieve. Objectives usually are quantified into units of measurement, such as a percentage.(2)

Reduction of the cost of risk is a primary goal of a risk management program. Specific safety-related goals that support this primary goal are the following:

- Minimize employees' exposures to workers' compensation losses
- Protect physical property assets of the state
- Reduce the frequency and severity of accidents
- Provide a reasonably safe environment for employees and the public
- Minimize interruptions of services provided to the public.(3)

In order to achieve the above goals, the state agency should have a built-in self-monitoring mechanism, which is accomplished by establishing specific performance objectives and comparing actual performance to the objectives.

The following steps are basic and necessary to the establishment of a system that measures the safety program's performance:

- Set measurable standards, expectations, and objectives
- Observe and measure performance
- Compare results with standards, expectations, or objectives
- Reevaluate plans and results.(4)

Performance objectives should be quantifiable and measurable. They should be both result- and task-oriented. An example of a results-oriented objective is the frequency rate of employee injuries per 100 employees. An injury frequency rate can be used to determine program effectiveness in eliminating or reducing risks that lead to employee injuries. An example of a task-oriented objective is the number of agency safety inspections that are conducted. Although a task such as a work site safety inspection can lead to a reduction of risks, the results of the task are not the measurement objective. Rather, the number of tasks performed becomes the objective.

Once the performance objectives are established, actual performance (results and tasks) can be compared to the objective to determine if the risk prevention technique is achieving the desired results and is meeting the overall goals of the risk management program. If after analysis, it is determined the chosen technique is not achieving the desired results, changes can be made to improve performance.

## ***Injury Frequency Rate (IFR)***

The value of computing and monitoring an injury frequency rate is that it allows comparisons of an agency's injury experience over a given period of time, i.e., quarterly or annually. Periodic monitoring of the IFR assists the agency in identifying significant trends within the agency and within departments. Therefore, every agency should calculate its own injury frequency rates to monitor its own employee safety and health program. IFRs should be calculated at least on an annual basis, usually by fiscal year, and more frequently if at all possible.

When making comparisons between different organizations, caution is advised to avoid making comparisons between dissimilar groups of information. For example, if the agency's injury frequency rate or incidence rate computation is based on lost work days and/or medical expense cases, then other organizations must report their data in the same manner so that the comparison is meaningful. Comparison information may be obtained using annual reports such as the National Safety Council's annual *Accident Facts* publication, which may be obtained through the Texas Safety Association.

For the purpose of State Office of Risk Management (Office) reporting and safety awards, computation of the IFR is performed using databases from the Office and the State Auditor's Office. The Office's database provides the number of worker's compensation claims filed by state agency employees. The state auditor's database provides the number of full-time employees (FTEs) who are employed by Texas state agencies. The equation used is as follows:

$$\frac{\text{Number of Claims} \times 100}{\text{Number of Employees}} = \text{Annual IFR}$$

### *How Agencies May Compute the Injury Frequency Rate*

The injury frequency rate most usually is based on the exposure of 100 full-time employees and is usually expressed as an annual period of time. The most common annual injury frequency rate (IFR) is derived from the following formula:

$$\frac{\text{Number of Injuries} \times 200,000}{\text{Number of Employee Hours Worked}} = \text{Annual IFR}$$

- The actual number of occupational injuries or diseases sustained is obtained from agency data and consists of those incidents occurring between September 1 and August 31.
- The 200,000 hours shown in the formula represents the equivalent of 100 full-time employees working 40 hours per week and 50 weeks per year. This figure is based on a recognized OSHA standard for computing annual IFRs.



- The number of actual employee hours worked is obtained by multiplying the average number of employees working during the year by 2,000 to derive the number of hours a single employee works in a year (50 wks. X 40 hrs.).

As an example, if an agency has averaged 400 employees during the fiscal year and had 5 reportable injuries over that same period, the formula would be as follows:

$$\frac{5 \text{ (injured)} \times 200,000}{400 \text{ (avg empl)} \times 2,000 \text{ (hrs)}} = \frac{1,000,000}{800,000} = 1.25 \text{ (IFR)}$$

[1.25 injuries per 100 FTEs]

(If rounding to a single decimal, the IFR would be 1.3 because .25 or more rounds up.)

Safety officers should ideally calculate their agency's IFR on a quarterly basis. As an example, if the agency has 400 employees and there were 3 injuries during the quarter, the formula would be as follows:

$$\frac{3 \times 200,000}{400 \times 500} = \frac{600,000}{200,000} = 3.0 \text{ (IFR)}$$

[3.0 injuries per 100 FTEs]

All year-to-date injuries must be included in the figure for cumulative data developed from quarterly IFR calculations. The number of hours worked by each employee would accumulate quarterly as follows:

1st QTR	= 500 hours
1st and 2nd QTR	= 1,000 hours
1st, 2nd and 3rd QTR	= 1,500 hours
Annual	= 2,000 hours

In order to show cumulative data, the number of employees must be averaged. By calculating this data on a quarterly basis and comparing the results with prior periods, an agency is able to accurately determine the effectiveness of its employee safety and health program.<sup>5</sup> The State Office of Risk Management uses the state auditor's *Quarterly Report of Full-Time Equivalent (FTE) State Employees* for injury frequency rate calculations. For consistency, state agencies should also use this report. Individual agencies report these numbers of FTEs to the State Auditor's Office annually.

## ***Injury Severity Rate (ISR)***

The injury severity rate relates the total number of days employees are away from work due to work-related injuries and illnesses to the total number of hours employees actually worked. The ISR provides an agency a measure of the seriousness of its employee injuries, expressed in terms of the total number of employee lost work days due to occupational injuries or illnesses. The number of workers' compensation cases provides information on lost time due to occupational injury or illness.

State Office of Risk Management reports are developed from information derived from databases created from different sources of data than individual state agencies will use to calculate their agency's ISRs and IFRs. Consequently, the numbers and figures that state agencies obtain will be different from those obtained by the State Office of Risk Management.

### ***How Agencies May Compute the Injury Severity Rate (ISR)***

The severity rate indicates the rate at which occupational injuries cause employees to lose time from work. The ISR is based on the following formula:

$$\frac{\text{Total Lost Work Days} \times 200,000}{\text{Total Hours Worked During Period Covered}} = (\text{ISR})$$

As an example, if the agency has averaged 400 employees during the fiscal year and had 5 reportable injuries over the same period, resulting in a total of 102 lost work days, the formula would be as follows:

$$\frac{102 \times 200,000}{400 \times 2,000} = \frac{20,400,000}{800,000} = 25.5 (\text{ISR})$$

It should be noted that "total lost work days" should include *all* leave time taken by employees due to on-the-job injuries or diseases. Any sick leave utilized by employees for workers' compensation should be included with workers' compensation indemnity (income) lost days.

When agency management knows about its individual frequency and severity rates and periodically monitors those figures, the causes of occupational injuries and diseases can be more quickly discovered, examined, and addressed, resulting in a lower incidence of workers' compensation-related injuries.<sup>6</sup>

### ***Measuring Safety Performance - A Process Approach***

Statistical methods that evaluate the number of work-related accidents, injuries, and diseases by

frequency and severity provide an excellent quantitative-based method to measure and evaluate the outcome and results of the agency employee safety and health program. These evaluation methods rely strictly upon an observation of the program's outcome. They do not consider the interactive process that involves all the factors that go into forming a final end result.

The process approach to measuring safety examines these other contributory factors more closely. Secondary contributing factors are measurable and quantifiable and provide tangible, measurable information about specific areas of the safety and health program that may need to be addressed. Examples of these secondary factors could include frequency of employee/manager attendance at safety meetings, the activity level of specific projects, significant new hiring or layoff of agency staff, or other factors.<sup>7</sup>

After specific issues are identified, remedies, or solutions can be more readily developed. Once performance discrepancies have been identified, one or more solutions can be developed and the cost of each solution determined. Intangible as well as tangible costs should be valued in terms of the desired result.<sup>8</sup>

A ten year study was conducted by the Association of American Railroads and the University of Minnesota to review and assess traditional methods of measuring safety program effectiveness. The Safety Program Effectiveness Survey (SPES) made the following conclusions:

- Safety program effectiveness cannot be correlated with losses using traditional evaluation techniques.
- A better measurement of program effectiveness is the organization's response to questions related to the quality of the systems that impact on behavioral issues within the safety program.
- Successful programs focus on and deal effectively with employee and supervisory behaviors.

Prior to administering the survey, educational sessions to explain the reasons for and benefits of the survey were provided to gain the support and commitment of employees and management. Subsequent reviews at appropriate intervals, usually on an annual basis, were used to gauge program improvement and maintain staff commitment. The survey measured the following three safety system management attributes:

- **Perceptions of management interests and effectiveness** such as, management credibility; support for safety; attitudes towards safety; safety climate and quality of supervision
- **Systems creating the climate for safety** such as, employment practices; safety regulations; inspections; hazard correction; supervisor training; motivational programs; safety meetings; goals for safety performance and accident investigation

- **Systems affecting individual employee behavior** such as, recognition for good safety performance; communications; substance abuse programs; employee involvement in safety programs; handling of safety training and discipline.<sup>9</sup>

Comprehensive measurement of the employee safety and health program's performance is improved by an understanding of the appropriate uses and inherent limitations involved in the operation of quantitative and assessment measurement systems. Human performance is a primary factor in determining the overall performance of the safety program. The interaction between behavior-based indicators and quantitative measurement methods that focus on outcomes should be fully understood.

### *Checklist for Essential Program Elements*

1. Does the agency safety program have an internal monitoring and feedback system that permits self-evaluation of program performance?	Yes	No
2. Are injury frequency rates calculated on an annual and/or quarterly basis?	Yes	No
3. Are injury severity rates calculated on an annual and/or quarterly basis?	Yes	No
4. Are annual safety performance goals and objectives (IFRs and ISRs) developed and monitored?	Yes	No

### *ENDNOTES*

1. *Federal Register*; Department of Labor, Occupational Safety and Health Administration; Safety and Health Program Management Guidelines, Issuance of Voluntary Guidelines; Section (c)(1)(ii); January 25, 1989; Vol. 54, No. 16; pp. 3904-3916.
2. Bruce, Stephen D.; "Key Element - Management Commitment/Employee Involvement" in *How to Meet OSHA's Safety & Health Guidelines*; Business & Legal Reports, Inc.; 1990; p. 3-3.
3. Head, George L. and Stephen Horn II; *Essentials of Risk Control, Volume I*, Second Edition; Insurance Institute of America; 1989.
4. North, Carol and Patricia Laing; *Public Employee Safety and Health Management*; National Safety Council; 1990.
5. "Recordkeeping and Incidence Rates" in *Accident Prevention Manual for Business & Industry, Administration & Programs*, 12th Edition; National Safety Council.

6. Krause, Thomas R., John H. Hidley, and Stanley J. Hodson; “Measuring Safety Performance: The Process Approach”; *Occupational Hazards*; June 1991.
  7. Mager, Robert F. and Peter Pipe; *Analyzing Performance Problems*, Second Edition; Lake Publishing Company; 1984; pp. 11 and 22.
  8. “Safety Program Effectiveness Survey”; National Safety Company.
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## Section Two - Employee Safety and Health Program

### Chapter 2

#### Safety Management and Administration

##### Subchapter 2.13

#### Safety Incentives and Awards Program

Revised: December 2004

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### Volume III:

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This chapter of Risk Management for Texas State Agencies supplies general information regarding state agency employee safety and health exposures, and techniques and methods to manage and control those exposures. It also identifies additional resources that may be available to assist state agencies in developing or enhancing its employee safety and health program. This chapter is not intended in any way to be a substitute for the advice and guidance of legal counsel, who should always be consulted regarding rights, duties, and responsibilities under the law.

Safety incentives and awards can have a positive impact on reducing operating costs and are important employee morale boosters. While a proactive employee safety and health program is key to reducing accidents and injuries, recognizing and rewarding employees for working safely contributes to and reinforces the program's success. Safety incentives and awards can be educational, fun, and motivational. In addition, incentives can provide emotional and material benefits to employees. Therefore, a safety incentives and awards program has become an accepted, important part of many employee safety and health programs.

The value of awards lies in their appeal to basic needs, such as pride, need for recognition, urge to compete, and financial gain. Awards serve as inducements, builders of good-will, continuing reminders, and publicity tools. Awards should be meaningful to the employees receiving them.

### *Motivating Safe Performance of Job Tasks*

Supervisors can improve employee motivation to practice safety by providing a supportive atmosphere where feedback and rewards work together. Some individuals may not need incentives to work safely and may only require verbal or written praise to be motivated. However, some people also respond favorably to tangible feedback. An effective feedback and reward system includes the following elements:

- Defines rules precisely
- Provides feedback on performance early and often
- Supports feedback

- Offers rewards on a regular basis
- Sets attainable goals.

Based upon the premise that some people may desire rewards to maintain high standards of behavior, recommendations include the following:

- Frequent written or verbal feedback
- Periodic rewards
- Celebration of safety goals
- Recognition of perfect safety records every year
- Recognition of long-term safety records every five years.<sup>1</sup>

Specific incentives and awards should be linked directly to attainable and measurable safety goals or objectives. However, it should be noted that every person is responsible for his or her own health and safety. No matter what an incentive program offers, it should reinforce the goal for every employee to work safely at all times and in all circumstances.

### *Types of Incentives and Awards*

The following are examples of the types of incentives and awards that may be utilized by state agencies:

- **Safety Contests and Publicity** - Contests are a one- time awards program. Although contests may be directly based on safety statistics, they may also feature other ways of awarding prizes. Competition among employee work groups or units is another way of promoting safety. Such contests and competitions not only provide rewards for participation, but also provide visible publicity for the employee safety and health program.
- **Safety Prizes and Awards** - Prizes and awards may target individual employees, units, departments, or the entire organization. The awards program may involve something as simple as setting up a “club” that recognizes employees who avoided injury over time because of their safe behavior. Many programs focus on lost time injuries. Others incorporate more complex rating systems that include safety meeting attendance, training, and other factors. However, when developing programs, they should be designed with fairness and awareness in mind. The awards are more effective if there are more winners than losers. Therefore, a large number of smaller awards is more desirable than one large award item. Furthermore, the awards should relate to safety and should be a constant reminder that safety comes first.<sup>(2)</sup>

The current State of Texas General Appropriations Act should be consulted regarding limitations on the use of appropriated funds for safety awards.

As an alternative to a separate safety and health award program, consideration of safety and health achievement factors may be included as a component of a larger employee achievement program.

## ***Designing a Safety Incentive and Awards Program***

The following factors should be considered when planning and designing an incentive and awards program:

- **Employee Base** - Tailor incentives to fit the particular requirements and practices of the agency. Consider the positions and job duties of people working for the agency.
- **Geographic Location** - Portions of the program may work in some regions of the State and may not work so well in others. This may be a factor also when there are central office and field office locations.
- **Management Commitment** - Senior management should be involved in the program. Examples of ways senior management can participate and support the program are: circulate memos to introduce incentives to employees; present awards to employees; and write congratulatory letters.
- **Agency Safety Culture** - Combine the concept of working safely with the incentive program so that they complement each other.
- **Positive Prevention** - Reward employees and work groups for working safely. Emphasize prevention and promote good safety and health behavior.
- **Keep It Simple** - Create a program that is easy to administer, maintain and communicate to employees. Keep costs down and employee awareness high.
- **Promote Teamwork** - Create a common goal among employees. The effectiveness of incentives depends on positive employee attitudes toward the program.
- **Be Creative** - Look for new and exciting ways to establish the importance of the program among employees. However, rewards should not be presented to employees so regularly or easily that they become expectations.<sup>3</sup>

## ***State Employee Incentive Program***

The Texas State Legislature created the Texas Incentive and Productivity Commission (*Vernon's Texas Civil Statutes* [V.T.C.S.], Articles 6252-28 and 6252-29a). The Incentive and Productivity Act is now codified in *Vernon's Texas Codes Annotated* (V.T.C.A.), Government Code, Title 10, Chapter 2108. Subchapter B describes the State Employee Incentive Program, which requires a state agency director to designate an agency coordinator to act as a liaison between that agency and the commission.



[§2108.021(1)] The agency coordinator has the responsibility to promote and monitor the agency's incentive program activities. [§2108.028]

The Texas Incentive and Productivity Commission has the authority to grant awards to state agency employees who make suggestions that: (1) reduce state expenditures, increase state revenues, increase agency productivity, or improve the quality of state services; and (2) are approved and implemented. [§2108.023(a)]

A state agency employee “is eligible for a bonus of 10 percent of the net savings or revenue increases, not to exceed an award of \$5,000, if the employee’s suggestion results in savings or increased revenues, including savings or increased revenues that result from increased productivity, that: (1) can be computed using a cost- benefit analysis; and (2) equal or exceed \$100 after implementation costs.” [§2108.023(d)]

A state agency employee “is not eligible for a bonus but may be recognized by a certificate of appreciation if the employee’s suggestion results in: (1) intangible savings or benefits that cannot be computed using a cost-benefit analysis; or (2) a net annual savings or increase in revenues of less than \$100.” [§2108.023(e)]

A certificate of appreciation may also be issued by the commission to each employee granted a bonus. Any bonus for a suggestion submitted by more than one employee will be divided by the commission among the employees submitting the suggestion. [§2108.023(f)-(g)]

The commission considers savings legitimate if reductions in expenditures are made possible by the following:

- Reductions in overtime, consultant fees, budgeted positions, travel, printing, mailing, and payments for nonessential expenditures of the agency’s funds
- Increases in efficiency in energy use
- Improvements in office procedures and systems
- Other practices or devices that have resulted in verifiable savings as determined by the commission. [§2108.104(c)]<sup>4</sup>

It may be possible to design an agency's safety incentives and awards program to take advantage of the State Employee Incentive Program. For example, cost savings that result from a comprehensive employee safety and health program for agency employees, verifiable by decreased injury frequency and severity rates and lower workers’ compensation claims and payments attributable to the agency, may qualify for this program. Individual employee safety suggestions that lead to verifiable savings may also qualify for an individual incentive bonus. The Texas Incentive and Productivity Commission

should be contacted directly regarding specific eligibility requirements.

### ***Texas Safety Association Awards Program***

The Texas Safety Association (TSA) is the Texas affiliate of the National Safety Council. Texas state agencies who are member organizations of TSA are eligible to compete in a number of safety contests and awards programs. TSA has established eligibility criteria and selection procedures for each of the following within its Public Employee Section:

- Occupational Safety and Health Program Awards
- Safety Manager of the Year Award
- Motor Fleet Safety Contest
- Safe Driver Award Contest
- Safe Worker Award Contest.5

### ***State Office of Risk Management Safety Awards Program for State Agencies***

The purposes of the State Office of Risk Management's safety awards program are to: increase safety awareness among state agencies; motivate agency personnel participation in occupational safety and health requirements, standards, and procedures; and develop interest and initiative on the part of state agencies to control and improve work environments, equipment, material, and operations.

#### *Procedures*

The State Office of Risk Management will recognize and present awards to state agencies or facilities that meet certain criteria. The award categories and their criteria are detailed below.

- **Bronze Award** - The Texas State Agency Safety Bronze Award will be presented to any eligible agency or facility that has a current injury frequency rate (IFR) decrease of 10% or more but less than 30% below the average of the prior five years IFR (or the number of years that data can be verified).
- **Silver Award** - The Texas State Agency Safety Silver Award will be presented to any eligible agency or facility that has a current IFR decrease of 30% or more but less than 50% below the average of the prior five years IFR (or the number of years that data can be verified).
- **Gold Award** - The Texas State Agency Safety Gold Award will be presented to any eligible agency or facility that has a current IFR decrease of 50% or more below the average of the prior five years IFR (or the number of years that can be verified). An agency or facility that is awarded the Texas State Agency Safety Gold Award will be provided an evaluation form, which must be completed to be eligible for the Texas State Agency Safety Excellence Award (explained below).

- **Sustained Superior Safety Performance Award** - The Sustained Superior Safety Performance Award will be presented to small agencies or facilities (100 or fewer FTEs) that historically have no reported injuries for three or more years. This award may also be presented to major agencies or facilities of agencies when the agency or facility has a lower IFR and cost per FTE for each of the past five years, when compared to the average of like agencies or facilities. This award will be in lieu of the bronze, silver, or gold awards. (This criteria is effective with the FY 2003 awards.)
  
- **Safety Excellence Award** - Agencies or major facilities awarded the Texas State Agency Safety Gold Award will automatically be provided a State Office of Risk Management nomination form. Nomination forms must be received at the Risk Assessment and Loss Prevention and Control section, not later than the date indicated in the letter advising the agency of its eligibility and at the address noted on the form. The award, a suitably engraved plaque, will be presented at an appropriate ceremony. Each nomination must include a detailed narrative description of each category listed on the form and be verifiable. A selection board composed of risk managers will be convened to select an agency to receive the Texas State Agency Safety Excellence Award. The judgement of the board is final, and a recipient of the award may or may not be selected depending on the substance contained in the nomination forms and the status of the agency's/facility's safety program as determined by visits to the agency/facility.
  
- No agency will be eligible to receive an award unless at least the three most recent years of recorded data are available (award year plus two prior years).<sup>6</sup>

***Checklist for Essential Program Elements***

1. Does the agency have a safety incentives and awards program?	Yes	No
2. Is the agency's safety incentives and awards program designed with consideration given to the Texas Incentive and Productivity Commission's State Employee Incentive Program?	Yes	No
3. If the agency is a member of the Texas Safety Association, does the agency participate in TSA's safety awards programs for the public sector?	Yes	No

**Available Resources for Texas State Agencies**

***Agencies and Organizations Providing Assistance***

**Texas Incentive and Productivity Commission**

P.O. Box 12482  
Austin, TX 78711  
(512) 936-6145  
E-mail: [help@tipc.state.tx.us](mailto:help@tipc.state.tx.us)  
[Texas Incentive and Productivity Commission](#)

Texas Safety Association  
9065 Jollyville Road, Suite 203  
Austin, Texas 78759

**(mailing address)**

P.O. Box 149179  
Austin, Texas 78714-9179  
Phone: 512-345-7900  
Toll free: 800-688-1005  
Fax: 512-345-7902

[Texas Safety Association](#)

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*Endnotes*

1. Feuerstein, Phyllis; "Incentives Inspire Safe Behavior"; *Safety & Health*; January 1992.
2. Janowiak, John; "Incentive Programs: Only the Icing, Not the Cake"; *Safety & Health*; July 1993; Volume 148, No. 1; pp. 62-65.
3. Weinstein, Mindy; "The Prize Package"; *Risk & Insurance*; April 15, 1993; p. 35.
4. *Vernon's Texas Codes Annotated*, Government Code, Chapter 2108, Subchapter B, Sections 2108.021- 2108.028 and Subchapter C, Section 2108.104 (Vernon Pamphlet 1998).
5. "Public Employee Section"; *Texas Safety Association Chairman's Award 1992*; Texas Safety Association; August 1993; pp. PBE-03 - PBE-13.
6. "Texas State Agency Safety Awards"; *State Office of Risk Management Internal Procedures*; Procedure, 14-LP&C.11; March 20, 1998; pp. 1-3.

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## Section Two - Employee Safety and Health Program

### Chapter 3

#### Safety Responsibilities

##### Subchapter 3.0

##### Introduction

Revised: November 2004

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### **Volume III:**

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This section of Risk Management for Texas State Agencies provides general information regarding employee safety and health exposures, techniques and methods to manage these exposures. It identifies resources that may be available to assist state agencies to develop or enhance an employee safety and health program. This section is not intended in any way to be a substitute for the advice and guidance of legal counsel, who should always be consulted regarding rights, duties and responsibilities under the law.

The success of any employee safety and health program depends upon the level of support received from top management. A state agency's employee safety and health program that is fully supported by the board or commission and top agency management should be successful emphasized and promoted. A fully supported program that is communicated throughout the organization promotes and encourages employee involvement and increases awareness that working safely is an important aspect of every activity, job, task or program.

The fact that a state agency exists, that it employs personnel, occupies physical structures, and administers programs exposes the agency to safety and health related risks. Avoidance of all risks is not possible. No matter how small or large the agency, it must be concerned with management and control of these inherent risks. Therefore, each state agency should develop an appropriate organization structure that maximizes management and control of safety and health risks, and ultimately minimizes the risk of losses occurring. This involves assigning responsibility and accountability for the program.

The OSHA voluntary guidelines for employee safety and health program management provide the following recommendations regarding the establishment of goals and objectives:

- Assign and communicate responsibility for all aspects of the program, so that managers, supervisors, and employees in all parts of the organization know what performance is expected of them.<sup>1</sup>
- Provide adequate authority and resources to responsible parties, so that assigned responsibilities can be met.<sup>2</sup>

- Hold managers, supervisors and employees accountable for meeting their responsibilities so that essential tasks will be performed.<sup>3</sup>

Everyone in the agency has some responsibility for safety and health; clear assignments of those responsibilities are necessary in order for everyone to know what is expected of them. Along with assignment of responsibility, appropriate authority and resources should be provided to carry out the assignments.<sup>4</sup>

This chapter of the "Employee Safety and Health Program" Section of *Risk Management for Texas State Agencies* discusses the responsibilities and accountability for an agency's program. Part one discusses the responsibilities of executive management in the development and implementation of the program. Parts two through four provide suggestions for mid-level and first-level managers in carrying out their responsibilities. The fifth part discusses the responsibilities that employees in general, and line employees in particular, have with respect to ensuring the employee safety and health program is successful.

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### ***Endnotes***

1. "Safety and Health Program Management Guidelines; Issuance of Voluntary Guidelines"; U.S. Department of Labor, Occupational Safety and Health Administration; *Federal Register 54 (16): 3904 - 3916*; January 25, 1989; Section (c)(1)(v).
2. OSHA Voluntary Guidelines; Section (c)(1)(vi).
3. OSHA Voluntary Guidelines; Section (c)(1)(vii).
4. Bruce, Stephen, Ph.D.; *How to Meet OSHA's Safety & Health Guidelines*; Business & Legal Reports, Inc., 39 Academy Street; Madison, CT; 1992; p. 5-2.

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## *Section Two - Employee Safety and Health Program*

### **Chapter 3**

#### Safety Responsibilities

##### Subchapter 3.1

#### Executive Management Responsibilities

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This section of Risk Management for Texas State Agencies provides general information regarding employee safety and health exposures, techniques and methods to manage these exposures. It identifies resources that may be available to assist state agencies to develop or enhance an employee safety and health program. This section is not intended in any way to be a substitute for the advice and guidance of legal counsel, who should always be consulted regarding rights, duties and responsibilities under the law.

Upper agency management plays a critical role in the success of an employee safety and health program because safety and health begins with this support and direction. This commitment sets the tone for the program and is essential for the program to be successful.(1) Top management's commitment is especially important because other pressures, such as peer and productivity pressure, can influence employee and supervisor compliance with safety and health program activities.(2)

The OSHA voluntary guidelines for employee safety and health program management provide the following recommendation regarding upper management's commitment to safety and health:

"Provide visible top management involvement in implementing the program, so that all will understand that management's commitment is serious."(3)

If top management gives high priority to safety and health protection in practice, others will observe their actions and will follow their lead. If top management commitment is not present, then the written safety and health policy will have little credibility and often others will not follow it.(4)

Although the employee safety and health program is generally managed by others, there are a number of program elements that should originate by direction of agency upper management.(5) These include the following:

- Establish a comprehensive employee safety and health program that effectively addresses the agency's exposures to employee accidents, injuries and occupational diseases.
- Adopt an employee safety and health policy and authorize any appropriate safety procedures,

standards, or regulations to support the policy.

- Provide an adequate budget to carry out the program.
- Designate appropriate safety staff to support and manage the program.
- Monitor specific measurable goals and objectives to reduce the frequency and severity of employee accidents, injuries and occupational diseases.
- Support incorporation of safety concepts and practices into all program operations of the agency.
- Establish a safety climate that encourages employees to fully participate in the program.
- Support active participation in program activities by all staff.
- Provide opportunities for training additional duty safety officers (ADSOs) in safety practices. (6,7,8)

Top management involvement and support of the agency employee safety and health program is essential.<sup>1</sup> Since employees are expected to take the program goals and objectives seriously, they must know that their participation is supported by upper management and their supervisors.

***Checklist For Texas State Agencies***

- |  |        |
|--|--------|
| 1. Has the agency head endorsed an employee safety and health program that effectively addresses the agency's exposures?                             | Yes No |
| 2. Has the agency head adopted and signed a safety and health policy?  | Yes No |
| 3. Has the agency head formally stated that safety and health has a priority equal to other mission- supporting functions and activities?            | Yes No |
| 4. Has top management authorized any appropriate safety procedures, standards, or regulations to support the policy?                                 | Yes No |
| 5. Has a budget been allocated for the agency safety program?  | Yes No |
| 6. Has an appropriate agency staff member been appointed to support and manage the program?  | Yes No |
| 7. Have specific measurable goals and objectives been established to reduce the frequency and severity of employee accidents, injuries and diseases? | Yes No |
| 8. Have safety concepts and activities been incorporated into all agency operations?   | Yes No |
| 9. Are employees encouraged to fully participate in the program?   | Yes No |



- |  |        |
|--|--------|
| 10. Does top management support active participation in program activities by all staff?             | Yes No |
| 11. Are safety-related training opportunities available for additional duty safety officers (ADSOs)? | Yes No |
- 

### ***ENDNOTES***

1. Geyer, Sherry; "Safety Investment Yields Future Dividends"; *Safety & Health*; July, 1991; pp. 23-25.
  2. Griffin, Ricky W.; *Management*; CPCU Edition; American Institute For Chartered Property Casualty Underwriters; Houghton Mifflin Company; Boston, MA; 1990. pp. 15-20.
  3. "Safety and Health Program Management Guidelines; Issuance of Voluntary Guidelines"; U.S. Department of Labor, Occupational Safety and Health Administration; *Federal Register* 54 (16): 3904 - 3916; January 25, 1989; Section (c)(1)(iii).
  4. Bruce, Stephen D., Ph.D.; *How to Meet OSHA's Safety & Health Guidelines*; Business & Legal Reports, Inc.; 39 Academy Street; Madison, CT 06443-1513; p. 3-8.
  5. Head, George L., Editor, Ph.D., CPCU, ARM, CSP, CLU; *Essentials of Risk Control*; Volume I; Insurance Institute of America; Malvern, PA; 1991. p. 325.
  6. Bruce, Stephen D.; *How to Meet OSHA's Safety and Health Guidelines*; Business and Legal Reports, Inc.; Madison, CT; 1990. Chapter 3-8 to 3-10.
  7. Bruce, Stephen D., Ph.D.; *BLR Encyclopedia of Safety & Health Training: An OSHA Compliance Handbook*; Business & Legal Reports, Inc.; Madison, CT; 1992. Chapter 2.
  8. Laing, Patricia, Editor; *Accident Prevention Manual For Business & Industry - Engineering and Technology*; National Safety Council; 1992. pp. 126.
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## Section Two - Employee Safety and Health Program

### Chapter 3

#### Safety Responsibilities

##### Subchapter 3.2

#### Safety Officer Responsibilities

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### Volume III:

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This section of Risk Management for Texas State Agencies provides general information regarding employee safety and health exposures, techniques and methods to manage these exposures. It identifies resources that may be available to assist state agencies to develop or enhance an employee safety and health program. This section is not intended in any way to be a substitute for the advice and guidance of legal counsel, who should always be consulted regarding rights, duties and responsibilities under the law.

Each state agency should formally appoint a safety officer. Depending on the agency size, the safety officer may be employed on a full or part-time (additional duty or collateral duty) basis. This appointment should be in writing and should document the safety officer's specific duties and responsibilities. The agency safety officer's duties will vary, depending on the size of the organization, the number of locations, the nature of the operations conducted at those locations, other staff people available to assist, and where the safety officer fits into the organization. Each agency should modify, adjust, or develop duties which uniquely apply to the individual needs of the particular agency.<sup>1</sup>

Regardless of agency size or whether the agency safety officer is full or part-time, that individual will have certain assigned duties.<sup>2</sup> The following are *examples* of agency safety officer duties and are not intended to be all inclusive:

- Develop a safety management system that provides a workplace with minimal employee safety and health risk exposures.
- Plan, implement, and maintain the Employee Safety and Health Program.
- Define the agency's safety and health objectives and performance standards.
- Establish safety and health standards and criteria.
- Develop a safety budget.

- Assist managers, supervisors and employees to develop and implement safe work practices for all operations.
- Develop a manual which addresses the agency's primary safety and health risk exposures.
- Develop and implement safety education and training programs customized to the individual agency.
- Develop a management information system to identify and monitor specific types of loss exposures.
- Develop a hazard recognition, reporting, and control system.
- Develop an internal process to report accidents and incidents and for conducting reviews and analyses of accidents and incidents.
- Conduct thorough, comprehensive accident reviews and analyses in cases or circumstances where necessary.
- Maintain a safety and health reference library for agency use.
- Supervise any agency safety and health staff, as appropriate.
- Train additional duty safety officers (ADSOs) to provide assistance, support and resources to the safety officer, as appropriate.
- Support the agency safety committee as a professional and technical resource.
- Manage or monitor the management of the agency's HAZCOM Program, including appropriate maintenance and management of MSDS information.
- Coordinate with the agency's risk manager, risk management point-of-contact, workers' compensation claims coordinator and other professionals as appropriate regarding health and safety issues.
- Attend professional safety and health management development conferences to keep current with latest technological and safety management advances.
- Obtain professional certifications, such as the Advanced Safety Certificate, Certified Safety Professional and Associate in Loss Control Management, as appropriate.<sup>2,3,4</sup>

### ***Checklist For Texas State Agencies***

1. Has the agency head formally appointed or hired an agency safety officer or additional duty safety officer?      Yes No
  2. Are duties and responsibilities assigned to the agency safety officer clearly and formally stated in writing?      Yes No
  3. Do the assigned duties refer to agency-unique programs and activities which require safety involvement?      Yes No
- 

### ***ENDNOTES***

1. Peterson, Dan; *Techniques of Safety Management*; Second Edition; McGraw Hill Book Co.; New York; 1990. pp. 80 - 81.
  2. Bruce, Stephen D., Ph.D.; *BLR Encyclopedia of Safety & Health Training: An OSHA Compliance Handbook*; Business and Legal Research, Inc.; Madison, CT; 1992. Chapter 2.
  3. Culbertson, Charles V.; *Managing Your Safety Manager*; Risk and Insurance Management Society, Inc.; 1983.
  4. *Safety & Health*; Thurber, Sarah; "Safety Directors: Too Many Tasks, Too Little Time"; July, 1993. pp 42-47.
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## Section Two - Employee Safety and Health Program

### Chapter 3

#### Safety Responsibilities

##### Subchapter 3.3

#### Additional Duty Safety Officer Responsibilities

Revised: November 2004

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### Volume III:

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This section of Risk Management for Texas State Agencies provides general information regarding employee safety and health exposures, techniques and methods to manage these exposures. It identifies resources that may be available to assist state agencies to develop or enhance an employee safety and health program. This section is not intended in any way to be a substitute for the advice and guidance of legal counsel, who should always be consulted regarding rights, duties and responsibilities under the law.

Large agencies with multiple statewide service regions, districts, facilities, divisions or departments may have a need for an organization of additional duty safety officers (ADSOs). The agency's safety officer or safety manager may find it difficult to effectively develop and implement an employee safety and health program within a large agency without additional assigned staff. Additional duty safety officers provide this essential function to implement an effective program and provide many of the same services as the agency safety officer at the regional, district, field office, facility, division or unit level.

The assignment of an additional duty safety officer should be in writing by the head of the agency, division or other responsible executive management position. The assignment should include specific duties and responsibilities. Appropriate performance standards for the safety and health function should be included in the individual's performance evaluation. Job descriptions should reflect safety responsibilities.

The following list addresses many of the primary responsibilities and job duties of the additional duty safety officer. This list is not intended to be all inclusive. Each agency should use it as a guide to develop a list of assignments which addresses the agency's individual needs:

- Coordinate development and implementation of the agency-wide safety and health program at the regional, district, field office, facility, division or unit level, as appropriate.
- Act as an advisor or resource to management and employees on matters concerning employee safety and health.

- Arrange for and/or conduct employee safety and health training for local individuals and groups.
- Ensure that training records and accident data are maintained at the local level or alternately forwarded to the agency safety manager.
- Establish reporting systems to keep management informed on the local program's progress.
- Review accident/incident report forms for accuracy and completeness prior to submission to the agency safety officer.
- Coordinate safety and health committee and accident review board activities.
- Conduct safety inspections of appropriate facilities.
- Coordinate with any appropriate staff members.
- Be familiar with MSDSs and HAZCOM training requirements.

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***Checklist For Texas State Agencies***

- |  |     |    |
|--|-----|----|
| 1. Does the agency assign additional duty safety officers (ADSOs)?   | Yes | No |
| 2. If ADSOs are assigned, is the assignment in writing, and signed by upper management?  | Yes | No |
| 3. Does the ADSO arrange for and/or present safety and health training for local agency employees?                                     | Yes | No |
| 4. Does the ADSO prepare safety and health status reports for management?  | Yes | No |
| 5. Does the ADSO ensure that local training records and accident data are maintained?  | Yes | No |
| 6. Does the ADSO review accident/incident report forms for accuracy and completeness prior to submission to the agency safety officer? | Yes | No |
| 7. Does the ADSO coordinate safety and health committee and accident review board meetings?  | Yes | No |
| 8. Does the ADSO conduct safety inspections in assigned areas of responsibility?   | Yes | No |
- 

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## Section Two - Employee Safety and Health Program

### Chapter 3

#### Safety Responsibilities

##### Subchapter 3.4

#### Safety Responsibilities of Supervisors

Revised: November 2004

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### Volume III:

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This section of Risk Management for Texas State Agencies provides general information regarding employee safety and health exposures, techniques and methods to manage these exposures. It identifies resources that may be available to assist state agencies to develop or enhance an employee safety and health program. This section is not intended in any way to be a substitute for the advice and guidance of legal counsel, who should always be consulted regarding rights, duties and responsibilities under the law.

The first-line supervisor plays a critical role in determining the level of effectiveness of an agency's employee safety and health program. The supervisor has considerable authority to determine workplace priorities and often sets the general tone and attitude toward safety and health issues in the workplace.(1)

It is essential that first-line supervisors:

1. understand what is expected by top management in the area of employee safety and health;
2. integrate employee safety and health concepts into the everyday procedures of an employee's job; and
3. supervise safety and health performance, just as other aspects of an employee's job require supervision.(2)

Safety duties and responsibilities of supervisors should be generally defined in the agency safety and health manual, included within all position descriptions, and evaluated during performance evaluations.(3)

The following is a summary of safety and health related duties and responsibilities of supervisors and is suggested as guidelines that each agency should modify, revise, and supplement with agency specific needs:

- **Establish safe work methods and practices.** Conduct Job/Task Safety Analyses for appropriate jobs, and ensure that the steps outlined are consistently followed. Evaluate jobs which may appear to be inherently safe for potentially unsafe conditions or employee actions.
- **Consistently apply and enforce any safety and health rules, methods, procedures, policies or**



**standards.** This is necessary to encourage all employees to follow the same safety and health methods, procedures, policies and standards, regardless of their position.

- **Reinforce safe behavior.** Give recognition and praise as soon as possible after the employee's mastery of safe operating practices.
- **Train and observe employees in safe performance prior to beginning work.** Ensure that employees know how to perform the work safely. This is especially applicable to the correct operation of machinery, vehicles, or equipment outside the office environment. Knowledge and skill will better enable an employee to work safely.
- **Retrain employees in any safety and health methods, procedures, policies or standards.** Employees perform better with practice or repetition - but only if the task or job is performed correctly the first time.
- **Promptly review the facts and circumstances surrounding accidents.** Complete the accident review and analysis form, and forward immediately to the agency safety officer or ADSO as appropriate.(2,3,4,5)

---

### *Checklist For Texas State Agencies*

- |   |        |
|---|--------|
| 1. Are the safety and health responsibilities of the agency supervisors clearly defined in agency documents?  | Yes No |
| 2. Are supervisors held accountable on written performance evaluations for safe operating practices by the employees they supervise?  | Yes No |
| 3. Do supervisors make regular and consistent use of a formal agency safety and health incentive, recognition, or awards program?   | Yes No |
| 4. Do supervisors promptly review the facts and circumstances surrounding accidents, incidents, and hazard reports and take appropriate workplace or supervisory corrections? | Yes N  |

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### *ENDNOTES*

1. Colvin, Raymond J., PE, CSP; *The Guidebook To Basic Safety Programming*; Safety Training Dynamics, Inc.; Brockton, MA; 1983. p.17.16-1.
2. *Supervisor's Safety Meetings Handbook*; Business & Legal Reports, Inc.; Madison, CT; 1992.
3. Bruce, Stephen D., Ph.D.; *How To Meet OSHA's Safety and Health Guidelines*; Business & Legal

Reports, Inc.; Madison, CT; 1992. Chapter 3.

4. Peterson, Dan; *Techniques of Safety Management*; Second Edition; McGraw Hill Book Co.; New York; 1990. pp. 41 -77.

5. Griffin, Ricky W.; *Management*; CPCU Edition; American Institute For Chartered Casualty Underwriters; Houghton Mifflin Co.; Boston, MA; 1990. Chapter 1.

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## Section Two - Employee Safety and Health Program

### Chapter 3

#### Safety Responsibilities

#### Subchapter 3.5

#### Safety Responsibilities of Employees

Revised: December 2004

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### Volume III:

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This section of Risk Management for Texas State Agencies provides general information regarding employee safety and health exposures, techniques and methods to manage these exposures. It identifies resources that may be available to assist state agencies to develop or enhance an employee safety and health program. This section is not intended in any way to be a substitute for the advice and guidance of legal counsel, who should always be consulted regarding rights, duties and responsibilities under the law.

The efforts and resources that agency management, safety and health professionals, and supervisors invest in an employee safety and health program have a primary objective. That objective is to provide a safe and healthy environment for the employee -- one that prevents or reduces injury-producing circumstances. The safety and health of employees is the main focus of the program. The employee is the principal participant and principal beneficiary. In addition, the agency's mission and goal to provide vitally important services to the citizens of Texas can be met in a more efficient, cost effective, and productive manner if employees work in a safe and healthy environment. Therefore, employees also have very important duties and responsibilities that contribute to an employee safety and health program.

The OSHA voluntary guidelines for employee safety and health program management provide the following recommendation regarding the establishment of goals and objectives:

"Provide for and encourage employee involvement in the structure and operation of the program and in decisions that affect their safety and health, so that they will commit their insight and energy to achieving the safety and health program's goal and objectives."(1)

An effective employee safety and health program depends upon commitment by employees as well as managers and supervisors. Therefore, it is important for employee concerns to be reflected in the program.  
(2)

The following list of employee duties and responsibilities are presented as guidance and are not intended to be all inclusive or comprehensive. Each agency should revise, modify, or add to the list to meet the particular unique needs of the agency:

- Understand and follow all agency safety and health standards, regulations, procedures, policies or practices;
- Use protective equipment and clothing when appropriate or required;
- Immediately report any accident, incident or injury to the supervisor;
- Make suggestions to the supervisor or safety officer for improving work procedures and practices to make them safer;
- Immediately report known or suspected hazards noted in the workplace to the supervisor or safety officer;
- Actively participate in safety committees, and safety meetings as appropriate;
- Seek training opportunities regarding safe work practices and safe operating procedures.(3)

The employee safety and health program should be designed to encourage employees to think and make decisions that support a safe working environment. Employee involvement in the program includes the interaction of several factors and may be achieved by the following:

- Supervisors communicating employee safety and health program expectations;
- Employees assuming responsibility for safe operating practices and specific actions;
- Management granting employees authority to follow employee safety and health program guidelines; and,
- Accountability assigned for all aspects of the program.4

## **SAFETY POLICIES, PROCEDURES, STANDARDS AND REGULATIONS**

Management's expectation for employees to work safely is effectively established and set out in safety, policies, procedures, standards and regulations. The intent is to provide employees with a consistent set of written instructions and expectations for safe behavior using recognized safety procedures, standards, policies, and regulations. Some of these procedures, standards, policies, and regulations will be general in nature and should be applied equally and impartially to all employees. However, others may be very specific to address hazardous exposures involved in specific operations. An example of a specific procedure is "electrical safety". (Refer to Chapter 6 for additional information on this subject.) The agency's employee safety and health manual or plan should contain reference to all relevant procedures, policies, standards or regulations, and copies should be available to all employees involved in these specific operations.

Safety policies, procedures, standards or regulations communicate to all staff the proper, safe methods to perform their job duties and tasks. Employees should be involved in the development process, since they perform the actual work and can provide valuable input regarding the safest way to perform specific duties and tasks. Successful implementation of such written instructions depends upon a sense of involvement by the employees. Some employees will not "buy-in" to the concepts involved in workplace safety and health unless they understand and acknowledge that procedures are for their benefit and well-being.(5)

When employees understand the expectation to work safely, are involved in developing safe procedures and acknowledge the importance of workplace safety and health, they assume their proper role in helping to establish a successful employee safety and health program.(6,7,8)

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### ***Checklist For Texas State Agencies***

- |   |        |
|---|--------|
| 1. Does the agency's safety manual or plan, employee manual and/or administrative personnel procedures manual address the responsibilities of employees regarding safety? | Yes No |
| 2. Do safety responsibilities apply equally to all employees  | Yes No |
| 3. Does a formal reporting system exist that employees can use to report known or suspected hazards in the workplace to management?                                       | Yes No |
| 4. Is appropriate personal protective equipment provided to employees?  | Yes No |
| 5. Does a formal mechanism exist for employees to make suggestions for improving work procedures to increase workplace safety?  | Yes No |
| 6. Do employees actively participate in safety committees and safety meetings?  | Yes No |
| 7. Are employees involved in the development and implementation phases of the employee safety and health program?   | Yes No |
- 

### ***ENDNOTES***

1. "Safety and Health Program Management Guidelines; Issuance of Voluntary Guidelines"; U.S. Department of Labor, Occupational Safety and Health Administration; *Federal Register* 54 (16): 3904 - 3916; January 25, 1989; Section (c)(1)(iv).
2. Bruce, Stephen D., Ph.D.; *How to Meet OSHA's Safety & Health Guidelines*; Business & Legal Reports, Inc.; 39 Academy Street; Madison, CT 06443-1513; p. 4-1.
3. Bruce, Stephen D., Ph.D.; *How To Meet OSHA's Safety and Health Guidelines*; Business and Legal Reports, Inc.; Madison, CT. 1990. Chapter 4. 4-1 to 4-2.
4. Petersen, Dan; *Techniques of Safety Management*; Second Edition; McGraw Hill Book Company; New York; 1990. pp.88-90.

5. *Public Employee Safety and Health Management*; National Safety Council, 1990; p. 30.
  6. *Safety & Health*; Wire, Ted; "Employees Take the Reins"; June, 1992. pp 31-33.
  7. *Safety & Health*; Wolf, Harvey J. and R. John C. Pearson; "Happy Workers Mean Fewer Injuries;" June, 1992. pp 34-38.
  8. Laing, Patricia M., Editor; *Accident Prevention Manual for Business & Industry: Engineering and Technology*; 10th Edition; National Safety Council; 1992. p.128.
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## Section Two - Employee Safety and Health Program

### **Chapter 4**

#### Education, Training, and Certification Programs for Health and Safety

##### Subchapter 4.0

##### Introduction

Revised: December 2004

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### **Volume III:**

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This chapter of Risk Management for Texas State Agencies supplies general information regarding state agency employee safety and health exposures, and techniques and methods to manage and control those exposures. It also identifies additional resources that may be available to assist state agencies in developing or enhancing its employee safety and health program. This chapter is not intended in any way to be a substitute for the advice and guidance of legal counsel, who should always be consulted regarding rights, duties and responsibilities under the law.

Safety education, training, and certification programs provide state agency safety professionals and employees with valuable educational and instructional resources and networking contacts. The information these programs provide goes beyond simple application of standards, policies, and procedures to the integration of strategic safety management issues within the framework of the organization.

Safety is more than simply compliance, but instead must address a number of issues, including performance and production problems. Because of the increasingly complex nature of safety management, more formalized methods of safety training, interdisciplinary education, and certification are necessary.

Accordingly, state agencies should establish a safety education and training program that is appropriate for the scope of operations, complexity, and size of the agency.

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## Section Two - Employee Safety and Health Program

### Chapter 4

#### Education, Training, and Certification Programs for Health and Safety

##### Subchapter 4.1

#### Education and Training Program for Safety and Health

Revised: December 2004

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### Volume III:

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This chapter of Risk Management for Texas State Agencies supplies general information regarding state agency employee safety and health exposures, and techniques and methods to manage and control those exposures. It also identifies additional resources that may be available to assist state agencies in developing or enhancing its employee safety and health program. This chapter is not intended in any way to be a substitute for the advice and guidance of legal counsel, who should always be consulted regarding rights, duties and responsibilities under the law.

An education and training program for safety and health is one of the most necessary and basic elements of an employee safety and health program. Education and training are essential to communicate practical understanding to employees<sup>1</sup> within a state agency. A training program addresses specific safety and health responsibilities and provides risk prevention and loss control information for agency employees. Safety education and training is most effective when it is immediately incorporated into standard operating procedures, workplace practices, and individual job performance requirements.

Education programs for safety and health require skill in the different teaching styles and learning processes required for each to be effective. Education is a process through which individuals gain new understanding, acquire new skills or change attitudes and behaviors. Learning occurs on many levels and can be successful even if participants do not demonstrate new skills and techniques after the educational program is completed.

Training is a specialized form of education that is focused upon developing skills. Although training incorporates educational theories, principles and practices, it is performance-oriented.<sup>2</sup> The goal of training is for participants to demonstrate something new or perform better than before. The program's effectiveness is measured by the participant's ability to demonstrate the desired skills.

Persons involved in developing an education program for safety and health should be aware of adult learning styles. Adults learn best in an atmosphere that permits and encourages use of their existing knowledge to question, debate and enter into discussion.<sup>2</sup> Because of the distinct differences between adult and child learning styles, instructors of adult learners should focus on facilitating the exchange



of ideas. Facilitation involves more than transmitting ideas; it involves helping the participants become self-directed.<sup>2</sup>

In addition to using appropriate teaching styles, specific needs of employees should be considered when designing a training program. The type of safety training should depend upon the size of the agency and its risk exposures. Each employee will have different training needs and the amount of training needed by each employee will depend upon the work performed and the risks associated with it. Training should be developed and targeted specifically for the employee, supervisor, safety officer or additional duty safety officer (ADSO).

Training which is conducted as part of the risk management program should address:

- Performance of specific job duties or tasks that stresses safe operations, quality and productivity;
- Information about agency standards, policies and procedures in regard to loss prevention, safety and health;
- Explanation of the reciprocal responsibilities of employees and the management of the agency;
- Identification of the risks and potentials for loss resulting from employees' actions;
- Discussion concerning employees' and supervisors' judgment when faced with novel or potentially hazardous conditions; and,
- Direction regarding employee or supervisory needs to communicate their concerns about loss control or health and safety matters.<sup>2,3</sup>

### ***Purpose of the Education and Training Program for Safety and Health***

The effectiveness of an employee safety and health program is measured by safe and competent job performance. An education and training program for safety and health is designed to address potential dangers and hazards that employees are likely to encounter when performing their jobs. To assure that employees are properly trained, supervisors must know how to train an employee to perform the essential duties and tasks in the most efficient, safest manner possible. Supervisors and safety officers must also know how to detect and control hazards, handle emergency situations, and conduct accident/incident reviews.<sup>3</sup>

The Occupational Safety and Health Administration's "Voluntary Guidelines for Safety and Health Program Management" recommend safety and health education and training be established for the following reasons:

To ensure that all employees understand the hazards to which they may be exposed and how to prevent harm to themselves and others from exposure to these hazards, so that employees accept and follow established safety and health protections;<sup>4</sup>

To ensure that supervisors understand that they will carry out their safety and health responsibilities effectively, including: analyzing the work under their supervision to identify unrecognized potential hazards; maintaining physical protections in their work areas; reinforcing employee training on the nature of potential hazards in their work and on needed protective measures, through continued performance feedback and, if necessary, through enforcement of safe work practices;<sup>5</sup> and

To ensure that managers understand their safety and health responsibilities...so that the managers will effectively carry out those responsibilities.<sup>6</sup>

## **TYPES OF TRAINING**

### ***Supervisory and Managerial Training***

- *Supervisor Skills Training* - It is essential that supervisors be trained in supervisory skills, which are then applied to supervising for safety. This type of training is usually available through the agency's human resources or staff development function.
- *Safety Training of Safety Officers and ADSOs* - Supervisors should be able to provide specific job content training to their safety officers and ADSOs. A job safety analysis provides employers with safety performance measures linked to specific job elements and highlights areas that require special attention. Job safety analysis is discussed in further detail in Chapter 5 of these guidelines.
- *Specialized Training* - A supervisor who is responsible for specialized work activities may require specialized training. An analysis of the agency's exposure to potentially hazardous situations and conditions should be conducted and training developed for such specialized needs as first aid or CPR training.
- *Train-the-Trainer Program* - The "Train-the-Trainer" program is a formal training program in which safety officers, ADSOs, and/or supervisors are taught how to develop, prepare and present formal instruction materials (safety or otherwise).
- *Professional Development Training* - Safety officers and ADSOs should periodically attend professional development seminars, conferences and meetings that provide informational updates and networking opportunities for safety and health professionals.<sup>7</sup>

### ***Employee Safety and Health Training***

- *New Employee Orientation Training* - New employees should receive an initial new employee safety and health orientation training. Chapter 4.2 of this section provides more information about this important area of training.
- *Job-Related Training* - When an employee is transferred into a new workgroup or department and is assigned new job duties, specific job instruction training should take place. Job instruction training should incorporate safety concepts into task training. The employee should show that he or she is able to perform the task safely before being allowed to perform the task without supervision. Refresher training at regular intervals is also desirable.
- *Remedial Training* - If it becomes evident that additional training is necessary, remedial training should be provided. For example, an increase in the number of employee traffic tickets while driving on state agency business may indicate a need for driver safety training.
- *Safety Meetings* - Safety meetings are specifically designed to provide quick, concise and focused presentation of safety and health related subjects to employees.<sup>7</sup>

### ***OSHA Training Guidelines***

The Occupational Safety and Health Administration states that training is an essential part of every employer's safety and health program for protecting employees from occupational accidents, injuries and diseases.<sup>8</sup> For this reason, OSHA includes training as an element of their voluntary safety and health program guidelines<sup>4,5,6</sup>, and has published a book on training requirements in OSHA standards and training guidelines.<sup>8</sup> The voluntary training guidelines provide a model for designing, conducting, evaluating, and revising employee safety and health training programs. This seven step model is as follows:

- Determine if training is needed;
- Identify training needs;
- Identify goals and objectives for the training;
- Develop learning activities;
- Conduct the training;
- Evaluate effectiveness of the training program; and
- Improve the program based on feedback.<sup>8</sup>

### ***Designing the Program***

A general guideline for designing the safety and health training program is provided in the following list:

- Determine if there is a training deficiency by performing a needs assessment;

- If a training deficiency exists, determine the type and method of training to be given;
- Identify goals and objectives;
- Develop specific learning activities;
- Conduct the training;
- Evaluate the program's effectiveness; and
- Improve the program.<sup>3,1</sup>

When determining if a training deficiency exists, a good starting point is the "Job Safety Analysis" (JSA). A JSA should be performed on each distinct job to target the specific critical tasks that have an inherent risk of injury, illness or disease to employees. The JSA evaluates specific job tasks associated with performing various duties. The cumulative results of JSAs for all employees can be used by the safety officer to make decisions regarding the types of overall generic safety training that should be developed. Job safety analysis is discussed in further detail in Chapter 5 of Volume III, Section Two of *Risk Management For Texas State Agencies*.

Certain training needs may be dictated by federal or state laws, rules, and regulations. For example, the Texas Hazard Communication Act is modeled after OSHA's Hazard Communication Standard. It requires employers with employees who work with or are exposed to chemicals to establish a Hazard Communication program, which involves training employees who are exposed to chemicals in the workplace.<sup>9</sup> State agencies should develop their safety and health education and training programs based upon needs analyses, JSAs, and federal or state statutes and/or applicable standards, rules and regulations.

### ***Administering the Training Program***

The following items have been demonstrated to be successful in developing and implementing safety and health training programs, and may be incorporated into an agency's training program:

- Lesson outlines and plans for each period of instruction;
- Appropriate tests of comprehension to document the degree of learning that has taken place;
- Dated attendance roster signed by all training attendees;
- Training records maintained in a central area of the agency;
- Procedures to explain responsibilities for training; and
- Recordkeeping procedures to comply with appropriate regulatory requirements.<sup>1</sup>

## ***Resources Available for Texas State Agencies***

### ***Publications***

State agencies should contact the Texas Workers' Compensation Commission, Workers' Health and Safety Division for various training materials.

*Encyclopedia of Safety & Health Training; An OSHA Compliance Handbook*; Bruce, Stephen D., PhD.; Business and Legal Reports, Inc.; 39 Academy Street; Madison, CT; 1992.

*Handbook of Training Techniques: How to Develop & Deliver Effective Programs*; Gallup, David A., Ed.D.; Business & Legal Reports, Inc.; 39 Academy Street, Madison, CT 06443; 1992.

*Training and Development Handbook*; Third Edition; American Society For Training and Development; Craig, Robert L. (editor); McGraw Hill Book Company; New York; 1987.

*Training Requirements in OSHA Standards and Training Guidelines*; U.S. Department of Labor, Occupational Safety and Health Administration; OSHA Publication 2254 (Revised); 1992; pp. v, 3-8.

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### ***Agencies and Organizations***

*Texas Department of Health*  
Hazard Communication Branch  
1100 West 49th Street  
Austin, TX 78756  
(512) 459-1611

*Texas Safety Association*  
(Texas affiliate of the National Safety Council)  
3834 Spicewood Springs Road  
P.O. Box 9345  
Austin, TX 78766-9345  
(512) 343-6525

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### ***Checklist for Texas State Agencies***

- |  |        |
|--|--------|
| 1. Does the agency have a formal, documented safety and health education and training program? | Yes No |
| 2. Does the agency provide supervisory skills training?  | Yes No |

- |  |        |
|--|--------|
| 3. Does the agency provide specific safety training for supervisors who supervise specialized or hazardous work?                     | Yes No |
| 4. Are safety officers provided with adequate opportunities to receive professional development training for safety and health?      | Yes No |
| 5. Are additional duty safety officers provided with adequate opportunities to receive professional development training for safety? | Yes No |
| 6. Do safety officers (if appropriate) receive "Train-the-Trainer" training?   | Yes No |
| 7. Do additional duty safety officers (if appropriate) receive "Train-the-Trainer" training?   | Yes No |
| 8. Are lesson plans prepared for periods of formal safety instruction?   | Yes No |
| 9. Are training records maintained to document all training attended by employees?   | Yes No |

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### *Endnotes*

1. Bruce, Stephen D., Ph.D.; *How to Meet OSHA's Safety and Health Guidelines*; Business & Legal Reports, Inc.; Madison, CT 06443.
2. Rekus, John, CSP, CIH; *Occupational Health & Safety*; "Training Should Treat Participants As Adults Eager To Exchange Ideas"; April, 1993.
3. Laing, Patricia M., Editor; *Accident Prevention Manual for Industrial Operations*; Ninth Edition; National Safety Council; 1988; p. 183.
4. "Safety and Health Program Management guidelines; Issuance of Voluntary Guidelines"; U.S. Department of Labor, Occupational Safety and Health Administration; *Federal Register 54 (16): 3904 - 3916*; January 25, 1989; Sections (c)(4)(i), (ii), and (iii).
5. OSHA Voluntary Guidelines; Section (C)(4)(ii).
6. OSHA Voluntary Guidelines; Section (C)(4)(iii).
7. *Supervisor's Safety Meetings Handbook*; Business & Legal Reports; Madison, CT; 1992.
8. *Training Requirements in OSHA Standards and Training Guidelines*; U.S. Department of Labor, Occupational Safety and Health Administration; OSHA Publication 2254 (Revised); 1992; pp. v, 3-8.
9. Texas Hazard Communication Act, Chapter 502; Health and Safety Code; Revised 1993.

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## Section Two - Employee Safety and Health Program

### Chapter 4

#### Education, Training, and Certification Programs for Health and Safety

##### Subchapter 4.2

#### New Employee Safety and Health Orientation Training

Revised: December 2004

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### Volume III:

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This chapter of Risk Management for Texas State Agencies supplies general information regarding state agency employee safety and health exposures, and techniques and methods to manage and control those exposures. It also identifies additional resources that may be available to assist state agencies in developing or enhancing its employee safety and health program. This chapter is not intended in any way to be a substitute for the advice and guidance of legal counsel, who should always be consulted regarding rights, duties and responsibilities under the law.

New employee orientation training provides a state agency with its first opportunity to introduce new employees to the agency's employee safety and health program. Employees who are new to the job statistically have a much higher rate of work-related injuries and illnesses than do more experienced workers.<sup>1</sup> This may be due to insufficient knowledge of specific job hazards and/or training in proper work practices. If this is the case, training at the earliest point of employment helps provide a solution.

The new employee safety and health orientation training lets employees know that the safety and health of employees is a fundamental concern of the agency. It also sends a message to all employees that safety and health is something that can be controlled and is everyone's responsibility. Management's concern for maintaining a safe and healthful work environment for employees can be clearly communicated.<sup>2</sup>

New employee safety and health orientation training programs may be presented and conducted in a variety of ways. They may be formal or informal, or they may be organized in an agency-wide or department (unit) specific format. Each agency should assess its needs for the method of orientation training it will provide for its employees. In all cases, the training should give the employee a basic understanding of the agency's employee safety and health program.

Safety and health orientation training should focus on communicating agency policies and procedures that are applicable to all employees. One such example is a policy that prohibits smoking within a building, the building evacuation plan or first aid protocols.<sup>3</sup>

### **SAFETY AND HEALTH TOPICS IN NEW EMPLOYEE ORIENTATION**



The following topics are recommended to be covered in the new employee safety and health orientation program:4

- **Employee's Position in the Safety Organizational Structure** - Employees should be provided with an explanation of safety responsibilities throughout the agency. This should include the role of the safety officer or safety manager.
- **Emergency Response/First Aid Response** - Employees should be informed of the agency's specific procedures for responding to a medical emergency.
- **Agency Safety and Health Policy** - All new employees should be informed of the agency's policy concerning employee health and safety. Management's support for the employee safety and health program is best conveyed when the policy is presented by a member of upper management or the agency safety manager.
- **Reporting Unsafe Working Conditions** - Employees should be informed of their responsibility to report any hazard, hazardous conditions, and known or suspected violations of any safety and health standard to their immediate supervisor, a management representative, or the safety officer. Procedures should be described if a formal, written hazard reporting system is in effect.
- **Management Support for Working Safely** - Employees should be informed that they have management's support to always work safety. They should never undertake any job, or task, or operate any equipment, machinery, or vehicle considered to be unsafe until the unsafe condition is corrected. The job or task is safe to perform if appropriate safe practices or procedures are provided, and/or personal protective equipment is provided.
- **Safety-Related Procedures and Policies must be Followed Consistently** - Without exception, employees should be informed that they are expected to adhere to all safety-related standards, workrules, policies, procedures, and safe work practices. Disciplinary action that may be taken for violation of safety policies and procedures should also be discussed.
- **Personal Protective Equipment** - Employees should be informed that personal protective equipment and clothing must be worn whenever appropriate.
- **Information about the Employee Safety and Health Committee** - Employees should be informed of the activities of the employee safety and health committee, and be encouraged to participate in and contribute to committee-sponsored activities, programs and events.
- **Texas Hazard Communication (HazCom) Act Procedures** - All new employees have the 'right-to-know' about hazardous chemicals they may be exposed to in the workplace. Section

502.009(f) of the Texas Hazard Communication Act requires all new employees to receive training before the employee works with or in a work area containing a hazardous chemical.<sup>5</sup>

- **Accident Reporting Procedures** - Each agency should have specific procedures available to direct employees in the steps that should be taken following an accident, incident, injury or occupational disease. These reporting procedures should be explained to employees during new employee safety and health orientation training.
- **Workers' Compensation Programs/Benefits** - Every new employee should be informed of the workers' compensation benefits that are available if he or she incurs a compensable injury during the course and scope of employment. New employee orientation training is an excellent forum to initially inform employees of this important benefit.

A sample new employee safety orientation checklist is provided in the Appendix of this chapter.

## **SPECIFIC JOB/TASKS-RELATED ORIENTATION TRAINING FOR NEW EMPLOYEES**

Specific job/task-related orientation training should be conducted by supervisors and should address specific safety and health topics to instruct employees in the safe and proper way to perform particular job tasks. This can be achieved by providing training that directly addresses the specific job/task safety concern. Each agency will need to assess its operations and determine its own training needs based on the results of that assessment.

Instructional methods most commonly used for training are either classroom instruction, self-instruction or on-the-job (OTJ) training. Each method presents its own set of strengths and weaknesses and requires that the needs of the group be assessed. Classroom and self-instruction are preferred for ongoing training of large groups. On-the-job training is usually preferred for training of physical job skills where instructors are available for training.<sup>6</sup>

## **DOCUMENTATION AND RECORD KEEPING**

Each new employee should be provided with a copy of the agency's safety and health policy statement, if not a part of other materials already provided. A record of who attended the meeting, topics discussed and information provided to attendees (including policy statement) should be retained.<sup>3</sup>

---

## ***CHECKLIST FOR TEXAS STATE AGENCIES***

1. Does the agency provide safety orientation training to all new employees? Yes No

- |  |        |
|--|--------|
| 2. Does the safety officer discuss employees' safety responsibilities during the orientation training? | Yes No |
| 3. Does new employee orientation include training on the following safety topics:                      |        |
| - Hazard reporting system for unsafe working conditions?   | Yes No |
| - Safety procedures and workplace rules/ regulations?  | Yes No |
| - Personal protective equipment?   | Yes No |
| - Safety and health committee?   | Yes No |
| - Safety and health committee?   | Yes No |
| - Emergency response and first aid response in the event of accidents?                                 | Yes No |
| - Accident reporting procedures?   | Yes No |
| - Workers' Compensation Benefits?  | Yes No |
| 4. Does each employee receive a copy of the agency safety and health policy?                           | Yes No |
| 5. Is the agency safety and health policy posted in prominent places within the agency?                | Yes No |
| 6. Does the agency maintain a permanent record of new employee safety and health orientation training? | Yes No |
- 

### ***ENDNOTES***

1. Laing, Patricia M., Editor *Accident Prevention for Business and Industry; Administration and Programs*; National Safety Council; 1992.
  2. Bruce, Stephen D., Ph.D.; *BLR Encyclopedia of Safety & Health Training; An OSHA Compliance Handbook*; Business and Legal Reports, Inc.; Madison, CT. 1992.
  3. *How To Meet OSHA's Safety & Health Guidelines*; Business & Legal Reports, Inc.; Madison, CT. 1992.
  4. National Safety Council Training Course: NSC #101 - Safety Training Methods. Texas Safety Association; Austin, TX.
  5. *Health and Safety Code*, Chapter 502, "Texas Hazard Communication Act"; Revised, 1993.
  6. *Supervisory Safety Meetings Handbook*; Business & Legal Reports, Inc.; Madison, CT; 1992.
-

# SAMPLE

## NEW EMPLOYEE SAFETY AND HEALTH ORIENTATION CHECKLIST

Name: \_\_\_\_\_ Date Employed: \_\_\_\_\_

Department/Unit: \_\_\_\_\_

Previous Work Experience: \_\_\_\_\_

I HAVE BEEN INSTRUCTED IN THE FOLLOWING:

	<b>Employee Initials</b>	<b>Supervisor Initials</b>
1. Safety and health policy and program	_____	_____
2. Safety and health standards and regulations (general)	_____	_____
3. Safety rules (specific to my job)	_____	_____
4. Safety and health environment	_____	_____
5. Specific hazards of my job	_____	_____
6. How to report unsafe acts or conditions	_____	_____
7. How to report injuries	_____	_____
8. Personal protective equipment	_____	_____
9. Fire alarm, extinguishing equipment and evacuation procedures	_____	_____
10. Lifting and material handling	_____	_____
11. Housekeeping and personal hygiene	_____	_____
12. Care and safe use of tools and equipment	_____	_____
13. Material safety data sheets (MSDS)	_____	_____
14. First aid response or medical response	_____	_____
15. Equipment operation	_____	_____
16. Other specific instructions given	_____	_____
a.		
b.		
c.		

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

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

Follow-up conducted by: \_\_\_\_\_ Date: \_\_\_\_\_

One copy in supervisor's file and original to agency safety officer within one week of date of employment.

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## Section Two - Employee Safety and Health Program

### Chapter 4

#### Education, Training, and Certification Programs for Health and Safety

##### Subchapter 4.3

##### Safety Discussion at Staff Meetings

Revised: December 2004

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### Volume III:

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This chapter of Risk Management for Texas State Agencies supplies general information regarding state agency employee safety and health exposures, and techniques and methods to manage and control those exposures. It also identifies additional resources that may be available to assist state agencies in developing or enhancing its employee safety and health program. This chapter is not intended in any way to be a substitute for the advice and guidance of legal counsel, who should always be consulted regarding rights, duties and responsibilities under the law.

A staff meeting is an excellent opportunity to address safety and health related topics. A safety meeting is an effective communication medium that keeps employees informed of key elements within the employee safety and health program. Every agency can address safety and health topics in staff meetings on a regular basis, and as often as practical at all levels of the organization. When safety is included in discussions within the framework of regular operational activities, such as staff meetings, a message is conveyed to employees that safety is an agency priority. It also acknowledges the importance of applying safe workplace practices to every aspect of agency operations. When safety is incorporated into normal operations, employees are encouraged to assume responsibility for the program's success in much the same way as other production concerns.(1,2)

The safety and health manual or plan is an appropriate document to formally state the agency's support of the practice to discuss safety at staff meetings. By documenting that safety is a concern worthy of discussion at staff meetings, the message is communicated to employees that management supports their safety efforts. It also communicates an agency-wide message that employee safety and health is a fundamental concern of management.(3)

### *Staff Meeting Structure*

There are a number of ways to introduce and conduct safety discussions within the framework of a staff meeting. However, the objective should always be to instruct employees about safety-related subject matter in a way that facilitates practical application of specific safety and health information to actual workplace experiences.(2)

The safety discussion or presentation at the staff meeting may be made by a safety officer or any other staff person knowledgeable about the topic being addressed. By placing the safety discussion item on the agenda in the same sequence at each meeting, the safety discussion will eventually be accepted as a regular agenda item.

Staff meetings will generally cover a range of topics of considerable importance to employees in attendance. Safety instructional material should be geared toward the particular needs of the audience and presented in a manner that is interesting to employees in attendance at the staff meeting. Safety issues that affect office workers are considerably different than those affecting maintenance workers, and the instructional material should target those unique areas of concern. Safety topics should be kept to a minimum of one or two subjects during the staff meeting to avoid information overload.(2,4)

Audiovisual presentations achieve this end by introducing safety material in a visually active format to keep the participants' attention focused on the material. It is always helpful to supplement the safety discussion or presentation with written handouts so that employees have something to refer to after the meeting is over.

Some additional pointers to conducting an effective safety discussion during a staff meeting are the following:

- Encourage participation;
- Be complimentary;
- Relate the topic to the job; and
- Ask questions.<sup>4</sup>

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### ***Checklist For Texas State Agencies***

1. Are safety and health related topics discussed regularly?	Yes	No
2. Does the safety plan, manual and/or administrative procedures document recommend that safety topics should be discussed at staff meetings?	Yes	No

---

### ***ENDNOTES***

1. *How To Meet OSHA's Safety & Health Guidelines*; "Supervisor's Guide to Successful Safety Meetings"; Business & Legal Reports, Inc.; 39 Academy Street; Madison, CT. 06443-1513. 1992.

2. Walsh, Kathy, Editor; *Public Sector Risk Management*; "Developing a Safety Committee"; Public Risk Management Association; Arlington, VA; 22209; 1990.

3. Bruce, Stephen, Ph.D.; *BLR Encyclopedia of Safety & Health Training: An OSHA Compliance Handbook*; "How To Conduct Your Safety Training"; Business & Legal Reports, Inc.; 39 Academy Street; Madison, CT. 1992.

4. *BLR Handbook of Training Techniques: How To Develop and Deliver Effective Programs*; Business & Legal Reports, Inc.; Madison, CT. 1992.

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## Section Two - Employee Safety and Health Program

### Chapter 4

#### Education, Training, and Certification Programs for Health and Safety

##### Subchapter 4.4

##### Employee Safety Meetings

Revised: December 2004

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### Volume III:

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This chapter of Risk Management for Texas State Agencies supplies general information regarding state agency employee safety and health exposures, and techniques and methods to manage and control those exposures. It also identifies additional resources that may be available to assist state agencies in developing or enhancing its employee safety and health program. This chapter is not intended in any way to be a substitute for the advice and guidance of legal counsel, who should always be consulted regarding rights, duties and responsibilities under the law.

Employee safety meetings are held for the specific purpose of conducting employee safety and health training. Safety meetings provide an opportunity to discuss hazards employees would typically be exposed to while performing their job duties. The topic could be something as simple as recognizing and avoiding poison ivy/oak by employees who work outdoors, or providing safety and accident prevention tips for office employees. Alternately the meetings can provide training for employees on the operation of a new or modified machine, or provide an opportunity to announce a safety contest. This chapter provides resources and helpful information for organizing and presenting safety training meetings.

Employee safety and training is an inherent part of every supervisor's duties, and supervisors can facilitate employee training by providing employees with workplace access to safety officers or ADSOs. It is equally important that the safety officer provide ADSOs with such assistance as supervisory training, assistance in developing training aids, flexibility in scheduling, and being available to assist supervisors to conduct training on request wherever possible.(1)

### *Reasons For Having a Safety Meeting*

There are many reasons for having a safety meeting. These are provided in the following list:

- To increase employee safety through increased safety awareness;
- To address a specific issue;

- To increase employee ability to recognize and report safety hazards;
- To explain procedures in a safety manual;
- To explain federal and state regulations;
- To reduce workers' compensation costs for injuries and illnesses;
- To comply with statutory or organizational requirements for having safety meetings; and
- To reinforce or update previous training.(2)

The meeting should have a specific objective or goal. To increase the effectiveness of the safety meeting, the objective should be stated in advance and be understood by all employees in attendance.

## **PLANNING MORE EFFECTIVE SAFETY MEETINGS**

Safety meetings provide the opportunity to focus on specific hazards, operations, new procedures, new equipment, and employees' behaviors. In order to implement an effective program that will lead to cooperation and compliance, the following basic steps have been identified:(1,3)

- **Perform a Needs Assessment** - Determine what participants need to know and what they already know.
- **Establish Goals and Objectives** - Determine what participants will be expected to know at the end of the program. A training objective is a description of the desired performance that participants should be able to exhibit in order to be considered competent. The objective describes the intended results, rather than the process of instruction. Instructional training is effective only to the degree that it is successful in changing the participants in the desired directions and not in undesired directions.(4)
- **Limit the Topic** - Safety meetings are most effective when they are brief and to the point. Multiple topics should be avoided and the focus of the meeting should be limited to points of discussion that apply specifically to the attendees.
- **Limit the Audience** - Whenever possible, limit the audience to those who need to hear about the topic or need training in that specific area. To reach the desired audience, decide what groups of employees would benefit most from the presentation. Advertise the training on bulletin boards and in agency newsletters. State what the training topic is, when and where training will take place and who is required or encouraged to attend.

- **Select the Meeting Type** - There are three generally recognized types of safety meetings to choose from and training will fall into one of those categories.
  - *Formal Safety Meetings* - Scheduled, formal training, generally conducted in a classroom setting with lesson plans, training aids, etc.
  - *Informal "Tailgate" Meetings* - Generally conducted at the job-site prior to beginning a particular job or project. This type of training gives the supervisor an opportunity to review each step of the operation from an operations and safety standpoint, either at the outset of the job or during any point of the job.
  - *Meetings of Opportunity* - These meetings present themselves either on short notice, or can possibly be integrated into a meeting which has been planned and is held for another primary purpose. An example of this might be a staff meeting, wherein the safety officer or ADSO is given the opportunity to present a brief safety message or the person holding the meeting presents a brief safety topic. The meeting is generally kept to a few minutes, as appropriate. The safety officer or ADSO should become practiced and willing to speak unexpectedly (extemporaneously) on safety topics at meetings of this type.<sup>1</sup>
  
- **Select the Meeting Format** - A training program can incorporate a variety of teaching methods, each with its advantages and disadvantages, depending on the lesson's goals and objectives. Several formats may be combined in a single meeting. The most common types of formats are the following:
  - *Lecture* - This method is useful for introducing concepts, presenting factual information, summarizing points, and reviewing previously presented material.
  - *Discussion* - This method allows for exchange of ideas and information between participants and is most effective when conducted in small groups.
  - *Demonstration* - This method is useful when equipment is involved and demonstration by the participants is required.
  - *Laboratory* - This method helps participants develop skills in equipment handling and is useful in situations where resources are limited and each participant cannot be provided with his/her own piece of equipment. Participants can move from station to station on a prearranged schedule.
  - *Audiovisual* - This method is an excellent way to present safety material since audiovisuals tend to hold an audience's attention.
  - *Handout Materials* - Written material, such as pamphlets, brochures and posters add to a safety presentation and are a good way for employees to take the message of the meeting with them into their own workplace. They should be simple and generally easy to read. To avoid unnecessary distraction during the presentation, materials can be distributed at the end of the meeting.<sup>(1,2,5)</sup>

The formats provided in the above list are discussed in further detail in the reference material listed at the end of this chapter. The safety officer, ADSO or safety trainer should attend a "Train-the-Trainer" class to become more technically prepared to conduct various types of safety training meetings.

- **Design the Meeting Plan** - The meeting plan typically contains a description of the steps the instructor will follow to achieve the goals and objectives, and includes the following four steps:
  - The meeting goals that describe what the participants expect to achieve through the training;
  - A scope statement which establishes the lesson's focus;
  - Learning objectives that identify what participants should be able to do when training is over; and
  - An outline which shows the meeting/training's format or agenda.(2,5)
  
- **Design the Agenda** - Preparing and following an agenda increases training effectiveness for all persons involved. The agenda provides participants with information about what will be discussed, what is expected of them, and what the meeting is supposed to accomplish. It maintains structure and organizes the meeting. Some helpful tips about preparing an agenda are the following:
  - Prepare it from the audience's perspective and make it relevant to their concerns so that it captures their interest.
  - Consider setting a time-limit on each item on the agenda, but allow enough time for participation in the discussion.
  - Identify and write down key points to be discussed in the video or handout materials.
  - Combine visual support, such as a blackboard and an overhead projector with the speech to increase employees' retention of the content.(1)
  
- **Assemble Available Resources** - Assemble available resources for conducting the meeting. This includes everything that can be done to ensure that materials are presented in a manner that encourages learning. Check in advance to determine if any audiovisual equipment and materials that will be used are operating correctly.
  
- **Preview the Video** - Watch the video in advance since this gives the speaker the opportunity to ensure that the material is relevant. Any out-dated information should be noted to the audience, or another video or topic substituted.(2)
  
- **Design the Presentation** - The presentation should have a three-part structure: an introduction, a discussion and a conclusion. The introduction should be brief and to the point and should capture the audience's attention by using humor, statistical facts, summary statements, etc. The majority of the time will be spent in discussion and should be interesting enough to hold employees' attention. Personalize the presentation and use visual aids for increased effect.(2)
  
- **Determine Seating Layout** - Seating layout should be arranged in a manner that is advantageous and facilitates learning. Adopt a layout that encourages interaction, rather than placing the focus on the speaker. This can be achieved by configuring a U- shaped seating arrangement; V-shaped seating arrangements have also been used with considerable success.

(2)

- **Use the Training/Meeting Checklist** - Prior to conducting the actual training, the training/meeting session checklist provided in this chapter should be previewed. This checklist should be helpful in reducing the chance of forgetting equipment or supplies necessary for the training session's success.(2)

## **TRAINING/MEETING SESSION CHECKLISTS**

### ***Meeting Room Items:***

Adequate Space

Ventilation

Lighting

Temperature

Set-Up

### ***Equipment:***

TV Monitor

Easel with flipchart

Video Cassette Player

Demonstration Equipment

Electric or Battery Power Overhead Projector

Table for Printed Materials

Screen Tables and Chairs

Spare Projector Bulbs

Blackboard

## Extension Cord

### ***Supplies:***

Note Pads

Chalk and Eraser

Pens and Pencils

Wastebasket

Pencil Sharpener

Name Tags/ Place Cards

Rubber Bands/ Push Pins

Tape to Secure Cords

Masking Tape

### ***Printed Materials:***

Viewing Log

Video Summary

Handouts

Other: \_\_\_\_\_

Tests

### ***Prepared Visuals:***

Audiovisual Program

Flip Charts

Transparencies

Other: \_\_\_\_\_

**Motivate the Audience** - Some suggestions for motivating an audience may include the following:

- Create an enthusiastic atmosphere and a team that works together makes the safety meeting more successful.
- Create a team by using the words, "we" and "our". Avoid presenting the speaker as someone who "knows better" than employees.
- Relate a personal experience that ties into the topic.
- Tell a humorous story that leads into the lesson.
- Emphasize the need-to-know aspects of a topic.
- Be enthusiastic toward participants and the topic.
- Be friendly, sincere, and show interest in the safety meeting.
- Emphasize encouragement by suggesting that the topic will be reasonably rewarding and within the ability of all to accomplish.
- Ask participants questions in keeping with their ability to answer correctly.
- Give recognition and reward whenever possible, ensuring it is deserved.
- Stimulate friendly competition and ensure it remains friendly. Emphasize performance.
- Utilize curiosity and encourage its growth.
- Capitalize on existing interests and develop others.
- Arrange learning tasks appropriate to the ability of the participants.
- Assist participants in evaluating their progress toward the goals.
- Reduce tension.

- Never emphasize the topic's difficulty. Avoid being negative.(1,5,6 )

**Concluding Statement** - This portion of the safety meeting should be short and direct. Restate and emphasize main points to leave employees with a lasting impression of the topic under discussion. This can be achieved by using such tools as surveys, questionnaires and participatory demonstrations. (1,2)

**Follow-Up Evaluation** - Without a proper evaluation it is difficult to determine if the safety meeting/training was effective. There are several types of evaluations that can be conducted:

- *Self Evaluation* - This is the instructor's evaluation of the meeting/training in terms of supplies, materials, visual aids, and employee participation.
- *Participant Evaluation* - This can be accomplished in one of two ways. An objective way is to ask employees to anonymously complete a questionnaire that asks for feedback for future meetings. Another way is to ask employees for verbal feedback. The most important part of evaluating employee feedback is whether the meeting was effective, not how much they enjoyed it, although these two factors are often dependent upon one another.
- *Participant Testing* - This type of evaluation assesses the extent of the employees' knowledge based on what was presented in the meeting session. Testing can be both pre- and post-training testing, or only post-training testing.
- *Supervisor/Management Evaluation* - This type of evaluation is conducted the same way that participants evaluate the training.
- *Job Performance Evaluation* - Through personal observation, employees' performance on the job can be evaluated. This takes considerably more time than other types of evaluation. Employees should be able to perform the tasks as they were instructed in the safety meeting, using proper methods and procedures, safety precautions. Another way to determine if the training was effective is to look for a reduction in accidents by employees who took the training or attended the safety meeting.1,5,6

**Make Improvements** - Examination and consideration of previous training evaluations and experiences should provide the instructor/facilitator with the information to assess and make improvements to future safety meetings and/or training.

**Record Keeping** - The final step involved in conducting a safety meeting is to keep proper and complete records on any and all training conducted. Employee training records do not have to be elaborate and as a minimum should include an employee sign-in sheet. Information on the sign-in sheet should include the following:



- Date of the meeting;
- Topic(s) presented;
- Person conducting the meeting;
- Participant's name and ID number; and,
- Participant's job position and work section.1,5,6

A record of all safety meetings conducted should be kept. At a minimum the record should include:

- Date of meeting;
- Topic covered;
- Outline of material presented;
- Names of employees trained; and,
- Copies of any tests given.1

Individual training records are also important. These should be maintained by the employee's supervisor and should include:

- Employee's position and work section;
- Employee's supervisor;
- Employee's name and ID number
- Training and dates received; and,
- Test scores, credits or evaluations from training, if available.1

The safety meeting records and individual training records together provide a means of cross-checking and validating employee training.

## **SUMMARY POINTS TO CONSIDER**

The following items are provided as an overall summary of helpful pointers that make safety training/meeting sessions more effective:

- Know your subject;
- Know your audience;
- Have all materials ready;
- Make sure the meeting place is ready;
- Greet people as they enter the room;
- Conduct the meeting as a facilitator;
- Keep the tone informal;
- Stay focused on the topic; and
- Show appreciation for the participants.1

---

## ***Resources Available for Texas State Agencies***

### ***Publications***

"Effective Safety Meetings: A Training Program for Use by Safety Personnel for Conducting Safety Meetings"; Texas Workers' Compensation Commission, Workers' Health and Safety Division; 4000 South IH-35; Austin, TX 78704; Phone: (512) 440-3627.

*National Safety Council Course # 101 - Safety Training Techniques*; Safety Training Course offered by: Texas Safety Association; P.O. Box 9345; 3834 Spicewood Springs Road; Austin, TX 78766-9345; 512/ 343-6525.

*BLR Handbook of Training Techniques: How To Develop & Deliver Effective Programs*; Gallup, David A., Ed.D.; Business & Legal Reports, Inc.; 39 Academy Street, Madison, CT. 06443.

*Training and Development Handbook, Third Edition*; Craig, Robert L., Editor; American Society For Training and Development; McGraw Hill Book Company; New York; 1987.

*Supervisor's Safety Meetings Handbook*; Business & Legal Reports, Inc.; Madison, CT; 1992.

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### ***Checklist for Texas State Agencies***

- |  |        |
|--|--------|
| 1. Does the agency have a formal program which addresses the need to conduct safety meetings on a regular, informal, or opportunity basis? | Yes No |
| 2. Have supervisors and/or safety personnel who conduct safety meetings received "Train-the-Trainer" training?                             | Yes No |
| 3. Is all training documented and a formal record kept in the employee personnel record and/or in an employee training file?               | Yes No |

---

### ***Endnotes***

1. *Guide To Effective Safety Meetings*; Texas Workers' Compensation Commission, Workers' Health and Safety Division, Safety Education and Training, 2nd Edition 1993.

2. *TWCC Resource Center Audiovisual Catalog, 1992*; Texas Workers' Compensation Commission, Workers' Health and Safety Division; Safety Education and Training, Austin, TX.

3. Rekus, John, CSP, CIH; *Occupational Health & Safety*; "Training Should Treat Participants As

Adults Eager To Exchange Ideas"; April 1993.

4. Mager, Robert F.; *Preparing Institutional Objectives*; Revised Second Edition, Lake Publishing Company; Belmont, CA 1984; pp.1-5.

5. *BLR Handbook of Training Techniques: How To Develop & Deliver Effective Programs*; Business & Legal Reports, Inc.; Madison, CT. 1992.

6. *How To Meet OSHA's Safety & Health Guidelines*; Business and Legal Reports, Inc.; Madison, CT. 1992.

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## Section Two - Employee Safety and Health Program

### Chapter 4

#### Education, Training, and Certification Programs for Health and Safety

##### Subchapter 4.5

#### Professional Safety Organizations and Certification Programs

Revised: December 2004

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### Volume III:

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This chapter of Risk Management for Texas State Agencies supplies general information regarding state agency employee safety and health exposures, and techniques and methods to manage and control those exposures. It also identifies additional resources that may be available to assist state agencies in developing or enhancing its employee safety and health program. This chapter is not intended in any way to be a substitute for the advice and guidance of legal counsel, who should always be consulted regarding rights, duties and responsibilities under the law.

Professional safety organizations and certification programs are valuable resources for Texas state agency safety professionals because they provide initial and continuing educational information, networking opportunities, and access to the most current safety and health information, risk prevention and loss control materials. Membership in safety organizations is generally open to individuals in the safety and health profession. However, some organizations restrict membership to licensed professionals or to persons whose specialization is in a particular area of safety and health, such as fire safety, public safety, and health care, among others.(1)

Active participation in, and the contacts made through, professional association memberships are a good source of safety and health related information and expert assistance. Many professional organizations and associations sponsor professional development seminars and educational programs that serve to increase safety professionals' technical knowledge. State agency membership in a safety organization also illustrates the agency's commitment to its employee safety and health program.(2)

There are a number of professional organizations and associations that offer certifications in the field of safety and health. Possession of a certification from one of these professional organizations or associations enhances the individual's credibility and is a formal acknowledgement of the individual's attainment of a specific standard of achievement, level of professional knowledge, or demonstration of a particular skill level in the safety and health field.(3)

The State Office of Risk Management (Office) encourages professionals in the fields of safety and health management to seek and obtain appropriate professional certifications. It is recommended that each agency evaluate its own need for professional safety and health expertise. In order for employee

safety and health programs to be of highest quality, professionals in the field of safety and health should be provided opportunities to receive the education and training necessary to fulfill the requirements of their positions.(4)

## **ORGANIZATIONS/ASSOCIATIONS AND CERTIFICATION PROGRAMS**

The following listing of organizations and associations and their certification programs is not intended to be all inclusive or comprehensive.

### **American Board of Industrial Hygiene**

302 South Waverly Road  
Lansing, MI 48917  
517 321-2638

This specialty Board is authorized to administer examinations, review credentials and certify properly qualified industrial hygienists. The objectives are to encourage the study, improve the practice, elevate the standards, and issue certificates to qualified applicants.(6)

### **American Conference of Governmental Industrial Hygienists (ACGIH)**

6500 Glenway Avenue, Bldg. D-7  
Cincinnati, OH 45211  
513-661-7881

ACGIH is an organization dedicated to the administrative and technical aspects of worker health and safety protection. It provides leadership, educational, and investigative opportunities to professional and technical personnel representing governmental agencies or educational institutions involved in occupational health and safety activities. The Conference also publishes a journal of members' papers.  
(6)

### **American Society of Safety Engineers (ASSE)**

1800 East Oakton  
Des Plaines, IL 60018  
708-692-4121

The ASSE is a professional society of safety engineers, safety directors and others concerned with accident prevention and safety programs. The Society provides safety professionals with professional growth and development opportunities by developing educational curricula, degree program accreditation, presentation of member education courses and publications, definition of research needs and communications to keep safety practitioners current.(5)

### **Board of Certified Safety Professionals (BCSP)**

208 Burwash Avenue

Savoy, IL 61874-9571  
217-359-9263

The principal purposes of the Board are to establish minimum academic and experience attainments necessary to qualify individuals as certified safety professionals, to determine the competency requirements, to administer examinations and to issue certificates to qualified applicants.(5)

### **Board of Certified Hazard Control Management**

8009 Carita Court  
Bethesda, MD 20817  
301-230-2475

The Board offers advice and assistance to persons who want to improve their professional abilities by acquiring administration skills combined with technical safety abilities. It establishes curricula in conjunction with colleges and universities and other training institutions to better prepare hazard control managers for their duties.(5)

### **Insurance Institute of America (IIA)**

720 Providence Road  
Malvern PA 19355-2100  
215-644-2100

The IIA is a private educational institution which offers a comprehensive curricula of risk management, loss control, and safety courses through extension education. Courses are conducted through correspondence with the Institute and are pursued through self study, study groups, or formal sources. After completing a series of lessons, students must pass written comprehensive tests. Individual program courses have been recognized as having college, graduate and post-graduate level equivalency. Upon successful completion of course requirements, students are subsequently awarded a variety of designations, including the *Associate of Loss Control Management (ALCM)*, and the *Associate of Risk Management (ARM)*.(7)

### **International Loss Control Institute (ILCI)**

4546 Atlanta Highway  
Loganville, GA 30249  
404-466-2208

The International Loss Control Institute offers services designed to further the success of loss control management programs. These services include loss control management consulting, auditing, research and development. ILCI also offers a full line of books, training aids, self-study guides, software and other loss control management tools.

### **National Fire Protection Association (NFPA)**

Batterymarch Park  
Quincy, MA 02269

800-344-3555

The NFPA is the clearinghouse for information on the subject of fire protection, prevention and firefighting. It also issues numerous technical standards widely accepted by federal, state, and municipal governments as the basis of legislation and widely used as the basis of good practice. Membership is generally open to fire prevention and fire safety professionals.(5)

### **National Safety Council (NSC)**

Texas Affiliate: Texas Safety Association  
3834 Spicewood Springs Road  
P.O. Box 9345  
Austin, TX 78766-9345  
512-343-6525

This organization focuses its efforts on providing resources to organizations and individuals to prevent accidents and illnesses. It develops education and training materials and works on development of accident prevention material and programs in specific areas of safety and health including industrial, traffic, home, recreational, and public sector areas.(5)

### **Texas Safety Association (TSA)**

3834 Spicewood Springs Road  
P.O. Box 9345  
Austin, TX 78766-9345  
(512) 343-6525

TSA is chartered by the National Safety Council, and has offices in major Texas cities. It offers a wide range of educational programs and resources to safety and health professionals, including a certification program which leads to the award of the National Safety Council "Advanced Safety Certificate".

### **Texas Workers' Compensation Commission Workers' Health and Safety Division**

4000 South IH-35 (MS #20)  
Austin, TX 78704  
512-440-3922

The TWCC Workers' Health and Safety Division does not "certify" safety and health professionals, although it is authorized by the Texas Workers' Compensation Act and Commission rules to acknowledge credentials and experience required of Texas Field Safety Representatives (FSRs). A safety and health professional who wishes to provide accident prevention services for a workers' compensation insurance carrier must meet the qualifications of an FSR. Although state employee safety and health professionals are not required to meet FSR qualifications, an individual with professional credentials may request the Workers' Health and Safety Division to evaluate their credentials and acknowledge if the FSR qualifications are met.

The Workers' Health and Safety Division, upon request, will evaluate professional credentials and determine if the requirements of an "Approved Professional Source" for safety services have been met. The Approved Professional Source is another state designation that is required for safety and health professionals who wish to provide professional consultations to employers designated as "Rejected Risk" or "Extra Hazardous," as defined in the Texas Workers' Compensation Act and Texas Workers' Compensation Commission rules or identified under the Rejected Risk Program, as defined in the Texas Insurance Code.

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### ***Checklist For Texas State Agencies***

- |   |        |
|---|--------|
| 1. Is the agency a member of appropriate safety and health organizations and associations?  | Yes No |
| 2. Are agency safety and health professionals individual members in professional organizations/associations?  | Yes No |
| 3. Do agency safety and health professionals pursue further professional development opportunities or required continuing education units (CEUs) through enrollment in courses? | Yes No |
| 4. Does the agency have a management development program which addresses the development needs of safety and health professionals employed by the agency?                       | Yes No |
- 

### ***Endnotes***

1. Kostner, William, ARM, MBA, CHCM; "Professional Development"; *Public Sector Risk Management*; Public Risk Management Association; Arlington, VA. 1990.
  2. Tritsch, Shane; "Companies Seek Safety Degrees"; *Safety & Health*; April, 1993.
  3. Hans, Mick; "The Path To Promotion"; *Safety and Health*; May 1992.
  4. Colvin, Ray, P.E., CSP and Colvin, Rosemary, ACL; "Senior Managers: Who's Managing Your Safety Program?"; *Texas Safe Talk*; Texas Safety Association; Vol. 2 No. 8; February 1993; p. 1.
  5. Laing, Patricia M., Editor; *Accident Prevention Manual For Business & Industry: Administration & Programs*; National Safety Council; 1992.
  6. Plog, Barbara A., MPH, CIH, CSP (Editor); *Fundamentals of Industrial Hygiene (Third Edition)*; National Safety Council; 444 North Michigan Ave., Chicago, IL; 1988; pp. 727 - 765.
  7. Head, George L., Ph.D., CPCU, ARM, CSP, CLU; *Essentials of Risk Management*; Insurance Institute of America; Malvern, PA. 1991.
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## Section Two - Employee Safety and Health Program

### Chapter 4

#### Education, Training, and Certification Programs for Health and Safety

##### Subchapter 4.6

##### University-Sponsored Education and Training Programs

Revised: December 2004

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### Volume III:

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This chapter of Risk Management for Texas State Agencies supplies general information regarding state agency employee safety and health exposures, and techniques and methods to manage and control those exposures. It also identifies additional resources that may be available to assist state agencies in developing or enhancing its employee safety and health program. This chapter is not intended in any way to be a substitute for the advice and guidance of legal counsel, who should always be consulted regarding rights, duties and responsibilities under the law.

Increasingly, safety professionals are being asked to go beyond the administration of rules and regulations to "integration of strategic management concepts as they relate to safety, both vertically and horizontally in the organizational structure."<sup>1,2</sup> The State Office of Risk Management (Office) strongly encourages professionals in the fields of risk and safety management to seek and obtain appropriate further educational opportunities in safety and health.<sup>3</sup>

There are a number of educational programs available through several Texas colleges and universities for risk managers and safety officers to improve their skills and abilities.<sup>4</sup> Each agency should evaluate its own need for professional continuing education safety and health expertise.

### UNIVERSITY PROGRAMS

The following listing of organizations and associations and their certification programs is not intended to be all inclusive or comprehensive:

#### **Lamar University**

Division of Public Services and Continuing Education

Occupational Health and Safety Division

P.O. Box 10008

Beaumont, TX 77710

409-880-8432

#### **Texas A & M University**

Occupational & Environmental Safety Training Division

Texas Engineering Extension Service  
College Station, TX 77843-8000  
409-845-3019

**Texas State Technical College**  
**Economic Development Industrial Training Division**  
3801 Campus Drive  
Waco, TX 76705  
817-867-3466

**University of Houston**  
**Health Law and Policy Institute**  
Room 104 TU2  
Houston, TX 77204-6381  
713-743-2101

**University of Houston**  
Health Science Center  
Southwest Center for Occupational and Environmental Health  
P.O. Box 20186, RAS-W1026  
Houston, TX 77225  
713-743-4250

**University of Texas at Arlington**  
Center for Environmental Research & Training  
Box 19021  
Arlington, TX 76019  
817-273-3878

**University of Texas at Austin**  
Industrial Education Department  
P.O. Box 7518  
Austin, TX 78713-7518  
512-471-4633

**University of Texas at Tyler**  
Technology Department  
3900 University Blvd.  
Tyler, TX 75799  
903-566-7310

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## ***ENDNOTES***

1. Hans, Mick; "The Path To Promotion: Degrees and Professional Certification"; *Safety & Health*;

May 1992.

2. Tritsch, Shane; "Companies Seek Safety Degrees"; *Safety & Health*; April, 1993.

3. Kostner, William, ARM, MBA, CHCM; "Professional Development"; *Public Sector Risk Management*; Public Risk Management Association; Arlington, VA. 1990.

4. Laing, Patricia M., Editor; *Accident Prevention Manual For Business & Industry: Administration & Programs*; National Safety Council; 1992.

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## Section Two - Employee Safety and Health Program

### Chapter 4

#### Education, Training, and Certification Programs for Health and Safety

##### Subchapter 4.7

##### TWCC Resource Center

Revised: December 2004

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### Volume III:

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This chapter of Risk Management for Texas State Agencies supplies general information regarding state agency employee safety and health exposures, and techniques and methods to manage and control those exposures. It also identifies additional resources that may be available to assist state agencies in developing or enhancing its employee safety and health program. This chapter is not intended in any way to be a substitute for the advice and guidance of legal counsel, who should always be consulted regarding rights, duties and responsibilities under the law.

The Texas Workers' Compensation Commission's Workers' Health and Safety Resource Center is a primary source of safety education and training information and materials within the state of Texas. The Resource Center is available to all Texas employers and other organizations seeking safety and health education materials. Individuals seeking specific safety and health related information will be able to locate materials at the Resource Center, or they may be referred to another point-of-contact for access to requested materials.

The TWCC Resource Center provides information in many different formats: VHS videotapes, slide programs, periodicals, books, on-line research, and many other information sources are available. The TWCC Resource Center includes a noncommercial library that loans videos and slide programs for use in employee safety and health training programs.

Video and slide programs are loaned only by written, signed requests on the Audiovisual Loan Request Form and must be received at least 21 days prior to the scheduled program show date. Early requests help ensure title availability. Both mail and fax requests are accepted. A copy of the TWCC Resource Center Audiovisual Loan Request Form is provided in the TWCC Resource Center's *Video Resource Catalog*.

The Texas Workers' Compensation Commission publishes the TWCC Resource Center *Video Resource Catalog*, which contains the following:

- Training session guidelines
- Audiovisual loan procedures
- Training programs
- Videotapes in Spanish
- Subject listing
- Audiovisual Loan Request Form.1

State agencies may request this catalog by writing or calling the address referenced at the end of this chapter.

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*Available Resources For Texas State  
Agencies*

Many Texas state agencies have library and audiovisual collections that are relevant to the particular mission of that specific agency. The TWCC Resource Center provides referrals to state agencies that maintain the most applicable source of employee safety and health program information and audiovisuals.

**[Texas Workers' Compensation Commission](#)**

TWCC Resource Center  
7551 Metro Center Drive  
Austin, TX, 78744-1609  
Central fax: 512-804-4001

**Texas Department of Health [Audiovisual Library](#)**

1100 W. 49th Street  
Service Bldg. 103  
(512) 458-7260  
FAX: (512) 458-7474

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***Endnotes***

1. *Video Resource Catalogue*; Texas Workers' Compensation Commission, Workers' Health and Safety Division; Publication, HS92-001C; Rev. February 1998.

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**TWCC RESOURCE CENTER AUDIOVISUAL LOAN REQUEST FORM**

This form must be used to request audiovisual programs. One form must be filled out for each requested

show date. Up to three videos are allowed per show date. All information must be complete for orders to be processed. Videos are for use in the state of TEXAS ONLY.

Please Print:

Account No. \_\_\_\_\_ Fax No. \_\_\_\_\_

Company Name: \_\_\_\_\_ Phone No. \_\_\_\_\_

Requestor's Name: \_\_\_\_\_ Show Date:\* \_\_\_\_\_

Mailing Address or P. O. Box: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Audiovisual Program Selection(s) No.: #1: \_\_\_\_\_ #2: \_\_\_\_\_ #3:  
\_\_\_\_\_

Alternate Selection(s) No.: #1: \_\_\_\_\_ #2: \_\_\_\_\_ #3: \_\_\_\_\_

Requestor has read and agrees to abide by the TWCC Resource Center Audiovisual Loan Procedures. Requestor will return the audiovisual program to the TWCC Resource Center on or before the Date Due \*\* shown on the Audiovisual Usage Form included with your audiovisual program. The Usage Form is to be completed and returned with your selection.

Requestor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_

### **Loan Procedures**

☒ The TWCC Resource Center includes a noncommercial audiovisual library to loan videos and slide programs for presentation in your safety training program. You may NOT request a video or slide program for public showing, loaning to others, or for any showing where a fee is charged. You are responsible for selecting appropriate media and for previewing prior to showing.

☒ Loans are made ONLY by written, signed requests made on the above form, and received in the Resource Center at least 21 days prior to your show date. Since titles are booked on a first come, first served basis, early requests will help ensure title availability. Requests may be mailed or faxed to the address below. Austin area patrons are requested to give up to 10 days notice. Three late returns will result in suspension of privileges.

☒ Up to three videos may be requested for one show date: \*show date may be from one to seven days in

duration.

⌘ Please rewind videos and place in correct tape case, and/or place slides in correct sequence; and fill out Usage Form completely. Also, please be sure to note any damage/problems with the audiovisual materials on the Usage Form so they may be corrected. Willful failure to return borrowed media on request is viewed as theft of state property in violation of Section 31.03 Texas Penal Code. Such conviction could, depending on value, result in a fine not to exceed \$500 (Class C Misdemeanor) or confinement of up to 10 years and a fine up to \$10,000 (Third Degree Felony). Failure to fill out the usage forms may result in suspension of future service.

⌘ **\*\***The Due Date shown on the Audiovisual Usage Form is the date the program is due back in Austin. Returns must be made by overnight or two-day courier service, e.g. UPS, Federal Express. Video tapes must be insured for \$200.00 per tape. In the event of loss, the requestor agrees by signing the Audiovisual Loan Request form to replace the audiovisual program promptly. Failure to do so will result in collection efforts and/or referral to the Office of Attorney General as appropriate.

⌘ Copyright regulations PROHIBIT any duplication or tampering of the videos. Anyone violating the regulations may face a misdemeanor charge. Your completed request form is your agreement not to copy or videotape the program. Violations of Federal Copyright laws will result in the immediate suspension of borrowing privileges and prosecution by the copyright owner can result in financial penalties and/or jail.

⌘ For additional information please call (512)804-4620 (TWCC Safety Resources Center).

**Mail or fax:**

Texas Workers' Compensation Commission  
7551 Metro Center Drive  
Austin, TX, 78744-1609  
Central fax: 512-804-4001

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## Section Two - Employee Safety and Health Program

### **Chapter 5**

#### Hazard and Accident Identification, Reporting, and Analysis

##### Subchapter 5.0

##### Introduction

Revised: April 2005

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### **Volume III:**

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This chapter of Risk Management for Texas State Agencies supplies general information regarding state agency employee safety and health exposures, and techniques and methods to manage and control those exposures. It also identifies additional resources that may be available to assist state agencies in developing or enhancing its employee safety and health program. This chapter is not intended in any way to be a substitute for the advice and guidance of legal counsel, who should always be consulted regarding rights, duties, and responsibilities under the law.

An agency's history of employee accidents, incidents, and workers' compensation claims and losses is often an indicator of the effectiveness of the employee safety and health program in preventing and controlling occupational health and safety hazards.

Incidents and injuries often occur because safety policies, regulations, standards, or operational procedures have not been adequately developed or followed, and/or hazardous conditions exist.

For these reasons, hazard identification and accident/incident reporting and analysis are important for developing loss control solutions to prevent recurrences.

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## Section Two - Employee Safety and Health Program

### **Chapter 5**

#### Hazard and Accident Identification, Reporting, and Analysis

##### Subchapter 5.1

##### Identification of Hazards and Employee Loss Exposures

Revised: December 2004

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### **Volume III:**

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This chapter of Risk Management for Texas State Agencies supplies general information regarding state agency employee safety and health exposures, and methods to manage and control those exposures. It also identifies additional resources that may be available to assist state agencies in developing or enhancing its employee safety and health program. This chapter is not intended in any way to be a substitute for the advice and guidance of legal counsel, who should always be consulted regarding rights, duties, and responsibilities under the law.

A crucial step in improving safety and health in work environments is the identification of hazards.<sup>1</sup> When hazards and exposures that pose safety and health risks to agency employees are systematically identified, management is better prepared to take timely corrective action prevent employee injury and any associated property loss. Corrective action before a loss occurs reduces the frequency and severity of accidents, loss of property and services, and interruption of agency operations. Corrective actions should positively impact the amount of money spent on compensation for employees' occupational illnesses and injuries.<sup>2</sup>

### **FACTORS THAT CONTRIBUTE TO HAZARDS AND EMPLOYEE LOSS EXPOSURES**

The four principal factors contributing to hazards and employee loss exposures include the following:

- Human Factors;
- Situational Factors;
- Environmental Factors; and
- Managerial Factors.

Each of these four factors are discussed below.

#### ***Human Factors***

The term "human factor" refers to an act or failure to act which creates an unsafe condition, which in turn exposes the employee, co-workers and possibly others to an increased probability and potential for an accident. Unsafe acts usually result when standard job procedures are not followed.<sup>2</sup> Some examples of unsafe acts include:

- Unauthorized equipment operation;
- Using equipment improperly or at too fast a speed;
- Operation of equipment or vehicles while chemically or otherwise impaired;
- Removal of equipment safety guards;
- Use of defective equipment;
- Lack of or inadequate training;
- Lack of or inadequate procedures;
- Safety measures bypassed;
- Work pressure or adverse supervisor influence;
- Poor individual personal attitude toward working safely;
- Failure to clean up spills;
- Failure to use protective equipment; and,
- Failure to report hazards.<sup>3</sup>

Human error may be significantly reduced by implementing correct methods and procedures; training for skill proficiency or equipment use; matching physical ability to job requirements; concentrating on correcting potentially dangerous situations; and by having supervisors correct unsafe actions by employees.

### *Situational Factors*

Situational factors also contribute to employee loss exposures. Situational factors include, but are not necessarily limited to:<sup>4</sup>

- *Defects in Design:*
  - Unguarded equipment;
  - Poor warning signals;
  - Ungrounded equipment;
  - Lightweight metal; and/or
  - Unvented, combustible flammable materials or containers.
- *Substandard Construction*
  - Excessive bearings wear on machines;
  - Ladders with weak rungs;
  - Metal-cast parts with structural faults;
  - Warped metal handles; and/or
  - Missing or ineffective metal connectors.

- *Improper Storage of Hazardous Materials*
  - Chemical tanks stored in an unstable manner;
  - Unmarked or unlabeled containers;
  - Unstable storage cans; and/or
  - Separation guidelines not followed.
  
- *Inadequate Planning, Layout, and Design*
  - Aisles too narrow;
  - Lights poorly placed;
  - Welding or painting booth not in protected corner area; and/or,
  - Combustible materials near excessive heat or sparks.

### ***Environmental Factors***

Environmental factors contribute directly or indirectly to potential accident situations. These include the following three areas:

- *Physical* - weather conditions, noise, vibration, lighting, temperature, radiation;
  
- *Chemical* - chemicals, materials, vapors, fumes, dust, smoke, mist; and,
  
- *Biological* - molds, viruses, fungi, parasites, bacteria.

### ***Managerial Factors***

A lack of management commitment and support of the employee safety and health program may produce several factors that weaken safety efforts, such as:

- Inadequate staffing levels;
  
- Inadequate training and education;
  
- Improper responsibility assignment; and
  
- Failure to maintain equipment and tools that are safe and suitable for the assigned tasks.<sup>2</sup>

Understanding the possible combinations and interactions between human, situational, environmental and managerial hazard and accident causation factors helps the agency to identify and eliminate or reduce the causes of occupational hazards and employee loss exposures.

## **IDENTIFYING AND ANALYZING HAZARDS AND EMPLOYEE LOSS EXPOSURES**

Employees are in most cases the persons who are closest to potential hazards, and therefore are usually in the best position to identify them. Therefore, an effective communications system must be established for management to encourage input from employees.<sup>5</sup>

Hazards and employee loss exposures may be identified by several different methods. These methods may include: checklists, inspections and audits, surveys, historical accident and claims data, maintenance records, employee suggestions, and safety hazard identification efforts. Many of these methods are discussed further in the remaining sections of this Chapter on Hazard and Accident Identification, Reporting and Analysis.

Hazard and loss exposure identification should emphasize, but not necessarily be limited to, the following areas:

- Housekeeping practices;
- Condition of equipment;
- Adequacy of equipment (including personal protective equipment);
- Use of prescribed equipment (including personal protective equipment);
- Unsafe working practices;
- Compliance with policies and procedures; machine guarding;
- Qualification of drivers;
- Vehicle condition; maintenance of equipment;
- Guarding of pits, tanks, and ditches;
- Storage and handling of chemicals, flammables, and combustibles;
- Fire extinguishers, first aid, and emergency lighting;
- Noise and dust levels;
- Condition of buildings, grounds, streets, and other infrastructure;
- Incident/accident history; and,
- Workers' compensation claims experience.<sup>4</sup>

The information collected concerning hazards and employee loss exposures should be analyzed for appropriate recommendations to management for developing and implementing a risk prevention and loss control program.

## **HAZARD AND EXPOSURE RANKING CRITERIA**

Management may prioritize information contained in the exposure identification and analysis and choose a method to maximize use of agency finances and resources. The method should consider the severity and probability of certain types of exposures and risks occurring, and allow exposures to be

addressed using a "worst case first" scenario. This ranking method specifies those conditions that need immediate attention and identifies secondary items that can be addressed in the future.(4)

The relative consequence or severity of losses is based on four potential outcomes:

1. *Catastrophic* - may cause death or facility loss;
2. *Critical* - may cause severe injury, severe occupational illness, or major property damage;
3. *Marginal* - may cause minor injury, minor occupational illness or minor property damage; and,
4. *Negligible* - violation of specific criteria but probably would not affect employee safety or health.

Qualitative estimates of the frequency of loss probability may also be included in the loss exposure analysis. An example might be:

- Likely to occur immediately or within a short period of time when exposed to the hazard;
- Probably will occur in time;
- Possibly will occur in time; or,
- Unlikely to occur.

The extent of employee exposure to a non-lethal hazard is also an important consideration. An example of an exposure category ranking method is:

- Greater than 50 employees regularly exposed to the hazard;
- From 10 to 49 employees regularly exposed to the hazard;
- From 5 to 9 employees regularly exposed to the hazard; and,
- Less than 5 employees regularly exposed to the hazard.

After all exposures have been identified and ranked according to criteria based on consequences of loss, probability of loss, and extent of exposure, a single number or risk assessment code (RAC) may be assigned.4 RAC numbers may be assigned according to a scale, such as the following scale:

- 1 = Critical
- 2 = Serious
- 3 = Moderate
- 4 = Minor
- 5 = Negligible

The final step of the loss exposure analysis is to present ranked recommendations with alternatives and estimated corrective costs to management for consideration. Alternatives may include such recommendations as training and education, improved policies and procedures, equipment replacement or repair, environmental controls and modifications, or process redesign.

Volume I, Section Two, Chapter 4, "Loss Exposure Analysis" provides more detailed information regarding analyzing and evaluating loss exposures.

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### ***Checklist for Texas State Agencies***

- |  |     |    |
|--|-----|----|
| 1. Does the agency collect its own internal data on accidents and near-misses?   | Yes | No |
| 2. Does a procedure exist to direct the staff to promptly report observed unsafe or hazardous conditions, situations and/or equipment? | Yes | No |
| 3. Does the agency require supervisors to complete an accident review report form after each accident or incident?                     | Yes | No |
- 

### ***Endnotes***

1. Smith, R. Blake; Senior Editor; "Getting to the Bottom of High Accident Rates"; *Occupational Health & Safety*; pp. 35-38.
  2. Head, George, Ph.D., CPCU, ARM, CSP, CLU; *Essentials of Risk Management, Volumes I & II*; Insurance Institute of America; Malvern, PA. 1991.
  3. Laing, Patricia, M. Editor; *Accident Prevention Manual for Business and Industry-Administration and Programs*. 10th Edition; National Safety Council; 1992.
  4. Head, George; Ph.D., CPCU, ARM, CSP, CLU, *Essentials of Risk Control, Vol. I & II*; Second Edition, Insurance Institute of America; Malvern, PA., 1989.
  5. Colvin, Raymond J.; *The Guidebook to Successful Safety Programming*; Lewis Publishers, Inc.; Chelsea, MI; 48118; p. 77.
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## Section Two - Employee Safety and Health Program

### **Chapter 5**

#### Hazard and Accident Identification, Reporting, and Analysis

##### Subchapter 5.2

##### Direct and Indirect Accident Costs

Revised: December 2004

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### **Volume III:**

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This chapter of Risk Management for Texas State Agencies supplies general information regarding state agency employee safety and health exposures, and techniques and methods to manage and control those exposures. It also identifies additional resources that may be available to assist state agencies in developing or enhancing an employee safety and health program. This chapter is not intended in any way to be a substitute for the advice and guidance of legal counsel, who should always be consulted regarding rights, duties, and responsibilities under the law.

Reliable accident/incident cost data provides an agency with a rational basis to evaluate proposals and recommendations to purchase safety equipment, materials, supplies, evaluate existing safety and health programs, and implement new safety programs. Accurate accident cost data has become increasingly important when making budgetary decisions that have an impact on agency programs. However, quantifying indirect accident costs is a challenging issue that is often difficult to address. When accident cost information accurately correlates both direct and indirect accident costs, management is better prepared to justify budgeted costs related to the employee safety and health program.<sup>1</sup>

An agency's financial, budget or accounting department can provide safety professionals with internal information from which to derive unique agency costs associated with accidents and injuries. The agency safety officer may have to initiate the development of a reporting procedure that can be implemented by agency personnel. This can be conducted on either a pilot basis or an on-going basis.

The accident report accounting procedure should be flexible enough to capture accident related costs over a period of time until all damages and/or losses caused by the accident have been identified. Unfortunately, this aspect of accident cost accounting is often ignored unless a serious incident or catastrophe brings the issue to the forefront. Costs associated with data gathering and reporting include supervisory time spent completing reports and forms, logging data, program monitoring, and training and education of supervisory staff.<sup>1</sup>

### **ESTIMATING ACCIDENT COSTS**



Accident costs can be divided into three categories: basic, direct and indirect.<sup>2</sup> Basic costs are discussed in Chapter 1.2. Direct and indirect costs are discussed below.

### *Direct Costs*

Direct cost data available to Texas state agencies is often limited to direct workers' compensation costs. Direct costs are readily measurable because they represent the amount spent on workers' compensation claims, including lost wages and medical expenses. Workers' compensation cost information is provided to agencies by the State Office of Risk Management (Office) in the form of computer generated reports. These reports usually are received by the agency's workers' compensation claims administrator. These reports should also be referred to the agency risk manager and safety officer for review and analysis.

### *Indirect Costs*

Indirect costs include those costs associated with employment-related accidents that are not covered or paid by workers' compensation. Indirect cost data is considerably more difficult to obtain than direct costs because the information is not often captured or quantified as it accrues. Although difficult to measure, it is still important to estimate indirect costs because they usually are several times more than direct costs.

### *Estimating Indirect Costs*

Indirect costs are usually expressed as a ratio to direct workers' compensation costs, such as 4 to 1. That is, for each one dollar of direct workers' compensation costs, there is a corresponding indirect cost of 4 dollars. There is no preset formula or method for estimating indirect costs. Therefore, an agency may find it useful to develop its own indirect accident cost ratio that more accurately reflects its own experience and is appropriate to its own operations.

Indirect costs may be estimated using the following guidelines:

- **Costs of employees who assist injured employees** - Certain employees may provide assistance to an injured employee following an accident, including co-worker assistance to obtain medical treatment, and assistance provided by the workers' compensation claims coordinator. These costs may be estimated by determining the amount of time spent by each employee while rendering assistance, and multiplying these times by the employee's individual rate of pay.<sup>1</sup>
- **Lost Production** - Production slowdowns and lost production may occur while equipment is

out of production, i.e. being repaired, replaced or sitting idle following an accident. These lost production costs may be estimated by identifying those employees who cannot work due to equipment down time, determining the amount of time while the production slowdown exists, then multiplying the employee's time by their rate of pay.<sup>1</sup>

- **Non-compensated time of the injured employee** - Following an injury, an employee may lose time from work but not receive workers' compensation indemnity benefits. This 'non-compensated time' includes time lost on the day of the injury, and the seven day waiting period for workers' compensation (if temporary income benefits are not received). After an employee returns to work, non-compensated time also includes time required for doctor's visits, physical therapy sessions, and other medical care. Also, if an employee elects to receive sick leave pay in lieu of workers' compensation temporary income benefits, these sick leave payments should be included in the non-compensated indirect cost estimates. The total amounts of non-compensated time should be calculated, then multiplied by the employee's rate of pay.<sup>1</sup>
- **Overtime or compensatory time** - Often following injuries, other employees may work additional time to complete work not performed by the injured employee. Such additional time often results in overtime or compensatory time being paid. The amount of overtime or compensatory time should be included in the indirect cost estimates.
- **Reduced output of replacement employees** - Temporary employees or replacement employees may require a certain amount of time to learn the injured employee's job, and to become proficient in the performance of the duties. Therefore, this reduction in output should be estimated as an indirect cost. A factor may be used to estimate the reduced output, for example a new, temporary employee may be only 50% proficient in performing the duties. Therefore, 50% of the temporary employee's wages would be considered reduced output, and by extension an indirect cost of the accident.<sup>1</sup>
- **Supervisor's activities** - The injured employee's supervisor often is required to perform certain activities related to the accident which keep the supervisor from performing other, regular supervisory duties. Such activities may include: completing accident report forms; assisting the injured employee obtain medical treatment; follow-up visits to the employee while off work; completing accident report forms; analyzing accident causes; and supervising corrective actions. The amount of time the supervisor spends on these types of activities may be estimated, then multiplied by the supervisor's rate of pay to determine the indirect costs.<sup>1</sup>
- **Accident reporting, review and analysis, claims processing, and recordkeeping** - Every accident and incident should have an accident report form completed, to include a thorough review and analysis of the causes of the accident. In addition, workers' compensation claim forms must be prepared. All accident forms and workers' compensation claim forms should be maintained in an information system that includes an accurate, complete record of each accident, incident and workers' compensation claim. All costs associated with developing,

reviewing and maintaining these records should be included in the indirect cost estimates.1

- **Damage to equipment or materials** - Accidents often result in damage to or destruction of agency-owned equipment or materials. The actual costs of repairing or replacing such equipment or materials damaged in the accident should be included in the indirect costs. Furthermore, if equipment is rented/leased, these costs also should be included.1
- **First Aid Costs** - The costs associated with first aid supplies that may be used to treat an injured employee are considered indirect costs. Those first aid supplies that are used to treat injuries should be included in the indirect cost estimates.3
- **Return-to-Work Program Costs** - The administrative costs of a return-to-work program are considered an indirect cost of accidents. Therefore, all costs associated with a return-to-work program, include employee salaries, supplies, equipment and office space, should be included in the indirect cost estimates.3

Although relevant data on indirect accident costs is difficult to collect, the best estimate for each component above should be determined for a specified period of time. For example, the data may be collected for a six month period of typical workers' compensation claims experience. After the cost data has been collected for this period, a ratio of indirect to direct costs can be calculated. This ratio may then be used as an estimator of direct vs. indirect costs. This process should be repeated as appropriate to update the typical direct vs. indirect cost ratio.

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### *Checklist for Texas State Agencies*

- |  |        |
|--|--------|
| 1. Does the agency identify, report, and analyze accident cost data?   | Yes No |
| 2. Does the accident cost data program include the collection and analysis of indirect, as well as direct, agency costs associated with accidents? | Yes No |

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### *Endnotes*

1. Miller, Terrence; *Safety & Health* - "Track the True Costs of Accidents"; November 1991.
2. Colvin, Raymond J.; *The Guidebook to Successful Safety Programming*; Lewis Publishers, Inc.; Chelsea MI; 1992; p. 249.
3. Kavianian, Hamid R., Ph.D. and Wentz, Charles A., Ph.D.; *Occupational and Environmental Safety Engineering and Management*; Van Nostrand Reinhold Publishers; New York; 1990; p. 235.

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## Section Two - Employee Safety and Health Program

### Chapter 5

#### Hazard and Accident Identification, Reporting, and Analysis

##### Subchapter 5.3

##### Job Safety Analysis

Revised: December 2004

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### Volume III:

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This chapter of Risk Management for Texas State Agencies supplies general information regarding state agency employee safety and health exposures, and techniques and methods to manage and control those exposures. It also identifies additional resources that may be available to assist state agencies in developing or enhancing its employee safety and health program. This chapter is not intended in any way to be a substitute for the advice and guidance of legal counsel, who should always be consulted regarding rights, duties, and responsibilities under the law.

Job safety analysis is a process that examines specific job tasks to identify hazards, safe methods and procedures to perform job tasks. The job safety analysis, or JSA, also provides the opportunity to implement corrective measures, if necessary. It is a tool that enables supervisors and managers to systematically teach employees safe job performance.(1) Job safety analysis is accomplished by performing a detailed study of the job and recording each step required to carry out and safely complete the tasks. Existing or potential job hazards are identified and a determination is made of the best way to perform the job to eliminate, reduce or control associated hazards. Outcomes may include improved job methods and procedures, employee training that reduces costs from employee absenteeism and workers' compensation, and/or increased employee productivity.

The OSHA voluntary guidelines for employee safety and health program management provides the following recommendation regarding job safety analysis so that all hazards and potential hazards can be identified and perform routine job hazard analysis.(2)

Job safety analysis (may be referred to as job hazard analysis) provides a mechanism for intensive analysis to identify hazards and potential hazards, and to determine protective measures. By paying careful attention to work processes in a job, points at which exposures to hazards occur, and changes in work practices and conditions can be recognized.(3)

The cornerstone of JSA is an agreement between the employee and supervisor to identify all components of the job, then analyze each component for potential hazards. Solutions to the hazards identified are then developed. JSA is based upon what the employee actually does, and not necessarily what is identified in the job description. Since the employee participates in the JSA process, the employee is

more likely to assume ownership of safe operating procedures developed, and is also more likely to incorporate the safe procedures into daily activities.(4)

Job safety analysis is one of the first and foremost proactive steps in a safety program.<sup>5</sup> The job safety analysis centers on identifying the set of activities or distinct steps that are performed in sequence, and that result in an anticipated work-related end-product. The JSA focuses on specific tasks performed as a part of a larger set of job duties. For example, the position of "Printing Press Operator" contains specific job tasks involved in operating a printing press, that is suitable for a job safety analysis.

Once the job safety analysis is complete and job hazards are uncovered, methods to manage and control those hazards can be developed and implemented. Solutions may take the form of physical changes that minimize or control job hazards, such as using machine guards. They may also take the form of changes in job procedures that eliminate or minimize hazards, such as eliminating unnecessary steps involved in stacking materials.

Each agency should identify and evaluate all identified hazardous positions and all jobs that are susceptible to accidents and injuries or occupational diseases. The JSA should be conducted on a periodic basis to ensure that new jobs and/or significant changes to existing jobs are not overlooked. The program should be formalized in writing, and provisions made for supervisors to report the results of the job safety analysis to management.

It is important to note that the job safety analysis procedures described in this chapter of *Risk Management for Texas State Agencies* are provided as a general guideline. Standards issued by the Occupational Safety and Health Administration (OSHA) should be referred to as part of the overall job safety analysis whenever applicable and practical. The State Office of Risk Management (Office) recommends that state agencies voluntarily follow OSHA safety and health standards whenever possible.

### ***Benefits of Job Safety Analysis***

There a number of benefits that may accrue as a result of performing job safety analysis. Others may be available, but at a minimum the JSA:

- Documents potentially serious hazards for supervisors and employees;
- Allows the agency to identify and eliminate hazards on a worst case basis;
- Provides a structured mechanism to identify weaknesses in the management system which may inadvertently allow work practices to become hazardous;
- Teaches supervisors to systematically evaluate a process or job;
- Allows supervisors to systematically study and document hazardous jobs;
- Provides supervisors with a mechanism to train employees in a structured yet positive manner;
- Gives employees a vehicle to express their safety concerns in performing specific jobs and processes;

- Provides a method to justify funding and budgeting for safety; and
- Becomes an integral part of writing and developing standard, safe operating instructions (SSOPs).<sup>1</sup>

## STEPS OF A JOB SAFETY ANALYSIS

JSA is a process in which a job is broken down into its component parts. Each part or task is analyzed to determine if there is a better, safer way to accomplish it.<sup>4</sup> Conducting a job safety analysis consists of four basic steps.

- Select the job to be analyzed.
- Break the job down into successive steps or activities, and observe how these are performed.
- Identify the hazards and potential accidents.
- Develop safe job procedures, engineering modifications, or provide personal protective equipment to eliminate the hazards and prevent the potential accidents.<sup>6,7</sup>

These four steps are discussed in more detail below.

### *Select the Job*

An agency should review all job positions to determine where accidents have previously occurred. Accident-related job tasks should be evaluated to determine the specific activity(ies) that caused the incident or accident. When selecting jobs to be analyzed, the following factors should be considered:

- *Frequency of Accidents:* Jobs where accidents have occurred most frequently, including non-injury producing near-miss accidents, and accidents which caused property damage or loss should receive a job safety analysis.
- *Serious or Critical Accidents:* Jobs that previously resulted in accidents that caused death, loss of consciousness, required medical treatment, or that caused a disability should undergo a job safety analysis.
- *Potential for Injury:* Jobs considered to have the potential for causing a serious or critical accident merit a job safety analysis.
- *New Operations:* Jobs that involve new functions or have undergone substantial change in job responsibilities and duties should receive a job safety analysis.<sup>6</sup>

## ***Break the Job Into Successive Steps***

Many jobs can be broken down into steps, which are distinct, separate actions that must be completed each time and in the same sequence to successfully perform the job.

- Select an employee who is knowledgeable about the job for observation.
- Explain the purpose of the job safety analysis to the employee and obtain his or her consent to participate.
- Observe the person as he or she is performing the job.
- Record each step on a job safety analysis form. A sample form is included as an appendix to this Chapter.
- Review the steps with the employee and seek employee input to ensure completeness of the analysis.<sup>8</sup>

## ***Identify the Hazards***

The next step is to identify any and all hazards that could possibly result from each job step. The hazard may be obvious, or it may be more difficult to recognize. Some considerations while identifying hazards in job safety analysis are the following:

- Is the workflow organized correctly?
- Are machinery, equipment, and work operations properly guarded?
- Do any obvious dangers to the employee exist, such as striking, being struck, being caught in or between, or other injurious contacts?
- Is lifting, pushing, pulling, bending, twisting or straining involved in the job?
- Is there any danger of the employee slipping, tripping or falling?
- Are any environmental hazards, such as chemicals, gases, fumes, mists, radiation, excessive heat or noise, or hazardous dusts present?
- Is protective clothing and equipment appropriate?<sup>8</sup>



## ***Develop Solutions***

Possible solutions that may be used to eliminate hazards or potential accidents include:

- Identify new or better ways to do the job or change the work procedure.
- Change the physical conditions that create the hazards.
- Reduce or eliminate the necessity or frequency of job tasks.<sup>7</sup>
- Provide appropriate protective clothing or equipment to employees.

Any solutions to job hazards recommended should be discussed with employees. Recommendations should be as specific as possible, and should be provided in language that can be easily understood by the employee, and therefore applied to the specific job task.

Solutions may take the form of combined job steps, a change in the sequence of job tasks, or the addition of safety equipment and precautionary measures used to reduce hazards. If safe operating procedures cannot be developed, then physical changes may be required, such as redesigning equipment, changing tools, adding machine guards, providing personal protective equipment, or improving ventilation. If hazards are still present, the necessity or frequency of performing the job may be reduced. Employees should be instructed on the changes in any job procedure and should understand the reasons for those changes.

Once the JSA has been conducted, and safe operating procedures have been written, the procedures should be reviewed to determine completeness and effectiveness. This review should be conducted by a qualified persons other than the persons who actually conducted the JSA. For instance, if the employee and the supervisor conducted the JSA, the agency safety officer or ADSO may provide appropriate review. However, employees who will be implementing the procedure can provide valuable input during this review, and should always be consulted.

A job safety analysis should be revised and updated periodically to ensure that job activities haven't changed significantly. Hazards missed during an earlier job safety analysis could be detected. Also, new hazards or revised operating procedures may have occurred since the JSA was last conducted. If an accident or injury occurs on a job where a JSA has been conducted, an immediate review of the JSA should be performed to determine if any changes are necessary.

## ***Job Safety Analysis and the ADA***

The Americans with Disabilities Act (ADA) imposes certain requirements upon employers that

necessitate the identification of "essential job functions" for all positions. The agency's human resources officer or ADA coordinator should be familiar with these requirements. Therefore, when conducting a job safety analysis, supervisors and safety officers should coordinate with the human resources officer or ADA coordinator concerning definitions and designations of the essential job elements of positions being analyzed. The results of the JSA should be of great value in identifying or further evaluating the essential job elements for ADA compliance purposes.

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### ***Checklist for Texas State Agencies***

- |   |     |    |
|---|-----|----|
| 1. Does the agency conduct job safety analysis of jobs that are new, complex, or are considered high risk?  | Yes | No |
| 2. Are jobs reviewed at least annually, or when significant criteria for conducting a job safety analysis are identified?                                     | Yes | No |
| 3. Are the results of the JSA used to develop and implement policies and/or standard operating procedures?  | Yes | No |
| 4. Does the supervisor and safety officer coordinate with the human resources or ADA Coordinator concerning the essential job elements of specific positions? | Yes | No |

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### ***ENDNOTES***

1. Colvin, Raymond J.; *The Guidebook to Successful Safety Programming*; Lewis Publishers, Inc.; Chelsea, MI; 1992; pp. 81-84.
2. "Safety and Health Program Management Guidelines; Issuance of Voluntary Guidelines"; U.S. Department of Labor, Occupational Safety and Health Administration; *Federal Register* 54 (16): 3904 - 3916; January 25, 1989; Section (c)(2)(i)(C).
3. Bruce, Stephen D., Ph.D.; *How to Meet OSHA's Safety & Health Guidelines*; Business & Legal Reports, Inc.; 39 Academy Street; Madison, CT 06443-1513; p. 7-2.
4. "MSHA Hits Pay Dirt With JSA"; *Safety & Health*; May, 1991.
5. "Cut Your Losses With JSAs"; *Safety & Health*; October, 1991.
6. *Accident Prevention Manual for Business and Industry, Administration and Programs*. 10th Edition, 1992.
7. Roughton, Jim; "Managing a Safety Program Through Job Hazard Analysis"; *Professional Safety*; January, 1992.

8. *Job Hazard Analysis*, U.S. Department of Labor, Occupational Safety and Health Administration, 1988, OSHA Publication 3071.

<b>SAMPLE JOB SAFETY ANALYSIS</b>	JOB TITLE: Landscape Maintenance Worker		DATE:	<input type="checkbox"/> NEW
	Page ___ of ___ JSA NO. ___			<input type="checkbox"/> REVISED
	TITLE OF PERSON WHO DOES JOB:	SUPERVISOR:	ANALYSIS BY:	
ORGANIZATION:	LOCATION:	DEPARTMENT:	REVIEWED BY:	
REQUIRED AND/OR RECOMMENDED PERSONAL PROTECTIVE EQUIPMENT:			APPROVED BY:	
<b>SEQUENCE OF BASIC JOB STEPS</b>	<b>POTENTIAL HAZARDS</b>	<b>RECOMMENDED ACTION OR PROCEDURE</b>		
1. Survey grounds for debris	1a. Falls from stepping on debris b. Cuts from debris c. Snake bites	1a. Walk slowly b. Wear gloves c. Wear snake leggings		
2. Gather equipment to be used (rakes, chain saw, shears, wheel barrow)	2. Muscle strains from lifting	2. Use correct lifting procedure, limit amount you carry		
3. Cut limbs	3a. Foreign objects in eyes b. Cuts to hands, legs and arms c. Cuts from chain saw d. Skin rash from poison ivy/oak	3a. Wear goggles b. Wear gloves, long sleeve shirt and long pants c. Use both hands for holding chain saw while cutting d. Same as 3b		
4. Gather and load cut limbs and debris into wheel barrow	4. Same as 2 & 3	4. Same as 2 & 3		
5. Dispose of limbs	5. Same as 2 & 3	5. Same as 2 & 3		
6. Store equipment and clean up	6. Same as 2	6. Same as 2		

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## Section Two - Employee Safety and Health Program

### **Chapter 5**

#### Hazard and Accident Identification, Reporting, and Analysis

##### Subchapter 5.4

#### Safety Inspection Program

Revised: December 2004

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### **Volume III:**

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This chapter of Risk Management for Texas State Agencies supplies general information regarding state agency employee safety and health exposures, and techniques and methods to manage and control those exposures. It also identifies additional resources that may be available to assist state agencies in developing or enhancing an employee safety and health program. This chapter is not intended in any way to be a substitute for the advice and guidance of legal counsel, who should always be consulted regarding rights, duties, and responsibilities under the law.

A well planned safety inspection program helps to detect unsafe conditions and hazards before an accident occurs. Safety inspections are not exercises, nor are they simply compliance mechanisms. When utilized properly, safety inspections are an effective method of eliminating occupational hazards and also provide an educational opportunity.

Monitoring the employee safety and health program involves four elements and includes: (1) job safety analyses, (2) safety inspections, (3) measurement and testing, and (4) accident reviews. Each of these elements is a necessary component of the employee safety and health program. A safety inspection program should include safety checklists to ensure that potential hazardous or unsafe conditions are given attention.(1)

An effective safety inspection program is based upon knowledge of safety regulations that are applicable to specific operations. The Occupational Safety and Health Administration publishes regulations and standards that are applicable to private employers but are also used by public employers. Other publications containing standards, checklists, and helpful technical data are available from the American National Standards Institute, The National Fire Protection Association, the National Safety Council, and the Occupational Safety and Health Administration.

### ***OSHA Voluntary Guidelines***

The OSHA voluntary guidelines for employee safety and health program management provide the

following recommendations regarding inspections for safety and health:

- So that all hazards and potential hazards are identified, conduct comprehensive baseline worksite surveys for safety and health, and periodic comprehensive surveys. Analyze planned new facilities, processes, materials and equipment.(2)
- Provide for regular site safety and health inspections, so that new or previously missed hazards and failures in hazard controls are identified.(3)

By conducting baseline surveys and inspections, a systematic record of existing and potential hazards can be developed for further analysis. Subsequent surveys and inspections on a regular basis are necessary to ensure that changes in conditions and activities do not create new hazards and that hazard control measures remain effective.(4)

### ***Purpose of a Safety Inspection***

The primary purpose of a safety inspection is to spotlight unsafe working conditions and equipment, unsafe behavior and reveal any need for new safeguards and procedures. However, an inspection also fosters safety awareness, involves employees in the safety program and promotes the safety program within the organization.

Safety inspections may be general or specific. General inspections are considered as a comprehensive review of all safety and health exposures in a given area. Specific inspections target exposures within a defined unit, facility or section. An example of a specific inspection might be to focus on back injuries reported on workers' compensation injury reports. A good inspection program should include both general and specific inspections. For example, a general safety inspection may be completed which reveals the need for specific safety inspections in targeted areas. The specific inspections are then accomplished later in those areas which the general inspection revealed needs further attention.(1)

A safety inspection program should assist agency management in accomplishing the following:

- Determine if the safety and health program is meeting its goals and objectives;
- Establish a basis for employee participation in, and accountability for, safety matters;
- Detect operational and procedural problems that may adversely impact the program;
- Establish the need for further education or training; and
- Facilitate formulation of improvement or action plans to correct problems in the system.(5)

## ***Who Conducts the Inspection?***

To increase employee interest and participation, individuals at different levels of the agency should be included in the inspection. The agency's size, area served, and scope of operations, the type of inspection (general or specific), time availability of the persons involved, and other factors will determine who should participate. Inspecting complex operations may require the inspector to possess specialized skills, knowledge, training, or certifications. Such inspections should be conducted by persons knowledgeable about the department of operation.

Agency safety officers, additional duty safety officers, and in some instances, safety committee members often are the most knowledgeable persons to conduct an inspection. However, supervisor and management involvement in safety inspections reinforces the message that all employees, not just the safety staff, are responsible for safety.

Alternately, general inspections which target "housekeeping" and workplace neatness can be conducted by personnel from other units or departments as part of a "peer review" arrangement. Agency safety committee members or ADSO's may also conduct general or specific inspections.

## ***Frequency of Safety Inspections***

The frequency of safety inspections should be determined on a case-by-case basis, dependent on the nature and severity of hazards that could be present, and on the relative stability and complexity of worksite operations.<sup>5</sup> Each agency should analyze its own operations based on the following criteria, to determine which areas need attention.

- Frequency of accidents;
- Potential for injury;
- Potential severity of injury;
- General workplace neatness, or "housekeeping";
- New or altered equipment, processes and operations; and
- Previous record of past incidents.<sup>(6)</sup>

## ***Types of Inspections***

There are two basic types of inspection processes: those that are continuous or ongoing, and those that are planned and conducted at regular intervals.

***Continuous Inspections:*** Continuous inspections are performed by employees or line supervisors as part of their daily routine. Inspections can be informal or formal, using a checklist and other documentation

procedures. Any necessary corrective action should be performed at the time a hazard or unsafe condition is discovered. This routine process demonstrates positive employee and supervisory involvement in an ongoing safety program. However, because of the routine nature of these continuous inspections, complacency may become a factor and reduce the value of the process. Supervisors and employees may be biased in evaluating their own areas, which reduces the objectivity of the continuous inspection process. Therefore, planned inspections in conjunction with the continuous ongoing inspection process may overcome this problem.

***Planned Inspections:*** The planned inspection consists of three types of inspections: periodic, intermittent, and general. The periodic inspection is usually performed at regular intervals (e.g. weekly, monthly, or semiannually) and is limited or site-specific in scope. The intermittent inspection is performed on an irregular interval basis and is usually not scheduled (e.g. it takes place when an accident occurs, during construction activities, when new employees are on the job, and generally when needed).

The general inspection is the formal, detailed, planned inspection that is typically referred to as the 'wall-to-wall' inspection. This process requires extensive planning, detailed checklists, possibly specialized equipment, and other specialized personnel such as the fire inspector and the involvement of upper management. This type of inspection forms the basis for the discussion on how to conduct an inspection in the remainder of the chapter.

## **INSPECTION STEPS**

The steps of any inspection, regardless of its purpose, can be divided into five basic categories; planning/preparation, the physical inspection or on-site visit, the report of findings, follow-up procedures, and upper management involvement/inspection training. To be of maximum value, an inspection should contain all of these steps. The degree to which these steps are used depends upon the complexity of the inspection, the facility being inspected, and the purpose, scope, or type of the inspection. Each of these steps is discussed below.<sup>7</sup>

### ***Pre-Inspection Planning and Preparation***

The first step in the inspection process is to adequately prepare for the actual walkthrough of the facility to be as productive and efficient as possible. If preparation and planning are thorough, the rest of the inspection will be easier. Following are some basic points to keep in mind during the planning/preparation phase:

- Keep a positive attitude and emphasize fact-finding instead of fault-finding.
- Become familiar with the organization and its facilities, including its buildings, vehicles, and

equipment. Obtain and review maps, plans and specifications of equipment. Organize the inspection by grouping similar facilities, areas of responsibility, and exposures or hazard types together.

- Review applicable standards, regulations, and codes that would apply (e.g., OSHA requirements, NFPA codes, Life-Safety codes, ANSI standards, and building codes).
- Develop checklists, which are the "tools" of the inspector's trade. Checklists can be as complex or as simple as their intended use demands. A basic purpose of the checklist is to guide the safety inspector through the inspection process and reduces any items that may be overlooked. The checklist and inspection schedules for each operation should be developed by the person(s) in charge of the operation, in cooperation with the safety officer.
- Assignment of responsibilities is very important. Upper management will probably have to be involved to provide authority to use internal agency staff. These persons may be shift supervisors and foremen, maintenance supervisors, department heads, and safety committee representatives.
- The actual items that will be inspected will depend on the purpose of the inspection and the nature of the hazards present.
- The fundamental reason for performing inspections on a routine, regular, and frequent basis is to ensure that the organization is as safe as possible at all times. OSHA regulations require inspections at specific intervals. The frequency depends on the nature of the critical components of the equipment and the degree of exposure to wear, deterioration or malfunction.
- Review previous inspection reports. Studying past reports can show repeated problem areas, areas not inspected, marginal areas, and ineffective prior remedial actions. All these areas should be given high priority on the inspection checklist.
- A useful and effective inspection cannot be performed without the appropriate materials and special tools. Some items include appropriate clothing; personal protective equipment; the previously developed and appropriate checklist; flashlight; tape recorder or dictaphone; and camera. Slides, photographs of good and substandard findings are excellent teaching/training tools.(6,7)

## ***The Inspection***

The physical inspection should follow the planning/preparation steps that were developed previously to make the on-site visit as efficient and effective as possible. Proper notification of supervisory personnel should be made prior to the inspection, and they should also be involved in the planning process. This becomes particularly important if the inspection is from outside the organization. Supervisors should



accompany the inspector on the walk-through of their particular area of responsibility. A sample safety inspection checklist is included in the Appendix of this chapter.

The following suggestions will help make inspections more effective:

- Follow the planning/preparation guidelines that have been developed; use the maps, schedules, and checklists. When taking notes, accent the positive as well as the unacceptable situations. Take notes during the inspection as reminders of the hazards observed, their location and description, and ideas for correcting them. Document using simple, concise descriptions and notations.
- Be diplomatic and constructive. Seek out the underlying reasons why hazardous conditions and practices exist, in terms of corrective actions.
- Simply running through a checklist is not as productive as inspecting even those areas where "no one ever goes" and where "no one ever gets hurt." Include an interview with employees, and always inform supervisors. If the same area has been repeatedly inspected, vary the route to provide a new perspective.
- If an unsafe operation, condition, or piece of equipment is discovered, notify the supervisor of the hazard as soon as possible. If necessary, have machinery taken out of service and tagged until the situation is corrected. Supervisors and possibly upper management may need to become involved to provide appropriate authority.
- Remember to inspect during night shifts or operations that occur outside normal 8 to 5 hours of operations.
- When evaluating the hazard for corrective actions, try to discover the root cause of substandard activity or conditions. It may require more, for example, than just fixing the defective guard on a piece of equipment to solve the problem. Ask why the machine was left operational with a defective guard. Attempt to determine why a hazard exists, or is allowed to exist, on each and every hazard identified.
- Two additional components of the actual on-site inspection are the opening and closing conference. The opening conference allows the inspector to formally introduce the inspection, become aware of the key people to contact, and generally set a positive tone for the inspection. The closing conference provides immediate feedback by informing appropriate personnel of critical aspects of the inspection findings. Corrective action should be implemented immediately for serious hazards identified during the inspection. The inspection report should be written to enhance the effectiveness of corrective action procedures and recommendations.

## ***The Inspection Report***

The inspection report contains the results of the inspection. The report can be simple or complex, as dictated by the inspection. It should be keyed directly to the inspection checklist. The report should (1) identify the area or items inspected, and (2) list all appropriate actions. The report should include all hazards and problems observed, a prioritization (classification) of hazard severity, corrective actions/recommendations, responsible parties to implement corrective actions, time lines for follow-up actions, and verification of corrective actions taken. Upper management should be provided a copy of the report.

The inspection report should describe the recommended corrective actions and go further than simply identifying the hazards. Special attention should be paid to repeat or recurring hazards and substandard situations.

Recommendations to eliminate hazardous conditions should be reasonable and cost-effective.

Once the report has been written and distributed to the appropriate parties, a follow-up process should be initiated. Time lines for dealing with the hazards should be established on the basis of the seriousness of the hazard identified during the inspection. A sample safety inspection report format is included in the Appendix of this chapter.

After the inspection report is completed, the agency safety officer should:

- Ensure that individuals or groups are properly commended for keeping respective areas safe.
- Track costs to determine the financial impact to complete recommendations.
- Verify that corrective actions will start on schedule.
- Track the progress of the corrective action to ensure it meets the intent of the recommendation, and review revisions in the action.
- Certify that corrective actions have been satisfactorily completed.
- Review the effectiveness of the recommendation for unforeseen adverse effects and reliability, or any other problem that was overlooked or a multiple cause not originally contemplated in the suggested recommendation.(7)

## ***Upper Management Support***

The final item to be considered in a total inspection program is upper-management support for inspections and inspection training. Inspection is a program in which management involvement is

critical. Unless all levels of the organization, including management, are willing to be actively involved in the safety effort, even well-intentioned safety programs can be ineffective.<sup>1</sup> However, if management supports the program, that commitment must be continuously visible to all employees.<sup>6</sup> An area where management commitment is readily visible is the safety inspection program.

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### ***Checklist for Texas State Agencies***

1. Does the agency have a safety inspection program?	YesNo
2. Are safety inspection checklists available and consistently used?	YesNo
3. Does the program include provisions for regularly scheduled inspections?	YesNo
4. Are the inspection reports reviewed by middle and upper management?	YesNo
5. Does the safety officer perform follow-ups on identified deficiencies and/or recommendations?	YesNo
6. Are supervisors and managers performing safety inspections on a regularly scheduled basis?	YesNo
7. Does the agency safety officer perform safety inspections of all facilities at least annually?	YesNo

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### ***Endnotes***

1. Colvin, Raymond J., PE, CSP; *The Guidebook To Basic Safety Programming*; Lewis Publishers, Inc.; Chelsea, MI; 1992; pp. 22, 39-43, 97-110.
  2. "Safety and Health Program Management Guidelines; Issuance of Voluntary Guidelines"; U.S. Department of Labor, Occupational Safety and Health Administration; *Federal Register 54 (16)*: 3904 - 3916; January 25, 1989; Section (c)(12(i)(A) and (B).
  3. IBID; Section (c)(2)(ii).
  4. Bruce, Stephen D., Ph.D.; *How to Meet OSHA's Safety & Health Guidelines*; Business & Legal Reports, Inc.; 39 Academy Street; Madison, CT 06443-1513; pp. 7-1, 7-15.
  5. Kavianian, H.R. and Wentz, C.A., Jr.; *Occupational and Environmental Safety Engineering and Management*; Van Nostrand Reinhold Publishers; New York; 1990; p. 241.
  6. *Accident Prevention Manual for Business and Industry, Administration and Programs* National Safety Council; Volume, 10th Edition, 1992.
  7. Crawford, Jay; *How To Conduct an Inspection*; Public Risk Management Association.
-

## SAMPLE OFFICE SAFETY INSPECTION CHECKLIST

<b>PHYSICAL SITE</b>				
<b>LOCATION:</b> _____		<b>BUILDING MANAGER:</b> _____		
<b>PERSONNEL INTERVIEWED</b> _____				
1. External Condition	Acceptable	Unacceptable	Not Applicable	Comments
a. Outside walls and roof	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
b. Sidewalks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
c. Adequate lighting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
d. Handrails/ramps	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
e. Parking areas	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
f. General appearance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2. Housekeeping and General Work Environment				
a. Floor, wall and ceiling condition	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
b. Adequate lighting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
c. Adequate ventilation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
d. Room arrangement	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
e. Elevator inspection (if applicable)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
f. Emergency exits	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3. Security				
a. Doors/window security	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
b. Access control (if required)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
c. Closed circuit observation system	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4. Fire Protection and Egress				
a. Evacuation route	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
b. Exit signs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
c. Aisles and passageways	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
d. Smoking (designation and signs)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
e. Fire hoses properly stowed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
f. Fire extinguisher:				
(1) number and locations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
(2) inspections	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
g. Fire alarm:				
(1) type?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
(2) tested?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
(3) smoke detectors?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

<b>5. First Aid</b>				
a. Emergency phone number	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
b. Posters	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
c. First aid kits	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>6. Operations Equipment</b>				
a. Condition	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
b. Guarding	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
c. Grounding	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>7. Material Storage</b>				
a. Stacking	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
b. Flammable/combustible	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
c. Compatibility	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
d. Marking/labeling	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
e. Ventilation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
f. Storage containers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>8. Emergency Exercise Program</b>				
a. Documentation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
b. Type conducted	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
c. Frequency	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
d. Follow-up action program	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>9. Training</b>				
a. Type	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
b. Frequency	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
c. Documentation/rosters	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>10. Inspection Program</b>				
a. Frequency	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
b. Type	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
c. Documentation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>11. Miscellaneous</b>				

**INSTRUCTIONS**

**FOR**

**THE SAMPLE SAFETY INSPECTION REPORT**

**A. REFER TO THE SAFETY INSPECTION SURVEY AND CONDUCT THE INSPECTION USING THE SURVEY. THE SURVEY WILL ADVISE YOU WHAT PARTICULAR AREAS TO CHECK.**

**B. WHEN YOU FIND AN AREA OR HAZARD THAT NEEDS ATTENTION,**

**ENTER THE INFORMATION ON THE INSPECTION SURVEY AND ON THE SAFETY INSPECTION REPORT WITH YOUR RECOMMENDATION FOR CORRECTIVE ACTION.**

**C. THE SAFETY INSPECTION REPORT SHOULD BE COMPLETED IN DUPLICATE WITH THE SECOND COPY GOING TO AN AGENCY SAFETY OFFICER.**

**D. THE FORM SHOULD BE USED AS FOLLOWS.**

**BLOCK 1. ENTER THE NAME AND TITLE OF THE DIVISION DIRECTOR.**

**BLOCK 2. ENTER THE NAME OF THE DIVISION SAFETY OFFICER.**

**BLOCK 3. CHECK THE APPROPRIATE INSPECTION TYPE.**

**BLOCK 4. ENTER THE NAME AND LOCATION OF THE AREA BEING INSPECTED.**

**BLOCK 5. ENTER THE DATE THE INSPECTION WAS STARTED.**

**BLOCK 6. ENTER THE NAME OF THE PERSON WHO YOU CONTACTED OR WHO ACCOMPANIED YOU ON THE INSPECTION.**

**BLOCK 7. ENTER THE DATE WHEN YOU EXPECT TO CONDUCT THE NEXT INSPECTION.**

**BLOCK 8. LEAVE BLANK. FOR AGENCY SAFETY OFFICE USE.**

**BLOCK 9. ENTER YOUR FINDINGS AND RECOMMENDATIONS.**

**BLOCK 10. THIS COLUMN IS FOR THE USE OF THE DIRECTOR OR SUPERVISOR TO ENTER WHAT CORRECTIVE ACTION WAS ACTUALLY TAKEN OR WILL BE TAKEN. (MAY DIFFER FROM RECOMMENDATION). ENTER REMARKS, DATES, OR SUBSEQUENT ACTIONS REQUIRED.**

**BLOCK 11. ENTER DATE OF LAST INSPECTION.**

**BLOCK 12. PERSON PERFORMING THE INSPECTION SIGN HERE.**

**BLOCK 13. ENTER THE DATE THE FORM WAS SIGNED BY THE INSPECTOR.**

**BLOCK 14. DIVISION DIRECTOR ADDS COMMENTS, PRINTS NAME, AND SIGNS FORMS. ALSO, ADD DATE SENT TO THE AGENCY SAFETY OFFICER.**

**SAMPLE  
SAFETY INSPECTION REPORT**

<b>1. TO:</b>		<b>2. FROM:</b>	
<b>3. TYPE OF INSPECTION</b> ___ Annual ___ Quarterly ___ Spot ___ Requested		<b>4. ACTIVITY INSPECTED</b>	<b>5. DATE INSPECTED</b>
<b>6. PERSON CONTACTED</b>		<b>7. SUSPENSE DATE (For next inspection)</b>	
<b>8. NO.</b>	<b>9. RECOMMENDATION</b>	<b>10. CORRECTIVE ACTION TAKEN</b>	
<b>11. DATE OF LAST INSPECTION</b>	<b>12. SIGNATURE OF INSPECTOR</b>	<b>13. DATE</b>	
<b>14. DIVISION DIRECTOR COMMENTS RELEVANT TO THIS INSPECTION:</b>			
_____ NAME (Print)	_____ DATE SENT TO AGENCY SAFETY OFFICER	_____ SIGNATURE	

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## Section Two - Employee Safety and Health Program

### Chapter 5

#### Hazard and Accident Identification, Reporting, and Analysis

##### Subchapter 5.5

##### Hazard Reporting

Revised: April 2005

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### Volume III:

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This chapter of Risk Management for Texas State Agencies supplies general information regarding state agency employee safety and health exposures, and techniques and methods to manage and control those exposures. It also identifies additional resources that may be available to assist state agencies in developing or enhancing its employee safety and health program. This chapter is not intended in any way to be a substitute for the advice and guidance of legal counsel, who should always be consulted regarding rights, duties, and responsibilities under the law.

Hazard reporting is an important part of employee safety and health program monitoring, and is necessary to prevent accidents and control losses. Employees should be encouraged and given opportunities to report all known or perceived hazards in the work environment. Examples of such hazards may be those associated with property or equipment, individual behavior or health, and problems in a management system, such as an operating procedure or production schedule that endangers the safety and health of employees. With the support of management and supervisors, employees will take more responsibility and initiative for the safety and health program to report any known or suspected hazards and dangers. Direct communication is the principal means through which safety and health concerns receive management's attention.

The OSHA voluntary guidelines for employee safety and health program management provides the following recommendation regarding a hazard reporting system:

So that employee insight and experience in safety and health protection may be utilized and employee concerns may be addressed, provide a reliable system for employees, without fear of reprisal, to notify management personnel about conditions that appear hazardous, and to receive timely and appropriate responses; and encourage employees to use the system.(1)

A hazard reporting system serves the dual purposes of providing many observation points to recognize hazards, and assuring employees that their time and efforts in the safety program are worthwhile.2



A formal hazard reporting system is necessary, especially for agencies with multiple facilities and/or with separate administrative regions. The hazard reporting program provides a tool for employees to communicate their safety and health concerns to management, and reinforces the message to employees that agency management is committed to the safety and health of its employees.

Every agency should have a formal written hazard reporting procedure to provide clear guidance to employees who wish to report safety and health concerns to management. A written hazard reporting procedure formally communicates the accepted process to all employees. The program is not intended to replace direct communication with supervisors. This procedure may be included in a safety manual or other administrative manual.

### ***Elements of a Hazard Reporting Program***

At a minimum, the hazard reporting program should provide:

- A means for reporting the hazard, such as the person to contact (agency safety officer), a reporting form or a telephone hotline;
- A written report of the hazard to include the inspection/investigation conducted;
- A record of the corrective action that was taken;
- Feedback to the employee who makes the report, if desired;
- Anonymity to the employee who makes the report, if desired; and
- A monitoring system which permits review, audit, data analysis, and program reporting.(3,4)

### ***Purpose of the Hazard Reporting Procedure***

A formal, written hazard reporting procedure serves the following purposes:

- Officially recognizes and documents the existence of a safety and health concern;
- Provides a basis for formal evaluation of reported hazardous conditions, and for initiating corrective actions, if appropriate;
- Forms an audit trail that documents action taken by the agency to correct or abate any hazard;
- Forms a permanent record that tracks actions required to correct the hazard and follows up until final corrective action is taken; and

- Provides a feedback mechanism to inform an employee who reports the hazard of the results of the hazard report and any corrective action taken by the agency.(4,5)

### ***Hazard Report Form***

Each agency should develop a hazard report form. The purpose of the form should be to provide a starting point from which to evaluate the reported hazard. The form also may provide a record of corrective action, if necessary and appropriate. Adequate space should be provided on the form for a complete description of the identified hazard, whether real or perceived, and to document corrective actions taken, if necessary and appropriate. The form should allow for the reporting employee to remain anonymous, if desired.

The agency's safety officer should evaluate the safety concern reported on the hazard reporting form, assess the hazard, and make suggestions to resolve the hazardous situation. In many instances, the agency will already have the resources available to take appropriate action.

A sample hazard report form is provided at the end of this Chapter. In addition, an agency may wish to provide a mechanism for employees to give their safety suggestions to upper management. Therefore, a sample safety suggestion form is also provided at the end of this chapter.

### ***Safety Hotline***

An agency with potentially hazardous operations or conditions may wish to provide a safety hotline phone number for employees to report agency safety and health hazards and problems. Hotline access is desirable for employees who do not have immediate access to forms, wish to remain anonymous, or the situation warrants immediate attention. However, a response to an anonymous caller will not be possible.

### ***Record Keeping and Reporting***

Complete records should be kept on all hazard reports, including the action that was taken. Records provide pertinent information that can be used to identify trends and target problem areas. Furthermore, records of corrective actions taken may be required in litigation proceedings. Hazard report records may also be used as a basis for determining potential recipients of safety awards or incentives. An agency should recognize employees who are safety conscious and who actively participate in the employee safety and health program.(4,5)

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## ***Checklist for Texas State Agencies***

- |  |        |
|--|--------|
| 1. Does the agency have a hazard reporting program?  | Yes No |
| 2. Does the hazard reporting program include a written procedure that provides for unsafe or hazardous conditions to be brought to management's attention in a timely manner?    | Yes No |
| 3. Does the program include a form for employees to use when reporting hazardous, unsafe conditions or acts?   | Yes No |
| 4. Does the program include a telephone hotline for reporting hazards, unsafe acts and unsafe conditions?  | Yes No |
| 5. Does the hazard reporting program allow anonymous reporting?  | Yes No |
| 6. Is a written evaluation report required that describes the reported condition, the subsequent evaluation, recommendations, and appropriate follow-up action required?         | Yes No |
| 7. Does the hazard reporting program provide for employee feedback?  | Yes No |
| 8. Is the written report provided to appropriate supervisory personnel and management?   | Yes No |
| 9. Does the program provide for action to be taken at the lowest organizational level authorized to take appropriate action?   | Yes No |
| 10. Does the program provide that appropriate levels of management institute budget or administrative action to implement a final solution to an agency problem, if appropriate? | Yes No |

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***Endnotes***

1. Laing, Patricia M., Editor; *Accident Prevention Manual For Business and Industry - Administration and Programs*; 10th Edition; National Safety Council; 1992.
2. "Safety and Health Program Management Guidelines; Issuance of Voluntary Guidelines"; U.S. Department of Labor, Occupational Safety and Health Administration; *Federal Register 54 (16): 3904 - 3916*; January 25, 1989; Section (c)(2)(iii).
3. Bruce, Stephen D., Ph.D.; *How to Meet OSHA's Safety & Health Guidelines*; Business & Legal Reports, Inc.; 39 Academy Street; Madison, CT 06443-1513; p. 8-1.
4. Colvin, Raymond J., PE, CSP; *The Guidebook To Basic Safety Programming*; Safety Training Dynamics, Inc.; Brockton, MA; 1984.
5. Colvin, Raymond J., PE, CSP; *The Guidebook To Successful Safety Programming*; Lewis Publishers; Chelsea, MI; 1992; pp. 77-93.

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Sample Forms available in Word format:

- [Sample Safety Suggestion Form](#)
- [Sample Hazard Report Form](#)
- [Hazard Report Form](#)

### SAMPLE HAZARD REPORT FORM

<b>HAZARD REPORTING PROGRAM</b>	<b>HAZARD REPORT NUMBER</b>
<b>PART I: HAZARD (To be filled out by Employee)</b>	
<input type="checkbox"/> MATERIAL <input type="checkbox"/> FACILITY <input type="checkbox"/> HEALTH <input type="checkbox"/> PROCEDURE <input type="checkbox"/> EQUIPMENT	
IF A FACILITY, PROVIDE ADDRESS OR LOCATION; IF VEHICLE OR EQUIPMENT, PROVIDE TYPE, MODEL AND SERIAL NUMBER.	
<b>DESCRIPTION OF HAZARD:</b> (Provide summary, to include who, what, when, where and how)	
<b>RECOMMENDATIONS:</b> (if you have ideas on how to fix the hazard, please tell us)	
<b>EMPLOYEE IDENTIFICATION (OPTIONAL)</b>	
NAME: _____	DEPARTMENT: _____
DATE: _____	PHONE: _____
<b>FORWARD PART I OF THIS HAZARD REPORT FORM TO THE DEPARTMENT SAFETY OFFICER.</b>	

**HAZARD REPORT FORM****PART II: INVESTIGATION OF HAZARD**

**SUMMARY OF INVESTIGATION:** (Use additional sheets, if required, and attach to hazard report)

**RECOMMENDATIONS:** (Investigator)

<b>DATE:</b>	<b>NAME/TITLE OF INVESTIGATOR:</b>	<b>SIGNATURE:</b>
--------------	------------------------------------	-------------------

**ACTION PLAN:** (Department Management/Supervisor)

<b>DATE:</b>	<b>NAME/TITLE OF DEPARTMENT REPRESENTATIVE:</b>	<b>SIGNATURE:</b>
--------------	---	-------------------

**ADDITIONAL ACTIONS:**

- Employee notified of results of investigation and action taken.
- Corrective action taken throughout the Department, if applicable.
- Hazard report forwarded to Risk Management for additional review/investigation or for Agency-wide application.

**SAMPLE  
SAFETY SUGGESTION FORM**

<b>SAFETY SUGGESTION PROGRAM</b>	
<b>PART I: SUGGESTION</b> (To be filled out by the Employee)	
1. Suggestion is on which program level?	
<input type="checkbox"/> CITY <input type="checkbox"/> DEPARTMENT <input type="checkbox"/> DIVISION <input type="checkbox"/> OTHER (List) _____	
2. Name (Optional): _____ Phone Number: _____	
3. <b>Suggestion</b>	(State your suggestion and include reference to any policy or procedure if known)
<b>PART II: SUGGESTION EVALUATION</b> (To be filled out by the Supervisor)	
<b>Evaluation:</b> (List any personnel or material impact, if known)	
Name: _____ Phone: _____ Date: _____	
<b>PART III: SAFETY EVALUATION</b> (To be filled out by Department Safety Liaison)	
DSL: _____ Phone: _____ Date: _____	

FORWARD COMPLETED EVALUATION TO AGENCY SAFETY OFFICER

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## Section Two - Employee Safety and Health Program

### **Chapter 5**

#### Hazard and Accident Identification, Reporting, and Analysis

##### Subchapter 5.6

#### TWCC Workers' Health and Safety Telephone Hotline

Revised: December 2004

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### **Volume III:**

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This chapter of Risk Management for Texas State Agencies supplies general information regarding state agency employee safety and health exposures, and methods to manage and control those exposures. It also identifies additional resources that may be available to assist state agencies in developing or enhancing an employee safety and health program. This chapter is not intended in any way to be a substitute for the advice and guidance of legal counsel, who should always be consulted regarding rights, duties, and responsibilities under the law.

The Texas Workers' Compensation Act, *Vernon's Texas Codes Annotated*, Labor Code, Title 5, Subtitle A, Sections 411.081-411.083 provide for the establishment of a 24-hour toll-free telephone service for reports of violations of occupations health and safety laws. This health and safety telephone hotline is administered by the Texas Workers' Compensation Commission, Workers' Health and Safety Division.

The purpose of the Workers' Health and Safety telephone hotline is to provide workers in the State of Texas with a way to report unsafe conditions in the workplace that may violate any occupational health or safety laws to a source who can investigate and take appropriate action. The hotline serves as a risk prevention and loss control mechanism which facilitates appropriate corrective action.

The TWCC health and safety telephone hotline is provided for the benefit of workers who are employed by those employers who come under the authority of this provision of the Act (Sections 411.081-411.083). Texas state agencies are not required to comply with this particular provision of the Act (as of this publication date). However, the State Office of Risk Management (Office) responds to any health and safety telephone hotline calls and other types of health and safety related inquiries that originate from state agency employees or other persons. Written inquiries are treated in the same manner as hotline calls by the Office. Alternately, state agency employees may report any health and safety concern directly to the State Office of Risk Management at (512) 936-1565.

When health and safety telephone hotline calls or written inquiries are received either by the TWCC Workers' Health and Safety Division or directly, the Office coordinates with appropriate state agencies regarding the call or inquiry. Each call or inquiry is handled on a case- by-case basis regarding actions that are appropriate to take. Any life-threatening hazards reported are higher in priority than chronic conditions noted. The state agency's risk manager is contacted to evaluate the call or inquiry and to determine appropriate action that may be taken by the agency. If necessary, other state agencies with special expertise or knowledge will be consulted regarding the issue.

---

### ***Checklist for Texas State Agencies***

- |  |     |    |
|--|-----|----|
| 1. Does the state agency respond in a timely manner to the State Office of Risk Management concerning TWCC health and safety hotline and other written notification inquiries? | Yes | No |
| 2. Does the agency take appropriate follow-up actions to address hotline or written notification inquiries?  | Yes | No |
- 

### ***Endnotes***

1. Texas Workers' Compensation Act, *Vernon's Texas Codes Annotated*, Labor Code, Title 5, Subtitle A, Sections 411.08-411.083.
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## Section Two - Employee Safety and Health Program

### **Chapter 5**

#### Hazard and Accident Identification, Reporting, and Analysis

##### Subchapter 5.7

##### Accident Reporting

Revised: December 2004

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### **Volume III:**

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This chapter of Risk Management for Texas State Agencies supplies general information regarding state agency employee safety and health exposures, and techniques and methods to manage and control those exposures. It also identifies additional resources that may be available to assist state agencies in developing or enhancing its employee safety and health program. This chapter is not intended in any way to be a substitute for the advice and guidance of legal counsel, who should always be consulted regarding rights, duties, and responsibilities under the law.

All job-related, employee incidents and accidents should be investigated and reported in order for agency management to identify facts and determine causes to prevent recurrence. Job-related incidents and accidents that should be reported include any that result in occupational injury, illness or disease, fatality, damage to motorized vehicles, and other property damage.<sup>1</sup>

The purposes of accident investigation and reporting are to identify the facts and circumstances surrounding the incident or accident, and to tell supervisors, managers, and others who need to know those facts and circumstances. These reports point to unidentified or uncontrolled hazards which help in developing accident prevention and loss control efforts. The reports provide valuable data that enable managers to target key areas of the safety culture, facilities, equipment, and training that need improvement; determine the resources necessary to carry out these improvements; and identify behaviors that need improvement.<sup>2</sup> An analysis of the conditions and circumstances of the accident provides a basis to implement corrective measures to prevent accident recurrences.<sup>3</sup> The information contained in the accident reports should be aggregated over time to develop accident trends and projections, which serve as indicators of how well the employee safety and health program is working.

Accident investigation and reporting are basic and essential parts of an effective employee safety and health program. Since every incident and accident includes a sequence of contributing causes, repeat events may be prevented by identifying the causes. Elimination of a single loss-causing condition or situation may prevent future recurrences.<sup>4</sup> Timely, complete, and accurate investigation of accidents facilitates the accident review and analysis process. Such investigation may also preserve and protect the health and safety of other persons and state agency resources. Timely, complete, and accurate reporting

may also help to preserve vital evidence that may be required later if litigation results.<sup>5</sup>

State agencies should develop specific procedures following an accident or incident that all employees are expected to follow. These procedures should include an investigation with an appropriate reporting instrument and step-by-step instructions to guide employee actions in order to report accidents. The following discussion provides suggestions regarding these procedures.

## **Employee Accident/Incident Report Form**

The instrument that typically is used to report accidents/incidents is an appropriate employee accident/incident report form. A form specifically for this purpose has been developed by the State Office of Risk Management (Office). This form, SORM -703 Incident/Accident Investigation Form, is attached. This form was developed to provide information to evaluate employee accidents, existing hazards, and loss exposures to state employees. It also provides information that may be used by agency management to assess the impact of the agency's employee safety and health program. The form is not required to be submitted to the Office, but it may be used by an agency as its accident/incident report form.

An alternative approach is for an agency to develop its own unique, accident reporting form specifically designed for its use. However, an agency-specific form should contain all the essential elements that are contained in the attached form. Any form that is developed should be capable of generating usable information, data, and statistics.

### [SORM -703 Incident/Accident Investigation Form](#)

## **Employee Accident/Incident Reporting Procedures**

General principles that should guide the development of accident/incident reporting procedures include the following:

- All job-related injuries and occupational diseases no matter how minor, should be promptly reported to the immediate supervisor. This should occur as soon as the employee is physically able and not later than the end of the immediate shift.
- Any time a job-related accident causes occupational injury or disease that requires treatment by a physician, an accident report form should be completed. The accident report form is a separate report from the Employer's First Report of Injury or Illness (Form TWCC-1S), which is filed to begin a workers' compensation claim.
- The immediate supervisor should obtain complete information from the employee, coworkers, and other witnesses to facilitate a thorough review and analysis of the accident. This information should be documented on the approved accident/incident report form and submitted to the

agency's safety officer in a timely manner.

- The injured employee and immediate supervisor should complete all required reports in a timely manner.
- All employees should cooperate and assist in the reporting and gathering of accident and injury information.
- All injured persons should receive prompt medical attention as described in the workers' compensation claims administration's policies and procedures.
- The agency's executive management should be notified immediately of a fatality, multiple injuries, or serious injuries requiring hospitalization.
- If a fatality occurs, the appropriate law enforcement authorities should be notified. Notification of next of kin or the employee's emergency designee should be coordinated through and approved by the agency head's office. Law enforcement officials often will coordinate with the agency in these matters. The State Office of Risk Management should also be immediately notified.
- If a health and safety committee or an accident review board exists, the committee or board should review all accidents and injuries and recommend appropriate actions to avoid, prevent, or reduce future, similar accidents. Alternatively, the safety officer should perform this function.

## **Responsibilities for Accident Reporting**

The following discussion contains suggested responsibilities that may be adapted to an agency's internal accident/incident reporting procedures.

### **Safety Officer Responsibilities**

It is the responsibility of the Safety Officer to

- Develop procedures to guide the activities of all employees in reporting job-related accidents/incidents, injuries, and occupational diseases.
- Ensure that accident/incident report forms are received from the departments or units in a timely manner.
- Conduct training sessions to ensure that managers, supervisors, and employees are informed and knowledgeable of the requirements of these procedures, as well as their other safety- and health-related responsibilities.

## Additional Duty Safety Officer (ADSO) Responsibilities

It is the responsibility of the ADSO to

- Serve as the contact and resource person for accident reporting procedures for the department, facility, or unit.
- Conduct training within the department to ensure that supervisors and employees are informed and knowledgeable of current accident reporting procedures.
- Ensure that all accident report forms originating from within the department, facility, or unit are correct and filed in a timely manner.

## Department Responsibilities

It is the responsibility of a department, facility, or unit to

- Ensure that the employees comply with current accident reporting procedures.
- Establish departmental procedures as necessary to improve accident reporting procedures.
- Designate an additional duty safety officer (ADSO) to serve as a resource for departmental employees regarding accident reporting and to assist department managers, supervisors, and employees in carrying out the procedures.

## Supervisor Responsibilities

It is the responsibility of the supervisor to

- Ensure that work performed under their supervision complies with all agency-wide/departmental safety and health policies and procedures.
- Not tolerate work methods that violate, wholly or in part, established safety policies and procedures.
- Follow current procedures regarding accident reporting.

## Employee Responsibilities

It is the responsibility of the employee to

- Know, understand, adhere to, and practice all departmental safety policies and procedures to avoid endangering themselves, coworkers, clients, or members of the general public.
- Report promptly to management any conditions of equipment, tools, property, or work methods and procedures that might contribute to an accident.
- Maintain the standards of physical and mental health fitness required for performing the duties of their position.
- Follow current procedures regarding accident reporting.
- Cooperate with departmental ADSOs, the agency's safety officer, the safety committee, and/or the accident review board by providing complete, detailed, accurate information about a job-related accident, injury, or disease that occurs to themselves or coworkers.

### **Actions when a Job-Related Accident/Incident Occurs**

The following are suggested actions to be taken in the event of an accident or incident. These actions can be incorporated into an agency's reporting procedures.

#### **Supervisor Actions**

- If an injury or illness is involved, provide immediate assistance to the injured employee by seeking medical attention as required by the nature of the injury or illness.
  - Provide or arrange for first aid/CPR as appropriate.
  - Request EMS assistance if necessary.
  - Take the employee to the physician of their choice or to the nearest medical facility.
- Write down the date and time of the injury, date and time that notification of the injury was received, and any other pertinent facts for future reference.
- Cooperate fully with any emergency response or law enforcement personnel on the scene. Do not interfere with an official investigation, such as a traffic accident, criminal, or workplace violence investigation.
- Provide complete, accurate, and timely information regarding the accident using a supervisor's accident/incident report form.
  - Go promptly to the scene of the accident/incident. Talk to the injured employee, if possible, and to all witnesses. Stress obtaining facts, rather than placing blame or responsibility. Listen to conversations that may be going on, realizing that unsolicited comments often have merit and can indicate areas of further inquiry.
  - Study possible causes for the accident/incident. Realize that many accidents involve both

unsafe conditions as well as unsafe practices or acts.

- Talk with knowledgeable persons about possible solutions. The problem may have been previously solved by someone else. Encourage employees to give their ideas for preventing similar accidents in the future.
  - Save or preserve any physical evidence that may be required in future litigation proceedings.
  - Write findings and recommendations on the accident/incident report form.
  - Submit the original accident/incident report form to the department's ADSO within 48 hours of the date of injury or notification by the employee.
- If possible, correct any unsafe conditions immediately. If immediate correction is not possible, report the situation to the appropriate level of management. Communicate with others regarding corrections so that all may benefit from the experience.
  - Tell the department's ADSO of any additional information or related facts as the claim progresses.
  - If an injured employee requires medical attention, contact the agency's workers' compensation claims coordinator regarding additional reports that may be required. This same procedure should also be followed if the employee loses time away from work due to a job-related accident or illness.

## Employee Actions

- Notify a supervisor or manager immediately of the accident/incident and if an injury or illness has occurred. An employee must notify a supervisor or manager within 24 hours, or at the beginning of the next shift, of the date and time of injury or first manifestation of the illness.
- Seek immediate medical attention for the nature of the injury or illness. If necessary, go to the physician of the employee's choice or to the nearest medical facility.
- Receive further information and instructions from the agency or division workers' compensation claims coordinator and immediate supervisor regarding claim and benefit procedures.

## Processing the Accident/Incident Form

In all instances, the injured employee's immediate supervisor should complete the accident/incident report form after speaking with the employee and thoroughly reviewing the circumstances and events surrounding the accident/incident.

The supervisor should write a brief narrative of the circumstances that led to and caused the occurrence.

Questions about who, what, where, when, how, and why should be answered. The completed form should then be forwarded to the department's ADSO for internal review and comment. If there is no designated ADSO, forward the completed form directly to the department head and then to the agency safety officer.

The ADSO should document suggestions about the actions and/or changes that have been taken to avoid a similar occurrence in the future. The ADSO then should forward the form to the department head for further review.

The department head should review the comments and suggestions provided by the supervisor and ADSO and write down any additional comments and further action that may need to be taken within the department. The department head should then forward the form to the agency's safety manager or safety officer.

The agency's safety officer and/or safety committee should review the comments and actions taken by the supervisor, ADSO, and department head. Any additional action that may need to be taken should be noted and reviewed by either the safety officer or safety committee.

### **Checklist for Essential Program Elements**

- |  |        |
|--|--------|
| 1. Has the agency developed formal, written procedures for reporting accidents and incidents?  | Yes No |
| 2. Does the agency use a SORM -703 Incident/Accident Investigation Form or an agency-unique accident report form that contains all essential elements of the investigation form? | Yes No |
| 3. Is the accident report form completed by the injured employee's supervisor in a complete, accurate, and timely manner?  | Yes No |
| 4. Is the accident report form properly routed and reviewed by mid-level and upper-level management?   | Yes No |
| 5. Is the accident report form routed to and reviewed for content and accuracy by the agency's safety officer?   | Yes No |
| 6. Does the safety officer have a procedure to complete reports that are incomplete or inaccurate?   | Yes No |
| 7. Does the safety officer conduct follow-ups to verify that corrective actions are taken?   | Yes No |

### **Endnotes**

1. North, Carol and Patricia Laing, eds.; "Reporting Accidents" in Public Employee Safety & Health Management; National Safety Council; 1990; pp. 159-161.

2. Groover, Donald R., Thomas R. Krause, and John H. Hidley; "Using the Behavior-Based Safety Process to Increase Injury Reporting"; Professional Safety; January 1992; Volume 37, Number 1; p. 24.
3. "Safety Issues - Accident Investigation"; Keller's Industrial Safety Report; November 1996; Volume 6, Number 11; p. 10.
4. "Safety Issues - Accident Investigation"; p. 10.
5. Jerner, R. Craig; "Preserving Evidence with Fast Response Accident Investigation"; Risk Management; February, 1993; Volume 40, Number 2.

**SUPERVISOR'S INVESTIGATION OF EMPLOYEE'S ACCIDENT/INCIDENT**

1. LAST NAME OF INJURED	2. FIRST NAME	3. M.I.	4. SOCIAL SECURITY # - -	5. DATE OF BIRTH / /
6. SEX <input type="checkbox"/> M <input type="checkbox"/> F	7. DATE OF EMPLOYMENT IN UNIT / /	8. AGENCY NUMBER (COMPTROLLER'S CODE)		9. BUDGET NUMBER OF ASSIGNED UNIT
10. JOB CLASSIFICATION CODE	11. POSITION STATUS <input type="checkbox"/> Full-time <input type="checkbox"/> Part-time <input type="checkbox"/> Floater (Fills where needed)		12. DATE OF INCIDENT / /	13. TIME OF INCIDENT am <input type="checkbox"/> pm <input type="checkbox"/>
<b>A. EXTENT OF INJURY (Check one only)</b>		<b>C. CONTINUED</b>		
<input type="checkbox"/> No injury (incident only) <input type="checkbox"/> Injury not requiring a TWCC-1S <input type="checkbox"/> Medical <input type="checkbox"/> Lost time only (more than one day) <input type="checkbox"/> Medical and lost time <input type="checkbox"/> Fatality		<input type="checkbox"/> Nursing station <input type="checkbox"/> Office areas <input type="checkbox"/> Program areas <input type="checkbox"/> Ramp <input type="checkbox"/> Sales store/Outlet <input type="checkbox"/> Seclusion room <input type="checkbox"/> Sleeping room <input type="checkbox"/> Steps/Stairs/Stairway <input type="checkbox"/> Storage area <input type="checkbox"/> Waiting room <input type="checkbox"/> Workshop/technical trades <input type="checkbox"/> Other (specify) _____		
<b>B. CATEGORY (Check one only)</b>				
<input type="checkbox"/> Occupational injury (accident) <input type="checkbox"/> Occupational injury (aggressive behavior) <input type="checkbox"/> Occupational illness/disease				
<b>C. SPECIFIC LOCATION OF OCCURRENCE (Check one only)</b>		<b>OUTDOORS:</b>		
INDOORS: BUILDING INVENTORY NO. _____  <input type="checkbox"/> Auditorium <input type="checkbox"/> Boiler room <input type="checkbox"/> Canteen/Snack bar <input type="checkbox"/> Cell block <input type="checkbox"/> Classroom <input type="checkbox"/> Closet <input type="checkbox"/> Day room <input type="checkbox"/> Dormitory/Living room <input type="checkbox"/> Elevator <input type="checkbox"/> Food service area/Dining/Kitchen <input type="checkbox"/> Garage <input type="checkbox"/> Gymnasium/Recreation <input type="checkbox"/> Hallway/Corridor <input type="checkbox"/> Hospital/Clinic/Dispensary <input type="checkbox"/> Laboratory <input type="checkbox"/> Laundry		<input type="checkbox"/> Athletic field <input type="checkbox"/> Campus <input type="checkbox"/> Grounds <input type="checkbox"/> Highway/Road/Street <input type="checkbox"/> Loading dock <input type="checkbox"/> Park or recreation area <input type="checkbox"/> Parking lot <input type="checkbox"/> Roof <input type="checkbox"/> Sidewalk <input type="checkbox"/> Steps/Stairs/Stairway <input type="checkbox"/> Storage area <input type="checkbox"/> Swimming pool area <input type="checkbox"/> Tower <input type="checkbox"/> Other (specify) _____		



<input type="checkbox"/> Hospital/Clinic/Dispensary <input type="checkbox"/> Laboratory <input type="checkbox"/> Laundry <input type="checkbox"/> Library	
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<b>D. ACTIVITY ENGAGED IN BY INJURED AT TIME OF INJURY (Check one only)</b>		<b>F. TYPE OF INJURY (Check primary one)</b>	
<input type="checkbox"/> Bathing <input type="checkbox"/> Buffing <input type="checkbox"/> Carrying <input type="checkbox"/> Cleaning <input type="checkbox"/> Climbing <input type="checkbox"/> Cutting <input type="checkbox"/> Descending <input type="checkbox"/> Digging <input type="checkbox"/> Dressing <input type="checkbox"/> Driving <input type="checkbox"/> Eating <input type="checkbox"/> Escorting <input type="checkbox"/> Exercising <input type="checkbox"/> Feeding <input type="checkbox"/> Grinding <input type="checkbox"/> Grooming <input type="checkbox"/> Jumping <input type="checkbox"/> Loading <input type="checkbox"/> Mopping	<input type="checkbox"/> Moving <input type="checkbox"/> Operating <input type="checkbox"/> Pulling <input type="checkbox"/> Pushing <input type="checkbox"/> Reaching <input type="checkbox"/> Redirecting <input type="checkbox"/> Restraining <input type="checkbox"/> Running <input type="checkbox"/> Sanding <input type="checkbox"/> Sawing <input type="checkbox"/> Searching <input type="checkbox"/> Securing <input type="checkbox"/> Sitting <input type="checkbox"/> Standing <input type="checkbox"/> Stripping <input type="checkbox"/> Turning <input type="checkbox"/> Typing <input type="checkbox"/> Walking <input type="checkbox"/> Other (specify) _____	<input type="checkbox"/> Abrasion <input type="checkbox"/> Amputation <input type="checkbox"/> Bite <input type="checkbox"/> Bruise <input type="checkbox"/> Burn <input type="checkbox"/> Concussion <input type="checkbox"/> Cut <input type="checkbox"/> Dermatitis <input type="checkbox"/> Dislocation <input type="checkbox"/> Foreign object <input type="checkbox"/> Fracture <input type="checkbox"/> Frostbite <input type="checkbox"/> Hearing loss <input type="checkbox"/> Heart attack	<input type="checkbox"/> Heat exhaustion <input type="checkbox"/> Hernia <input type="checkbox"/> Infection <input type="checkbox"/> Inflammation <input type="checkbox"/> Internal injuries <input type="checkbox"/> Puncture <input type="checkbox"/> Repetitive trauma <input type="checkbox"/> Rupture <input type="checkbox"/> Scratch <input type="checkbox"/> Shock <input type="checkbox"/> Sprain/Strain <input type="checkbox"/> Sting <input type="checkbox"/> Other (specify) _____
<b>E. BODY PART INJURED (Most Serious)</b>		<b>G. TYPE OF OCCURRENCE (Check one only)</b>	
<input type="checkbox"/> Ankle <input type="checkbox"/> Arm <input type="checkbox"/> Back <input type="checkbox"/> Buttocks <input type="checkbox"/> Cheek <input type="checkbox"/> Chest <input type="checkbox"/> Chin <input type="checkbox"/> Ear(s) <input type="checkbox"/> Eye(s) <input type="checkbox"/> Foot-Feet <input type="checkbox"/> Finger/Thumb(s) <input type="checkbox"/> Forehead <input type="checkbox"/> Groin <input type="checkbox"/> Hand <input type="checkbox"/> Hips	<input type="checkbox"/> Internal organ <input type="checkbox"/> Jaw <input type="checkbox"/> Knee(s) <input type="checkbox"/> Leg(s) <input type="checkbox"/> Mouth <input type="checkbox"/> Neck <input type="checkbox"/> Nose <input type="checkbox"/> Pelvis <input type="checkbox"/> Rib(s) <input type="checkbox"/> Scalp <input type="checkbox"/> Shoulder <input type="checkbox"/> Toe(s) <input type="checkbox"/> Wrist(s) <input type="checkbox"/> Other (specify) _____	<input type="checkbox"/> Aggression (client, student, inmate, patient) <input type="checkbox"/> Bodily reaction (drug, medication) <input type="checkbox"/> Caught in, on, under, or between <input type="checkbox"/> Contact with chemicals <input type="checkbox"/> Contact with electric current <input type="checkbox"/> Contact with temperature extremes <input type="checkbox"/> Fall on same level <input type="checkbox"/> Fall on different level <input type="checkbox"/> Over-exertion (exceeding physical ability) <input type="checkbox"/> Over-exposure to environmental hazards (noise, toxic) <input type="checkbox"/> Repetitive motion <input type="checkbox"/> Slip (not a fall) <input type="checkbox"/> Struck against (rough, sharp object) <input type="checkbox"/> Struck by falling moving object <input type="checkbox"/> Other (specify) _____	

H. PHYSICAL THING MOST CLOSELY ASSOCIATED WITH OCCURRENCE (Check one)	H. CONTINUED
<input type="checkbox"/> Aircraft <input type="checkbox"/> Air pressure <input type="checkbox"/> Animal (snake, dog, horse, etc.) <input type="checkbox"/> Athletic equipment (baseball, bat, dart, etc.) <input type="checkbox"/> Attachments (belt, pulley, gear, shaft) <input type="checkbox"/> Cabinet <input type="checkbox"/> Chemical (solid, liquid, or gas) <input type="checkbox"/> Computer <input type="checkbox"/> Clothing <input type="checkbox"/> Container (bottle, box, barrel, cylinder, etc.) <input type="checkbox"/> Curb <input type="checkbox"/> Doors (automatic, manual, revolving) <input type="checkbox"/> Drugs or medicine <input type="checkbox"/> Dust <input type="checkbox"/> Electrical apparatus <input type="checkbox"/> Elevator, escalator <input type="checkbox"/> Explosives <input type="checkbox"/> Eyewear <input type="checkbox"/> Fan <input type="checkbox"/> Fire, flame, smoke <input type="checkbox"/> Floor <input type="checkbox"/> Food products <input type="checkbox"/> Fumes <input type="checkbox"/> Furniture, fixtures <input type="checkbox"/> Gas <input type="checkbox"/> Glass items <input type="checkbox"/> Gun <input type="checkbox"/> Ground (earth) <input type="checkbox"/> Hand tool <input type="checkbox"/> Heating equipment <input type="checkbox"/> Hoisting equipment <input type="checkbox"/> Icy condition <input type="checkbox"/> Infectious or parasitic agent <input type="checkbox"/> Inmate, client, employee <input type="checkbox"/> Insect <input type="checkbox"/> Kitchen equipment <input type="checkbox"/> Knife <input type="checkbox"/> Lighting fixture and equipment <input type="checkbox"/> Ladder, scaffold <input type="checkbox"/> Locker <input type="checkbox"/> Machine <input type="checkbox"/> Material handling equipment <input type="checkbox"/> Metal <input type="checkbox"/> Mineral items (asphalt, clay, gravel, etc.) <input type="checkbox"/> Motor vehicle <input type="checkbox"/> Needle <input type="checkbox"/> Office equipment (chair, desk, cabinet, etc.)	<input type="checkbox"/> Paint <input type="checkbox"/> Particle <input type="checkbox"/> Pavement <input type="checkbox"/> Person (other than client, inmate, employee) <input type="checkbox"/> Pipe <input type="checkbox"/> Platform, dock, ramp <input type="checkbox"/> Pole <input type="checkbox"/> Power tool or machinery (lathe, saw, etc.) <input type="checkbox"/> Radiating equipment (microwave, x-ray, etc.) <input type="checkbox"/> Receptacle <input type="checkbox"/> Smoke <input type="checkbox"/> Stair, step <input type="checkbox"/> Sun <input type="checkbox"/> Trench/Ditch <input type="checkbox"/> Vegetation <input type="checkbox"/> Weather <input type="checkbox"/> Wood <input type="checkbox"/> Other (specify) _____
	<b>I. ACT/PRACTICE ASSOCIATED WITH OCCURRENCE (Check one only)</b>
	<input type="checkbox"/> Contact with electrical source (tool, device, wire, etc.) <input type="checkbox"/> Entering an unauthorized area <input type="checkbox"/> Failure to practice safe driving technique <input type="checkbox"/> Failure to use established route or taking short cut <input type="checkbox"/> Failure to use handrail, grab bar <input type="checkbox"/> Failure to use lockout device <input type="checkbox"/> Failure to use personal protective equipment (PPE) <input type="checkbox"/> Failure to warn of known hazards (i.e., no safety sign, light, barricade, instruction, etc.) <input type="checkbox"/> Failure to wear appropriate dress (shoes, shirt, blouse) <input type="checkbox"/> Handling (of object, material, item, thing) <input type="checkbox"/> Horseplay <input type="checkbox"/> Improper mixing or storing (non-compatible material, chemicals, etc.) <input type="checkbox"/> Improper placing or storing (materials, tools, equipment) <input type="checkbox"/> Lifting (including position, stance) <input type="checkbox"/> Making safety devices inoperative <input type="checkbox"/> No unsafe act/practice on the part of employee <input type="checkbox"/> Operating/Working at unsafe speed <input type="checkbox"/> Operating without proper authority/clearance
	<b>Continued on next page</b>

I. CONTINUED	J. CONTINUED
<input type="checkbox"/> Over or unnecessary exposure to hazards (gas, fumes, dust, chemicals, mist, radiation, etc.) <input type="checkbox"/> Repairing or servicing moving object/thing (machine, equipment, etc.) <input type="checkbox"/> Riding moving equipment not designed for passengers <input type="checkbox"/> Unobservant (daydreaming, inattentive, etc.) <input type="checkbox"/> Using unsafe/defective tool, material equipment <input type="checkbox"/> Using wrong tool, material equipment <input type="checkbox"/> Working/Walking under suspended load (crane, hoist, derrick) <input type="checkbox"/> Working in a confined space without proper safeguard <input type="checkbox"/> Working without adequate lighting <input type="checkbox"/> Other (specify) _____	<input type="checkbox"/> Protruding object (nail, wire, splinter, etc.) <input type="checkbox"/> Rough/Sharp objects <input type="checkbox"/> Slipping or tripping hazard <input type="checkbox"/> Step, stairs, ladder, or other working surfaces <input type="checkbox"/> Unguarded machine, belt, pulley, roller, etc. <input type="checkbox"/> Unsafe/defective hand or electric tools <input type="checkbox"/> Unsafe equipment <input type="checkbox"/> Unsafe material <input type="checkbox"/> Unsafe vehicle <input type="checkbox"/> Unshored trench, excavation, etc. <input type="checkbox"/> Walkway, sidewalk, pavement <input type="checkbox"/> Other (specify) _____
	K. DID A RULE, POLICY OR PROCEDURE APPLY THIS MISHAP?
	<input type="checkbox"/> Yes <input type="checkbox"/> No
J. CONDITION (PHYSICAL HAZARD) ASSOCIATED WITH OCCURRENCE (Check one)	L. WAS THE RULE, POLICY OR PROCEDURE FOLLOWED? (If no, explain in section N)
<input type="checkbox"/> Congested area <input type="checkbox"/> Electrical hazard (uninsulated wire, over loaded circuit, inadequate ground, etc.) <input type="checkbox"/> Excessive noise <input type="checkbox"/> Harmful animals/insects/reptiles <input type="checkbox"/> Health hazards (radiation, gas, fumes, dust, vapors, etc.) <input type="checkbox"/> Improper housekeeping <input type="checkbox"/> Improperly stored chemicals, hazardous substances <input type="checkbox"/> Inadequate ventilation <input type="checkbox"/> Inadequate or no warning signs <input type="checkbox"/> Layout or design (office, shop, equipment) <input type="checkbox"/> Lighting <input type="checkbox"/> Mislabeled/Unlabeled chemicals, hazardous materials, etc. <input type="checkbox"/> No unsafe condition <input type="checkbox"/> Open trench, hole, ditch, sharp drop-off <input type="checkbox"/> Poisonous vegetation (oak, ivy, etc.)	<input type="checkbox"/> Yes <input type="checkbox"/> No
	M. ACTION(S) TAKEN OR PLANNED TO PREVENT RECURRENCE? (Check all that apply)
	<input type="checkbox"/> Action taken with employee for violating rules, regulations or procedures <input type="checkbox"/> All employees were made aware of the occurrence, cause, consequence, and action taken to prevent recurrence <input type="checkbox"/> Employee given basic training <input type="checkbox"/> Employee given refresher or remedial training <input type="checkbox"/> Existing rule, regulation or standard (SOP) enforced <input type="checkbox"/> Existing rule, regulation or standard (SOP) revised <input type="checkbox"/> New rule, regulation or standard prepared <input type="checkbox"/> Physical hazard(s) corrected <input type="checkbox"/> Other positive action taken _____

**N. DESCRIBE BRIEFLY, IN NARRATIVE FORM, THE CIRCUMSTANCES THAT LED TO AND CAUSED THIS OCCURRENCE. ANSWER: WHO? WHAT? WHERE? WHEN? AND HOW? (Use additional sheet if necessary)**


		/ /	( )
<b>INJURED'S IMMEDIATE SUPERVISOR (print)</b>	<b>SIGNATURE</b>	<b>DATE</b>	<b>PHONE</b>

REVIEWED BY	<b>SECTION/DEPARTMENT/DIVISION ADDITIONAL DUTY SAFETY OFFICER COMMENT:</b>	
	SIGNATURE:	DATE: / /
	<b>SECTION/DEPARTMENT/DIVISION HEAD COMMENT:</b>	
	SIGNATURE:	DATE: / /
	<b>AGENCY OR FACILITY SAFETY MANAGER COMMENT:</b>	
SIGNATURE:	DATE: / /	

**SUPERVISOR'S INVESTIGATION OF EMPLOYEE'S ACCIDENT/INCIDENT**

1. LAST NAME OF INJURED <b>Smith</b>	2. FIRST NAME <b>Jane</b>	3. M.I. <b>A.</b>	4. SOCIAL SECURITY # <b>000 - 00 - 0000</b>	5. DATE OF BIRTH <b>04 / 01 / 59</b>
6. SEX <input type="checkbox"/> M <input checked="" type="checkbox"/> F	7. DATE OF EMPLOYMENT IN UNIT <b>10 / 01 / 85</b>	8. AGENCY NUMBER (COMPTROLLER'S CODE) <b>101</b>		9. BUDGET NUMBER OF ASSIGNED UNIT <b>7100</b>
10. JOB CLASSIFICATION CODE <b>1161</b>	11. POSITION STATUS <input checked="" type="checkbox"/> Full-time <input type="checkbox"/> Part-time <input type="checkbox"/> Floater (Fills where needed)		12. DATE OF INCIDENT <b>02 / 01 / 97</b>	13. TIME OF INCIDENT <b>10 : 30</b> am <input checked="" type="checkbox"/> pm <input type="checkbox"/>

<b>A. EXTENT OF INJURY (Check one only)</b>	<b>C. CONTINUED</b>
<input type="checkbox"/> No injury (incident only) <input type="checkbox"/> Injury not requiring a TWCC-1S <input type="checkbox"/> Medical <input type="checkbox"/> Lost time only (more than one day) <input checked="" type="checkbox"/> Medical and lost time <input type="checkbox"/> Fatality	<input type="checkbox"/> Nursing station <input type="checkbox"/> Office areas <input type="checkbox"/> Program areas <input type="checkbox"/> Ramp <input type="checkbox"/> Sales store/Outlet <input type="checkbox"/> Seclusion room <input type="checkbox"/> Sleeping room <input checked="" type="checkbox"/> Steps/Stairs/Stairway <input type="checkbox"/> Storage area <input type="checkbox"/> Waiting room <input type="checkbox"/> Workshop/technical trades <input type="checkbox"/> Other (specify) _____
<b>B. CATEGORY (Check one only)</b>	
<input checked="" type="checkbox"/> Occupational injury (accident) <input type="checkbox"/> Occupational injury (aggressive behavior) <input type="checkbox"/> Occupational illness/disease	
<b>C. SPECIFIC LOCATION OF OCCURRENCE (Check one only)</b>	<b>OUTDOORS:</b>
<b>INDOORS:</b> BUILDING INVENTORY NO. _____  <input type="checkbox"/> Auditorium <input type="checkbox"/> Boiler room <input type="checkbox"/> Canteen/Snack bar <input type="checkbox"/> Cell block <input type="checkbox"/> Classroom <input type="checkbox"/> Closet <input type="checkbox"/> Day room <input type="checkbox"/> Dormitory/Living room <input type="checkbox"/> Elevator <input type="checkbox"/> Food service area/Dining/Kitchen <input type="checkbox"/> Garage <input type="checkbox"/> Gymnasium/Recreation <input type="checkbox"/> Hallway/Corridor <input type="checkbox"/> Hospital/Clinic/Dispensary <input type="checkbox"/> Laboratory <input type="checkbox"/> Laundry <input type="checkbox"/> Library	<input type="checkbox"/> Athletic field <input type="checkbox"/> Campus <input type="checkbox"/> Grounds <input type="checkbox"/> Highway/Road/Street <input type="checkbox"/> Loading dock <input type="checkbox"/> Park or recreation area <input type="checkbox"/> Parking lot <input type="checkbox"/> Roof <input type="checkbox"/> Sidewalk <input type="checkbox"/> Steps/Stairs/Stairway <input type="checkbox"/> Storage area <input type="checkbox"/> Swimming pool area <input type="checkbox"/> Tower <input type="checkbox"/> Other (specify) _____

D. ACTIVITY ENGAGED IN BY INJURED AT TIME OF INJURY (Check one only)	F. TYPE OF INJURY (Check primary one)																																																																		
<table border="0"> <tr><td><input type="checkbox"/> Bathing</td><td><input type="checkbox"/> Moving</td></tr> <tr><td><input type="checkbox"/> Buffing</td><td><input type="checkbox"/> Operating</td></tr> <tr><td><input type="checkbox"/> Carrying</td><td><input type="checkbox"/> Pulling</td></tr> <tr><td><input type="checkbox"/> Cleaning</td><td><input type="checkbox"/> Pushing</td></tr> <tr><td><input type="checkbox"/> Climbing</td><td><input type="checkbox"/> Reaching</td></tr> <tr><td><input type="checkbox"/> Cutting</td><td><input type="checkbox"/> Redirecting</td></tr> <tr><td><input checked="" type="checkbox"/> Descending</td><td><input type="checkbox"/> Restraining</td></tr> <tr><td><input type="checkbox"/> Digging</td><td><input type="checkbox"/> Running</td></tr> <tr><td><input type="checkbox"/> Dressing</td><td><input type="checkbox"/> Sanding</td></tr> <tr><td><input type="checkbox"/> Driving</td><td><input type="checkbox"/> Sawing</td></tr> <tr><td><input type="checkbox"/> Eating</td><td><input type="checkbox"/> Searching</td></tr> <tr><td><input type="checkbox"/> Escorting</td><td><input type="checkbox"/> Securing</td></tr> <tr><td><input type="checkbox"/> Exercising</td><td><input type="checkbox"/> Sitting</td></tr> <tr><td><input type="checkbox"/> Feeding</td><td><input type="checkbox"/> Standing</td></tr> <tr><td><input type="checkbox"/> Grinding</td><td><input type="checkbox"/> Stripping</td></tr> <tr><td><input type="checkbox"/> Grooming</td><td><input type="checkbox"/> Turning</td></tr> <tr><td><input type="checkbox"/> Jumping</td><td><input type="checkbox"/> Typing</td></tr> <tr><td><input type="checkbox"/> Loading</td><td><input type="checkbox"/> Walking</td></tr> <tr><td><input type="checkbox"/> Mopping</td><td><input type="checkbox"/> Other (specify) _____</td></tr> </table>	<input type="checkbox"/> Bathing	<input type="checkbox"/> Moving	<input type="checkbox"/> Buffing	<input type="checkbox"/> Operating	<input type="checkbox"/> Carrying	<input type="checkbox"/> Pulling	<input type="checkbox"/> Cleaning	<input type="checkbox"/> Pushing	<input type="checkbox"/> Climbing	<input type="checkbox"/> Reaching	<input type="checkbox"/> Cutting	<input type="checkbox"/> Redirecting	<input checked="" type="checkbox"/> Descending	<input type="checkbox"/> Restraining	<input type="checkbox"/> Digging	<input type="checkbox"/> Running	<input type="checkbox"/> Dressing	<input type="checkbox"/> Sanding	<input type="checkbox"/> Driving	<input type="checkbox"/> Sawing	<input type="checkbox"/> Eating	<input type="checkbox"/> Searching	<input type="checkbox"/> Escorting	<input type="checkbox"/> Securing	<input type="checkbox"/> Exercising	<input type="checkbox"/> Sitting	<input type="checkbox"/> Feeding	<input type="checkbox"/> Standing	<input type="checkbox"/> Grinding	<input type="checkbox"/> Stripping	<input type="checkbox"/> Grooming	<input type="checkbox"/> Turning	<input type="checkbox"/> Jumping	<input type="checkbox"/> Typing	<input type="checkbox"/> Loading	<input type="checkbox"/> Walking	<input type="checkbox"/> Mopping	<input type="checkbox"/> Other (specify) _____	<table border="0"> <tr><td><input type="checkbox"/> Abrasion</td><td><input type="checkbox"/> Heat exhaustion</td></tr> <tr><td><input type="checkbox"/> Amputation</td><td><input type="checkbox"/> Hernia</td></tr> <tr><td><input type="checkbox"/> Bite</td><td><input type="checkbox"/> Infection</td></tr> <tr><td><input type="checkbox"/> Bruise</td><td><input type="checkbox"/> Inflammation</td></tr> <tr><td><input type="checkbox"/> Burn</td><td><input type="checkbox"/> Internal injuries</td></tr> <tr><td><input type="checkbox"/> Concussion</td><td><input type="checkbox"/> Puncture</td></tr> <tr><td><input type="checkbox"/> Cut</td><td><input type="checkbox"/> Repetitive trauma</td></tr> <tr><td><input type="checkbox"/> Dermatitis</td><td><input type="checkbox"/> Rupture</td></tr> <tr><td><input type="checkbox"/> Dislocation</td><td><input type="checkbox"/> Scratch</td></tr> <tr><td><input type="checkbox"/> Foreign object</td><td><input type="checkbox"/> Shock</td></tr> <tr><td><input type="checkbox"/> Fracture</td><td><input checked="" type="checkbox"/> Sprain/Strain</td></tr> <tr><td><input type="checkbox"/> Frostbite</td><td><input type="checkbox"/> Sting</td></tr> <tr><td><input type="checkbox"/> Hearing loss</td><td><input type="checkbox"/> Other (specify) _____</td></tr> <tr><td><input type="checkbox"/> Heart attack</td><td></td></tr> </table>	<input type="checkbox"/> Abrasion	<input type="checkbox"/> Heat exhaustion	<input type="checkbox"/> Amputation	<input type="checkbox"/> Hernia	<input type="checkbox"/> Bite	<input type="checkbox"/> Infection	<input type="checkbox"/> Bruise	<input type="checkbox"/> Inflammation	<input type="checkbox"/> Burn	<input type="checkbox"/> Internal injuries	<input type="checkbox"/> Concussion	<input type="checkbox"/> Puncture	<input type="checkbox"/> Cut	<input type="checkbox"/> Repetitive trauma	<input type="checkbox"/> Dermatitis	<input type="checkbox"/> Rupture	<input type="checkbox"/> Dislocation	<input type="checkbox"/> Scratch	<input type="checkbox"/> Foreign object	<input type="checkbox"/> Shock	<input type="checkbox"/> Fracture	<input checked="" type="checkbox"/> Sprain/Strain	<input type="checkbox"/> Frostbite	<input type="checkbox"/> Sting	<input type="checkbox"/> Hearing loss	<input type="checkbox"/> Other (specify) _____	<input type="checkbox"/> Heart attack	
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<input type="checkbox"/> Burn	<input type="checkbox"/> Internal injuries																																																																		
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<input type="checkbox"/> Hearing loss	<input type="checkbox"/> Other (specify) _____																																																																		
<input type="checkbox"/> Heart attack																																																																			
<b>E. BODY PART INJURED (Most Serious)</b>	<b>G. TYPE OF OCCURRENCE (Check one only)</b>																																																																		
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H. PHYSICAL THING MOST CLOSELY ASSOCIATED WITH OCCURRENCE (Check one)	H. CONTINUED
<ul style="list-style-type: none"> <li><input type="checkbox"/> Aircraft</li> <li><input type="checkbox"/> Air pressure</li> <li><input type="checkbox"/> Animal (snake, dog, horse, etc.)</li> <li><input type="checkbox"/> Athletic equipment (baseball, bat, dart, etc.)</li> <li><input type="checkbox"/> Attachments (belt, pulley, gear, shaft)</li> <li><input type="checkbox"/> Cabinet</li> <li><input type="checkbox"/> Chemical (solid, liquid, or gas)</li> <li><input type="checkbox"/> Computer</li> <li><input type="checkbox"/> Clothing</li> <li><input type="checkbox"/> Container (bottle, box, barrel, cylinder, etc.)</li> <li><input type="checkbox"/> Curb</li> <li><input type="checkbox"/> Doors (automatic, manual, revolving)</li> <li><input type="checkbox"/> Drugs or medicine</li> <li><input type="checkbox"/> Dust</li> <li><input type="checkbox"/> Electrical apparatus</li> <li><input type="checkbox"/> Elevator, escalator</li> <li><input type="checkbox"/> Explosives</li> <li><input type="checkbox"/> Eyewear</li> <li><input type="checkbox"/> Fan</li> <li><input type="checkbox"/> Fire, flame, smoke</li> <li><input type="checkbox"/> Floor</li> <li><input type="checkbox"/> Food products</li> <li><input type="checkbox"/> Fumes</li> <li><input type="checkbox"/> Furniture, fixtures</li> <li><input type="checkbox"/> Gas</li> <li><input type="checkbox"/> Glass items</li> <li><input type="checkbox"/> Gun</li> <li><input type="checkbox"/> Ground (earth)</li> <li><input type="checkbox"/> Hand tool</li> <li><input type="checkbox"/> Heating equipment</li> <li><input type="checkbox"/> Hoisting equipment</li> <li><input type="checkbox"/> Icy condition</li> <li><input type="checkbox"/> Infectious or parasitic agent</li> <li><input type="checkbox"/> Inmate, client, employee</li> <li><input type="checkbox"/> Insect</li> <li><input type="checkbox"/> Kitchen equipment</li> <li><input type="checkbox"/> Knife</li> <li><input type="checkbox"/> Lighting fixture and equipment</li> <li><input type="checkbox"/> Ladder, scaffold</li> <li><input type="checkbox"/> Locker</li> <li><input type="checkbox"/> Machine</li> <li><input type="checkbox"/> Material handling equipment</li> <li><input type="checkbox"/> Metal</li> <li><input type="checkbox"/> Mineral items (asphalt, clay, gravel, etc.)</li> <li><input type="checkbox"/> Motor vehicle</li> <li><input type="checkbox"/> Needle</li> <li><input type="checkbox"/> Office equipment (chair, desk, cabinet, etc.)</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Paint</li> <li><input type="checkbox"/> Particle</li> <li><input type="checkbox"/> Pavement</li> <li><input type="checkbox"/> Person (other than client, inmate, employee)</li> <li><input type="checkbox"/> Pipe</li> <li><input type="checkbox"/> Platform, dock, ramp</li> <li><input type="checkbox"/> Pole</li> <li><input type="checkbox"/> Power tool or machinery (lathe, saw, etc.)</li> <li><input type="checkbox"/> Radiating equipment (microwave, x-ray, etc.)</li> <li><input type="checkbox"/> Receptacle</li> <li><input type="checkbox"/> Smoke</li> <li><input checked="" type="checkbox"/> Stair, step</li> <li><input type="checkbox"/> Sun</li> <li><input type="checkbox"/> Trench/Ditch</li> <li><input type="checkbox"/> Vegetation</li> <li><input type="checkbox"/> Weather</li> <li><input type="checkbox"/> Wood</li> <li><input type="checkbox"/> Other (specify) _____</li> </ul>
	<p style="text-align: center;"><b>I. ACT/PRACTICE ASSOCIATED WITH OCCURRENCE (Check one only)</b></p>
	<ul style="list-style-type: none"> <li><input type="checkbox"/> Contact with electrical source (tool, device, wire, etc.)</li> <li><input type="checkbox"/> Entering an unauthorized area</li> <li><input type="checkbox"/> Failure to practice safe driving technique</li> <li><input type="checkbox"/> Failure to use established route or taking short cut</li> <li><input checked="" type="checkbox"/> Failure to use handrail, grab bar</li> <li><input type="checkbox"/> Failure to use lockout device</li> <li><input type="checkbox"/> Failure to use personal protective equipment (PPE)</li> <li><input type="checkbox"/> Failure to warn of known hazards (i.e., no safety sign, light, barricade, instruction, etc.)</li> <li><input type="checkbox"/> Failure to wear appropriate dress (shoes, shirt, blouse)</li> <li><input type="checkbox"/> Handling (of object, material, item, thing)</li> <li><input type="checkbox"/> Horseplay</li> <li><input type="checkbox"/> Improper mixing or storing (non-compatible material, chemicals, etc.)</li> <li><input type="checkbox"/> Improper placing or storing (materials, tools, equipment)</li> <li><input type="checkbox"/> Lifting (including position, stance)</li> <li><input type="checkbox"/> Making safety devices inoperative</li> <li><input type="checkbox"/> No unsafe act/practice on the part of employee</li> <li><input type="checkbox"/> Operating/Working at unsafe speed</li> <li><input type="checkbox"/> Operating without proper authority/clearance</li> </ul> <p style="text-align: right;"><b>Continued on next page</b></p>

<p><b>I. CONTINUED</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Over or unnecessary exposure to hazards (gas, fumes, dust, chemicals, mist, radiation, etc.)</li> <li><input type="checkbox"/> Repairing or servicing moving object/thing (machine, equipment, etc.)</li> <li><input type="checkbox"/> Riding moving equipment not designed for passengers</li> <li><input type="checkbox"/> Unobservant (daydreaming, inattentive, etc.)</li> <li><input type="checkbox"/> Using unsafe/defective tool, material equipment</li> <li><input type="checkbox"/> Using wrong tool, material equipment</li> <li><input type="checkbox"/> Working/Walking under suspended load (crane, hoist, derrick)</li> <li><input type="checkbox"/> Working in a confined space without proper safeguard</li> <li><input type="checkbox"/> Working without adequate lighting</li> <li><input type="checkbox"/> Other (specify) _____</li> </ul>	<p><b>J. CONTINUED</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Protruding object (nail, wire, splinter, etc.)</li> <li><input type="checkbox"/> Rough/Sharp objects</li> <li><input type="checkbox"/> Slipping or tripping hazard                             <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Step, stairs, ladder, or other working surfaces</li> </ul> </li> <li><input type="checkbox"/> Unguarded machine, belt, pulley, roller, etc.</li> <li><input type="checkbox"/> Unsafe/defective hand or electric tools</li> <li><input type="checkbox"/> Unsafe equipment</li> <li><input type="checkbox"/> Unsafe material</li> <li><input type="checkbox"/> Unsafe vehicle</li> <li><input type="checkbox"/> Unshored trench, excavation, etc.</li> <li><input type="checkbox"/> Walkway, sidewalk, pavement</li> <li><input type="checkbox"/> Other (specify) _____</li> </ul> <p><b>K. DID A RULE, POLICY OR PROCEDURE APPLY THIS MISHAP?</b></p> <p style="text-align: center;"><input type="checkbox"/> Yes      <input checked="" type="checkbox"/> No</p> <p><b>L. WAS THE RULE, POLICY OR PROCEDURE FOLLOWED? (If no, explain in section N)</b></p> <p style="text-align: center;"><input type="checkbox"/> Yes      <input type="checkbox"/> No</p> <p><b>M. ACTION(S) TAKEN OR PLANNED TO PREVENT RECURRENCE? (Check all that apply)</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Action taken with employee for violating rules, regulations or procedures                             <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> All employees were made aware of the occurrence, cause, consequence, and action taken to prevent recurrence</li> </ul> </li> <li><input type="checkbox"/> Employee given basic training                             <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Employee given refresher or remedial training</li> </ul> </li> <li><input type="checkbox"/> Existing rule, regulation or standard (SOP) enforced</li> <li><input type="checkbox"/> Existing rule, regulation or standard (SOP) revised</li> <li><input type="checkbox"/> New rule, regulation or standard prepared</li> <li><input type="checkbox"/> Physical hazard(s) corrected</li> <li><input type="checkbox"/> Other positive action taken _____</li> </ul>
<p><b>J. CONDITION (PHYSICAL HAZARD) ASSOCIATED WITH OCCURRENCE (Check one)</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Congested area</li> <li><input type="checkbox"/> Electrical hazard (uninsulated wire, over loaded circuit, inadequate ground, etc.)</li> <li><input type="checkbox"/> Excessive noise</li> <li><input type="checkbox"/> Harmful animals/insects/reptiles</li> <li><input type="checkbox"/> Health hazards (radiation, gas, fumes, dust, vapors, etc.)</li> <li><input type="checkbox"/> Improper housekeeping</li> <li><input type="checkbox"/> Improperly stored chemicals, hazardous substances</li> <li><input type="checkbox"/> Inadequate ventilation</li> <li><input type="checkbox"/> Inadequate or no warning signs</li> <li><input type="checkbox"/> Layout or design (office, shop, equipment)</li> <li><input type="checkbox"/> Lighting</li> <li><input type="checkbox"/> Mislabeled/Unlabeled chemicals, hazardous materials, etc.</li> <li><input type="checkbox"/> No unsafe condition</li> <li><input type="checkbox"/> Open trench, hole, ditch, sharp drop-off</li> <li><input type="checkbox"/> Poisonous vegetation (oak, ivy, etc.)</li> </ul>	



N. DESCRIBE BRIEFLY, IN NARRATIVE FORM, THE CIRCUMSTANCES THAT LED TO AND CAUSED THIS OCCURRENCE. ANSWER: WHO? WHAT? WHERE? WHEN? AND HOW? (Use additional sheet if necessary)

**Ms. Smith states that she was walking down the service stairs of the headquarters building. Her heel caught on the edge of the stairs and she fell to the bottom of the stairs, injuring her lower back. One witness was present and stated that Ms. Smith was carrying a box of computer paper in both hands.**

<b>Scott Hoopes</b>		<b>02 / 02 / 96</b>	<b>( 512 ) 440-1000</b>
INJURED'S IMMEDIATE SUPERVISOR (print)	SIGNATURE	DATE	PHONE

<b>REVIEWED BY</b>	<b>SECTION/DEPARTMENT/DIVISION ADDITIONAL DUTY SAFETY OFFICER COMMENT:</b>	
	Employee was wearing 3" spiked heels. She was unable to use the hand rail or see the steps because she was carrying the box of computer paper. She has been counseled regarding proper safety practices, wear of appropriate clothing for jobs being performed and carrying techniques to allow use of hand rails, if they are necessary.	
	SIGNATURE: 	DATE: 02 / 03 / 96
	<b>SECTION/DEPARTMENT/DIVISION HEAD COMMENT:</b>	
	No further action required.	
	SIGNATURE: 	DATE: 02 / 04 / 96
	<b>AGENCY OR FACILITY SAFETY MANAGER COMMENT:</b>	
	No further action required.	
SIGNATURE: 	DATE: 02 / 05 / 96	

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## Section Two - Employee Safety and Health Program

### **Chapter 5**

#### Hazard and Accident Identification, Reporting, and Analysis

##### Subchapter 5.8

##### Accident/Incident Review and Analysis

Revised: December 2004

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### **Volume III:**

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This chapter of Risk Management for Texas State Agencies supplies general information regarding state agency employee safety and health exposures, and methods to manage and control those exposures. It also identifies additional resources that may be available to assist state agencies in developing or enhancing an employee safety and health program. This chapter is not intended in any way to be a substitute for the advice and guidance of legal counsel, who should always be consulted regarding rights, duties, and responsibilities under the law.

All accidents and incidents should be reviewed and analyzed to identify the contributing factors and causes to prevent recurrence. Accidents and incidents requiring review and analysis include all occupational injuries, illnesses, fatalities, damage to motorized vehicles and other property damage. For this reason, accident/incident review and analysis is a basic, necessary component of a comprehensive employee safety and health program.(1)

The purposes of accident/incident review and analysis are to: consider all facts and circumstances about each accident/incident; examine and evaluate those facts; and to identify any corrective actions that may be necessary to prevent recurrence of the accident/incident. The information collected on accident reports can be aggregated over time to develop accident trends and projections, which serve as an indicator of how well the employee safety and health program is working.(2)

The OSHA voluntary guidelines for employee safety and health program management provides the following recommendations regarding accident review and analysis:

Provide for investigation of accidents and near- miss accidents so that their causes and means for preventing repetitions are identified.(3)

Analyze injury and illness trends over time, so that patterns with common causes can be

identified and prevented.(4)

The primary reasons for accident investigation, or accident review, are simply to uncover accident causes (a fact-finding activity) and to develop solutions that will prevent recurrence. A review of accident and injury experiences over time may reveal patterns of accidents and injuries that may have common causes. These common causes can then be addressed. Correlation of changes in injury experience with changes in operations, personnel, and production processes may also identify causes.  
(5)

### ***The Review and Analysis Process***

For many state agencies, the supervisor and manager of the unit involved and/or the safety officer normally conduct the review and analysis. However, an agency's safety and health committee or an accident review board may be appropriate mechanisms to assure consistency and to provide a formal review process of accidents and incidents. All accidents and incidents should be reported, thoroughly reviewed and analyzed. Written procedures should identify the person(s) and/or the committee that will review accidents/incidents and the process for conducting the reviews and subsequent analysis.

All accident causes and contributing factors should be identified. Potential corrective actions associated with each factor should also be identified. Corrective actions should be evaluated, with those that appear to provide the best solutions for the agency and its employees should be recommended for implementation by management.

### ***Review and Analysis Policy***

A formal policy should be adopted that all accidents and near-miss incidents will be reviewed. Near-miss incidents are those non-injury producing accidents where the potential for bodily injury or property damage was present, but did not occur. The policy should identify those who are responsible for reviewing and analyzing accidents/incidents. At a minimum, the policy should state that accident reviews must be conducted if any one of the following conditions occur in the work environment:

- A near-miss incident occurs, where the potential for bodily injury was present, but did not occur;
- An employee loses time away from work because of a job-related injury or occupational disease;
- An employee seeks medical attention for a job-related injury or occupational disease, or medical payments for workers' compensation occur;
- Damage to agency-owned equipment or property, and/or property owned by others occurs;

- An employee is involved in a vehicle accident while performing job-related duties;
- A fatality occurs as a result of a job-related accident or occupational disease; (6) and/or
- A weapon of deadly force is used in the work environment.

Based upon this policy, each state agency should develop its own accident review and analysis procedures to guide agency personnel in the review and analysis process.

## **RESPONSIBILITY FOR PERFORMING AN ACCIDENT/INCIDENT REVIEW AND ANALYSIS**

The nature of the accident and its severity may have an impact on who is responsible for conducting the review. Most organizations assign responsibility for accident reviews to one or more of the following:

- **The Supervisor** - This is the person who most likely was at the scene of the accident. The supervisor is the most knowledgeable of work processes and operating procedures. The supervisor is also the most likely person to implement any corrective measures. Near-miss incidents and minor, less severe accidents may be reviewed by the immediate supervisor who is familiar with the process involved. In these cases, the agency safety officer should review the results of the supervisor's review and analysis for technical considerations and consistency of review and analysis.
- **Safety Officer** - A safety professional employed within the agency is another likely person to conduct the review. The safety officer, through training, education and experience, is knowledgeable of accident causes, and usually is capable of sound judgments. Serious and severe accidents should receive the attention of this experienced person to review and analyze the facts and causes leading up to the accident, and to offer suggestions for corrective actions.
- **Safety Committee** - The safety committee typically is composed of representatives of both management and employees. Consequently, the safety committee is in the unique position to see both managerial and employee viewpoints regarding accident facts and causes, and to make suggestions regarding potential solutions that are in the best interests of management and employees. The committee considers information presented by employees, the supervisor and witnesses regarding the circumstances and facts surrounding the accident, and other evidence that may be available, to identify the causes of the accident. The committee then identifies any corrective actions that may be necessary to prevent similar accidents from occurring. This process may be conducted informally, or a more formal process may be established.

- **Accident Review Board** - An accident review board typically is an ad hoc committee that is specially appointed in order to conduct formal accident review proceedings. The composition of the board usually is comprised of upper and middle management, and some employee representatives. Employees who are involved in job-related accidents are formally required to attend a board meeting. The employee's supervisor, and often witnesses are also required to attend. The board considers information presented by the employee, supervisor and witnesses regarding the circumstances and facts, considers other evidence that may be available, including expert testimony if necessary, to identify the causes of the accident. The board then identifies any corrective actions that may be necessary to prevent similar accidents from occurring.
- **Legal Counsel** - An agency's legal counsel may be involved in the review, especially for serious accidents which involve or have the potential for litigation. Whenever questions of law or legal authority surface during the review, legal counsel should be consulted.
- **Other Sources** - In some cases, other persons and sources of information should be included in the review. For example, if a workers' compensation claim is involved, the claims adjuster handling the claim for the Workers' Compensation Division, State Office of Risk Management may need to be consulted. Representatives from law enforcement agencies or other civil authorities may be involved in certain cases if criminal or civil investigations are being conducted. In these cases, the investigations of these other sources may supplement the agency review, but should not replace it.(8)

## ***Training***

Skills used to conduct an accident review and analysis are developed and acquired primarily through training and experience. Some amount of education and training should be provided to persons who will be conducting reviews. Education or training should address the following:

- Form and report filing requirements;
- Notification procedures;
- Fact identification techniques;
- Interviewing techniques;
- Time requirements for completing the review and analysis;
- Corrective actions and recommendations;
- Assistance available during the review and analysis process; and
- Follow-up requirements.(5)

## **SUGGESTIONS FOR CONDUCTING AN ACCIDENT/INCIDENT REVIEW**

The following are some suggestions that may be helpful to persons who are involved in conducting an accident/incident review and analysis:

- Strive to maintain fairness, objectivity and impartiality, which are essential to maintaining the value and integrity of the accident/incident review and analysis. It should be remembered and emphasized that the primary objective of the review and analysis is to prevent the recurrence of future accidents. Therefore, the primary emphasis should be upon identifying the facts of the accident, and associated causes of the accident. Undue emphasis upon placing the blame for the accident only serves to destroy the overall value of the review and analysis.(8)
- Begin with the facts and circumstances that existed at the accident scene. Review any physical changes that took place. Reconstruction of the setting at the scene of the accident is often helpful, as are working diagrams, photographs or videos of the area. Any evidence that is collected should be maintained in a manner that prevents alteration or destruction of the objects.(9)
- Prepare for interviews with employees, supervisors and/or witnesses. Planning the questions asked during an interview is very helpful, and reduces the chances that important questions will be omitted. Timing, compassion and an understanding of the technology or equipment involved in the accident/incident are all important interview considerations.
- Conduct interviews in a calm, relaxed manner. Ask the person to go through the sequence of events that led up to, during and following the accident/incident. Keep the focus of the interview on the subject by redirecting the person being interviewed back to the subject of the interview. The interview should end on a positive note and the person should be encouraged to contact the interviewer if any additional information comes to mind.(6,8)
- Study possible causes, realizing that accidents involve both unsafe conditions as well as unsafe practices or acts. Furthermore, look for systemic causes that may exist within the management system or structure that may have contributed to the accident. The following factors should be examined as possible causes or contributing factors:
  - **Environment** - Physical and/or environmental hazards in the workplace often contribute to an accident. This may include inefficiencies in the operating process or procedures, poor physical work environment or inefficient physical layout.
  - **Equipment/Machinery** - Two important factors that contribute to this category of accident include: equipment failure, defined by physical breakdown or deterioration of any part or process, and; equipment design deficiency that occurs when the equipment is designed in a way that failure occurs at a certain point.
  - **Human Errors** - Factors associated with human physiological and psychological limitations that lead to the failure of a person to perform an act or to follow approved procedures are classified as human error.
  - **Management** - An element of management, such as inadequate planning, training,

support or supervisory involvement in work practices and procedures may contribute to an accident.

- **Natural Phenomena** - These are classified as "acts of nature", such as fires, earthquakes, wind, floods, or other weather-related events. However, this classification does not apply when the injury/loss was caused by a failure to take normal precautions against these events.(6)
- Talk with knowledgeable persons about possible solutions. It may be that a similar or the same problem may have already been solved by someone else.
- Follow-up to correct unsafe conditions. If immediate correction is not possible, management should be informed.
- Inform others of corrective actions taken to make conditions safer, so that all may benefit from the experience. This can be done effectively through division/department/unit safety meetings as well as the agency safety committee.

### ***Corrective Actions***

All of the factors for which corrective action is possible should be identified, and corrective actions listed for each. Each potential corrective action should be evaluated in terms of its efficiency and effectiveness in resolving the problem. The action(s) that provides the best solution(s) for the agency should be recommended for implementation. The decision should be based upon such considerations as cost, effectiveness, feasibility, reliability, effect on productivity, acceptance and time required to implement.(6)

Recommendations for corrective action also may be used as opportunities to accomplish the following:

- Review, examine and update all applicable policies, procedures, and operating methods and practices;
- Provide education, instruction, and training and/or retraining to minimize human factors that contribute to accidents;
- Provide supervisors with updated information about the hazards and unsafe practices in their own areas, and will result in more effective discussions with employees and initiate prompt changes in the work environment; and
- Provide a basis for disciplinary actions when necessary, either through performance evaluations or through another formal agency disciplinary mechanism.(6)

## LONG-TERM ANALYSIS OF ACCIDENTS

### *Accident Experience Analysis*

The collection of accident reports and detailed reviews and analyses over time will provide a wealth of information that can be used by the safety officer and agency management to improve the employee safety and health program, and specific loss prevention and control measures. Therefore, the safety officer should utilize this information to develop an information system to provide routine reports to agency management. Statistical data can be developed using individual reports, which ideally should be computerized for ease of manipulation and retrieval.

Two measurement techniques are particularly useful in evaluating an employee safety and health program. These measurements are the "injury frequency rate" and the "injury severity rate".

- **Injury Frequency Rate (IFR)** - The value of computing and maintaining an injury frequency rate is that it allows comparisons of an agency's injury experience over different time periods. Periodic monitoring of the IFR assists in identifying significant trends within the agency and within departments. Every agency should calculate its own "injury frequency rates" to monitor their employee safety and health program. IFR's should be calculated at least on an annual basis, and more frequently if at all possible. Prior to starting each new fiscal year, internal agency goals should be established to reduce the agency's IFR. A detailed explanation of how an agency may compute its injury frequency rate is provided in Chapter 2.12 - Measuring Safety Program Performance.
- **Injury Severity Rate (ISR)** - The injury severity rate relates the total number of days employees are away from work to the total number of hours employees worked. The ISR lets an agency know how serious its employee injuries are, expressed in terms of the total number of employee lost work days due to occupational injuries or disease. Information on lost work days or lost time due to occupational injury or disease must be determined from workers' compensation claims records. In order to calculate an ISR, each agency must keep records of lost work days that result from workers' compensation claims. A detailed explanation of how an agency may compute its injury severity rate is provided in Chapter 2.12 - Measuring Safety Program Performance.

### *Accident Cost Analysis*

In addition to the accident experience rates, the cost of accidents is information that is very beneficial to management. These costs may be broken down into direct and indirect costs. Therefore, the agency safety officer should institute a mechanism to identify and track these costs. Chapter 5.2 provides more detailed information on direct and indirect costs.



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### ***Checklist for Texas State Agencies***

1. Does the agency have a policy that requires review and analysis of accidents/incidents? Yes No
2. Have written procedures been established to guide the agency staff while conducting accident/incident reviews and analyses? Yes No
3. Is the immediate supervisor of the affected employee involved in the accident/incident review and analysis process? Yes No
4. Is the agency safety officer involved in the incident/accident review and analysis process? Yes No
5. Is the agency safety committee involved in the review and analysis process? Yes No
6. Alternatively, has a formal accident review board been established? Yes No
7. Have all personnel involved in the review and analysis process been trained regarding the process and how to properly conduct an accident review? Yes No
8. Does the analysis of each accident include determining direct and indirect costs? Yes No
9. Does management take appropriate corrective action based upon the review and analysis process? Yes No

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### ***Endnotes***

1. North, Carol and Patricia Laing, Editors; *Public Employee Safety & Health Management*; National Safety Council; 1990.
2. "Safety and Health Program Management Guidelines; Issuance of Voluntary Guidelines"; U.S. Department of Labor, Occupational Safety and Health Administration; *Federal Register* 54 (16): 3904 - 3916; January 25, 1989; Section (c)(2)(iv).
3. IBID; Section (c)(2)(v).
4. Bruce, Stephen D., Ph.D.; *How to Meet OSHA's Safety & Health Guidelines*; Business & Legal Reports, Inc.; 39 Academy Street; Madison, CT 06443-1513; p. 9-2, 9-5.
5. Groover, Donald R., and Thomas R. Krause and John H. Hidley; "Using the Behavior-Based Safety Process to Increase Injury Reporting;" *Professional Safety*; January, 1992.

6. Walsh, Kathy, Editor; *Public Sector Risk Management*; "Accident/ Injury Reporting and Investigation," written by Mary DeCampli Stewart, ARM, Risk Manager, Metropolitan Washington Airports Authority. 1990.
  
  7. *Risk Management and Loss Control Manual For Local Government*; The Local Government Institute; Seattle, WA. 1988.
  
  8. Bruce, Stephen D., Ph.D.; *How To Meet OSHA's Safety & Health Guidelines*; Business & Legal Reports, Inc., 39 Academy St., Madison, CT. 16443- 1513. Chapter 9.
  
  9. Jerner, R. Craig; "Preserving Evidence With Fast Response Accident Investigation;" *Risk Management*; February, 1993.
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## Section Two - Employee Safety and Health Program

### Chapter 6

#### Occupational Safety Program

#### Subchapter 6.0

#### Introduction

Revised: December 2004

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### Volume III:

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This chapter of *Risk Management for Texas State Agencies* supplies general information regarding state agency employee and suggested techniques and methods to manage and control safety and health exposures. It also identifies additional resources that may be available to assist state agencies in developing or enhancing its employee safety and health program. This chapter is not intended in any way to be a substitute for the advice and guidance of legal counsel, who should always be consulted regarding rights, duties, and responsibilities under the law.

An occupational safety program should include those accident prevention and loss control measures that address specific safety hazards, issues, and concerns in the workplace. Effective accident prevention and loss control programs are the most effective cost containment measures a state agency can implement to reduce loss exposures and workers' compensation claims and losses. Accidents may be prevented by eliminating workplace hazards and redesigning jobs or job sites to prevent occupational accidents. Occupational hazards that cannot be eliminated may be controlled through engineering techniques, administrative controls, and other loss control methods.

This chapter of *Risk Management for Texas State Agencies* addresses certain occupational safety exposures that may exist in many state agency environments. Discussion of these exposures includes suggestions for accident prevention and loss control. These suggestions are based upon applicable industry standards, federal, and/or state agency rules and regulations. The State Office of Risk Management (Office) encourages Texas state agencies to adapt these suggestions and other industry standards as appropriate to manage and control occupational safety exposures.

The State Office of Risk Management will periodically add new topics to this chapter of *Risk Management for Texas State Agencies*. Existing topics will also be updated as necessary in future revisions of this chapter. State agency safety officers and risk managers are encouraged to provide feedback to the Office regarding these existing topics and additional exposures or issues that should be addressed in these guidelines.

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## Section Two - Employee Safety and Health Program

### **Chapter 6**

#### Occupational Safety Program

##### Subchapter 6.1

#### Aggressive Behavior Management

Revised: December 2004

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### **Volume III:**

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This chapter of Risk Management for Texas State Agencies supplies general information regarding state agency employee safety and health exposures, and techniques and methods to manage and control those exposures. It also identifies additional resources that may be available to assist state agencies in developing or enhancing its employee safety and health program. This chapter is not intended in any way to be a substitute for the advice and guidance of legal counsel, who should always be consulted regarding rights, duties, and responsibilities under the law.

Aggressive behavior within certain populations is difficult, if not impossible, to predict. That is, the conditions and situations in which a person is likely to exhibit aggression, the events leading up to an aggressive behavior incident, or when aggressive behavior will occur do not readily lend themselves to classification and analysis.

Many state agencies have operations and programs in which employees of the agency must deal with persons who exhibit some form of aggressive behavior. The agencies where aggressive behavior is most prevalent are those agencies that provide "institutional" environments. Consequently, aggressive behavior accounts for a significant percentage of workers' compensation claims among these agencies.

There are also a number of regulatory, law enforcement, health, and human service agencies that routinely deal with clients, claimants, and other members of the public who occasionally may become angry and possibly aggressive. These agencies should consider providing employee education and training that address successful techniques to deal with these persons and ways of providing the highest quality customer service. Any foreseeable situation that could possibly lead to aggression should be addressed and provisions made for appropriate action.

Potential also exists for the person who exhibits aggressive behavior, subsequent to an incident, accident and/or injury, to file complaints, claims and/or lawsuits against the agency and State. Because of the unpredictable nature of aggressive behavior, the frequency of aggressive behavior incidents and claims for workers' compensation and/or liability claims/suits, an aggressive behavior management program is an important element of an occupational safety program for agencies that have such exposures.

The following information is based upon the Texas Department of Mental Health and Mental Retardation's Preventive Management of Aggressive Behavior (PMAB) training manual,1 supplemented with information from additional resources. State agencies may find the suggestions and ideas within this chapter helpful and beneficial in preventing aggressive behavior accidents and injuries within their agencies. Therefore, this chapter may be adapted by a state agency for their specific exposures and conditions.

### ***Causes of Aggressive Behavior***

There are numerous reasons why people exhibit aggressive and violent behavior. It is useful to understand some of the basic causes that drive these behaviors prior to developing and implementing controls. Some of these are summarized below.

- **Stress** caused by lack of control over one's environment, especially by persons confined to institutional settings. Stress can be further refined into different types of experiences:
  - *Fear* of new environments, peers, and situations either perceived or real;
  - *Loss* of job, family, possessions, identity, and other types of losses;
  - *Unsatisfied needs* that may be linked to very basic, strong human motivating factors; and
  - *Ineffective communication* that may lead to isolation and misunderstanding.
- **Learned behavior responses** that are caused by a conditioned personal response to particular stimuli, situations, or environments.
- **Physiological and psychological reasons** including psychosis, functional disabilities, and in some cases physical disabilities that may contribute to aggression either directly or indirectly.

## **GUIDELINES FOR ACCIDENT PREVENTION - AGGRESSIVE BEHAVIOR MANAGEMENT PROGRAM**

There are several basic elements that are common to most aggressive behavior management programs. These include: commitment from upper management, program planning and design, program administration, employee education and training, and routine operations. In the discussion of these basic elements that follows, the term "client" refers to persons housed in state-owned/managed institutions or members of the general public who use the services, programs and/or facilities of a state agency, or who come in close proximity to state agency personnel.

### ***I. Commitment From Executive Management***

- Commitment and support from the executive staff must be present, which must be translated into support of the program by all agency managers. This includes management support of employees to carry out established procedures as instructed and trained.
- One form of management commitment is providing appropriate, adequate training for employees and supervisors who must come in contact with potentially aggressive clients. Another form of commitment is the provision of written procedures that address aggressive behavior exposures.
- Combined, cooperative efforts of both management and employees are necessary to effectively prevent aggressive behavior incidents, accidents, and injuries.

## *II. Program Planning and Design*

- **Establish a Budget for the Program** - An aggressive behavior management program should be supported by allocating funds specifically for employee education and training, prevention and loss control efforts. Injury/claims experience data may be useful in developing budget information.
- **Develop a Long-Range Plan** - Facilities should be designed and constructed with specific consideration given to the population that will use them. Advance consideration should be given to layout and design of buildings, materials used in construction, type of furniture to be used, and the purchase of specialized equipment.
- **Develop a Contingency Plan** - Contingency plans are developed based on worst case possibilities. Employees should be trained and retrained regarding their role when clients begin to exhibit aggressive behavior.
- **Provide a Safe Physical Environment** - Provide an environment that is as safe as possible. This is especially important in wards, dormitories, snack bars, dining rooms, and athletic fields where many aggressive behavior injuries occur. Frequently inspect client areas to ensure that furniture is properly arranged, equipment and supplies are properly arranged and secured, floor surfaces are safe and tripping hazards are removed, and items that could be used as a weapon are not available to clients. Inspect equipment used by clients for proper maintenance. Dormitories, wards, hospitals, and other institutional environments should be painted neutral colors or pastels that have a calming effect on clients.
- **Assign Trained Personnel** - Well-trained direct care employees and/or security personnel should be assigned to new clients whose history is unknown, or where records indicate that the client may be capable of causing injury or damage.
- **Approach Aggressive Behavior in a Logical Order** - When a client shows signs or behavior

of becoming aggressive, employees should follow procedures in a logical order.

- Follow a client's progress;
  - Use verbal intervention;
  - Get assistance, when possible; and
  - Use restraining techniques only as a last resort.
- **Shape and Control the Environment** - The most "appropriate" environment should be provided for clients, taking into consideration their total status, including the potential for aggression.
  - **Establish an Appropriate Staff-to-Client Ratio** - A realistic staff-to-client ratio should be established and maintained. The required staff should always be on duty and not located elsewhere within the facility or at home on call. Untrained people should not be used as on-call staff.
  - **Flexible Scheduling** - Schedules should be flexible enough to allow for unpredictable situations and unforeseen delays. Such flexible scheduling will avoid compounding stressful situations by strict adherence to rigid timetables.

### ***III. Program Administration***

- **Maintain Accurate, Complete Client Records** - Keep client records up to date and include, where appropriate, detailed information concerning actual/potential aggressive behavior. A file or information system is helpful in this regard.
- **Promptly Review Aggressive Behavior Incidents and Take Prompt Remedial Action** - Situations involving acts of aggression and injuries involving aggression must be immediately reviewed. Reviews should address all conditions relating to the occurrence, including personnel, procedures, training, and the immediate situation surrounding the incident.

An "Accident/Incident Review" form is beneficial in tracking such accidents and incidents. The form should be routed through the division or department manager for immediate action, then to the agency safety officer for monitoring and control. If a safety committee or a special ad hoc aggressive behavior committee exists, the form should be provided to the committee for further action. Supervisors and managers should attend committee meetings to provide more detailed information about the incident. Appropriate follow-up action should be taken to prevent recurrence.

Further information on accident/incident reporting, review, and analysis is contained in Chapter 5 of this section of the *Risk Management for Texas State Agencies* guidelines.



- **Conduct New Hire Reference Checks** - All job applicants should have their references checked before hiring. If the agency is allowed by law to conduct background checks, such checks should also be conducted before a job applicant is hired.
- **Establish Accountability** - Hold all employees accountable for their actions and commend them for positive performance. This is best accomplished through a performance evaluation program.
- **Identify and Monitor Aggressive Behavior Repeat Offenders** - Establish a procedure to identify and monitor clients and employees who are repeatedly involved in aggressive behavior accidents/incidents, and take positive action as appropriate. The same employees are often injured from the same causes, in the same locations, from the same type accidents, and on a recurring basis. This information should be used to assist in the review and evaluation of procedures, environments, and employee job performance.
- **Monitor Locations with High Incident Rates** - Review records to identify units, teams, departments, divisions that consistently experience high aggressive behavior accident/incident frequency rates, and take action as appropriate to help them. Supervisors and managers should be held accountable for excessive accidents/incidents that occur in their areas.
- **Monitor Employee Turnover Rates** - As employee turnover rates increase, the overall experience level of employees decreases, and the potential for injury increases. Not only is the new and inexperienced employee at risk, but also the experienced employee who must divide attention and work efforts between their particular tasks and training the new employee, which places both at a higher risk of injury. Managers and supervisors should be aware of this correlation, and adjust work schedules and other work-related activities to compensate for the new employee's inexperience.
- **Develop Information Flow Systems** - Establish information flow systems that facilitate communications to inform staff members of clients who have been transferred between units, employees receiving transferred clients, and the aggressive or potentially aggressive nature of the clients. Manual or computerized file systems, pre-transfer telephone calls, and client status boards are a few examples of information flow systems. Client transfers and staff reassignments to unfamiliar environments should be avoided if at all possible.

#### ***IV. Staff Training***

Aggressive behavior management training should be based on the actual need for training. The instructor should be thoroughly knowledgeable of aggressive behavior management techniques, and should be able to demonstrate mastery of the subject. Students should demonstrate competency in the subject matter after instruction and training. Remedial and refresher training should be provided as

necessary, particularly after an incident that has caused injury or that may have caused injury. Training instruction should include the following:

-Causes and consequences of aggressive behavior;

-Client behavior that has a tendency toward, or actually results in, aggression.

Employees who work directly with persons known to exhibit aggressive behavior should be knowledgeable of the behavior and reasons for the behavior that cause clients to behave aggressively;and

-Aggressive behavior management techniques that are useful in anticipating, preventing, and controlling aggressive behavior.

- **New Employee Orientation** - All new employees should receive a thorough orientation before they are exposed to potentially aggressive clients or situations. Aggressive behavior management techniques alone are not sufficient to orient new staff members to problems that are encountered in the work place. Orientation training should include "controlled" exposure to the actual work environment. This provides the trainer with opportunities to observe the employee in a simulated or controlled work situation. Such controlled training gives the employee an increased level of awareness of aggressive behavior management.
- **Promote Awareness of Environment** - Stress employee awareness of environments and situations where the potential for aggressive behavior exists. For certain populations, even calm situations present the possibility for immediate aggressive behavior.
- **Establish Teams** - Specially trained and equipped teams should be established to handle or control aggressive clients and situations where aggressive behavior may occur.
- **Stress Management for Employees** - Train employees in stress management techniques. Institutional environments associated with aggressive clients are especially stressful to staff members. Stress can directly affect the way employees deal with clients and perform their duties. Stress, fear, anxiety, and/or apprehension regarding aggressive clients and/or aggressive behavior management procedures can lead to indecision rather than action during aggressive confrontations. Programs providing information for managing and reducing the effects of stress are essential in these situations. Following situations of verbal or physical aggression and/or physical restraint, allow staff members a period in which to regroup and relax. Stress management techniques and activities should be taught to the staff and practiced by the staff.
- **Aggressive Behavior Management Techniques** - Employees who must come in contact with persons who potentially may exhibit aggressive behavior, or who are known to exhibit aggressive behavior, should receive specific training regarding acceptable techniques that may be used to manage or control aggressive behavior. Such techniques typically begin with verbal intervention and progress to restraint of the client as the final course of action.

One example of such a program is known as "Preventive Management of Aggressive Behavior" or PMAB. This program was developed by the Texas Department of Mental Health/ Mental Retardation specifically for use by their employees in dealing with clients of that agency. PMAB is further described at the end of this chapter. Other examples are: Cornell Therapeutic Crisis Intervention Method, Handle With Care Behavioral Management System, and Verbal Judo. In addition, the National Crisis Prevention Institute provides seminars, customized training programs, and videos for dealing with aggressive behavior.

## ***V. Routine Operations***

The following activities are some suggested loss control techniques that may be considered for use by state agencies to manage aggressive behavior and injury problems. A certain amount of creativity may be required to achieve the most effective combination of loss prevention and loss control measures. Although the following program elements were developed primarily by a direct care agency, the suggested activities may also be adapted to more general situations in agencies that do not routinely deal with aggressive clients. These suggestions are intended to stimulate the problem-solving process and are not intended to be all-inclusive.

- **Develop Standard Operating Procedures** - Establish Standard Operating Procedures for all routine operations/activities where aggressive behavior injuries occur or have the potential for occurring. While no procedure can cover all of the potential situations and client actions/reactions, standard operating procedures are an essential control method. The procedures should specifically and clearly identify appropriate actions employees should follow to prevent or control aggressive behavior situations.
- **Evaluate All New Clients and New Situations** - Evaluate new clients immediately and handle them according to their specific needs, even if it is on a temporary basis. Anticipate possibilities for aggressive behavior confrontations between employees and clients and take preventive steps to eliminate the possibility of aggression.
- **Develop Policies or Procedures that Target Specific Problem Areas** - Some examples are the following:
  - *Smoking/Cigarette Butts* - Establish a "No Smoking" or "Controlled Smoking" policy. Provide suitable ashtrays from which cigarette butts cannot be retrieved by clients. Certain clients of some agencies might exhibit behavior termed as "pica" - having an abnormal desire to eat substances not normally consumed.
  - *Personal Hygiene* - Establish personal hygiene requirements within the boundaries of the client's personal rights and based on client history.
  - *Shift Overlaps* - A fifteen minute overlap between employee work shifts may be helpful to brief incoming shift workers on the status of certain clients.

- **Review All Allegations of Aggressive Behavior** - Promptly review and evaluate the circumstances surrounding the incident and resolve the situation quickly. It is important to support the employee if he or she has complied with established procedures.
- **Limit Congregating Groups of People** - Activities should be planned to limit congregation of large numbers of clients in one small area. Crowded conditions often contribute to aggressive behavior. Groups of people who are upset or unhappy should not be encouraged or provided with a place to congregate.
- **Avoid Unnecessary Exposure of Employees to Aggression** - Emphasize to employees that they are not to unnecessarily expose themselves to the possibility of client inflicted injury. A safe distance should be kept between the employee and the client unless there is a need for closer proximity.
- **Transfers of Clients** - A written procedure should be established to address transfers of clients who become too aggressive for a specific facility or unit. The procedure should address specific conditions or situations in which transfers to a different or more secure facility may be allowed.
- **Develop a Mentor System** - Establish a system that places the new employee under the supervision of an experienced person who serves as the new employee's mentor or coach.
- **Proper Staff/Client Interpersonal Relations** - Interpersonal relations and communications with the client should be conducted in such a manner so as not to produce unfulfilled expectations on the part of the client. Such unfulfilled expectations could result in aggressive behavior.
- **Use Signaling Devices** - Employees who work directly with aggressive clients should be provided with an emergency signaling device. An example is a two-way radio.
- **Match Individual Physical Capabilities to the Individual Performing the Job** - Staff persons should always be physically and mentally capable and qualified to do their jobs.
- **Avoid Working Alone** - Employees should not be required to perform a job alone if the task normally requires two or more people. This especially applies in situations where aggressive behavior is possible.
- **Provide Counseling** - Aggressive clients should be informed of the consequences of their aggressive actions.
- **Control Exposure to Hazardous Substances, Objects, and Medication** - All potentially

dangerous substances, objects, and medications should be controlled by staff. Clients should not be allowed access to any of these materials.

- **Wear Appropriate Clothing** - Employees should wear appropriate work clothing such as long sleeve shirts, blouses, and low heel shoes when working with aggressive clients. Certain clothing and jewelry items worn by staff members may expose them to unnecessary risk.
- **Provide Personal Protective Equipment** - If possible, issue to the staff the appropriate personal protective equipment designed to protect the employee in aggressive behavior situations.
- **Establish a Committee to Address Aggressive Behavior** - Committee composition should consist of persons who are qualified and proficient to provide knowledgeable input. The committee should provide planning, organization, coordination, and direction to the aggressive behavior management program. The committee should continually review training programs for applicability, appropriateness, and effectiveness.
- **Preventive Management of Aggressive Behavior (PMAB) Training and Evaluation** - PMAB is a program specifically developed by the Texas Department of Mental Health/Mental Retardation to manage aggressive behavior situations. These methods were developed to provide the least amount of harm to the client(s) and the employee involved in administering PMAB techniques.

The program involves extensive training regarding recognition of specific aggressive behaviors, and corresponding application of specific aggressive behavior control methods. Initial training and re-training in methods and techniques for the control and/or redirection of aggressive behavior are offered. Training should be continual and should take place as close as possible to the actual environment in which violent and aggressive activity is expected to take place. Instructors are certified at least annually, and more often if injury experience dictates such a training need. Assignment of PMAB instructors to specific facilities and units has been successful to reduce aggression-associated injuries.

PMAB is only one example of an aggressive behavior management program. Other types of programs are available which offer effective management of aggressive behavior in certain specific environments.

## ***ADDITIONAL RESOURCES FOR TEXAS STATE AGENCIES***

### ***Organizations***

*Handle With Care Behavioral Management System*

(845)855-4031

*National Crisis Prevention Institute, Inc.*

3315-K North 124th Street

Brookfield, WI 53005

1(800)558-8976

The National Crisis Prevention Institute provides customized training programs, seminars, materials, and videos appropriate for dealing with aggressive behavior of coworkers, employees, and customers.

*Texas Department of Mental Health and Mental Retardation*

Training Unit

P.O. Box 12668

Austin, TX 78711

(512)206-4540

*Texas Department of Public Safety*

Training Department

5805 North Lamar

Austin, TX 78773-0001

(512)424-4000

*Texas Youth Commission*

Training Division

4900 North Lamar

Austin, TX 78751

(512)424-6000

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### ***CHECKLIST FOR TEXAS STATE AGENCIES***

- |  |     |    |
|--|-----|----|
| 1. Does the agency have a program for addressing aggressive behavior in the workplace?                                   | Yes | No |
| 2. Are written procedures developed and implemented to guide employees to manage aggression?                             | Yes | No |
| 3. Does the agency provide aggressive behavior management training for employees?  | Yes | No |
| 4. Does the agency keep records to track and monitor the occurrence of aggressive behavior within the client population? | Yes | No |

5. Is appropriate personal protective equipment available to employees in the event of client aggression? Yes No

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***ENDNOTES***

1. Texas Mental Health and Mental Retardation, *Training Prevention and Management Manual*. Austin, Texas.

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## Section Two - Employee Safety and Health Program

### Chapter 6

#### Occupational Safety Program

#### Subchapter 6.2

#### Boiler and Pressure Vessel Safety

Revised: December 2004

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### Volume III:

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This chapter of Risk Management for Texas State Agencies supplies general information regarding state agency employee safety and health exposures, and techniques and methods to manage and control those exposures. It also identifies additional resources that may be available to assist state agencies in developing or enhancing its employee safety and health program. This chapter is not intended in any way to be a substitute for the advice and guidance of legal counsel, who should always be consulted regarding rights, duties, and responsibilities under the law.

Boilers and unfired pressure vessels hold gases, vapors, liquids, and solids at various temperatures and pressures. The process of controlled combustion generates steam to power machinery or provides heat required by industrial processes. The combustion process in a boiler results from a continual introduction of fuel and air in a flammable mixture.<sup>1</sup> As a result, boilers have many potential hazards in common that must be controlled by safety devices and safe work practices.

Boiler risks which include boilers, both steam and hot water, and pressure vessels, fired and unfired are often overlooked. These risks are technical and require some engineering knowledge. Losses are usually infrequent; however, losses that do occur can be very high in terms of severity. Therefore, state agency facilities should be reviewed for appropriate loss control measures of both fired pressure vessels (e.g., water heaters, autoclaves, sterilizers, and vulcanizers) and unfired pressure vessels (e.g., air tanks and LP gas tanks).

#### *General Definition of Terms*

- Generally defined, a *boiler* is a *closed fired pressure vessel* in which water is heated by combustion of fuel or heat from other sources creating pressurized steam and hot water.<sup>2</sup>
- *Unfired pressure vessels* generally include compressed air tanks, steam-jacketed kettles, digesters, vulcanizers, and other vessels that can withstand internal pressure or vacuum but do not have the direct fire of burning fuel or electric heaters impinging against the vessels' walls. If heat is generated in the vessel, it is by chemical action within the vessel or by application of



electric heat, steam, not oil, or other heating medium to the contents of the vessel.<sup>2</sup>

The Texas Legislature has recognized the perilous nature of boilers by enacting the "Texas Boiler Law," Article 5221c, Vernon's Texas Civil Statutes. The law requires registration, regular inspections and reports, certification of operations, regulation of unsafe boilers, and specific definitions of the boiler types that are regulated. This legislation is codified as Chapter 755 of the Health and Safety Code, and establishes the Texas Department of Licensing and Regulation (TDLR) as the regulatory authority.

Each boiler, as defined by the Act, must be registered with TDLR and must be inspected at regular intervals by TDLR approved inspectors. An approved Certificate of Operation "must be posted under glass in a conspicuous place on or near the boiler for which it is issued" (§755.029). Refer to *Risk Management for Texas State Agencies*, Volume II - "Property Conservation" for additional information regarding boiler legislation, its requirements, and TDLR boiler rules and regulations.

## **GUIDELINES FOR ACCIDENT PREVENTION**

- Inspect pressure vessels regularly. Boilers should be regularly inspected by a TDLR approved inspector.
- Procedures and instructions for routine and emergency operation of equipment should be developed and followed.
- An appropriate cleaning and maintenance schedule based upon manufacturer's specifications should be established and followed.
- A complete log of the vessel's maintenance and experience history should be kept.
- Valves and other controls should be located in an easily accessible area.
- High-pressure gauges should be shielded from potential damage.
- Pressure vessels should always be installed and maintained in accordance with manufacturers' instructions.
- Operating personnel should be trained in the correct operation of equipment and should also make routine equipment safety checks.
- Qualified maintenance personnel should be contacted for malfunctions or repair problems.
- Pressure vessel room floors, lights, exits, stairs, and runways should be maintained in good

condition.

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***ADDITIONAL RESOURCES FOR TEXAS STATE AGENCIES***

***Publications***

"Boiler Rules" published by the:  
Texas Department of Licensing and Regulation  
P.O. Box 12157  
Austin, TX, 78711  
Telephone: (800) 722-7483

Factory Mutual Insurance Corporation; "Boiler and Machinery Basics"; *Loss Prevention Data 6-0*;  
Factory Mutual Research Corporation; Norwood, MA.

*Health and Safety Code, Vernon's Texas Codes Annotated; Chapter 755 - "Boilers."*

References to the following National Fire Protection Association codes and standards will provide further information on the safeguards for boiler-furnaces discussed in this chapter.

**NFPA 30** - Flammable and Combustible Liquids Codes.

**NFPA 68** - Explosion Venting.

**NFPA 8501** - Standard for Single Boiler Operation.

**NFPA 8502** - Standard for the Prevention of Furnace Explosions/Implosions in Multiple Burner Boilers.

**NFPA 8503** - Standard for Pulverized Fuel Systems.

*Pressure Vessels - 29 CFR 1910.106(b)(1)(v), Occupational Safety and Health Administration.*

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***CHECKLIST FOR TEXAS STATE AGENCIES***

1. Does the agency have any heating boilers, nuclear boilers, power boilers, or unfired steam boilers as defined by §755.001 of the Health and Safety Code?      Yes No

2. If yes, are boilers regularly inspected by the Texas Department of Licensing and Regulation?      Yes No

- |   |        |
|---|--------|
| 3. Are certificates of operations posted under glass in a conspicuous place on or near the boiler?                    | Yes No |
| 4. Are copies of certificates of operations kept on file by the risk manager to monitor boiler inspection compliance? | Yes No |
| 5. Does the agency have a boiler inspection program as part of its routine maintenance?                               | Yes No |
- 

### ***ENDNOTES***

1. *Fire Protection Handbook*; National Fire Protection Association; Quincy, MA 02269; 1991; pp. 2-89 through 2-100.
  2. Laing, Patricia, M., Editor; *Accident Prevention Manual for Business and Industry - Engineering & Technology*; 10th Edition; National Safety Council; 1992.
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## Section Two - Employee Safety and Health Program

### Chapter 6

#### Occupational Safety Program

##### Subchapter 6.3

#### Construction Safety

Revised: December 2004

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### Volume III:

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This chapter of Risk Management for Texas State Agencies supplies general information regarding state agency employee safety and health exposures, and techniques and methods to manage and control those exposures. It also identifies additional resources that may be available to assist state agencies in developing or enhancing its employee safety and health program. This chapter is not intended in any way to be a substitute for the advice and guidance of legal counsel, who should always be consulted regarding rights, duties, and responsibilities under the law.

In 1989, OSHA issued recommended guidelines for construction standards, codified at 29 CFR 1926. The complete original text of the construction guidelines is found in the *Federal Register* (54 FR (18):3094-3916, January 26, 1989).

#### *Pre-Construction Planning*

Early in the planning phase of the construction project, agency management should confirm that the contractor is in compliance with all local, state, and federal laws and regulations that pertain to the construction work being performed.<sup>1</sup> As part of the contract bid specifications for construction projects, the agency should include provisions that the company performing the contract provide appropriate liability insurance coverage, such as an owner's protective insurance policy, and workers' compensation insurance coverage for the contractor's employees. The contract bid specifications should also include appropriate provisions that the contractor must follow certain health, safety, and equipment requirements. The right of the agency to inspect work performed should also be provided in the contract.

The Texas Building and Procurement Commission provides resources and oversight for state agencies that initiate construction contracts and must be contacted and consulted whenever construction contract bids are being developed.

A preconstruction conference should be held prior to the start of construction to discuss safety issues. Discussions should include a comprehensive overview of the construction project to provide

familiarity with the overall nature of the hazards that are expected to be encountered. The contractor's representatives should be introduced to the agency's Employee Safety and Health Program and the extent of on-site first aid facilities available. Notice should be made of any special safety equipment required because of hazards in the agency's operations and emergency procedures that may apply.<sup>2</sup>

## **GUIDELINES FOR ACCIDENT PREVENTION**

### ***Protection of Employees and Equipment***

Supervisors should take appropriate measures to protect employees and the public from any harm or danger that may occur as a direct or indirect result of construction being performed. General safety considerations include the following:

- Isolate the work from normal operations by setting up barricades, fences, guardrails, or other appropriate barriers.
- Inform agency employees in written form of any potential hazards to avoid. Post appropriate warning signs in conspicuous locations.
- Advise employees about specific hazards, such as open excavation pits, temporary wiring and overhead electric lines, the potential for falling objects, and welding operations.
- Restrict unauthorized persons from entering construction areas without appropriate personal protective equipment and an escort.<sup>3,4</sup>

Additional information on safety-related work practices applying to construction may be referenced at the following:

- 29 CFR 1910.333(b)(2) - Lockout and tagging.
- 29 CFR 1910.334 - Use of portable electrical equipment, electric power and lighting circuits, use of flammable or ignitable materials.
- 29 CFR 1910.335 - Safeguards for personal protection.

### ***Management/Contractor Participation***

Participation and cooperation between state agency management and the construction contractor is critical to eliminating injuries or death that may occur during construction. Agency management, with the assistance of agency safety professionals, should communicate with the contractor to identify ways to prevent accidents. The relationship between the contractor and agency representatives is important during introduction of new equipment on the premises to insure that all of the appropriate

safety measures are taken. Safe and effective flow of construction equipment, provision of proper personal protective equipment, and administrative controls are necessary to maintain the safety of agency staff and the public in and around the construction project.1,2,5

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### ***CHECKLIST FOR TEXAS STATE AGENCIES***

- |  |        |
|--|--------|
| 1. Are Texas Building and Procurement Commission contract bidding procedures followed on construction projects?                    | Yes No |
| 2. Are safety and health requirements included within the contract bid specifications?   | Yes No |
| 3. Does the contract require owner's protective insurance coverage, if appropriate?  | Yes No |
| 4. Is the contractor required in the contract to provide workers' compensation insurance coverage for employees of the contractor? | Yes No |
| 5. Are safety and health professionals consulted during the planning phase of the construction project?                            | Yes No |
| 6. Is a preconstruction conference conducted that includes supervisors and safety and health professionals?                        | Yes No |
| 7. Are employees notified verbally and in writing of construction hazards throughout the construction project?                     | Yes No |
| 8. Are employees notified verbally and in writing of construction hazards throughout the construction project?                     | Yes No |

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### ***ENDNOTES***

1. Whitely, Tracy; "Dangerous Digging;" Public Risk; November/December 1993.
2. "Safeguards During Construction, Alteration and Demolition;" *Loss Prevention Data*; Factory Mutual Engineering Corp.; April 1992; p. 1-0.
3. 29 CFR 1926.416, "Safety-Related Work Practices Applying to Construction;" Occupational Safety and Health Administration.
4. Sharry, John; "Fire Hazards of Construction, Alterations, and Building Demolitions;" *Fire Protection Handbook*; National Fire Protection Association; Quincy, MA; 1991; pp. 6-156 through 6-160.
5. *Best's Safety Directory*; Volume I; A.M. Best Company; 1991; pp. 121-122.

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## Section Two - Employee Safety and Health Program

### Chapter 6

#### Occupational Safety Program

##### Subchapter 6.4

##### Electrical Safety

Revised: December 2004

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### Volume III:

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This chapter of Risk Management for Texas State Agencies supplies general information regarding state agency employee safety and health exposures, and techniques and methods to manage and control those exposures. It also identifies additional resources that may be available to assist state agencies in developing or enhancing its employee safety and health program. This chapter is not intended in any way to be a substitute for the advice and guidance of legal counsel, who should always be consulted regarding rights, duties, and responsibilities under the law.

If electrical systems are properly designed, installed, and maintained, they are both convenient and safe; otherwise, they may be a source of fire and personal injury. Failure to establish and consistently use safety practices often results in serious injuries, property damage, or death. Inadvertent contact with even low voltages encountered during installation, repair, servicing, testing, and routine maintenance of electrical equipment is a potentially hazardous situation. Safeguards, procedures, and safety training are an effective combination to prevent electrical accidents.

Severity of electrical shock is generally determined by the following three factors:

- The amount of current flowing through the victim,
- The length of time the body receives current, and
- The parts of the body involved.<sup>1</sup>

Although it is generally assumed that high voltages are necessary to result in serious injury or death, an electrical shock from a 110 voltage outlet over an extended period of time has the same effect. A low voltage 'normal' current is dangerous because muscular contraction often prevents the victim from breaking contact with the electrical circuit.<sup>2</sup> All state agencies have facilities with 110 voltage currents, and many agencies have personnel who perform routine maintenance on electrical equipment. For this reason, state agencies are urged to incorporate electrical safety training into their Employee Safety and Health Program.

According to OSHA, occupations with the highest electrical accident rates include electricians and apprentices; mechanics and repair persons; structural metal craftsmen and welders.<sup>3</sup> In a National Fire Protection Association (NFPA) study of structural property damage caused by fire, foreseeable or



avoidable human error accounted for the majority of fires involving the use of electrically powered equipment.<sup>4</sup> The following list provides examples of these types of errors:

- **Improper Installation of Equipment** - When workmanship provisions of the National Electrical Code are not followed, equipment may be installed in ways that lead to overloading, damage to equipment, or excessive heat exposure to nearby combustibles.
- **Lack of Equipment Maintenance** - Electrical insulation of equipment can deteriorate with age through regular use, even when installation of electrical equipment is done correctly. Deterioration is accelerated through improper installation, such as laying cords across heavy traffic areas.
- **Improper Use of Equipment** - Equipment that is not used in accordance with instructions and conditions of use can cause fires.
- **Carelessness and Oversight** - Momentary lapses of caution in the use of equipment can cause fires. Failure to turn off equipment that is not in use, dropping combustible materials into equipment, and draping combustibles over operating equipment, such as a cloth over a lamp, are all examples.<sup>4</sup>

### *Types of Electrical Injuries*

Types of injuries that may occur as a result of electric shock can be grouped into the following categories:

- **Internal injuries** involving severe burns, hemorrhages, and chest contractions causing asphyxiation.
- **Skin and eye injuries** caused by electrical flashes.
- **Injuries from falls** from one level to another as a result of shock.<sup>1</sup>

### *Training*

Timeliness of instruction is vital to educating employees about electrical safety. New employee orientation presents an excellent opportunity to provide employees with information to increase their general awareness of electrical safety and to reduce their risk of injury or harm from electrical power sources. Many employees have access to such common electrical office machinery as computers, typewriters, surge protectors, copy machines, and coffee makers and have a need to know about basic electrical safety. Other employees operate electrical equipment such as motor driven equipment in heating and air conditioning systems, shop tools, and machinery.

An agency's Employee Safety and Health Program should include specific equipment training for all

employees who work with electrical equipment or who routinely operate electrical systems. Employee training should include courses in CPR, rescue, and emergency procedures related to electrical safety. Cardiopulmonary Resuscitation (CPR) and proper rescue procedures for persons who have experienced electrical shock are vital to saving the victim's life. Agency supervisors should know about any existing and possible electrical hazards and take appropriate actions to alleviate these hazards.

OSHA provides training requirements for employees who are exposed to a higher-than-normal risk of injury from electrical shock [1910.332(b)] and lists those specific occupations that should receive training. OSHA also requires employers to train all other employees who are likely to face a "comparable risk of injury due to electric shock or other electrical hazards."<sup>3</sup>

## **GUIDELINES FOR ACCIDENT PREVENTION**

The following guidelines apply to electrical safety and should be used by all state agencies:

- Electrical control panels should be clearly identified and secured.
- Only certified electrical specialists should have access to control panels and make repairs on electrical equipment.
- Flexible extension cords should be fray-free and unspliced.
- Electrical equipment should have fail-safe devices such as interlocks, barriers, warning signs, and guarding to protect employees.
- Electrical equipment should be properly grounded and the grounding should be frequently checked.
- Ground-fault circuit interrupters (GFCI) should be used when workers are exposed to humid or wet conditions or when they may come into contact with the ground or grounded equipment.
- Electrical equipment should not be installed in locations where flammable gases, vapors, dusts, or other easily ignitable materials are present.
- Before performing maintenance work or inspections on electrical equipment, all components should be de-energized when possible and the systems locked and tagged to prevent accidental re-energizing.
- All electrical systems should be insulated and grounded prior to use.<sup>1</sup>

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## ***CHECKLIST FOR TEXAS STATE AGENCIES***

- |  |        |
|--|--------|
| 1. Do electrical safety procedures exist as part of the agency's safety program? | Yes No |
| 2. Are employees who routinely work with electrical equipment properly trained?  | Yes No |
| 3. Do employees understand the dangers of electrical shock?                      | Yes No |
| 4. Is electrical equipment properly grounded and insulated prior to use?         | Yes No |
| 5. Are electrical control panels clearly identified and secured?                 | Yes No |
| 6. Are ground-fault circuit interrupters available?                              | Yes No |
| 7. Are extension cords maintained in good condition?                             | Yes No |
| 8. Do employees have access to agency CPR training?                              | Yes No |
- 

## ***ADDITIONAL RESOURCES FOR TEXAS STATE AGENCIES***

### ***Publications***

29 CFR Section 1910, Subpart S - Electrical, *Occupational Safety and Health Administration*.

*The National Electrical Code Handbook (NFPA 70)* contains the entire text of the NEC, supplemented by comments, diagrams, and illustrations that are intended to clarify some of the intricate requirements of the NEC. It is published each year by the National Fire Protection Association.

### ***Organizations***

*American Society For Testing and Materials (ASTM)*  
100 Barr Harbor Drive  
West Conshohocken, PA 19428-2959

*The Institute of Electrical and Electronics Engineers (IEEE)*  
3 Park Avenue, 17th Floor  
New York, NY 10016-5997

*Underwriters Laboratories, Inc. (UL)*  
333 Pfingsten Road  
Northbrook, IL 60062

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### ***ENDNOTES***

1. Laing, Patricia, Editor; *Accident Prevention Manual for Business and Industry: Engineering and Technology*; 10th Edition; National Safety Council; 1992; pp. 455-485.
2. *Electrical Standards - Course 309A*; U.S. Department of Labor; Occupational Safety and Health Administration; Office of Training and Education; Des Plaines, IL; 1993.

3. *Best's Safety Directory -1991*; Volume II; A.M. Best Company; Oldwick, New Jersey 08858.

4. Cote, Arthur E., PE, Editor-in-Chief; *Fire Protection Handbook*; Seventeenth Edition; National Fire Protection Association; Quincy, MA; 1991; Chapter 2.

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## Section Two - Employee Safety and Health Program

### Chapter 6

#### Occupational Safety Program

##### Subchapter 6.5

#### Emergency Evacuation

Revised: December 2004

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### Volume III:

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This chapter of Risk Management for Texas State Agencies supplies general information regarding state agency employee safety and health exposures, and techniques and methods to manage and control those exposures. It also identifies additional resources that may be available to assist state agencies in developing or enhancing its employee safety and health program. This chapter is not intended in any way to be a substitute for the advice and guidance of legal counsel, who should always be consulted regarding rights, duties, and responsibilities under the law.

Every organization has exposures to emergencies or accidents that could have a potentially serious impact, including injuries or death to employees. Advanced planning for emergencies is critical to minimize this potential loss exposure. The most effective emergency evacuation plan is one that has been planned in advance

The primary objective of an emergency evacuation plan is the protection and preservation of human life. Evacuation of personnel is only one component of a more comprehensive plan, variably known as a contingency plan, disaster response plan, crisis management plan, and/or emergency plan. This comprehensive plan anticipates any foreseeable physical dangers from naturally-occurring or man-made threats. Such comprehensive contingency/disaster plans will be addressed in more detail in Volume II - "Property Exposures." The focus of an emergency evacuation plan is on the human aspects of protection and preservation of life, and reduction of injury or harm to occupants.

Emergency evacuation plans are comprised of a set of written procedures for dealing with emergency situations. Typical components of emergency plans include:

- Risk analysis of the agency's exposures to identify possible emergency scenarios;
- Assignment of responsibilities for carrying out the plan;
- A reliable alarm or warning system;
- Specific emergency action and procedures;
- Employee training and testing under simulated conditions;
- Communications network officials; and
- Post-emergency planning.<sup>1,2</sup>

## GUIDELINES FOR ACCIDENT PREVENTION

### *Emergency Evacuation Planning*

Before an emergency or crisis occurs, a risk analysis should be performed on the agency's exposures to emergency situations. Responsibility for directing an evacuation should be assigned to one person and/or a team to direct all emergency response activities. An emergency response team coordinates and plans for emergencies and practices the appropriate responses.

Assignment of responsibility is necessary to facilitate evacuation efforts and should be accomplished prior to any real life incident.

An effective emergency response team should concentrate on the following areas:

- **Identify Potential Hazards** - The team should predict potential emergencies and determine those functions and areas that are most susceptible to damage or loss.
- **Develop a Strategy to Cope with Each Hazard** - The strategy should address prevention of loss, response if loss occurs, and the amount of time needed for recovery.
- **Assign Responsibility for Each Strategic Element** - Assign responsibility for prevention measures and divide duties among response teams.
- **Practice the Planned Response to Emergencies** - Make sure that employees are trained properly and are aware of their responsibilities.
- **Train and Educate the Entire Staff Regarding the Plan** - Each employee must know what he or she is expected to do in real life emergency situations.
- **Annually Update the Plan** - New hazards may develop which need to be addressed, and as people within the agency change, responsibilities will need to be reassigned.<sup>3</sup>

Evacuation of buildings and the premises may not always be necessary, and in some cases leaving the shelter of buildings may increase the health or safety risks to personnel. Examples of such situations may be hazardous chemical spills or extremely dangerous weather conditions, such as tornadoes and flooding.

Exiting the premises may not always be appropriate for certain people, and providing access to shelter in previously designated, well-protected, adjoining parts of the structure may be more appropriate. These types of shelters are called "horizontal exits," because they are typically on the same floor as

the occupants. Employees designated to transport persons to these horizontal exit areas and persons who will be using these areas should receive appropriate training.

## **EMERGENCY EVACUATION PLAN**

An effective method to document an emergency evacuation plan is through a plan that addresses actions to be taken in the event of an emergency. Elements of this plan may include:

- A summary page of persons to contact in the event of an emergency, including names and phone numbers of internal agency personnel and external public protection services.
- Appropriate action to take in the event of an emergency. State agency emergencies may include but are not limited to: fires, bomb threats, explosions, severe weather, technological disasters, hostage situations, power failures, and health emergencies.
- Specific evacuation procedures for persons with disabilities.
- Duties and responsibilities of agency personnel and assignment of specific responsibilities for Emergency Management Team members, the agency safety officer, security personnel, and employees in general.

### ***Procedures for Safe Emergency Evacuations***

Appropriate emergency action may require the immediate, safe removal of personnel from the endangered area. To facilitate the safety of agency personnel during evacuations, certain steps should be taken. The following steps are presented in sequence as they should occur after an incident. The actual exiting and removal of personnel from the building should be an ongoing activity even while the other emergency activities are taking place.

- Notify the appropriate public authorities, such as fire professionals, emergency response teams, and police.
- Notify agency personnel through the use of a reliable alarm system. The alarm system should be designed so that employees recognize and respond appropriately to the alert.
- Apply first aid and interim emergency measures, such as fire extinguisher use and administration of medical assistance, as necessary.
- Shut down machinery and equipment and/or turn off power and utilities.
- Assist with safe evacuation of personnel, including removal of injured and noninjured persons

with disabilities.1

### ***Employee Education and Training***

Employee education, training, and regular practice drills are necessary to provide employees with information they must know prior to an incident. Employees should know the specific actions expected of them in case of an emergency. Written procedures are helpful and necessary. However, the important thing is to get people to consider what they would do to respond to an emergency before their response is required. Therefore, specific employee training sessions should be provided. Employee staff meetings are also a good place to discuss what is expected of people during an evacuation.

Commendations from senior management to employees for excellent response and orderly conduct during an agency emergency evacuation drill are another way to reinforce desired behavior. The commendation can also provide a review and outline of the procedures employees should follow during an evacuation drill as a way to remind employees of their responsibilities.

Placards posted on workplace bulletin boards are another effective way to increase employee awareness of their role during an emergency. A typical bulletin board notice containing evacuation instructions appropriate to a fire-related emergency appears below.

#### **IN CASE OF FIRE OR OTHER EMERGENCY:**

- **Keep Your Head** - Avoid panic or confusion.
- **Know Exit Locations** - Know the safest way out of the building no matter where you are. Do not take the elevators.
- **Know the Locations of the Nearest Fire Extinguishers** - Learn the proper way to operate fire extinguishers.
- **Know How to Report a Fire or Other Emergency** - Send in the alarm without delay.
- **Notify the Emergency Coordinator.**
- **Follow Exit Instructions** - Stay at your workplace until instructed to leave; complete all assigned emergency evacuation duties; be ready to leave the building according to plan.
- **Walk Quickly to the Assigned Exit** - Maintain order and quiet; take each alarm seriously.



## ***CHECKLIST FOR TEXAS STATE AGENCIES***

- |  |        |
|--|--------|
| 1. Does the agency or facility have an Emergency Evacuation Program? | Yes No |
| 2. Is the plan written and available in each work unit?              | Yes No |
| 3. Has an Emergency Response Coordinator been appointed?             | Yes No |
| 4. Has an Emergency Response Team been assembled?                    | Yes No |
| 5. Is the plan regularly practiced?                                  | Yes No |
| 6. Are provisions made for assisting persons with disabilities?      | Yes No |
- 

## ***ENDNOTES***

1. Warren, David, CPCU and Ros McIntosh, CPCU; *Practical Risk Management*; Emergency Planning: Topic D-4; Practical Risk Management, Inc.; Oakland, CA; 1988.
  2. Head, George, Editor; *Essentials of Risk Control*; Volume II; Insurance Institute of America; Malvern, PA; 1989.
  3. "How To Keep Emergencies From Becoming Disasters;" *Insurance and Risk Management for Business and Government*; February 24, 1993.
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## Section Two - Employee Safety and Health Program

### **Chapter 6**

#### Occupational Safety Program

#### Subchapter 6.6

#### Fire Safety

Revised: November 2003

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### **Volume III:**

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This chapter of Risk Management for Texas State Agencies supplies general information regarding state agency employee safety and health exposures, and techniques and methods to manage and control those exposures. It also identifies additional resources that may be available to assist state agencies in developing or enhancing its employee safety and health program. This chapter is not intended in any way to be a substitute for the advice and guidance of legal counsel, who should always be consulted regarding rights, duties, and responsibilities under the law.

#### **Description:**

Fire safety refers to all measures that are designed to prevent and/or minimize property damage and harm to persons that could result from a hostile fire. Extensive fire safety standards have been developed by life safety engineers and fire professionals, and have been codified in the Life Safety Code, published by the National Fire Protection Association (NFPA). A fire safety program is based upon compliance with building safety codes and local fire ordinances, which generally incorporate NFPA standards.

Fire hazard analysis considers factors that contribute to a structure and its occupants' susceptibility to loss by fire, and should include the following points:

- People - Age, mobility, density, activities engaged in, awareness of proper procedures, knowledge of environments, etc.
- Building Site - Location and age of buildings, availability of water, traffic, etc.
- Building Construction - Type of materials used in the framework, fuel sources, electrical systems, etc.
- Building Contents - Amount and type of materials, flammability rating, location within structure, etc.
- Management Factors - Policies, procedures, good housekeeping, etc.
- Fire Protection Systems - Type of detection, suppression, extinguishing systems.
- Fuel materials - Explosive and easily ignited materials include the following: Waste materials, common gases, flammable liquids, flammable vapors, and concentration of dust or fumes.

- Ignition sources - Electricity sparks from wiring, switches, connections, static, etc; Spontaneous combustion caused by the right combination of heat, fuel material(s), and oxygen; Heat generated by friction, or from other sources, like combustion engines, welding torches, shop heaters, coffee makers, etc; and Open flames such as candles, stoves, lanterns.

## **Key Elements:**

A fire safety program should include the following key elements:

- Fire Safety Procedures - Detailed safety rules and procedures regarding employee actions to prevent fires and control fire hazards.
- Fire Prevention Engineering Controls - Compliance with NFPA standards; automatic detection and suppression systems; separation of potential fuel materials from ignition sources, etc.
- Employee Training - Include employee fire safety training in the overall safety-training program.
- Coordination - Coordinate with the State Fire Marshal's Office, State Commission on Fire Protection, and/or local public fire and safety officials to ensure adequate participation in life safety training, programs, and fire inspections.
- Fire Emergency Response Planning - Develop a proactive, emergency response plan that includes emergency, evacuation procedures and fire drills.
- Fire Safety Inspections - Include fire safety inspections in the overall safety inspection program.

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## **Guideline Adopted by Reference**

Texas Administrative Code, Title 28 - Insurance, Part 1 - Texas Department of Insurance, Chapter 34 - State Fire Marshal, Subchapter A, C, E, F, G, H, I, J.

Standards for Flammable Liquids, State Fire Marshal Inspections, Fire Extinguishers, Fire Alarms, Fire Sprinklers, Fire Works, Security Bars, and Stovetop Fire Suppression Devices are contained in this chapter.

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## ***ADDITIONAL RESOURCES FOR TEXAS STATE AGENCIES***

### ***Publications***

*Fire Protection Handbook*, 17th Edition; Arthur E. Cote, P.E., Editor-in-Chief; Jim L. Linville, Managing Editor; 1991.

NFPA 101 *Life Safety Code*, 1988 Edition; *Life Safety Code Handbook*; Edited by James K. Lathorop;

4th Edition; NFPA.

*NFPA National Fire Codes 1990.*

*Fire Prevention - 29 CFR 1910.38(b), Occupational Safety and Health Administration.*

*Fire Brigades - 29 CFR 1910.156, Occupational Safety and Health Administration.*

*Portable Fire Extinguishers - 29 CFR 1910.157, Occupational Safety and Health Administration.*

*Fire Detection Systems - 29 CFR 1910.164, Occupational Safety and Health Administration.*

### ***Organizations***

#### *National Fire Protection Association*

1 Batterymarch Park  
P.O. Box 9101  
Quincy, MA 02269-9904

#### *General Services Commission Fire Safety Office*

300 W. 15th Street  
Suite 170  
Austin, TX 78701  
(512)463-7163

#### *Texas Commission on Fire Protection*

P. O. Box 2286  
Austin, TX 78768-2286  
PHONE:(512)239-4911  
FAX: (512) 239-4917

#### [Texas Department of Insurance](#)

State Fire Marshal's Office  
State Fire Marshal's Office  
333 Guadalupe - Austin, Texas 78701  
P.O. Box 149221 - 78714-9221  
Telephone: (512) 305-7900, 1-800-578-4677

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### ***CHECKLIST FOR TEXAS STATE AGENCIES***

1. Does the agency have a formal, documented, fire safety program?    Yes No

- |   |        |
|---|--------|
| 2. Is fire safety training incorporated into the overall employee safety training program?                        | Yes No |
| 3. Are fire safety inspections conducted on a regular basis?  | Yes No |
| 4. Does the agency coordinate and participate with local public safety organizations in fire prevention programs? | Yes No |
| 5. Does a formal evacuation plan exist for every facility?  | Yes No |
| 6. Are fire evacuation drills conducted on a regular basis and the results documented?                            | Yes No |
- 

## ***ENDNOTES***

1. *Life Safety Code Handbook*; National Fire Protection Association; 1991.
  2. Laing, Patricia, Editor; *Accident Prevention Manual For Business and Industry. Engineering and Technology*, 10th Edition; National Safety Council; 1992.
  3. Cozad, Duke CSP, CSSP, CHC; "A Burning Issue;" *Public Risk*; May/June 1993; pp. 27-30.
  4. *Fire and Safety Inspections*; General Services Commission Rules, Executive Administration Division, Section 111.15: Revised; August 1992.
  5. Cote, Arthur E., P.E., Editor; *Fire Protection Handbook*, Seventeenth Edition; National Fire Protection Association; Quincy, MA; 1991.
  6. Department of Labor, Occupational Safety and Health Act, 29 CFR 1910.157.
  7. *Conducting Fire Inspections: A Guidebook For Field Use*, 2nd Edition; National Fire Protection Association; Battery March Park; Quincy, MA 02269. First Printing, January 1989.
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## Section Two - Employee Safety and Health Program

### Chapter 6

#### Occupational Safety Program

##### Subchapter 6.7

#### Hand and Portable Powered Tools

Revised: December 2004

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### Volume III:

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This chapter of Risk Management for Texas State Agencies supplies general information regarding state agency employee safety and health exposures, and techniques and methods to manage and control those exposures. It also identifies additional resources that may be available to assist state agencies in developing or enhancing its employee safety and health program. This chapter is not intended in any way to be a substitute for the advice and guidance of legal counsel, who should always be consulted regarding rights, duties, and responsibilities under the law.

Hand and portable tools are such a common and integral component of people's daily activities that hazards may frequently be overlooked. Although tools generally are manufactured with safety considerations incorporated in the design, accidents may still occur because steps taken to eliminate tool-related hazards are not implemented. Disabilities resulting from misuse of tools or use of damaged tools include the loss of eyes and vision; puncture wounds from flying chips; severed fingers, tendons, and arteries; broken bones; contusions; infections from puncture wounds; ergonomic stress and other injuries. Employees should be instructed to recognize the hazards associated with using certain types of tools and the necessary safety precautions and loss prevention measures to avoid injury.

### GUIDELINES FOR ACCIDENT PREVENTION

#### *General Safety Precautions*

The following general safety precautions should be observed by all hand and power tool users:

- **Use Appropriate Protective Equipment** - Eye and face protection prevents injuries from flying objects or liquids. Hand and arm protection prevents injuries from flying or sharp objects. Respiratory protective equipment can provide protection from particulates and fumes, and should be used in conjunction with a respiratory protection program. Power tools may create noise levels above regulatory standards and employees should be provided with hearing protection devices.

- **Select the Proper Tool for the Task** - Examples of unsafe practices include: using pliers instead of a wrench and using a screwdriver to pry.
- **Maintain Tools in Good Operating Condition** - Unsafe tools include wrenches with cracked or worn jaws; screwdrivers with broken tips; dull saws; hammers with broken or chipped handles; extension cords with broken plugs; split insulation.
- **Train Workers to Use Tools Correctly** - Some common causes of accidents are knives pulled toward the body; screwdrivers applied to handheld objects; using tools on objects that are not secured; failure to ground electrical equipment.
- **Store Tools Properly** - Many accidents are caused by tools falling from overhead. Another source of accidents is leaving the cutting edge of tools exposed when transporting them.<sup>1</sup>

A safety program that is designed to control tool accidents should include the following activities:

- **Training** - Employees should be trained to select the correct tool for each job, and supervisors should see that the proper tools are available and are used correctly. Employee training in the proper selection, use, and care of tools, combined with adequate supervision of their use, reduces the probability that accidents or injuries will occur in the workplace.
- **Inspection** - Regular tool inspection procedures should be established and good repair facilities provided to ensure that tools are kept in safe condition.
- **Procedures** - A procedure should be established to control the organization's tools such as a check-in and check-out system. Only properly conditioned tools should leave the tool storage area, and only properly conditioned tools should be returned.
- **Storage** - Proper storage areas should be provided in the work area and the tool storage area.<sup>2,3</sup>

### ***Hand Tools***

Hand tools do not require a power source and include anything from axes to wrenches. The greatest hazards posed by hand tools result from employee misuse and improper maintenance. Although the agency is responsible for providing tools that are in good and safe working condition, employees are responsible for using them safely and maintaining them in good condition.

Supervisors should instruct employees and demonstrate safe handling techniques prior to permitting use of the tools. Supervisors should also caution employees that saw blades, knives, and other tools

should be directed away from aisle areas and other employees working in close proximity. Dull tools can be more hazardous than sharp ones; therefore, sharpening of these tools is an important safety measure.<sup>2</sup>

Appropriate personal protective equipment such as safety goggles, gloves, and hearing protection should be worn due to hazards that may be encountered while using hand tools. Floors should also be kept clean and dry to prevent accidental slips and falls.

When hand tools are used around flammable substances, sparks produced by iron or steel hand tools pose a dangerous ignition source. In cases where this hazard exists, hand tools should be provided that are constructed from materials such as brass, plastic, aluminum, or wood.<sup>2</sup>

### ***Portable Power Tools***

Portable power tools include saws, drills, belt sanding machines, and other hand-held powered equipment. Power tools are classified based on their power source: electric, pneumatic, liquid fuel, power hydraulic, and power-actuated. Employees should be trained in the use of tools and should understand the potential hazards and the necessary safety precautions to prevent accidents.<sup>4</sup>

Electrical tools carry a high potential risk of electrical shock. Typical injuries include burns and shocks that may lead to other injuries. For example, a shock can also cause a worker to fall off a ladder or other elevated work surface. Under certain conditions, even a slight amount of electrical current may result in fibrillation of the heart which could result in death. The risk of electrical shock from electric powered tools can be reduced by using properly grounded equipment, approved wiring, and battery operated equipment.<sup>4</sup>

Pneumatic tools are powered by compressed air and include chippers, drills, hammers, and sanders. Injuries often occur when the hose becomes disconnected and whips around, striking employees within range. Injuries also occur as a result of flying chips. Certain pneumatic tools such as jackhammers cause fatigue and strains. The National Safety Council publication, *Occupational Vibration: Preventing Injuries and Illness*, discusses vibration-related injuries.<sup>5</sup>

Pneumatic impact tools require two safety devices. The first device is an automatically closing valve that is actuated by a trigger located within the handle. The machine can only operate when the trigger is depressed. The second device is a restraining device that holds the tool in place so that it cannot be accidentally fired.<sup>1,3</sup>

Liquid fuel powered tools are usually powered by gasoline. The most serious hazard that comes from using them is fuel vapors that can explode, burn, and give off dangerous exhaust fumes. Approved containers must be used when handling, transporting, and storing gas or fuel. Prior to refueling, the machine should be turned off and allowed to cool to prevent accidental ignition of hazardous vapors. Effective ventilation and/or personal protective equipment is necessary to prevent accidents and



injuries.1,4

Power-actuated tools require special safety precautions and must be operated only by specially trained employees. Hydraulic power tools must operate on an approved fire-resistant fluid and manufacturer's recommended safe operating pressure for hoses, valves, pipes, filters, and other fittings must not be exceeded.1,3

In general, the following practices should be followed when using any power tools:

- All tools should be operated within their design specifications.
- Proper personal protective equipment is recommended during use of any power tools that may pose a hazard.
- Tools should be stored in a dry, safe place when not in use.
- Electric tools must not be used in wet locations. Ground-fault circuit interrupters should be used in damp areas.
- Work areas should be well lighted.
- When using pneumatic or hydraulic tools, employees must check to ensure that air hoses are fastened securely. A positive locking device attaching the hose to the tool will serve as an added safeguard.
- Tools should never be pointed at anyone and screens should be erected between employees if danger is present.1,3

### ***Maintenance, Repair, Inspection, and Control of Tools***

Periodic inspection of all tool operations can be incorporated in a tool maintenance and repair program. Inspections and a tool control system identify operating defects and prevent potentially costly breakdowns. Inspections and regular maintenance also serve to prevent hazardous conditions from developing. An in-house inspection schedule and recordkeeping system for tool maintenance should be developed, and defective tools tagged and withdrawn from service until repaired.6

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## ***ADDITIONAL RESOURCES FOR TEXAS STATE AGENCIES***

### ***Publications***

*Hand and Portable Powered Tools and Other Hand-Held Equipment - 29 CFR 1910, Subpart P, Occupational Safety and Health Administration.*

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**CHECKLIST FOR TEXAS STATE AGENCIES**

- |  |        |
|--|--------|
| 1. Does the agency have a routine inspection, maintenance, and repair program for tools?                                 | Yes No |
| 2. Are employees required to use personal protective equipment when using hand or power tools?                           | Yes No |
| 3. Are employees trained appropriately for the tools they use?   | Yes No |
| 4. Are employees supervised in the use of equipment they are not familiar with until they have demonstrated proficiency? | Yes No |
| 5. Are employees required to check tools in/out through a central control system?  | Yes No |
| 6. Are electrical tools properly grounded when used?   | Yes No |
| 7. Do hydraulic tools have proper restraining devices?   | Yes No |
- 

**ENDNOTES**

1. Respiratory Protection Program; 29 CFR, 1910. 134; Occupational Safety and Health Administration.
  2. Laing, Patricia M., Editor; *Accident Prevention Manual for Business & Industry, Engineering and Technology*; National Safety Council; 1991.
  3. "Hand and Portable Powered Tools and Other Hand-Held Equipment;" 29 CFR 1910, Subpart P.
  4. *Hand and Power Tools*; U.S. Department of Labor; Occupational Safety and Health Administration; Washington, D.C.; 1988.
  5. "Vibration, Preventing Injuries and Illnesses;" National Safety Council.
  6. *Best's Loss Control Engineering Manual*; A.M. Best Company; 1988.
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## Section Two - Employee Safety and Health Program

### Chapter 6

#### Occupational Safety Program

##### Subchapter 6.8

##### Housekeeping

Revised: November 2003

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## Volume III:

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### Introduction

This chapter of Risk Management for Texas State Agencies supplies general information regarding state agency employee safety and health exposures, and techniques and methods to manage and control those exposures. It also identifies additional resources that may be available to assist state agencies in developing or enhancing its employiye safety and health program. This chapter is not intended in any way to be a substitute for the advice and guidance of legal counsel, who should always be consulted regarding rights, duties, and responsibilities under the law.

### Description

It can be said that safety and housekeeping go hand in hand. The development of good housekeeping practices plays an important role in occupational safety and health protection by recognizing and addressing common hazards that are frequently overlooked in the work environment. Poor housekeeping habits often result in employee injuries, increased insurance costs and possible regulatory citations. Proper housekeeping also has a positive effect upon a facility's Fire Safety by eliminating accumulated debris and keeping emergency exit paths clear. In addition to safety, disorderly work environments can negatively impact the morale of employees who must function in a job site that is dirty, hazardous and poorly managed. A noticeably clean and orderly facility is a good indication that an organization's overall safety program is extensive and effective.

Agency safety professionals must regularly emphasize the importance of good housekeeping measures to managers, supervisors, and employees. Employees should be informed that good housekeeping is part of the routine job duties rather than a custodial chore delegated to service personnel. Proper training and education is a vital element for successful implementation of this key, loss control element. Like safety, housekeeping is everyone's job.

Key housekeeping program elements include the following:

- Implement a housekeeping plan and hold personnel accountable for their responsibilities (develop their housekeeping habit).
- Keep work areas, aisles, walkways, stairways and equipment clear of loose materials, trash and spilled liquids.
- Never obstruct aisles, fire exits, emergency equipment, breaker panels or alarm pull boxes.
- Avoid accumulations of combustible trash such as paper, cardboard, wood, etc.
- Minimize the use of flammable/combustible materials and keep storage amounts and stockpiles small.
- Clean up all spills such as grease, oil and water immediately. Delays can result in accidents.
- Ensure that proper trash containers are readily available and emptied on daily basis. Disposal of oily rags and flammable/combustible materials must be in securely closed containers.
- Return tools, machinery, and other equipment to their designated storage areas after each use.
- Materials stored on shelves, in racks or stacked on pallets should be arranged neatly and securely.
- Provide warning signs of slip hazards before, during, and after cleanup of operations.
- Provide adequate washing, restroom, and eating facilities and, maintain them in an adequate fashion.

## Resources Federal Agencies

Occupational Safety and Health Administration, Department of Labor

Occupational Safety and Health Standards - 29 CFR Part 1910, (General Industry) Section 1910.22 - Housekeeping

<b>Checklist</b>	
1. Is Housekeeping addressed in the Agency's Risk Management/Safety Manual?	Yes ___ No ___
2. Is the importance of Housekeeping covered in initial employee training and subsequent meetings/refresher training?	Yes ___ No ___
3. Are pathways to Exits clear and unobstructed?	Yes ___ No ___
4. Is emergency equipment (fire extinguishers, eyewash fountains, alarm boxes, breaker panels) readily accessible?	Yes ___ No ___
5. Is Housekeeping included on safety inspection checklists?	Yes ___ No ___

6. Is an emphasis on Housekeeping evident throughout the workplace?

Yes \_\_\_

No \_\_\_

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## Section Two - Employee Safety and Health Program

### **Chapter 6**

#### Occupational Safety Program

#### Subchapter 6.9

#### Ladder Safety

Revised: December 2004

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### **Volume III:**

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This chapter of Risk Management for Texas State Agencies supplies general information regarding state agency employee safety and health exposures, and techniques and methods to manage and control those exposures. It also identifies additional resources that may be available to assist state agencies in developing or enhancing its employee safety and health program. This chapter is not intended in any way to be a substitute for the advice and guidance of legal counsel, who should always be consulted regarding rights, duties, and responsibilities under the law.

Ladders are a major source of injuries and fatalities. OSHA has estimated that in excess of 20,000 injuries and over 30 deaths occur each year from unsafe acts attributed to ladders. Work on or around ladders should therefore be considered hazardous. Ladder safety is an important component of an employee safety and health program and requires that good safety practices be enforced when employees are engaged in activities where ladders are used. Agencies must ensure that their employees who use ladders receive training by a knowledgeable person to minimize hazards associated with ladder use.

### **GUIDELINES FOR ACCIDENT PREVENTION**

#### *Ladder Construction*

Ladder construction should conform to provisions of the applicable American National Standards Institute (ANSI) Codes. Detailed information on ladders may be found at the following:

ANSI A14.1: Safety Requirements for Portable Wooden Ladders;

ANSI A14.2: Safety Requirement For Portable Metal Ladders;

ANSI A14.3: Safety Requirements For Fixed Ladders;

ANSI A14.4: Safety Requirements For Job-Made Ladders;

ANSI A14.5: Safety Requirements For Portable Reinforced Plastic Ladders.3

### ***General Ladder Safety***

General suggestions for ladder safety are contained below. Several types of ladders exist and specific requirements for each type should be referenced in the ANSI codes. Suggestions for the safe use of each major type are discussed in this chapter.

- Ladders should have slip-resistant bases and safety tops.
- A ladder inspection and maintenance program should be adopted.
- Ladders should not be left unattended in an area where unauthorized people can climb them.
- Sharp, heavy, or dangerous objects/items should not be placed on top of step ladders.
- Unsafe/unstable ladders should not be used.
- Safety belts should be used when appropriate.
- Shoe soles and ladder rungs should be checked before climbing ladders to ensure they are free of slippery material.
- When carrying a long ladder, clearance should be checked at both ends and assistance obtained, if necessary.
- Both hands should be used when climbing a ladder.
- The ladder should be long enough so the employee does not overreach. The ladder should be repositioned to avoid overreaching.
- Ladders should always be placed on solid footing.
- Ladders should not be placed against a loose gutter or movable object, such as against a tree limb that might allow the side rails to twist.1,2,3

### ***Straight or Extension Ladders***

- A ladder should be strong enough for its intended use.
- Light duty (Type III) ladders are designed to handle 200 pounds maximum weight.
- Minimum duty (Type II) ladders are designed to handle up to 225 pounds.
- Heavy duty (Type I) ladders are designed to handle up to 250 pounds.
- The top of a straight ladder should extend at least three feet above the point of support (for example, a gutter, eave or roof line).
- Straight ladders should be positioned at the proper angle according to the four-to-one rule: Set the base or foot of the ladder approximately one foot away from the wall for every four feet of ladder height to the point of support.
- Straight ladders must rest squarely against a firm, rigid surface.
- A ladder should never be extended into overhead power lines or electrical apparatus.

### ***Wooden Ladders***

- Wooden ladders should always be checked for knots or decayed areas prior to use. An unsafe ladder should not be used. Wooden ladders made from defective stock often break and collapse even under normal weight limits.
- Wooden ladders should not be painted since serious defects may be concealed. A wood preservative or clear finish that protects the wood without hiding defects should be used.
- All ladder parts should fit tightly together.
- Loose wooden rungs often turn and throw the climber backward. These should be tightened or replaced.
- Wooden ladders should be checked for splinters.
- Ladders should be kept out of the weather, away from excess heat or humidity, and stored in a manner that does not permit sagging or warping.1,2,3

### ***Step Ladders***



- The second rung from the top of the ladder should not be stood upon.
- The top of the ladder should not be stood upon.
- A step ladder should not be used outdoors in strong winds.
- Never extend a step ladder into overhead power lines or electrical apparatus.
- A step ladder should be equipped with proper devices that lock legs into place when fully opened to prevent spreading and slipping.
- Step ladders should be checked for sharp corners or rough edges, and appropriate repairs made.
- If a step ladder is made of metal it should not be used for electrical work.1,2,3

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### ***ADDITIONAL RESOURCES FOR TEXAS STATE AGENCIES***

29 Code of Federal Regulations, Part 1910, Occupational Safety and Health Standards; Subpart D - Walking and Working Surfaces.

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### ***CHECKLIST FOR TEXAS STATE AGENCIES***

- |  |        |
|--|--------|
| 1. If ladders are used, has a ladder safety program been developed and implemented?  | Yes No |
| 2. Do ladder safety and accident prevention rules or procedures exist?   | Yes No |
| 3. Are employees trained and retrained on ladder safety rules and procedures?  | Yes No |
| 4. Are ladders routinely inspected for safety by the safety officer or independent authority from another functional area? | Yes No |

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### ***ENDNOTES***

1. *Job Safety and Health - BNA Policy and Practice Series*; The Bureau of National Affairs, Inc; Washington, D.C. 20037.
2. *Accident Prevention Manual for Business and Industry, Engineering and Technology*; National Safety Council; Itasca, IL; 1991.
3. 29 Code of Federal Regulations, Part 1910, Occupational Safety and Health Standards, Subpart D - Walking and Working Surfaces.

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## Section Two - Employee Safety and Health Program

### Chapter 6

#### Occupational Safety Program

##### Subchapter 6.10

##### Machine Safety

Revised: November 2004

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### Volume III:

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This chapter of Risk Management for Texas State Agencies supplies general information regarding state agency employee and suggested techniques and methods to manage and control safety and health exposures. It also identifies additional resources that may be available to assist state agencies in developing or enhancing its employee safety and health program. This chapter is not intended in any way to be a substitute for the advice and guidance of legal counsel, who should always be consulted regarding rights, duties, and responsibilities under the law.

Machine tools potentially present significant hazards to state employees who use them. Unsafe work practices and incorrect operating procedures most often contribute to machine tool injuries. Inadequate supervision and insufficient training may be contributing factors in these types of injuries. An integral part of the employee safety and health program is the assurance of safe machine operating procedures and proper safeguards on all machinery and equipment.

### **GUIDELINES FOR ACCIDENT PREVENTION**

#### *General Machine Safety Procedures*

Safe operation of machinery should be emphasized by managers and supervisors to employees. Agency policies to eliminate unsafe practices should be established in every shop. The following general safety rules apply to all machinery:

- Closely supervise all personnel during training.
- Allow only trained personnel to operate, adjust, and repair machinery.
- Establish and maintain safe work procedures. Job safety analysis should be used where appropriate.
- Ensure that all machines have proper guarding devices for moving parts.

- Inspect new and modified equipment before allowing operators to use the equipment.1,2
- Establish procedures that call for operators to shut down and lock out any machine that the operator has finished using.3

### ***Machine Tool Operating Procedures***

The following rules apply to the safe operation of any machine tool and should be emphasized in all training:

- Loose-fitting clothing, jewelry, or neckties should not be worn.
- Long hair should be tied back or in some manner restricted from getting caught in moving parts.
- Eye and hearing protection should be worn at all times if required.
- Machine tools should never be left unattended while in operation unless the machine has been designed to do this.
- Operating controls should be locked when the machine is not in use.
- The machine should not be adjusted while in operation.
- Guards should be installed before using the machine.4

### ***Safeguarding***

Safeguarding the point of operation consists of two basic items -- the guard and the device. A "guard" is a physical barrier that absolutely prevents access to the point of operation when it is in place. The "device" is best understood as a safeguarding means that controls access to the point of operation. Such devices may be operator controlled or they may be devices that control the operator. An example of this relationship is an operator-controlled brake and the automatic power brake.1

### ***Lockout/Tagout Procedures***

Lockout/tagout is a specific type of safeguarding that is used when maintenance and servicing are required on equipment. The procedure is used to ensure that the machine is isolated from all potentially hazardous energy sources after it has ceased operation, and has been locked out before employees perform any servicing or maintenance. This procedure is performed to ensure that the machine will not

start up unexpectedly and cause serious injury. Once all energy sources have been neutralized, the machine is energy-isolated. Various devices and processes of safeguarding are used to attain this state. The agency's Employee Safety and Health Program should provide full employee protection, training, and thorough periodic inspections. Employees must comply with the restrictions and limitations imposed upon them during the use of lockout/tagout.<sup>4</sup>

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### ***ADDITIONAL RESOURCES FOR TEXAS STATE AGENCIES***

29 CFR 1910, Subpart O - "Machinery and Safeguarding."

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### ***CHECKLIST FOR TEXAS STATE AGENCIES***

- |  |     |    |
|--|-----|----|
| 1. Are only trained personnel allowed to operate machine tools?      | Yes | No |
| 2. Is safeguarding used on all required machines?                    | Yes | No |
| 3. Are operators closely supervised during training?                 | Yes | No |
| 4. Is eye and hearing protection used by all operators, if required? | Yes | No |
| 5. Are employees properly trained on lockout/tagout procedures?      | Yes | No |
- 

### ***ENDNOTES***

1. Laing, Patricia M., Editor; *Accident Prevention Manual for Business and Industry, Engineering and Technology*; National Safety Council; Itasca, IL; 1991.
  2. 29 Code of Federal Regulations Part 1910, Subpart O - Machinery and Machine Guarding.
  3. *Hand and Power Tools*; U.S. Department of Labor; Occupational Safety and Health Administration; Washington, D.C.; 1988.
  4. *Logout/Tagout-Your Key to Safety*; Bureau of Business Practices, Inc.; 1991.
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## Section Two - Employee Safety and Health Program

### **Chapter 6**

#### Occupational Safety Program

##### Subchapter 6.11

##### Office Safety

Revised: December 2004

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### **Volume III:**

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This chapter of Risk Management for Texas State Agencies supplies general information regarding state agency employee safety and health exposures, and techniques and methods to manage and control those exposures. It also identifies additional resources that may be available to assist state agencies in developing or enhancing its employee safety and health program. This chapter is not intended in any way to be a substitute for the advice and guidance of legal counsel, who should always be consulted regarding rights, duties, and responsibilities under the law.

Every state agency has an office environment; consequently, this environment represents the most common type of exposure to loss that exists in Texas state government. Office risks affect a large number of state employees, and some exposures have the potential for serious injury, property damage, and loss. All state agencies should include office safety as a basic element of their Employee Safety and Health Program.

Accidents and injuries that occur in an office environment typically are associated with the following types of workplace situations:

- Slipping, tripping, and falling.
- Improper lifting and handling (of equipment, materials, supplies, objects, etc.).
- Being unobservant, inattentive, or unaware of surroundings.
- Caught on, in, or between stationary or moving objects.
- Struck by or struck against an object.
- Improper layout or arrangement of furniture, equipment, materials, and supplies.
- Burns (from hot liquids or chemicals).
- Contact with an electric source.
- Horseplay.
- Overexposure to toxic substances.

### **GUIDELINES FOR ACCIDENT PREVENTION**

When addressing office safety issues, agency managers, supervisors, and safety personnel should consider the items listed below when developing procedures, training, and education programs.

### ***Layout***

- Office furnishings should be arranged in a manner that provides unobstructed, safe movement of employees.

### ***Stairways***

- Stairways should be kept clear of obstructions that cause tripping and falling accidents.
- Handrails should be installed on both sides of stairways. An intermediate (center rail) should be installed on stairways over 88 inches wide.
- Steps and carpeting should be maintained in a safe condition.
- Employees should be instructed not to run up or down steps, and to use handrails when ascending or descending.
- When ascending or descending stairs, loads that obstruct vision should not be carried.
- Fire exit doors from stairways should not be locked to prevent employees from exiting.

### ***Doors***

- Glass doors should have some type of conspicuous marking to prevent employees from walking into them.
- If solid, opaque doors swing open in both directions and present a hazard, personnel should be warned of the hazard and instructed in proper opening procedures. See-through glass panels or a door opening device to prevent fast opening should be installed in non-transparent doors, if necessary for safety.

### ***Illumination***

- Adequate lighting should be provided to prevent eye strain and accidents.

### ***Ventilation***

- Ventilation should be adequate for employee safety and health. Ventilation systems should be inspected frequently by qualified personnel to ensure compliance with safety and health standards.

### ***Electrical***

- Electrical safety should be in accordance with the current edition of the National Electrical Code. Some specific requirements are as follows:
  - Exposed wiring, apparatus, switches, devices, etc., should be covered or guarded to prevent electrical hazards to employees.
  - Temporary wiring such as extension cords should not be used as permanent wiring.
  - Appliances such as coffee pots and microwave ovens should be UL approved.
  - All equipment, machines, and appliances should be grounded.
  - All wiring, appliances, cords, and electrical apparatus should be inspected frequently and hazards should be corrected immediately.
  - Circuit breakers and fuse boxes should be marked as to what they control.
  - Circuits should not be overloaded.
  - Only qualified workers using approved materials and equipment should work on electrical installations, apparatus, and wiring.
  - Procedures should be established to ensure electrical appliances such as coffee pots, approved heating devices, etc., are disconnected when not in use, especially after normal working hours.
  - Electrical outlets should be grounded.

### ***Floors***

- Floors should be maintained in a good state of repair.
- Difference in floor levels that create a fall hazard should be eliminated or marked to call attention to the hazard.
- On hard surface floors, nonskid wax should be used.
- Floors should be kept free of debris, obstacles, and other tripping hazards.
- Open-sided floors of upper levels should be equipped with guard rails to prevent falls.
- Carpet, rugs, and mats should be kept in good state of repair: i.e., free of wrinkles, holes, loose edges, and other tripping hazards.
- Floor mats, throw rugs, etc., that could slip on hard floors should not be used unless secured to the floor to prevent slipping.



### ***Waste Basket/Containers and Other Obstacles***

- Waste baskets and other obstacles that create tripping hazards should not be placed or left in walkways.
- Waste baskets should be constructed of non-combustible materials.
- Waste baskets should be emptied daily, or more frequently when full.

### ***Aisles***

- Aisle width should conform with the N.F.P.A. Life Safety Code 101 and should be kept free of obstacles that cause trip, slip, and fall type accidents. Aisle width should also comply with requirements established under architectural barrier guidelines and the Americans With Disabilities Act of 1990.
- File drawers should not open into aisles.
- Pencil sharpeners should not extend out into aisles possibly causing a "striking against" hazard.

### ***File Cabinets***

- File cabinets that are not weighted at the bottom should be secured to the wall or bolted together to prevent toppling when top drawers are opened.
- File cabinet drawers should have safety stops to prevent the drawer from being pulled clear of the cabinet.
- Heavy materials should not be stored/placed on top of file cabinets.
- Hazardous chemicals, materials, or objects should not be placed in cabinets.
- Drawers should not be left open when not in use.

### ***Desks***

- Desks should be maintained in a safe condition, free of sharp edges, nails, burrs, file runners,

etc., and should not block exits or paths to exits.

- Glass desk tops should be free of sharp edges.
- Desks should be inspected frequently to insure they are safe. Hazards should be corrected or reported to the supervisor for correction.
- Desk tops should not be used in lieu of ladders.
- Drawers should not be left open when not in use.

### ***Hazardous Objects***

- Open knives, unprotected razor blades, scissors, and other hazardous items/objects should not be kept in desk drawers or file cabinets unless they are placed/ stored in a manner that will not cause a hazard to employees.
- Hazardous chemicals, explosives, and other dangerous items/objects should not be kept in general office furniture. Such items should be kept in storage containers and facilities specifically designed for the item.
- Heavy office supplies, equipment, and materials should be stored on lower shelves below eye level.
- Office workers should be trained in the use of proper lifting techniques.
- Hazardous chemicals, materials, and substances should not be stored in offices.

### ***Chairs***

- Chairs should be inspected frequently to insure they are safe. Hazards should be reported to the supervisor for correction.
- Chairs should be maintained in safe condition.
- Unsafe chairs should not be used.
- Employees should be instructed not to lean too far back in chairs not equipped to swivel.

- Chairs should not be used for ladders.
- Employees should exercise care before sitting in a chair to ensure it is properly placed. (Rolling chairs cause many accidents.)

### ***Ladders***

- When necessary to reach above extended arm height, approved ladders or step stools should be provided and used.
- Employees should be instructed not to use makeshift devices such as a box, desk top, chair, table, etc., as a substitute for an approved ladder or step stool.

### ***Office Machines With Moving Parts***

- Office machines should be guarded to prevent accidental contact with moving parts.
- Guards should not be removed from a hand operated paper cutter. When the cutter is not in use, the blade should be secured in the down position.

### ***Smoking***

- Offices should be designated as a "non-smoking" or "smoke-free" environment. Appropriate "designated smoking areas" may be provided so that non-smoking employees are not exposed to secondary smoke.
- Where smoking is permitted, ash trays should be:
  - Of noncombustible material;
  - Large and deep enough to prevent lighted cigarettes from falling out and starting a fire;
  - Emptied when full or at least daily.
- Ash trays should not be emptied in waste baskets containing combustible material.

### ***Fire Extinguishers***

- Fire extinguisher(s) of the right type for the building and contents should be readily available to the occupants within the office. All employees should be trained in their use.

## *Exits*

- Exit doors and the way to exit doors should be clearly identified, kept free of objects that block egress, and not locked from the inside. If necessary, exit signs should be lighted.

## *Storage*

- If extra heavy materials (safes, machines, etc.) are stored in offices on balconies/subfloors, etc., weight limits should be determined and maximum weight limit signs should be posted prior to storage to prevent overloading.

## *Extension Cords and Similar Obstacles*

- Wires, extension cords, pipes, and other tripping hazards should not be placed/located in areas where employees walk.
- Extension cords should not be used as a substitute for permanent wiring.
- Extension cords should be grounded and should not be frayed or exposed.

## *Emergency Plans*

- A written emergency plan should be prepared for the office to cover all potential emergency situations.
- Employees should be trained and retrained on the plan.
- Each employee should receive a written copy of suggested actions to take in an emergency situation.

## *Proper Lifting and Handling of Objects*

Employees should be taught proper procedures for lifting and handling. Such training should include the following:

- Lift with the legs **not** the back.
- Do not twist the back while lifting or holding a load. Turn the body by moving the feet.

- Hold the load as close as possible to the body.
- Use a mechanical lifting device, if possible.
- Do not attempt to lift a load beyond one's capability to lift it safely. Get help when necessary.
- Before lifting objects, observe them closely for sharp staples, strapping, bonding, and/or rough edges that could puncture the hand or body.
- Use gloves when necessary to protect hands.

### ***Training and Retraining***

- All employees should be trained in procedures to prevent office accidents. Retraining should occur at appropriate intervals.

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### **Description**

Slips, trips, and falls represent the majority of general industry accidents and is the second leading cause of accidental deaths; motor vehicle accidents rank first. Slips and falls at the same level (those that do not result in falling to a lower level) are also second in all workers' compensation claims. Covered Texas state agencies reported 1,994 fall/slip claims for FY 2002.

Causes involve various sciences and disciplines, including:

- Ergonomics - tasks involve force associated with movement patterns and gait
- Biomechanics - walking and interfacing with surfaces
- Psychology - perception of and response to conditions
- Tribology - a study dealing with the design, friction, wear, and lubrication of interacting surfaces in relative motion.

Generally, slips and falls result from poor work practices, poor conditions, or a combination of both. When developing a slip/fall prevention program, the following key elements should be included:

- Housekeeping practices: e.g., remove cords from across walkways and traffic areas; keep working surfaces clean, orderly, and sanitary; close file drawers when not in use; ensure proper lighting; provide floor mats and proper floor treatments to reduce slipperiness; train staff; and, perform routine area inspections.
- Awareness: be aware of surroundings; report hazardous conditions immediately; inform others; provide warning signs or barricades.
- Footwear: take into account environment, floor material, and surface conditions for tasks to be

performed when choosing the right shoes; inspect periodically for wear and tear.1

*NOTE: If any of the links below fail to take you to the website, copy and paste the link into a web browser.*

## **Statutory Regulations Adopted by Reference State**

Texas Worker's Compensation Act, Vernon's Texas Codes Annotated, Labor Code, Title 5, Subtitle A, Chapter 411, Section 411.103 - Duty of Employer to Provide Safe Workplace

Executive Order GWB 95-8, signed June 29, 1995, by George W. Bush, Governor of the State of Texas, <http://www.sorm.state.tx.us/VolumeThree/2Chapter1/3218.php>

## **Other Regulatory Agencies and Resources Federal**

Occupational Safety and Health Administration, Department of Labor Occupational Safety and Health Standards - 29 CFR Part 1910, (General Industry) Subpart D - Walking-Working Surfaces, Section 1910.22 - General Requirements, <http://www.osha.gov/SLTC/walkingworkingsurfaces/index.html>

## **Other Resources**

### Reports and Publications

Maynard, Wayne S., CSP, CPE, ALCM; "Tribology: Preventing Slips and Falls in the Workplace"; Occupational Health & Safety; 2002; Volume 71, Number 7; pp. 134-139. This article provides comprehensive information regarding: statistics, causes, measurement of slip resistance, prevention, and the four rules for hazard identification.

Preventing Slips and Falls (publication #50M393); National Safety Council; 1993. (There may be a more current edition available.) This pamphlet provides information on safe walking, spills and slips, shoe safety, and how to prevent falls.

Loss Control Programs and Controlling Office Hazards in Accident Prevention Manual for Business and Industry, Administration & Programs, 11th Edition; National Safety Council; 1994; pp. 83-85 and 449-455. Provides information regarding basic office safety procedures, chair falls, materials storage, and summary precautions.

Accounting Firms, Section A-3; Best's Loss Control Engineering Manual; A. M. Best Company; 2002. General liability and worker's compensation information for office exposures, including on-site

inspection issues and items to investigate.

American National Standard ANSI/ASSE A1264.2-2001, Standard for the Provision of Slip Resistance on Walking/Working Surfaces; American National Standard Institute (ANSI) and American Society for Safety Engineers (ASSE). Addresses floor surface characteristics, footwear, environmental factors, and management controls. A copy can be obtained through the University of Texas Engineering Library for a small copy charge; or, contact the ASSE Customer Service Department.

Agencies and Organizations Texas Chapter Public Risk Management Association (Texas PRIMA)  
[Texas Prima](#)

The Safety Network Information Center link takes the reader to a link for Internet Resources, which contains links to OSHA, DOL, and other professional organizations that might be of benefit to this program.

Louisiana Workers' Compensation Corp.

<http://www.lwcc.com>

This site takes the reader to downloadable articles on safety including slip and fall prevention tips, a fall protection program, and an office safety checklist.

## Video Libraries

Texas Worker's Compensation Commission, TWCC Resource Center, <http://www.twcc.state.tx.us/information/videoresources/avcatalog.html>. This link takes the reader to the Resource Center. Click on Audiovisual Resource Catalog. Titles include:

- Housekeeping for Safety
- How to Prevent Slips and Falls
- Safety in the Office
- Slips, Trips, & Falls

Texas Department of Health, Audio/Visual Library,  
<http://www.dshs.state.tx.us/Library.shtm>

Titles for this safety category include:

- Introduction to Safety
- Office Safety 1999 Safety Orientation
- It Takes a Winning Attitude 1998
- Housekeeping - It Ain't Like the Movies 1995

Vermont Safety Information Resources, Inc.

<http://siri.uvm.edu/ppt/>

This site contains 199 free, downloadable safety PowerPoint presentations on many safety issues.

Presentations include:

- Fall Protection
- Slips, Trips, and Falls
- Office Safety Awareness
- Walking and Working Surfaces

## **CD-ROM Training**

<http://www.sorm.state.tx.us/Training/Courses/CBT.php>

This is SORM's Agency Outreach & Training site containing information on interactive CD-ROMs available to state agencies for individual training. Click on Computer-Based Training. Titles include:

- Fall Protection
- Ladder Safety
- Office Safety
- Safety Housekeeping
- Slips, Trips, and Falls

## ***CHECKLIST FOR TEXAS STATE AGENCIES***

- |   |        |
|---|--------|
| 1. Are appropriate office safety rules, regulations, or standards adopted and enforced?   | Yes No |
| 2. Does the agency have a policy that requires review and analysis of accidents/incidents?  | Yes No |
| 3. Have written procedures been established to guide the agency staff while conducting accident/incident reviews and analyses?  | Yes No |
| 4. Is there a procedure to direct staff to promptly report observed unsafe or hazardous conditions, situations, and/or equipment?                                     | Yes No |
| 5. Are standard operating procedures for housekeeping developed and implemented for all agency facilities?  | Yes No |
| 6. Is housekeeping included in the safety education/training program and on safety inspection checklists?   | Yes No |
| 7. Are slips, trips, and falls prevented by keeping the floors dry, mats and carpets firmly attached, and the floor and stairs free of obstacles and uneven surfaces? | Yes No |
| 8. Is the parking area adequately illuminated at all times?   | Yes No |
| 9. Are procedures in place to effectively manage slipping hazards during harsh weather conditions?  | Yes No |
| 10. Are storage area aisles uncluttered and free from congestion?   | Yes No |



11. Is the work space neat and clean?

Yes No

12. Are walking and working surfaces free from slip, trip, or fall hazards?

Yes No

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## Section Two - Employee Safety and Health

### Program

### **Chapter 6**

### Occupational Safety Program

### Subchapter 6.12

### Shop Safety

Revised: December, 2004

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## **Volume III:**

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## **Introduction**

This chapter of Risk Management for Texas State Agencies supplies general information regarding state agency employee safety and health exposures, and techniques and methods to manage and control those exposures. It also identifies additional resources that may be available to assist state agencies in developing or enhancing its employee safety and health program. This chapter is not intended in any way to be a substitute for the advice and guidance of legal counsel, who should always be consulted regarding rights, duties, and responsibilities under the law.

This chapter presents a general overview of shop safety issues to assist agency personnel in developing shop safety rules and procedures if applicable to their state agencies. The chapter is designed to assist personnel to recognize shop hazards and understand concepts that are typically included in shop safety programs.

For the purposes of this chapter, a shop is defined as a work area designated for the use, repair, maintenance and/or assembly of machinery and tools. A state agency that has a shop will need to evaluate the types of hazards that are unique to and most prevalent in that particular shop's operations. Safety precautions and loss control methods that are applicable can then be identified. Shops vary in size and type and present a variety of potential accident situations. Job safety analysis is a tool that may be used to identify and evaluate hazards that may exist in shop areas.

## **GUIDELINES FOR ACCIDENT PREVENTION**

There are a number of considerations for accident prevention that apply to shops regardless of the specific kind of activity. The shop safety accident prevention program should consist of the following items:

**Safety training** should be provided to all employees. Safety orientation should be provided for new machinery/process operators.

**Ongoing safety and health training** should be provided for all employees.

**Employees should receive training and specific instructions** on safe and proper use of any power tools or equipment.

**Employees should demonstrate proficiency** before being permitted to operate hazardous equipment.

**Admission to shop areas should be restricted** to authorized personnel and supervised visitors only.

**If hazardous chemicals are stored or used in the shop area**, notices should be posted and employees should receive training according to the requirements of the Texas Hazard Communication Act.

**Personal protective equipment** should be provided where appropriate.

**Personal protective clothing and gear** should be provided whenever appropriate. In addition, training on the proper way to use personal protective equipment should be provided. Loose clothing should be either secured or removed before entering the workshop area. Watches, rings, neckties, gloves, and long shirtsleeves may be dangerous in the presence of certain types of machinery. The danger of catching body hair in shop machinery, such as a drill press, is a serious concern and a shop cap should be worn.

**Appropriate personal protective gear and clothing**, such as eye shields or goggles, should be worn at all times when tools or machines are in use. Respirators should be worn in dusty or toxic atmospheres. Hearing protection should be worn if noise exceeds permissible levels.

**Supervisory approval for special or new projects** should be secured.

**The supervisor should be consulted** if any question arises about operating machinery or equipment.

**Equipment malfunctions or necessary maintenance** noted by employees should be immediately brought to the attention of the supervisor.

**Access to first aid, emergency, and medical facilities** should be readily available.

**Administer first aid to the injured person**, if necessary and if qualified.

**Provide eye wash stations and showers** if exposures to hazardous chemicals and airborne particles exist.

**Notify** the person in charge.

**Call 911** if necessary.

**Equipment** should be used properly.

**Use each piece of equipment** for bona fide operations only.

**Notices required under the Texas Hazard Communication Act** should be posted wherever appropriate.

**All electrical machines** should be properly grounded.

**Aisles and walkways** should be marked and kept clear of obstructions.

**Keep hands away** from moving machine parts.

**Conversations should be avoided** while equipment is being operated.

**Keep operating area free** of tools, mops, scraps, and litter.

**Make and secure all adjustments** before starting the machine.

**Use the proper size stock** on machinery designed to accommodate the stock size.

**Select the machine best designed** to perform a specific operation.

**Plan each operation** prior to turning on the machinery.

**Materials should be fed** into the machine after maximum R.P.M. has been reached.

**All safety guards** should be kept in their proper place.

**Always shut off the machine** when it's not being used.

**Allow the machine** to come to a complete stop before measuring or making adjustments or leaving the machine.

**Shut off the machine** at the first sign of any odd or unusual noise coming from the machine.

**Equipment** should be maintained properly.

**Machinery and equipment should be inspected** for material defects prior to initial use.

**Periodic maintenance and inspection schedules** should be kept for each piece of equipment.

**Each machine should be maintained and repaired** using parts specified by the manufacturer.

**Lubricate the various pieces of equipment** according to the manufacturer's instructions. Follow manufacturer's schedules and instructions for maintenance and keep proper records.

**Housekeeping** should be neat and orderly.

**Clean up spillage and dispose of waste** properly and immediately.

**Maintain general cleanliness** of the workplace, adequate washing, restroom, and eating facilities.

**Ensure that proper containers** and other airtight containment methods are available wherever solvents are used.

**Keep the workplace clear** of combustible materials.

**Return tools, machinery, and other equipment** to their designated storage areas after each use.

## **ADDITIONAL RESOURCES FOR TEXAS STATE AGENCIES**

### **Publications**

Laing, Patricia; Accident Prevention Manual For Business & Industry, Engineering and Technology; National Safety Council; 1991.

Plog, Barbara, A., Editor, MPH, CIH, CSP; Fundamentals of Industrial Hygiene; National Safety Council; 1988.

Cote, Arthur E., PE, Editor-in-Chief; Fire Protection Handbook, Seventeenth Edition; National Fire Protection Association; Quincy, MA; 1991.

Hand and Power Tools; U.S. Department of Labor; Occupational Safety and Health Administration; 1988.

Eye Protection and Face Protection - 29 CFR 1910.133, Occupational Safety and Health Administration.

Occupational Noise Exposure - 29 CR 1910.95(b)(1), Occupational Safety and Health Administration.

Respiratory Protection - 29 CFR 1910.134, Occupational Safety and Health Administration.

Training Personnel - 29 CFR 1910.96(i) and 29 CFR 1910.217(e)(3), Occupational Safety and Health Administration.

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## **CHECKLIST FOR TEXAS STATE AGENCIES**

1. Does the agency have a shop of any type, such as a repair, maintenance, or tool and die shop?  
Yes\_\_ No\_\_
2. Do shop safety and accident prevention rules and procedures exist? Yes\_\_ No\_\_
3. Are employees trained and retrained on the proper use of equipment and machinery and shop safety procedures? Yes\_\_ No\_\_
4. Are routine safety inspections conducted by the safety officer or an independent authority from another functional area? Yes\_\_ No\_\_
5. Are first aid and emergency medical facilities provided? Yes\_\_ No\_\_

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Section Two - Employee Safety and Health  
Program

**Chapter 6**

Occupational Safety Program

Subchapter 6.13

Traffic Safety Program

Revised: December, 2004

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**Volume III:**

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**Introduction**

This chapter of Risk Management for Texas State Agencies supplies general information regarding state agency employee safety and health exposures, and techniques and methods to manage and control those exposures. It also identifies additional resources that may be available to assist state agencies in developing or enhancing its employiye employee safety and health program. This chapter is not intended in any way to be a substitute for the advice and guidance of legal counsel, who should always be consulted regarding rights, duties, and responsibilities under the law.

The basic goal of a traffic safety program is to promote safe driving by employees who are required to drive on state business. Traffic accidents may affect the productivity and fiscal well being of the agency. If an employee is involved in a vehicle accident while conducting agency business, the State may become involved in claims for personal injury, damage to or loss of property, and/or tort liability. If the employee is injured, the State may also bear the costs of workers' compensation benefits, lost productivity, preparation of reports, and possibly reassignment of employees and/or payment of overtime due to rescheduling of employees.

Therefore, it is imperative that safe vehicle operations be recognized as necessary skills that must be practiced and reinforced by every employee who drives on State business. This includes drivers of personally owned vehicles and rental vehicles as well as agency-owned vehicles.(2)

It is equally important that appropriate fleet vehicle maintenance and inspection procedures be developed and implemented by state agencies. Fleet operations and maintenance are discussed in more detail in Volume II of Risk Management for Texas State Agencies.

**Causes of Traffic Accidents**

The majority of all motor-vehicle accidents are due to driver or operator error rather than equipment failure. The Occupational Safety and Health Administration reports that 38 percent of all job-related

fatalities involve a motor vehicle, while job-related motor-vehicle fatalities that occur on the job are among the leading causes of fatal occupational injuries in Texas.(1)

The predominant causes of vehicle accidents are the following:

- Driving too fast for the road, weather, and traffic conditions;
- Passing, changing lanes, or turning without giving appropriate signals in advance or without sufficient clearance;(2)
- Following too closely to the vehicle in front;
- Failure to stop at a red traffic control signal or speeding through a yellow caution signal;
- Backing the vehicle without verifying the amount of clearance;
- Driving on the wrong side of the road.

## **ROLES AND RESPONSIBILITIES**

Risk managers can have a significant impact on the reduction of human and financial losses associated with auto accidents by implementing a proactive traffic safety program for improving traffic safety of agency employees. The driver or operator of the vehicle is only one of several persons who share responsibility for the traffic safety program. The agency's director, managers, fleet/operations, and maintenance manager, safety officer, traffic safety coordinator, and supervisors each share a role in making traffic safety a priority for all agency employees.

### **Directors and Agency Managers**

The agency's executive director should support traffic safety efforts through the appointment of a knowledgeable and proficient traffic safety coordinator, setting safety priorities and goals, providing appropriate safety resources, and providing management support.

Agency managers contribute to the traffic program by giving priority support for program efforts. Managers should emphasize to supervisors and their employees who drive vehicles when conducting agency business that agency traffic safety policies and procedures should be stringently followed. Appropriate disciplinary procedures should be developed in case policies and procedures are not followed.

### **Fleet/Operations and Maintenance Manager**

If the agency has a fleet of state-owned vehicles, the fleet operations and maintenance manager has the responsibility to direct the operation and maintenance efforts of agency fleet vehicles, set schedules and priorities for maintenance of agency vehicles, and develop guidelines for vehicle operations. The fleet manager should incorporate appropriate safety procedures into all operating procedures of agency vehicles.



## **Safety Officer**

The safety officer should be a safety professional and should be given appropriate authority to carry out the duties of the position. The safety officer should work with the traffic safety coordinator, fleet manager, and other agency managers to develop appropriate programs to create and maintain traffic safety awareness and accident prevention efforts. In many agencies, the safety officer may be the designated traffic safety coordinator. The safety officer should also be involved in the review of all traffic accidents.

## **Supervisors**

Supervisors who direct the activities of employees who drive vehicles on agency business should require their employees to be fully qualified to drive the vehicles. This includes requiring employees to possess a valid license for the type of vehicle to be driven and to maintain a safe driving record based on standards that are acceptable to the agency. Employee training should be provided as well as appropriate skills testing, if necessary.

## **Employees Who Drive Vehicles on Agency Business**

Employees should possess a valid operator's license for the type of vehicle to be driven and should maintain a safe driving record, according to agency standards. The following is a legal requirement for employees who are hired for the sole purpose of transporting people and/or equipment. Article 6687b, Section 37, Vernon's Texas Civil Statutes (VTCS) states:(3)

"Before employing a person as a driver of a motor vehicle used to transport persons or property, an employer shall request from the Department of Public Safety, a list of convictions for traffic violations contained in their files on the potential employee and a verification that the potential employee has a valid drivers license. No person shall employ a person as a driver of a motor vehicle used to transport persons or property until the potential employee has been licensed to drive such a vehicle as provided in this Act."

Employees that are employed specifically as drivers, as well as employees who regularly drive in the course and scope of their duties, should also be adequately trained in safe driving procedures. Management's support of the traffic safety program will enhance employee efforts to drive safely on the job.

## **ELEMENTS OF A TRAFFIC SAFETY PROGRAM**

The traffic safety program establishes safety policies and procedures for employees who operate vehicles while conducting business for the agency. It also applies to employees who drive their personal or rental vehicles on agency business. Principle elements of a traffic safety program are discussed in the following sections.

## **I. Traffic Safety Policy**

Each state agency that requires employees to drive agency-owned or leased vehicles and/or personally owned vehicles to conduct agency business should develop a traffic safety program and policy. The traffic safety program should include a policy statement to provide direction for all employees involved in or affected by the program. The policy should be approved by the agency's chief executive officer and should adequately cover all components or elements of the program. Suggested program elements are identified and discussed in this subchapter. The policy statement should require compliance from all employees and should include the following:

- The requirement that all employees who drive on agency business must possess a valid driver's license;
- A statement that appropriate training for employees whose duties include driving will be provided by the agency;
- A prohibition of employees from consuming alcohol or possessing or using illegal drugs in the workplace;
- A mandate that safety belts be worn when operating or riding in an agency vehicle;
- A statement that all agency owned vehicles be equipped with vehicle safety kits for use in emergencies;
- A provision for establishing procedures for record keeping and driver evaluation;
- The requirement that employees maintain an acceptable safe driving record according to agency standards;
- The requirement that employees comply with traffic safety laws when driving on agency business.

## **II. Traffic Safety Program Coordinator**

A traffic safety program coordinator should be appointed to administer the program. The duties and responsibilities of the coordinator should be identified in the position description of the designated position, and also should be addressed in the traffic safety program procedures. The duties and responsibilities may include the following:

- Develop and implement traffic safety program policies, procedures, and forms.
- Conduct motor vehicle record checks of applicants and employees to ascertain the driving record of the applicant or employee.
- Ensure that vehicle accident report forms are completed by employees and supervisors as required by procedures.
- Conduct reviews of employee vehicle accidents to identify causes of accidents.
- Prepare studies and reports of vehicle accidents and traffic safety related issues, and provide such studies and reports to the risk manager and appropriate managers according to procedures.
- Participate as a technical advisor to the agency's accident review board and/or safety committee.
- Conduct appropriate traffic safety training for agency employees, or arrange for such training to

be conducted.

### **III. Vehicle Maintenance Program**

A vehicle maintenance program should be developed and implemented to track inspection and maintenance of state agency vehicles. This subject is covered in more depth in the Property Exposures Volume of Risk Management For Texas State Agencies. It is relevant to this section of the guidelines because it affects the safety and health of agency employees. Article 601b, §14.01, Vernon's Texas Civil Statutes (V.T.C.S.), makes provision for the General Services Commission (GSC) to administer a program to provide vehicle maintenance services for certain state agency-owned vehicles. Travis County is presently the only area where vehicle maintenance service is available. Service includes but is not limited to the following:

- State approved vehicle safety inspections,
- Bulk fuel system credit card purchases,
- Lubrication services,
- Other preventive maintenance services,
- Contract maintenance service for extensive mechanical work.

Other information concerning the a preventive maintenance program is provided in the GSC's Texas Building and Procurement Commission "Statewide Vehicle Fleet Management Rules," §125.41 through §125.53 49. Additional help is available by writing or phoning the General Services Commission Vehicle Fleet Management Section, 6506 Bolm Road, Austin, Texas 78721 (512) 463-3538.

### **IV. Driver Selection Procedures**

Procedures should include information regarding selection and hiring of qualified, safe drivers.

Identify specific employee positions that carry the most exposure to vehicle accident risk.

Write job descriptions to include the following:

- Specific activities, if any, to be performed by the driver;
- Experience and skills needed;
- Certifications and licenses required;
- Extent and nature of driver interaction with agency customers.

Investigate the driving histories of applicants by checking moving violation records through the Department of Public Safety. Allow only employees with good driving records to drive on agency business.

### **V. Education and Training**

Traffic safety program education and training increases employee awareness of safe driving information, traffic hazard information, and risk prevention techniques to avoid accidents and injuries. Some initial orientation and basic courses to introduce new employees to the agency's traffic safety program may include the following:

- An introduction to traffic and vehicle safety;
- Review of safe driving rules and regulations of the agency;
- Review procedures for reporting accidents and vehicle breakdowns;
- Paperwork and record keeping requirements;
- Route and schedule expectations;(7)
- Coping with road emergencies.

### **Specialized Driver Training Programs**

Driver safety training programs may be developed within the agency or commercially developed programs may be purchased. Operators of heavy duty trucks and truck tractors with trailers may require additional behind-the-wheel training. Such training should simulate actual road and working conditions and refresher training should be repeated at regular intervals.(4)

The National Safety Council (NSC) has developed several specialized driver training courses, which include the following:

- Driver Safety Course (Defensive Driving) - Designed to instruct and motivate motor vehicle drivers to control and avoid accident producing situations. This course develops the qualities of knowledge, foresight, and skills.(4)

The National Safety Council defines defensive driver training as

"driving to prevent accidents in spite of the incorrect actions of others and adverse conditions."

Major points included in the National Safety Council's accident prevention formula are as follows:

- Recognition of the hazard;
  - Understanding the defense;
  - Acting in time.
- 
- DDC-Attitudinal Dynamics of Driving - Designed for the operator with multiple tickets or traffic accidents. The course applies the principles of Reality Therapy to the problem driver's driving behavior.(4)

All drivers can improve their driving by improving their skills through:

- Education
  - Judgment
  - Awareness
  - Anticipation.
- Commercial Drivers License Skills Training Program - Prepares commercial drivers for Commercial Drivers License testing. Instructor development courses can also be taken to become a certified instructor in the National Safety Council's driving courses.(4)

## **Commercial Driver's License**

The Commercial Motor Vehicle Safety Act of 1986, Title XII of Public Law 99-570, requires all states to implement a commercial driver's license testing program.<sup>4</sup> In response to this federal legislation, The Texas Commercial Driver's License Act, V.T.C.S., Article 6687b, §2, became effective April 1, 1990.

Since April 1, 1992, every driver of a commercial vehicle who drives in the state of Texas must possess a commercial driver's license (CDL). A CDL is required to operate any of the commercial motor vehicles listed below:

- A single vehicle with a gross vehicle weight rating (GVWR) of more than 26,000 pounds;
- A trailer with a GVWR of more than 10,000 pounds if the gross combination weight rating (weight of the vehicle + weight of the trailer) is more than 26,000 pounds;
- A vehicle designed to transport more than 15 persons (including the driver); or,
- Any size vehicle which requires hazardous materials placards.(5)

Additional information on the CDL driver and vehicle requirements may be found in the Texas Commercial Motor Vehicle Driver's Handbook.(5)

## **VI. Safe Driver Incentives**

The agency's traffic safety program may include the provision of certain incentives to encourage, promote, and/or influence employees to develop safe driving habits. Safe driving incentives may include a driver evaluation system and/or a safe driver awards program.

### **Driver Evaluation System**

A driver record evaluation system establishes standards and guidelines that may be used to evaluate driving records. This system may be applied to any employee or to job applicants who drive state-owned or personal or rental vehicles on state business. Driver's license record checks on all job applicants and

employees who may drive on state business are recommended as a way to identify persons who do not have a valid driver's license and/or who have poor driving records. At a minimum, only persons licensed by the state should be permitted to operate vehicles on state business. The Texas Drivers Handbook provides an overview of license suspension criteria.(15)

**Drivers License Checks** - Employing a driver who does not have a motor vehicle operator's license is illegal in the State of Texas if the driver has been hired to transport persons or property: "Before employing a person as driver of a motor vehicle used to transport persons or property, an employer shall request from the Department of Public Safety a list of convictions for traffic violations contained in their files on the potential employee and a verification that the potential employee has a valid license. No person shall employ a person as a driver of a motor vehicle used to transport persons or property until the potential employee has been licensed to drive such a vehicle."(3)

State agencies that employ persons to drive on agency business who do not possess a valid license are subjecting the agency to increased liabilities in the event the employee is involved in a vehicle accident. Increased liabilities could also occur if an employee who has a poor driving record, including DWI/DUI convictions, is involved in an accident while driving on agency business. Therefore, conducting frequent driver's license and driver's record checks are recommended as a risk prevention measure.

**Moving Violation Records** - Procedures should be developed by agency management to routinely check the moving violation records (MVR's) of agency drivers. A check should be conducted at the time of employment and on a regular basis thereafter. A "good driving record" should be a job requirement of agency drivers, and should be included in both the position descriptions and job posting announcements. An applicant for a driving position should be notified that the applicant's MVR will be checked. However, questions concerning an applicant's MVR should be asked during an interview only if the driving record is pertinent to the job duties to be performed.

**Records Requests** for moving violation records may be made to the Texas Department of Public Safety using form LIDR-1 License Issuance and Driver Records. MVR checks for Texas drivers will be conducted by the Department of Public Safety at no cost to state agencies. Information provided may include the driver's date of birth, license status, and a list of all accidents and violations within the past three-year period. An example of form LIDR-1 is included as Appendix A of this chapter.

Confidentiality of MVR's is important and should only be provided to agency managers or supervisors on a need-to-know basis only.

## **Types of Violations**

Violations vary in significance and are of three types.

**Statutory Violations** - Reflect moral hazards and generally involve licensing or registration offenses that include the following:

- Operating a vehicle without registration;
- Using false registration or license;
- Driving while license is under suspension.

Major Violations - Are serious convictions that indicate a serious disregard for public safety and include the following:

- Driving while intoxicated or under the influence of drugs;
- Reckless driving where bodily injury or property damage results;
- Hit and run;
- Negligent homicide.

Capitol Violations - Reflect severe moral hazards and are felonies such as:

- Murder or assault with a motor vehicle;
- Theft of a motor vehicle and related offenses.(11)

## **Driver Point System**

The driver point system is an evaluation tool designed to provide agency management with a systematic method to evaluate an employee or job applicant's driving records. It establishes a safe driving threshold limit based upon the driver's record and assesses points for each driving violation occurrence. An example of such a driver evaluation point system is provided as Appendix B of this chapter.

## **Safe Driver Awards Program**

Performance measures for incentives should be linked to specific behaviors. A safe driver awards program can improve driving behaviors by motivating employees to maintain and/or improve safe driving records. Such programs can increase awareness of vehicle safety, reduce preventable fleet accidents and resulting claims, and reduce losses in productivity. The Texas Safety Association (TSA) recognizes public sector safe drivers annually. Phone TSA at (512) 345-7900 for details.

The safe driver awards program should appeal to the needs of agency drivers and reward safe behavior. Inexpensive incentives have been successful in reducing the frequency of accident and moving violations. Examples of widely used awards for recognition of safe driving records include a safe driving pin, a patch that is worn on clothing, a certificate or plaque, and merchandise awards.

An incentive program should be suitable to the needs of the agency. The program may be simple or based on complex performance measures, such as a driver point system.

The program should be given adequate publicity by advertising it on agency bulletin boards, letters to

employees, and through agency publications.

The awards program should be administered fairly and according to established guidelines. Driving records should be kept current and awards should be given promptly, with appropriate publicity.(8)

## **Disciplinary Procedures**

Disciplinary procedures establish measures that may be taken against an employee who violates traffic safety program procedures. Disciplinary action may be appropriate if any of the following situations exist. The employee:

- Does not possess a valid driver's license;
- Does not maintain an acceptable safe driving record according to agency traffic safety program standards;
- Receives a conviction for DWI/DUI while driving on agency business; and/or
- Is found in possession of alcoholic beverages or illicit drugs while conducting agency business.

Discipline should be progressive and be based upon the agency's established driver evaluation point value system. Increasing levels of discipline should be considered if the employee has been subject to work-related disciplinary actions or poor performance has been documented. The following are examples of the types of actions that may be included in the traffic safety disciplinary system:

- Interim suspension of agency driving privileges until facts surrounding the incident are determined.
- Oral and written counseling.
- Remedial driver training or a Driver Safety Course.
- Employee probation.
- Temporary or permanent suspension of the employee's driving privileges.
- Salary reduction, permissible under the current General Appropriations Act: "If a classified employee's performance so warrants, the executive head may reduce his salary to a step rate in a designated salary group no lower than the minimum step rate. The employee's pay may be restored to any step rate in the range up to and including his prior rate as such employee's performance improves."(10)
- Termination of the employee.

## **VII. Safe Vehicle Operating Procedures**

The traffic safety program should include specific procedures for safe operation and handling of vehicles. The procedures should at a minimum require employees to use seat belts while on agency business, comply with all speed limits and traffic laws, and require trip logs that account for an agency-owned vehicle's use at all times.



## **Pre-Trip Inspection Procedures**

Procedures should be developed for drivers to conduct vehicle inspections prior to driving. The driver should inspect the vehicle for conditions that could cause hazardous driving. The inspection should include the exterior, interior, and mechanical systems. Pre-trip inspection forms help the driver to consistently check all important vehicle systems. Examples of items that may be included in a Pre-Trip Inspection Checklist are included as Appendix C of this chapter.

## **Vehicle Safety Equipment**

Vehicle safety equipment that has been installed by the manufacturer will vary depending on the type of vehicle and the year of manufacture. Such safety equipment should be maintained in good operable condition. Equipment may include but is not limited to the following:

- Seat belts
- Air bags
- Anti-lock brakes
- Side view mirrors
- Reflective or light colored paint (for night visibility)
- Slip resistant steps and rails (for trucks, tractors, vans and buses).(6)

## **Transporting Non-Agency Personnel**

Occasions arise which require agency-owned vehicles to transport non-agency personnel. Claims or litigation may be initiated against the agency and state by non-agency personnel if personal property damage, personal injury, or death occurs under conditions set forth in the Texas Tort Claims Act, §101.021. State agency liability exposures may be reduced by establishing appropriate procedures concerning transportation of non-agency personnel in agency-owned vehicles. Legal counsel should be consulted during development of these and all procedures.

## **Compliance with Traffic Safety Laws**

All agency vehicle operators should be expected to obey all federal, state, and local laws and ordinances that address traffic safety. Each driver should be provided a copy of the Driver Safety Handbook from the Texas Department of Public Safety.

## **Safe Driver Practices**

Safe driver practices should be adopted as part of the agency's traffic safety program.

All agency drivers must have a valid driver's license.

Applicable motor vehicle laws within the state, county, and city must be observed.

Seat belts must be worn at all times by drivers and passengers.

Unauthorized drivers and passengers must not be permitted to either operate or ride in an agency-owned vehicle.

Driver's training should include awareness of the condition of the vehicle. Vehicles should be operated only when they are in good operating condition.

Written vehicle operating condition reports should be required after each trip involving agency-owned vehicles.

Privileges to operate an agency-owned vehicle should extend only as long as the driver operates the vehicle in a safe and efficient manner. A record of unacceptable safety violations should result in removal of driving privileges.(8)

All vehicle accidents involving agency employees who are conducting agency business must be immediately reported to the supervisor and agency traffic safety coordinator. This applies to accidents involving agency-owned vehicles and personally owned vehicles. The agency's legal department should also be advised immediately.

### **Driver Procedures Following a Vehicle Accident**

The agency traffic safety coordinator should develop a comprehensive set of procedures that agency drivers should be expected to follow in the event of a vehicle accident. These procedures may include, but should not necessarily be limited to, the following suggested guidelines:

- Stop the vehicle immediately. Avoid obstructing the normal flow of traffic if possible. Place appropriate warning flags, reflective triangles, flares or other such devices, if available, to prevent additional accidents or damage.
- Aid any injured person(s) and request emergency assistance from police officers, firemen, or emergency medical services technicians. The driver of any vehicle involved in an accident resulting in injury or death is required by law to render reasonable assistance to an injured person. Such assistance includes carrying or making arrangements for carrying the injured person to a physician, surgeon, or hospital if it is apparent that medical or surgical treatment is necessary, or if the injured person requests such transportation.
- Report the accident by telephoning law enforcement authorities having appropriate jurisdiction.

Within an incorporated city, the city police department would be the appropriate authority to call. Outside the city limits, the county sheriff's department should be called. The Texas Department of Public Safety (DPS) should be called if the accident occurs on a state, federal, or interstate highway or in a rural area where DPS troopers are accessible. If the accident occurs in Austin in a state controlled parking garage or lot, the DPS Capitol Security Police should be notified at (512) 463-3333. If the accident occurs in San Antonio in the Sutton Building parking lot (321 Center Street), the DPS Capitol Security Police should also be notified at (210) 222-4669.

- Report the accident to the supervisor and to the agency's traffic coordinator and fleet operations manager (if appropriate). The names and numbers of the designated contact persons should be listed in an accident reporting packet contained in each agency- owned vehicle.
- Complete all accident report forms included in the accident report packet that should accompany each vehicle. If an accident is not investigated by a law enforcement officer and the accident results in injury to any person including the driver, the driver of the vehicle must forward a written report of the accident (DPS form ST-2) to the Texas Department of Public Safety within ten (10) days after the accident.
- Fault or liability should not be stated, admitted, or accepted. All liability questions should be directed to the agency's general counsel and the Litigation Division of the Office of the Attorney General. State the facts clearly and objectively to law enforcement officers and agency accident investigators. Subjective, misleading, or false statements should not be made.
- Witness information should be obtained from all witnesses of the accident. Witness information should include the names, addresses, telephone numbers and, if applicable, vehicle plate numbers of the witnesses.
- Obtain insurance information from the driver of the other vehicles involved in the accident. Such insurance information should include the following:
  1. Name, address, and telephone number of insured;
  2. Name, address, and telephone number of insurance company;
  3. Insurance policy number;
  4. Driver's license number of driver; and,
  5. Vehicle license number.

An example of an accident information form is included as Appendix D of this chapter.

## **VIII. Accident/Loss Reporting and Review Procedures**

Accident review procedures developed by traffic safety program personnel assist the agency in determining the causes of accidents and potential solutions. Accident reports and review information may also be useful in defending against claims or lawsuits that may result. The goal of these procedures is to effect reductions in both the frequency and severity of losses.

The agency's traffic safety program procedures shall require the agency's accident report form to be completed by the driver involved in the accident. Only factual information should be reported. Drivers should be provided with an accident form, instruction booklet, or information packet that indicates appropriate actions to be taken at the accident site. All accidents that involve the following should be reported to the supervisor and traffic safety coordinator:

- Personal injury or death;
- Any property damage to vehicles or other property;
- Dangerous materials that contributed to the accident;
- Vehicles with oversized or overloaded cargo;
- Any unusual circumstances.(7)

The accident report form should provide objective documentation and/or evidence concerning the conditions and events that existed prior to, during, and after the accident. Only the facts as they occurred should be recorded and reported. Subjective comments and statements should never enter into a report or review document. The accident report form should include the following information:

- Time, date, and place of the accident;
- Road conditions, weather conditions, and available lighting;
- Names and addresses of all persons involved in the accident, whether injured or not;
- A statement by the driver as to how the accident happened and, if obtainable, a statement from the driver of the other vehicle; A summary of damages to the vehicle, cargo, and other property that may be involved;
- Name, organization, and badge number of the investigating law enforcement official.(7)

If an agency driver is injured and transported to emergency medical facilities, the agency traffic safety coordinator should contact the investigating police officer and obtain relevant accident information. The agency representative may obtain a copy of the officer's "Texas Peace Officer's Accident Report" (St-3) by contacting the Texas Department of Public Safety Statistical Services Section. The agency driver's supervisor, traffic safety coordinator, and/or safety officer should also contact the agency's workers' compensation claims coordinator and institute the workers' compensation claims process.

## **Accident Review**

Accident review information should be compiled and maintained by the traffic safety coordinator. This information should be analyzed to determine frequency and severity of various types of accidents and other statistical information that may be beneficial to agency management to monitor and control the

fleet operations, maintenance, and safety programs. The review information and analysis should be presented to the agency's Accident Review Board or Safety Committee for evaluation and recommendations for corrective action, if appropriate.

## **IX. Record Keeping**

Accurate record keeping is an essential component of a traffic safety program. Accurate records are a tool to monitor and evaluate data on the program's effectiveness, and provide information to isolate problem areas within the program that may require modification.

Driver records, moving violation records, training records, accident report and review records, and fleet maintenance records provide information that is useful to analyze. Records should be organized, kept current, and lend themselves to statistical analysis. Record keeping also provides driver experience data that may be used in the safe driver incentives program.

Development and maintenance of a computer database provides an excellent mechanism for analysis of problem areas and identification of trends that may lead to modification of operational methods and procedures. Some examples of statistical data that may prove useful are the following:

- Vehicle accident frequency rates per 1,000,000 miles driven;
- Accident frequency rates per hours worked;
- Accident frequency rates per driver;
- Vehicle accident loss ratio;
- Direct and indirect costs attributed to vehicle accidents.(7)

Complete and accurate records should be maintained by the traffic safety coordinator. Monthly, quarterly, and/or annual reports should be developed by the traffic safety coordinator and submitted to appropriate management.

### **Reporting Theft or Vandalism of Agency-Owned Vehicles**

State agencies should develop appropriate procedures for internal reporting of vehicle theft or vandalism. The agency's property manager, fleet manager, and agency risk manager should jointly develop procedures regarding theft or vandalism of agency vehicles. General Services Commission's Personal Property Accounting System Manual of Instruction should be consulted for appropriate reporting forms and procedures for reporting to GSC and the State Auditor.

If an agency-owned vehicle is stolen, the agency should notify the appropriate law enforcement agency having jurisdiction. The law enforcement officer should complete an offense report and provide a copy to the agency. This information can be provided on the Texas Department of Public Safety's "Stolen Property Report" (form CAS-5). The information included on this report should include but not be limited to the following:

- Vehicle make, model, and color;
- Vehicle registration license plate number;
- Vehicle identification number (VIN) located on the left-hand side of the dashboard or on the vehicle registration certificate;
- Name of driver, if applicable;
- Name of witnesses, if any;
- Last known location of the vehicle.

When all information is available, the theft/vandalism report should be submitted for review in the same manner as vehicle accident reports. Appropriate findings and recommendations should be considered.

## **X. Vehicle Liability Issues Tort Liability Exposures**

The Texas Tort Claims Act specifically states that the State is liable for property damage only in cases involving the "operation or use of motor-driven vehicles or equipment" when "proximately caused by the wrongful act or omission or negligence of an employee acting within his scope of employment".

Issues of liability arise if an employee has an accident while performing duties in the normal course and scope of employment. If the employee's actions were discretionary, made in good faith, and occurred in the course and scope of employment, the employee is protected from lawsuits under the status of "qualified immunity." However, if the employee is liable for damages that result from negligent conduct performed in an official capacity, the state may provide indemnity up to \$100,000 per individual and \$300,000 per occurrence in the case of personal injury, death, deprivation of a right, privilege, or immunity. A single occurrence of property damage may be reimbursed up to \$10,000.

A more detailed discussion of this subject is contained in Volume IV - Section One - Tort Liability Exposures of Risk Management for Texas State Agencies.

### **ADDITIONAL RESOURCES FOR TEXAS STATE AGENCIES Organizations Texas Department of Public Safety**

License Issuance and Driver Records (L.I.D.R.)  
Post Office Box 15999 5805 North Lamar  
Austin, Texas 78761-5999 78752  
(512) 465-2032 424-2000

Texas Employers For Traffic Safety  
Texas Department of Transportation  
Traffic Safety Division  
P.O. Drawer 15426 125 East 11th Street  
Austin, TX 78761-5426 78701- 2483  
(512) 832-7001 416-3175

## **CHECKLIST FOR TEXAS STATE AGENCIES**

1. Does the agency have a formal traffic safety program that includes management support, procedures, education, and training? Yes\_\_ No\_\_
2. Has the agency established an internal driver training program? Yes\_\_ No\_\_
3. Does the agency have specific traffic accident reporting procedures? Yes\_\_ No\_\_
4. Does the agency routinely and periodically check for valid driver's licenses of employees required to drive on agency business? Yes\_\_ No\_\_
5. Does the agency conduct Department of Public Safety driver moving violation record checks for agency drivers? Yes\_\_ No\_\_
6. Is a "Non-Owners Automobile Liability Insurance Policy" purchased to provide liability protection to the agency (if authorized)? Yes\_\_ No\_\_
7. Does the agency require the employee to notify their auto liability insurance carrier to obtain additional coverage while the employee uses their personal vehicle on agency business? Yes\_\_ No\_\_

## **ENDNOTES**

1. Occupational Injury and Illness in Texas: Report to the Legislature; University of Houston Health Law and Policy Institute; March 1993.
2. Thomas, Jeffrey E.; Practical Risk Management; "Fleet and Vehicle Safety."
3. Article 6687b, §37 - Employing Unlicensed Driver, Vernon's Texas Civil Statutes.
4. "Fleet Driver Training"; Best's Safety Directory; 1991.
5. "Commercial Drivers' Licenses: The Test Question;" Safety and Health Magazine; National Safety Council; Chicago, IL; January 1991.
6. Public Employee Safety & Health Management; National Safety Council; Chicago, IL; 1990.
7. Walsh, James, August Ralston, Ph.D., Matthew Lenz, Jr., Ph.D.; Risk Management Manual; The Merritt Company; Santa Monica, CA; 1992.
8. Adapted from Fleet Safety Policy Statement Operating Procedures, City of San Marcos, Texas.

9. Network News; Texas Employers For Traffic Safety; Volume 1, Number 2; April 1993.
10. Appropriations Act, "Salary Reduction For Disciplinary Reasons", Article V-31, 1991.
11. "Motor Vehicle Records - A Management Tool;" The Hartford Fire Insurance Company; Hartford Plaza, Connecticut.
12. "Vehicle Safety on the Job - What You Should Know," 1992, Business and Legal Reports, Inc., Madison, Connecticut.
13. "Defensive Driving and You," 1992, Business and Legal Reports, Inc., Madison, Connecticut.
14. "Play It Safe...Drive To Stay Alive," 1989, Bureau of Business Practice, Inc., Waterford, Connecticut.
15. Texas Drivers Handbook, Texas Department of Public Safety; May 1992.

## **APPENDIX B DRIVER EVALUATION FORM**

**Division** \_\_\_\_\_

**Name** \_\_\_\_\_

**Terminal** \_\_\_\_\_

**Date** \_\_\_\_\_

### **INSTRUCTIONS**

This is a primary step but not the only step (driving test, medical, prior employment check, etc.) in the initial evaluation of a prospective driver employee.

Use point evaluations on all driver applicants.

If prospective driver has a driver evaluation score in excess of 6, serious consideration should be given to his qualifications prior to hiring. Points assignable:

---

#### **A. Age Points**

Under 25 2

25-55 0



Over 55 1

**B. Work History (Jobs Started Within Last 5 Years)**

None 0

1 1

2 2

More than 2 4

Any employment period of less than 1-year duration during the last 5 years will be assessed an additional 1 point.

**C. Number of Accidents (within last 3 years)**

None 0

1 1

2 2

3 5

**D. Major Moving Violations (within last 3 years)**

Hit and Run; Leaving the scene of an accident 6 each

Driving under the influence of alcohol or drugs 6 each

Any felony, homicide or manslaughter involving use of motor vehicle 6 each

Racing or excessive speeds (20 mph over limits) 4 each

Reckless, negligent, or careless driving 4 each

License suspension or revocation 3 each

Speeding 2 each

**E. Other Moving Violations (within last 3 years)**

None 0

1 or 2 1

3 and over 1 each

**GRADING**

Best 0 - 2

Average 3 - 4

Questionable 5 - 6

Poor Over 6

**APPENDIX C Pre Trip Inspection Checklist**

The following items should be considered when developing a pre-trip inspection checklist:

- Windshield wipers and fluid levels
- Windshield defogger/defroster working properly
- Antifreeze/Coolant levels; proper protection for weather conditions; check reservoir level
- Battery fluid levels; proper color in battery "eye" for sealed batteries
- Side view mirror

- Tires (tread, pressure), Winter rating if applicable
- Lights (signal, brake, head, (high/low beam) hazard/flashing,) clean and working properly

### **Emergency Kit includes:**

- Flashlight with good batteries
- Roadside distress marker
- Flares
- First aid kit
- Jumper cables
- Fire extinguisher
- Blanket (if cold weather anticipated)
- Fan belts tight and not frayed or cracked
- Hoses firm not cracking, leaking, or bloated
- Brakes (fluid levels adequate, pedal firm not spongy, pedal height from the floor is sufficient)
- Dashboard gauges are operating properly
- Seat belts are worn by all passengers; operating properly
- Vehicle is not overloaded beyond its rated weight capacity
- Shock absorbers work properly
- Oil level is sufficient
- Transmission fluid level is sufficient
- Ignition wiring is in good repair
- Snow has been cleared from the entire vehicle
- Sunglasses are available
- Horn-working
- Gasoline-full tank; cap in place
- Radio in working order (for possible weather information)
- Air bag (in newer vehicles)
- Spare tire-inflated properly; tools, jack, screwdriver, lug wrench, etc.
- Gloves (to change tire)
- Check under vehicle for leaking fluids if vehicle has been previously parked
- Map(s) of trip if necessary

If deficiencies are noted in any of these areas they should be reported to the Fleet Manager or Safety Officer prior to departure or as soon as possible.

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**Appendix D**

<b>ACCIDENT INFORMATION</b>	
Accident Date	
Time	<input type="checkbox"/> AM <input type="checkbox"/> PM
Accident location	
City/State	
Police case #	
Officer's name	
Tickets issued	<input type="checkbox"/> yes <input type="checkbox"/> no
To whom	
Charge	
Your vehicle year	Color
Make	Model
VIN#	
State	Lic. plate #
Driver's name	
Address	
City/State	
Phone	Bus. phone
Driver's lic. #	State
Insurance Co.	
Policy #	
Agent	
Were you injured?	
Registered owner's name	
Address	
Insurance Co.	
Agent	
Policy #	
PASSENGERS: List name, address, phone, business phone, and age of each passenger and if they were injured.	
WITNESSES: Write down name, address, phone, business phone, and age of each witness.	

Keep several copies of this useful form in each of your automobiles.  
Exchange information with driver(s) of other vehicle(s).

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## Section Two - Employee Safety and Health Program

### Chapter 6

#### Occupational Safety Program

##### Subchapter 6.14

##### Warehouse Safety

Revised: December 2004

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### **Volume III:**

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This chapter of Risk Management for Texas State Agencies supplies general information regarding state agency employee safety and health exposures, and techniques and methods to manage and control those exposures. It also identifies additional resources that may be available to assist state agencies in developing or enhancing its employee safety and health program. This chapter is not intended in any way to be a substitute for the advice and guidance of legal counsel, who should always be consulted regarding rights, duties, and responsibilities under the law

For the purposes of this chapter a warehouse is a structure designed to store, deposit, or stock merchandise or commodities for state agency use. Warehouses present many hazards and accident potentials, and the severity of injuries depends on the type of materials and supplies that are in storage.

## **GUIDELINES FOR ACCIDENT PREVENTION**

### *Regulatory Compliance*

- All electrical wiring should meet National Electric Code requirements or local code requirements, if applicable.
- Fire prevention and protection should meet National Fire Protection Association (NFPA) codes and standards.
- Compliance with The Texas Hazard Communication Act should be enforced.

### *Good Housekeeping Practices*

- Aisles should be designated in yellow or with black and yellow striped tape.
- Spills should be cleaned up immediately.
- Adequate lighting should be provided in all areas of the warehouse.
- Cleanliness and order should be maintained at all times.

- Tools, machinery, and equipment should be returned to their designated storage area immediately after use.

### ***Storage Safety Considerations***

- Storage bins and racks should be strong enough to support the load plus a ten percent safety factor.
- Balconies and upper floors should have the maximum load limit posted and the posted load limit should not be exceeded.
- Storage of materials should not create a hazard. Materials stored in tiers (bags, containers, bundles, pallets, drums) should be stacked, strapped, blocked, or interlocked, and should be limited in height so they are stable and secure against sliding or collapse.
- Supplies and materials should be stacked in a safe manner.
- Noncompatible supplies, materials, and chemicals should be stored separately.
- Sprinkler heads should not be blocked by piling, or materials placed in a manner that interferes with the water flow in the event of a fire.
- High explosives such as dynamite, nitroglycerine, blasting caps, etc., should not be stored in a warehouse unless designed specifically for such storage.
- Containers of flammable and combustible fluids from which liquids are drawn should be grounded to prevent static electricity, explosion, and/or fire. Storage and use of flammable and combustible liquids should be in compliance with applicable NFPA Codes.

### ***Construction and Design Considerations***

- Hand rails should be used when ascending and descending stairs and steps.
- Emergency telephone numbers should be posted on or near telephones.
- Doors that swing both ways and present a hazard should have a window installed, or door openers should be installed that restrict fast door opening.
- Differences in floor levels should be marked or other action taken to call attention to the hazard.

- Standard guard rails and toe boards should be installed on all open-sided floors, balconies, and in other areas where material is stored to prevent objects from falling.
- Safety instruction signs or warnings should be displayed throughout the building as necessary to prevent accidents.
- Loading docks should be made safe for use.
- Adequate ventilation should be provided to protect employees and prevent perishable supplies and materials from being damaged or destroyed.
- Floors should be maintained in a safe condition to avoid slipping or tripping hazards.
- The warehouse should be laid out in such a manner that aisles are kept open to provide an unobstructed path to exit doors.
- Warehouse roofs should be designed to prevent water or snow from accumulating to prevent roof leakage or collapse.
- Lifting devices and hoists should be marked and tagged to clearly indicate the maximum weight that can be safely lifted. Loads exceeding the maximum weight for the device should not be attempted.
- Blind corners should be eliminated if possible, or mirrors installed and other action taken to prevent accidents.
- Refrigerator rooms and vaults should have emergency door releases or other emergency escape devices installed to prevent individuals from being locked inside.

### ***Training and Procedures***

- Standard operating procedures should be prepared for all operations and equipment as appropriate.
- Employees should be trained to comply with the procedures and supervisors should enforce the procedures.
- Safety meetings should be held regularly to discuss hazards, accident causes, accident potentials, and safety precautions.

## ***Signs***

- Mark fuse boxes or breaker switches clearly.
- Post traffic control signs for forklift operators.
- "No Open Flame" signs should be posted and enforced in areas having explosive atmospheres.
- Maximum load limits should be posted in all elevators. Load limits should not be exceeded.

## ***First Aid Considerations***

- If medical facilities are not located nearby, selected personnel should be trained in first aid and CPR measures.
- First-aid stations should be clearly marked and kept supplied with first-aid materials.

## ***Personal Protective Equipment***

- Employees should be provided with and be required to use personal protective clothing and equipment (PPE) when performing inherently hazardous work.
- All hazardous machines should be guarded to prevent accidents.
- If serious eye hazards exist, an eye wash fountain should be provided.
- If physical body hazards exist, such as from chemicals or other toxic agents, a shower should be installed. An eye wash stand may also be appropriate.

## ***Equipment and Machinery***

- The equipment and machinery typically used in or near warehouses include the following: forklifts, riding mowers, maintenance equipment, and other heavy lifting equipment and machinery.
- Forklifts parked on an incline should have the wheels chocked (blocked) to prevent rolling.
- Forklifts with combustion engines should not be operated in areas where a spark might set off an

explosion, cause a fire, or where carbon monoxide may accumulate.

- Carbon monoxide fumes from internal combustion engines should be vented to the outside.
- Personnel should not ride the forks of forklifts unless a cage that meets safety requirements has been provided for this purpose.

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## ***ADDITIONAL RESOURCES FOR TEXAS STATE AGENCIES***

### ***Publications***

*Housekeeping - 29 CFR 1910.141(a)(3), Occupational Safety and Health Administration.*

*Storage Areas: Aisles and Passageways, Clearances - 29 CFR 1910.176(a), Occupational Safety and Health Administration.*

*Signs and Tags; Accident Prevention - 29 CFR 1910.145, Occupational Safety and Health Administration.*

*Warehouses Flammable Liquids - 29 CFR 1910.106 (d)(5)(v), Occupational Safety and Health Administration.*

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## ***CHECKLIST FOR TEXAS STATE AGENCIES***

- |   |     |    |
|---|-----|----|
| 1. Does the agency have a warehouse(s) or storage facility of any type?   | Yes | No |
| 2. If yes, has a warehouse safety program been developed and implemented?   | Yes | No |
| 3. Do warehouse safety and accident prevention guidelines or procedures exist?  | Yes | No |
| 4. Are employees trained and retrained on warehouse safety rules and procedures?  | Yes | No |
| 5. Are routine safety inspections conducted by the safety officer or independent authority from other functional areas? | Yes | No |

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## Section Two - Employee Safety and Health Program

### Chapter 6

#### Occupational Safety Program

##### Subchapter 6.15

##### Welding and Cutting

Revised:

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### Volume III:

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#### Description

Welding, cutting and brazing are hazardous industrial processes. Some of the potential safety hazards associated with these operations include:

- Fire or explosion,
- Burns
- Eye damage
- Electrical shock
- Crushed toes and fingers
- Inhalation of vapors and fumes

One of the most significant health hazards that is less readily noticeable, but has both acute and more long-term chronic respiratory health effects, is the generation of toxic metal welding fumes, gases, and particulate matter. Depending on the type of welding or cutting being done, a welder can be exposed to various pulmonary irritants, such as aluminum, carbon particles, beryllium, and zinc oxides that can cause disabling and fatal diseases, i.e., aluminosis, anthracosis, berylliosis, and metal fume fever respectively. Although there have been many advances in technology to control exposures, state employees who perform welding, cutting and brazing continue to be exposed to the safety and health hazards associated with welding, cutting and brazing. State agencies need to be informed of the best ways to reduce the risk of exposure.

Key Guidelines for Welding, Cutting and Brazing include the following:

- Obtain the Material Safety Data Sheets (MSDS) to identify any materials that may be contained in consumable material used during the welding process.
- Remove all paint and solvents before welding or torch cutting.
- Use the safest welding method for the job. For example, stick welding creates much less fume than flux core welding.

- Provide adequate ventilation in shops or rooms where work is to be performed. Keep the face far from the welding plume. Keep local exhaust hoods four to six inches from the fume source.
- Do not place work to be welded or heated on a concrete floor. Concrete, when heated, may splatter and fly hot particles exposing the welder to possible burns.
- Keep welding areas neat, clean, and free from tripping hazards.
- Provide approved personal protective equipment for welders, including welders who must enter confined spaces, manholes, or other space restricted areas. Also, provide a means to ensure their quick removal in case of an emergency.
- Do not perform cutting and welding operations in explosive atmospheres or within 50 feet of storage of large quantities of exposed, readily ignitable materials.
- Purge hoses of flammable gas mixture in open spaces and away from ignition source before lighting the torch for the first time each day.
- When working in a confined space, ensure that the fuel gas and oxygen supply are located outside the confined space. The torch and hose should be removed from confined spaces when not in use.
- Close and shut off fuel gas and oxygen torch valves and torches when not in use and when unattended.
- Protect welding torch hoses from damage by contact with hot metal, open flames, corrosive agents or sharp edges. Repair or replace hoses that have leaks, cuts, burns, worn spots or other evidence of deterioration.
- Provide shielding to protect personnel from heat, sparks, slag, light, and radiation. Whenever practical, all arc welding operations shall be shielded by non-combustible or flame-proof screens which will protect the employees and other persons working in the vicinity from the direct rays of the arc.
- Provide a fire watch for at least 30 minutes after completion of cutting or welding operations to detect and extinguish smoldering fires.

Not every control method will be effective in a given setting. Therefore, a safety professional should assess conditions to determine which method or combination of methods will best suit the situation. A regular monitoring program should also be implemented.

## OSHA Requirements

OSHA provides basic requirements for welding and cutting. Some of the most frequently cited welding standards in general industry are referenced in 29 CFR 1910. Key portions of the regulations and how to comply are included here:

### 29 CFR 1910 Subpart H - Hazardous Materials, 1910.101 - 1910.105

- covers the general requirements for the handling, storage, and use of compressed gases other than those consumed in the welding process. The General Requirements section of 1910.101 is concerned with:

- Cylinder inspection to include required markings

- Handling, storage, and utilization
- Installation and maintenance of safety relief devices.

1910.252 (c) (4)(iv) (B) (C) requires specific control measures for welding materials that contain certain metal, such as precautionary labels on welding material containing cadmium or fluorine compounds.

1910.252 (c)(4)(iv) (A) requires "all filler metals and fusible granular materials to carry the following notices, as a minimum on tags, boxes or other containers." CAUTION - Welding may produce fumes and gases hazardous to health. Avoid breathing these fumes and gases. Use adequate ventilation.

1910.252 (c)(5)(7)(8)(9) and (10) contain requirements for welding and cutting with materials that contain zinc, lead, beryllium, cadmium and mercury. According to the standard, in all cases, work should only be performed "using local exhaust ventilation and airline respirators unless atmospheric tests under the most adverse conditions have established that the worker's exposure is within acceptable concentrations defined by 1910.1000 of this part."

1910.252 and 1910, Subpart S, "Electrical", provides guidelines for arc welding, resistance welding, welding in confined spaces.

1910.253(b)(2) (ii) contains requirement for securing and storing gas cylinders inside buildings. Cylinders shall be stored in well-protected, well-ventilated, dry location at least 20 feet from highly combustible material, i.e. oil.

1910.253 (b) (2) (iv) requires valve protection caps in place and secured when compressed gas cylinders are transported, moved, or stored, except where cylinders are in use or connected for use.

1910.253 (b) (4) (i) & (iii) requires that compressed gas cylinders be separated (oxygen from fuel gas) by a distance of 20 feet; or by a 5 foot high non-combustible barrier of at least a ½ hour fire resistance rating.

1910.253(e)(3) (ii)(c)(3) requires flash-back protection that will prevent flame from passing into the fuel gas systems.

## Health Protection and Ventilation

Various adverse health effects may be caused by inhaling welding fumes depending on the type of welding done and the type of metals being welded. According to OSHA, possible elements of welding fumes include but not limited to the following: Zinc, Cadmium, Beryllium, Iron Oxide, Mercury, Lead, Fluorides, Chlorinated Hydrocarbon Solvents, Phosgene, Carbon Monoxide, Ozone and Nitrogen Oxide.

The following link takes the reader to OSHA's page for chemicals commonly associated with welding, cutting and brazing operations.

## Welding, Cutting, Brazing

Since 1989, the OSHA PEL (permissible exposure limit) for total welding fume was set at 5mg/m<sup>3</sup> as an eight-hour TWA (time-weighted average. In its "Occupational Safety and Health Guideline for Welding Fumes." OSHA notes several methods to control exposure to welding fume and gases.

- Process enclosure;
- Local Exhaust Ventilation;
- General Dilution Ventilation;
- Personal Protective Equipment (PPE)

Mechanical ventilation at 2,000 cubic square feet of air per minute per welder is required when welding or cutting on metals, except where local exhaust hoods, booths, or approved airline respirators are provided, or there is less than 10,000 cubic feet of space per welder or where the ceiling height is less than 16 feet or in confined spaces or where structural barriers (such as partitions or balconies) significantly obstruct cross ventilation. Reference: 29 CFR 1910.252(c)(2)(i)(a) through (c).

The American Conference of Governmental Industrial Hygienists (ACGIH) has a TLV-TWA for welding fume-total particulate of 5mg/m<sup>3</sup>. The ACGIH TLV (threshold limit value) represents conditions under which it is believed that nearly all workers may be repeatedly exposed to day after day without adverse health effects.

If exposure limits are being exceeded, then an agency must determine what corrective action is needed. A respiratory protection program should be implemented until a permanent engineering control can be developed and implemented.

## **Fire Prevention and Protection (Hot work)**

Before welding commences in other than a specifically designated welding area, a hot work permit should be issued in accordance to Occupational Safety and Health Standards (OSHA) - 29 CFR Part 1910 Subpart Q, (General Industry) Section 1910.252(a)(2)(iv) and (xiii). According to 29 CFR 1910.119 (b), Hot work is defined as work being done where heat, open flames, slags or sparks are created during the work process, i.e. welding, cutting, brazing, and grinding operations. Monitoring, evaluating, and controlling the hot work process is essential for reducing and/or eliminating the potential for serious injury of property loss. A hot work permit, as defined in 29 CFR 1910.146 (b), is recommended for documenting this process. A hot work permit is required for each welding project and should be valid only for the time period noted on the form.

Key elements of a Hot Work Permit Program should contain the following:

- Communicate the hazards being introduced in the work area with all affected personnel;

- Authorize where the use of heat, flame or spark producing equipment will be allowed in specific operations or locations;
- Conduct an inspection of the work area for combustibile and flammable materials. Removing flammable materials from the work area before starting hotwork, verifying that combustibile material are at least 35 feet away from the hot work, or shielding material with flame-retardant covers before conducting hot work;
- Maintain fire extinguishing equipment for use while welding or cutting operations are being performed;
- Provide a firewatcher or standby person who is proficient in the operation of available fire extinguishing equipment with proper type of fire extinguishing equipment in place during and for 30 minutes after all heat, spark or flame producing activities are completed;
- Select and provide the appropriate personal protective equipment (PPE) including face and eye shields, apron, gloves, hearing protection, safety shoes and respiratory equipment;
- Train and educate employees in welding and cutting processes, maintenance, housekeeping, inspections and PPE.

National Fire Protection Association (NFPA) standard 51 B, "Cutting and Welding Processes," Appendix A (1999) contains a good sample Hot Work Permit.

Guideline Adopted by Reference Federal Occupational Safety and Health Administration, Department of Labor Occupational Safety and Health Standards - 29 CFR Part 1910 Subpart Q, (General Industry) Section 1910.251 to 1910.255 - [Welding, Cutting, and Brazing](#).

This is OSHA's standard for Welding, Cutting, and Brazing the covers the following: 1910.251, Definitions, 1910.252, General Requirements, 1910.253, Oxygen-fuel gas welding and cutting, 1910.254, Arc welding and cutting, and 1910.255, Resistance welding.

## Resources

### Federal Agencies

#### [Chemical Welding](#)

This is a link to the Electronic Library of Construction Occupational Safety and Health (ELCOSH) on the NIOSH website.

#### [U. S. EPA](#)

This is a link to a welding web based training module from the U.S. EPA OSHA 600 Collateral Duty Safety and Health Course.

### State Agencies

#### [The University of Texas at San Antonio](#)

This is a link to the Table of Contents of UTSA Environmental Health and Safety Operations Guide. Click on Welding and Cutting under Section 3: Shop Safety and this will take you to sample welding and cutting guidelines.

### [Texas Workers' Compensation Commission, TWCC Resource Center](#)

This link takes the reader to the Resource Center. Click on Alphabetical Listing of Publications. There is a short safety training aid entitled, "Compressed Gas Cylinders - Take 5 for Safety".

## **Reports and Publications**

### [Brookhaven National Laboratory](#)

This link takes the reader to a sample policy from Brookhaven National Laboratory that describes the design and operation for storage, transportation, identification, and use of compressed gas cylinders.

### [Brookhaven National Laboratory](#)

This link takes the reader to a sample policy from Brookhaven National Laboratory that provides the requirements for cutting and welding with electric arcs, oxy-fuel gas and other forms of hot work such as flames, grinding, or brazing activities.

Best's Loss Control Engineering Manual, 2002, Book 6. Section W-2, Welding, Brazing and Cutting. Hazard indexes are given for different welding activities along with onsite inspection suggestions and items to investigate.

Accident Prevention Manual for Business and Industry, Engineering & Technology; 11th Edition; National Safety Council; 1997, Part Four; pp. 603-627.

Guidelines for Manz, A.F. "Welding and Cutting," Fire Protection Handbook,; National Fire Protection Association; pp. 2-159 to 2-166.

## **Other Organizations and Institutes**

### [The American Welding Society](#)

This is a link to the American Welding Society. This link contains several safety & health fact sheets on welding, such as fumes and gases, electrical hazards, noise, burn protection, etc.

[Lehigh University](#) - This is a sample welding, cutting, and brazing policy.

[Texas A & M University](#) - This is a link to a sample welding, cutting, and brazing checklist from Texas A & M's Office of Engineering Safety.

Video Libraries Texas Department of Health, Audio/Visual Library - [Audio/Visual](#)

Welding Safety (1996) Texas Workers' Compensation Commission, [TWCC Resource Center](#)

This link takes the reader to the Resource Center. Click on Audiovisual Resource Catalog.

Titles include:

- Welding Hazards
- Welding Safety
- Safe Work with Hotwork Shop Safety
- Welding Handling and Storage of Compressed Gas Cylinders

[Vermont Safety Information Resources, Inc.](#)

This website contains free downloadable PowerPoint presentations of various safety issues, one of which is welding, cutting, and brazing.

[CD-ROM Training -](#)

This is SORM's Agency Outreach & Training site containing information on interactive CD-ROMs available to state agencies for individual training. Click on Computer-Based Training. Titles include:

### **Welding Safety Compressed Gas Cylinders Checklist**

- |  |     |    |
|--|-----|----|
| 1. Are employees authorized and trained to use welding, cutting or brazing equipment?  | Yes | No |
| 2. Do employees read and follow equipment manufacturer's instructions, cylinder labels, and MSDSs?   | Yes | No |
| 3. Is cutting and welding permitted only in areas that are or have been made fire safe?  | Yes | No |
| 4. Have all flammables and combustible materials within a 35 feet area of the welding operation been removed?  | Yes | No |
| 5. Have workers and other personnel adjacent to the welding areas been protected from radiant energy or splatter by use of noncombustible and/or flameproof screens?   | Yes | No |
| 6. Does the agency provide the required personal protective equipment: leather apron and leggings, flame-proof gauntlet-style gloves, hearing protection, welder's helmet safety shoes and respirators when necessary? | Yes | No |
| 7. Is the agency in compliance with all OSHA threshold exposure limits regarding fume exposures?   | Yes | No |
| 8. Is local exhaust or general ventilation provided for welding operations?  | Yes | No |

- |   |     |    |
|---|-----|----|
| 9. Is the appropriate fire extinguishing equipment readily available when welding, cutting or brazing operations are accomplished?                      | Yes | No |
| 10. Is welding equipment checked for damaged before each use?   | Yes | No |
| 11. Has a hot work permit been issued before welding commences in other than a specifically designated welding area?                                    | Yes | No |
| 12. Have the affected employees been trained on the use of a hot work permit?   | Yes | No |
| 13. Are all compressed gas cylinders securely stored, separated from combustible materials, with oxygen cylinders stored from other fuel gas cylinders? | Yes | No |

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## Section Two - Employee Safety and Health Program

### Chapter 6

#### Occupational Safety Program

##### Subchapter 6.17

#### Control of Hazardous Energy (Lockout / Tagout)

New: November, 2003

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### Volume III:

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### Control of Hazardous Energy (Lockout / Tagout

Logout / Tagout Checklist in [HTML](#) or in a [Word document](#).

#### Description

State employees who service or maintain machines or equipment may be exposed to serious physical harm or death if hazardous energy is not controlled. Failure to lockout machinery before working on it is a major cause of injury and death in Texas and the United States. Workers can be electrocuted or lose fingers, hands, arms. Workers can also suffer severe crushing injuries because machinery is inadvertently turned on while being serviced or maintained.

Establishing an effective lockout / tagout program can prevent an estimated 120 fatalities and 50,000 injuries in the U.S. each year. Employees injured on the job from exposure to hazardous energy lose an average of 24 workdays in the U.S. each year. A review by the National Institute of Occupational Health and Safety (NIOSH) of 152 fatalities revealed the following:

- Failure to completely de-energize, isolate, block, and/or dissipate the energy source accounted for 82% of the fatalities.
- Failure to lockout and tagout energy control devices and isolation points after de-energization accounted for 11% of the fatalities.
- Failure to verify that the energy source was de-energized before beginning work accounted for 7% of the fatalities.

Workers may be exposed to hazardous energy in several forms and combinations during installation, maintenance, service, or repair work. A comprehensive hazardous energy control program should address all forms of hazardous energy:

- Kinetic (mechanical) energy in the moving parts of mechanical systems.
- Potential energy stored in pressure vessels, gas tanks, hydraulic or pneumatic systems, and springs (potential energy can be released as hazardous kinetic energy).

- Electrical energy from generated electrical power, static sources, or electrical storage devices (such as batteries or capacitors).
- Thermal energy (high or low temperature) resulting from mechanical work, radiation, chemical reaction, electrical resistance, or convection.

## **Risk Avoidance, Prevention, and/or Control**

The following are key elements of a program to control hazardous energy:

- Develop and implement a hazardous energy control program.
- Identify and label all hazardous energy sources.
- Before initiating work, do the following:
  1. De-energize all sources of hazardous energy:
    - Disconnect or shut down engines or motors.
    - De-energize electrical circuits.
    - Block fluid (gas or liquid) flow in hydraulic or pneumatic systems.
    - Block machine parts against motion.
  2. Block or dissipate stored energy:
    - Discharge capacitors.
    - Release or block springs that are under compression or tension.
    - Vent gases from pressure vessels, tanks; but never vent toxic, flammable, or explosive vapors into the atmosphere.
- Lockout and tagout all forms of hazardous energy including electrical panels, control valves, etc. Use lockout devices for equipment that can be locked out. Tagout devices may be used in lieu of lockout devices only if the tagout program provides worker protection equivalent to that provided through a lockout program.
- Require workers to secure energy control devices with their individually assigned locks and keys.
- Require that each lock used to secure an energy control device be clearly labeled with durable tags to identify the worker assigned to the lock.
- Make sure that the worker who installs a lock is the one who removes it after all work has been completed; if work is not completed when the shift changes, workers arriving on shift should apply their locks before departing workers remove their locks.
- Verify by test and/or observation that all energy sources are de-energized before work begins.
- Inspect repair work before reactivating the equipment.
- Make sure that all workers are clear of danger points before re-energizing the system.
- Train ALL workers in the basic concepts of hazardous energy control, and the details of site-specific energy control procedures.
- Inspect and audit energy control procedures at least annually. Document findings and make appropriate changes to energy control procedures.

## **Guideline Adopted by Reference**

Occupational Safety and Health Administration (OSHA), Department of Labor Occupational Safety and Health Standards - 29 Code of Federal Regulations (CFR) Part 1910.147

“The Control of Hazardous Energy (Lockout / Tagout)” Occupational Safety and Health Standards - 29 CFR 1910.333

“Selection and Use of Work Practices” Electrical

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## Resources

### Federal Agencies

#### Occupational Safety and Health Administration, Department of Labor (OSHA)

[OSHA Lockout / Tagout \(LOTO\) Web Site](#) – This site provides an interactive training tool and a number of additional resources for LOTO.

[OSHA LOTO Training](#) – This page contains a description of the Standards in a question and answer format.

[OSHA LOTO Plus Expert Advisor](#) – Here you will find an interactive software program that determines, through a series of questions, whether a facility needs a lockout / tagout program. The answers generated in the program assist in the preparation of a site-specific control of a hazardous energy written program.

[OSHA Control of Hazardous Energy \(Lockout / Tagout\)](#) – This link contains training materials which include: discussion / overheads, student handouts, and a self-inspection checklist.

### State Agencies

#### Texas Workers' Compensation Commission (TWCC)

[TWCC - Lockout / Tagout](#) – Downloadable Lockout / Tagout brochure in Portable Document Format (PDF) that contains useful information for the control of hazardous energy.

### Reports and Publications

Accident Prevention Manual for Business and Industry (Engineering & Technology); 11th Edition; National Safety Council; 1997; Part Two; Chapter 6; pages 150-153.

OSHA 1910 Compliance Manual for General Industry; Merritt Publishing; Volume 1; Chapter 1910.147.

Safety & Health Training An OSHA Compliance Handbook; Business & Legal Reports, Inc.; 9/93; Volume I; Section II; Chapter 7; Subpart J; Part 1910.147.

“Preventing Worker Deaths from Uncontrolled Release of Electrical, Mechanical, and Other Types of Hazardous Energy”; NIOSH, publication 99-; August 1999.

“Modern Methods”, Occupational Health & Safety; October 2000.

“The Language of LOTO”, Occupational Health & Safety; September 2001.

“Leverage Your LOTO Logic”, Occupational Health & Safety; March 2002.

## **Video Libraries**

### **Texas Department of Health, Audio/Visual Library**

[TDH Audiovisual Library](#) – “Lockout / Tagout: Affected and Authorized Persons”; 7573; 2000;

“Lockout / Tagout: An Open and Shut Case”; 7546; 2000

“Lockout / Tagout: When Everyone Knows”; 5252; 1992

### **Texas Workers' Compensation Commission, TWCC Resource Center**

[TWCC Audiovisual Library](#) – “Lockout/Tagout: A Training Program for Employees”; V1180CC, V1180S; “Lockout/Tagout: Controlling the Beast”; V701CC; “Control of Hazardous Energy Sources”; V608

### **Vermont Safety Information Resources, Inc.**

[Lockout / Tagout PowerPoint Presentation](#) – This site contains 199 free downloadable safety PowerPoint presentations on a multitude of safety issues. Lockout / Tagout is one of the PowerPoint presentations.

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## Section Two - Employee Safety and Health Program

### Chapter 6

#### Occupational Safety Program

##### Subchapter 6.18

#### Powered Industrial Trucks (Forklifts)

Revised: December 2004

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### Volume III:

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This chapter of Risk Management for Texas State Agencies supplies general information regarding state agency liability exposures, and techniques and methods to manage and control those exposures. It also identifies additional resources that may be available to assist state agencies in developing or enhancing its liability program. This chapter is not intended in any way to be a substitute for the advice and guidance of legal counsel, who should always be consulted regarding rights, duties, and responsibilities under the law.

#### *Overview*

Numerous state agencies use powered industrial trucks (forklifts) in daily operations to carry, lift, or stack materials. These trucks require safeguards for the safety of the operator and other employees. General operating procedures, inspection and maintenance procedures, and an operator training program are also required.

#### *Types of Trucks*

Powered industrial trucks can be classified by power source, operator position, or by means of engaging the load.

#### *Rider-Controlled Trucks*

The widely-used lift truck, with a cantilevered load engager, vertical masts, and elevating mechanism is usually referred to as a rider-controlled truck. Some rider-controlled trucks use a platform to engage the load. Both of these trucks may be either high-lift (has an elevating mechanism that permits the tiering of one load on another) or low-lift (has a mechanism that raises the load only enough to permit horizontal movement).

In warehouse operations, other types of rider-controlled trucks can be used to raise the operator to a desired height.

#### *Motorized Hand Trucks*

Another category of powered industrial truck is the motorized hand truck controlled by an operator who walks behind it. This truck also has a platform or lifting forks to engage the load and may be either a high-lift truck for tiering or a low-lift truck to raise the load only enough for horizontal travel.[1](#)

### ***Safeguards for Powered Industrial Trucks***

Powered industrial trucks present a number of safety challenges to operators. In order to reduce or eliminate some of these safety challenges, powered industrial trucks must be equipped with certain safety features.

#### ***Operator Restraint System***

Every powered industrial truck should have some type of restraint system. If the truck came with a system provided by the manufacturer, then it should be used according to the manufacturer's specifications. If the truck does not have such a system, the manufacturer should be contacted to ascertain what type of restraint system is recommended. If the truck is retrofitted, the restraint system should be as recommended by the manufacturer.

#### ***Overhead Guards***

Overhead guards are required when trucks will be working with overhead loads or when working in an area where objects may fall from overhead areas. The overhead guard must be constructed of sufficiently strong materials so that it will withstand the impact of any type of object which could be reasonably expected to pose a threat to the truck operator. The overhead guard may be of solid sheet construction or it may be of open construction. If it is of the open type, the openings must be small enough to block the smallest size material which is being worked with. The overhead guard needs to be designed so that it extends beyond the operator's immediate position.

#### ***Additional Guards***

Additional guards are needed over exposed tire areas and over any moving parts that pose a hazard to the operator.

#### ***Load Backrest Extension***

A load backrest extension should always be present when the type of load being worked presents a hazard to the operator. Under such circumstances, the load being worked should not be higher than the backrest extension. Backrest extensions shall be constructed in accordance with 29 CFR 1910.178 and the *American National Standard for Powered Industrial Trucks, Part II, ANSI 1-1969*.

#### ***Horns and Warning Devices***

Trucks must be equipped with warning horns. The horn should be one that will emit a distinct sound that is loud enough to be heard over other ancillary noise in the operating area. The primary horn

should be under the control of the operator; however, the back-up horn must operate automatically. Warning lights may also be used. If lights are used, they should be mounted on the overhead guard and under the operator's control.

### *Fire Extinguisher*

Each powered industrial truck needs to be equipped with a portable fire extinguisher. The extinguisher should be of the type and size appropriate to combat the class of fire which might occur. The extinguisher should be permanently affixed to the truck at some obvious location. All operators need to be trained on the use of the extinguisher. The extinguisher must be inspected and maintained as required in NFPA 10, Chapter 4.

### *Motorized Hand Trucks*

Motorized hand trucks must have hand guards for the control handles. The guards must be constructed so as to prevent the operator's hands or the truck controls from coming in contact with other solid objects, such as a wall or doorway, while being operated. In addition, the control handle must be designed so that the truck's brakes are automatically applied when the handle is in the extreme up or down position.[2](#)

### *General Operating Principles*

Improper use of forklifts can cause serious injuries and property damage. Safe operation of a forklift can reduce the risk of accidents in the workplace. Always consult the manufacturer's operating procedures in the owner's manual for recommended operating procedures for a specific type of forklift. The basic, safe operating procedures are discussed in the following paragraphs.

#### *Speed*

Excessive speed can lead to accidents in the workplace. Drive at a safe speed, start and stop gradually, and follow at least three truck lengths from the truck ahead to allow ample time and space for safe stopping. Drive slowly on wet or slippery floors, over dock plates, and around corners. Always obey posted speed limits, traffic regulations, and other road signs, including floor markings.[3](#)

#### *Turns*

Forklifts require special turning techniques because of their design. Forklifts are taller, narrower, and two to three times heavier than most vehicles. In fact, forklifts have very quick steering compared to a car. Because a forklift is generally steered by the rear wheels, the driver must always be careful when steering because the rear end of the forklift swings in a wide arc. Use extreme caution when turning. Avoid turning too sharply. This can cause the forklift to swerve or tip over sideways. Turns should be made smoothly, gradually, and at a safe speed.[4](#)

#### *Loading and Unloading*

- **Loading** - Before loading, plan the route and inspect the load to ensure that it is within the rated capacity of the forklift. Also, inspect the condition of pallets and cargo, trailer-to-dock levelers, and vehicle restraints. Make sure the load is within the forklift's weight limit. Overloads make the forklift difficult to steer and may cause the forklift to turn over.

Make a plan for loading. Think in advance how to make each load stable and centered. If the load consists of loose items, stack and secure the items carefully. Place irregular-shaped or long objects and heavy objects with the weight as low as possible. Block round objects, e.g., pipe, and secure if necessary so that they will not roll off the forklift. This increases stability and makes steering easier. Check the maximum lift height on the forklift's nameplate, and do not stack materials higher than recommended. If the type of load presents a hazard, install a vertical load backrest extension to protect the driver.

When raising a load, line up with the center of the load and approach it straight on with the forks in the traveling position. Lift the load smoothly and slowly in order to check the stability and weight of the load. Maintain a stable load while picking up materials by keeping the forks level, at an equal distance from the center stringers, and spread towards the outside of the materials. Lower the load approximately six inches off the floor. Six inches is the maximum height for carrying a load. Tilt the mast back to cradle the load before traveling with the load. Never raise or lower the forks while driving, turning, or maneuvering.[5](#)

- **Unloading** - When unloading materials onto a rack, stack, truck, or railroad, raise and position the load to the correct height. Check overhead clearance levels. Move slowly into position and tilt the elevated load forward only when directly over the unloading area. When stacking, know how high materials can be safely stacked. Always finish lowering the forks before backing, and look over the shoulder while carefully backing out.

Never place a load in an aisle or fire lane, or in front of a stairway or fire equipment. Be especially careful to observe "this side up" signs.[6](#)

Set the brakes and chock the wheels of trucks, trailers, or railroad cars to prevent movement while loading and unloading. Special jacks may be needed to support an uncoupled trailer to prevent it from overturning when the forklift and load enter. Before driving into a truck, trailer, or railroad car, check the strength of the floor, which must be able to withstand the weight of the forklift and the load.

### *Proper Care of Vehicles*

Operators should use a forklift correctly and for the purposes for which it is designed. Unless the forklift has a device specifically designed for the following purposes, do not bump skids, push piles of materials out of the way, use makeshift connections to move heavy objects, use the forks as a hoist, move other forklifts or freight cars, or open/close freight car doors. Damaged or disabled forklifts should never be pushed or carried by another forklift, but moved only by towing with a tow bar and



safety chain.

According to OSHA, a forklift is unattended if the operator is more than 25 feet from it or cannot see it. If the operator must leave the forklift unattended, always lower the forks, put the controls in neutral, set the parking brakes, shut off the power, remove the key or connector plug, and lower the load-engaging mechanism to an inoperative position.

Do not leave a forklift in aisles, doorways, or where it blocks exits or emergency equipment. This can be accomplished by designating an area for parking forklifts when not in use or when the shift has ended.

Take proper safety measures when using gas-powered forklifts inside buildings and confined spaces. Gasoline, liquid petroleum (LP) gas, and diesel forklifts emit carbon monoxide (CO) in the exhaust and cause dangerous levels of CO to build up. To reduce the risk of CO poisoning, the operator should

- Avoid racing the engine, braking repetitively, idling for long periods of time, and using the hydraulic systems erratically
- Avoid storing or parking forklifts in cold areas so exhaust from warm-ups are reduced
- Tune the forklift regularly
- Never leave the forklift running inside an enclosed space
- Install a catalytic converter to reduce CO emissions, if possible.[7](#)

### *Operator and Pedestrian Safety*

The operator should always wear a seatbelt and keep the hands, arms, and legs inside the cab of the forklift and a safe distance from the hoist mechanism. It is the operator's responsibility to look out for coworkers and sound the horn at doorways, blind corners, and when coworkers are present. A backup alarm signals coworkers when the forklift is being driven in reverse. Flashing lights mounted on the forklift give extra protection, especially in locations with excessive noise. The operator should never let anyone stand or walk under the elevated forks, full or empty. Passengers should never be lifted or carried in unauthorized ways. The only exception is when an approved safety platform designed to lift people is used.

Set up a method to enforce safety rules and practices. Additional training, warnings, disciplinary actions, or removal from the job are possible options. Regardless of its form, an enforcement policy is necessary.[8](#)

### *Driving on Grades*

On all grades, ascend and descend slowly; keep the load raised with the load and load engaging means tilted back if applicable, and raised only as far as necessary to clear the road surface. On grades of more than 10%: always drive a loaded forklift (up or down) with the load uphill; always drive an unloaded forklift (up or down) with the forks downhill.[9](#)

### *Crossing Railroad Tracks*

Extra caution should be taken when crossing railroad tracks. Cross tracks diagonally wherever possible to prevent forward tipping and cargo damage. Park forklifts at least eight feet away from the center of railroad tracks.[10](#)

### *Load Capacity*

Selection of the right kind of forklift is the first step in safety. Load capacity is naturally the first consideration. Every forklift has a maximum safe load capacity marked on its nameplate. This rating indicates the load capacity in pounds and the load center in inches. For example, a forklift with a 5,000 lb (2,268 kg) load capacity and 24-inch load center means it can lift 5,000 lbs if the load's center of gravity is 24 inches from the face of the load arms. Every operator should be familiar with the maximum load limits of the forklift being operated and should be required to never exceed that load capacity.

Forklifts are designed with weight in the rear to counterbalance the load carried in front. The front wheels are the balance point between the forklift and its load. Overloading the forklift can make it unstable and it may tip over. The operator should never add extra weight to counterbalance an overload because this makes the forklift difficult to steer and puts extra strain on the hydraulic system, tires, axle, chains, forks, and motor.[11](#)

### *Inspection and Maintenance*

Powered industrial trucks should be thoroughly inspected on a regular basis and given a complete overhaul after regular periods of operation. Operators should inspect their trucks before and after each shift. Repairs, replacements, or other work should be performed only by trained mechanics wearing proper protective equipment, particularly when handling electrically powered trucks. Repairs or refueling of gasoline and liquified petroleum trucks should be done according to NFPA standards to avoid health hazards, burns, and explosions.[12](#)

### *Operator Selection*

Trainees should have a valid driver's license and a good driving record. Employers should verify the trainees' previous experience whenever possible. Agencies should select trainees that meet certain physical and mental qualifications required by safety standards.[13](#)

### *Training*

Powered industrial truck operators hired before September 1, 2000, must receive formal documented training and evaluation by March 1, 2001. Employees that are hired after September 1, 2000, must receive initial training and evaluation before the employee is assigned to operate a powered industrial truck.

The operator must be trained and evaluated on the type of equipment that he or she will be using in the workplace, e.g., lift truck, order picker, or motorized hand truck.

Normal refresher training and evaluation shall be conducted at least once every three years after the initial training.[14](#)

### ***Training Program Implementation***

Training shall consist of a combination of formal instruction (e.g., lecture, discussion, interactive computer learning, video tape, written material), practical training (demonstrations performed by the trainer and practical exercises performed by the trainee), and evaluation of the operator's performance in the workplace.

All operator training and evaluation shall be conducted by persons who have the knowledge, training, and experience to train powered industrial truck operators and evaluate their competence.

### ***Training Program Content***

Powered industrial truck operators shall receive initial training in the following topics, except in topics which the agency can demonstrate are not applicable to safe operation of the truck in the agency's workplace.

- **Truck-Related Topics**

- Operating instructions, warnings, and precautions for the types of truck the operator will be authorized to operate
- Differences between the truck and the automobile
- Truck controls and instrumentation: where they are located, what they do, and how they work
- Engine or motor operation
- Steering and maneuvering
- Visibility (including restrictions due to loading)
- Fork and attachment adaptation, operation, and use limitations
- Vehicle capacity
- Vehicle stability
- Any vehicle inspection and maintenance that the operator will be required to perform
- Refueling and/or charging and recharging of batteries
- Operating limitations
- Any other operating instructions, warnings, or precautions listed in the operator's manual for the type of vehicle that the employee is being trained to operate.

- **Workplace-Related Topics**

- Surface conditions where the vehicle will be operated
- Composition of loads to be carried and load stability
- Load manipulation, stacking, and unstacking
- Pedestrian traffic in areas where the vehicle will be operated
- Narrow aisles and other restricted places where the vehicle will be operated
- Hazardous (classified) location where the vehicle will be operated
- Ramps and other sloped surfaces that could affect the vehicle's stability
- Closed environments and other areas where insufficient ventilation or poor vehicle maintenance could cause a buildup of carbon monoxide or diesel exhaust
- Other unique or potentially hazardous environmental conditions in the workplace that could affect safe operation.

- *Refresher Training and Evaluation*

Refresher training, including an evaluation of the effectiveness of that training, shall be conducted to ensure that the operator has the knowledge and skills needed to operate the powered industrial truck safely.

Refresher training in relevant topics shall be provided to the operator when

- The operator has been observed to operate the vehicle in an unsafe manner
- The operator has been involved in an accident or near-miss incident
- The operator has received an evaluation that reveals that the operator is not operating the truck safely
- The operator is assigned to drive a different type of truck, or
- A condition in the workplace changed in a manner that could affect safe operation of the truck.

*Avoidance of Duplicative Training*

If an operator has previously received training in a topic specified in this section, and such training is appropriate to the truck and working conditions encountered, additional training in that topic is not required if the operator has been evaluated and found competent to operate the truck safely.

*Certification*

The agency shall certify that each operator has been trained and evaluated. The certification shall include the name of the operator, the date of the training, the date of the evaluation, and the identity of the person(s) performing the training or evaluation. [15](#)

### ***Checklist for Essential Program Elements***

- |  |     |    |
|--|-----|----|
| 1. Does every powered industrial truck have some type of restraint system?   | Yes | No |
| If not, has the manufacturer been contacted to ascertain the type of restraint system recommended for retrofit?              | Yes | No |
| 2. Are all powered industrial trucks equipped with warning horns, automatic back-up warning devices, and fire extinguishers? | Yes | No |
| 3. Are all motorized hand trucks equipped with hand guards for the control handles?  | Yes | No |
| 4. Are all unloaded forklifts driven with the forks at ground level?   | Yes | No |
| 5. Is load capacity being given top priority when selecting a forklift truck?  | Yes | No |
| 6. Does the agency training program consist of both classroom and practical training demonstrations?                         | Yes | No |
| 7. Are operators trained on all types of trucks they will operate prior to being qualified?                                  | Yes | No |
| 8. Is refresher training being provided when drivers are observed operating the truck in an unsafe manner?                   | Yes | No |

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### ***Additional Resources for Texas State Agencies***

#### ***Publications***

*Occupational Safety and Health Standards - 29 CFR Part 1910, Subpart N - Materials Handling and Storage, Section 1910.178 - Powered Industrial Trucks; amended December 1, 1998*  
U.S. Department of Labor (OSHA)  
525 Griffin Street, Room #602  
Dallas, TX 75202  
(214) 767-4731

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#### ***Endnotes***

1. Krieger, Gary R. and John F. Montgomery, eds.; "Powered Industrial Trucks" in *Accident Prevention Manual for Business and Industry, Engineering & Technology*, 11th Edition; National Safety Council; 1997; p. 507. ([Return to text](#))
2. Krieger, Gary R. and John F. Montgomery, eds.; pp. 507-512.

and

Nussbaum, Julie A. and Gerald L. Woodson, eds.; *Workplace Safety in Action: Forklifts*; J. J. Keller & Associates, Inc.; December 1998; p. 185. ([Return to text](#))

3. Code of Federal Regulations, Title 29, Part 1910, Section 1910.178(n); Amended December 1, 1998. ([Return to text](#))

4. Krieger, Gary R. and John F. Montgomery, eds.; pp. 516-517. ([Return to text](#))

5. 29 CFR §1910.178(o); Amended December 1, 1998.

and

Krieger, Gary R. and John F. Montgomery, eds.; pp. 517-518.

and

*Life Truck Safety*; National Safety Council; Publication, #15244-0000; 1991; p. 4. ([Return to text](#))

6. *Forklift Safety*; Business & Legal Reports, Inc.; Publication, #200 017 00; 1990; p. 11. ([Return to text](#))

7. Krieger, Gary R. and John F. Montgomery, eds.; pp. 515-516 and 522-523. ([Return to text](#))

8. Krieger, Gary R. and John F. Montgomery, eds.; p. 516.

and

*Lift Truck Safety*; p. 7. ([Return to text](#))

9. 29 CFR §1910.178(n)(7); Amended December 1, 1998.

and

Nussbaum, Julie A. and Gerald L. Woodson, eds.; p. 59. ([Return to text](#))

10. 29 CFR §1910.178(n)(5); Amended December 1, 1998. ([Return to text](#))

11. Krieger, Gary R. and John F. Montgomery, eds.; p. 517. ([Return to text](#))
12. Krieger, Gary R. and John F. Montgomery, eds.; p. 527. ([Return to text](#))
13. Krieger, Gary R. and John F. Montgomery, eds.; p. 523. ([Return to text](#))
14. "Powered Industrial Truck Operator Training"; U.S. Department of Labor, Occupational Safety and Health Administration; *Federal Register*, Vol. 63, No. 230: Section VIII - Summary and Explanation of the Final Standard; December 1, 1998; pp. 66254-66259. ([Return to text](#))
15. 29 CFR §1910.178(l); Amended December 1, 1998. ([Return to text](#))

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## Section Two - Employee Safety and Health Program

### Chapter 7

#### Occupational Health Program

##### Subchapter 7.0

##### Introduction

Revised: November 2004

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### Volume III:

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This chapter of *Risk Management for Texas State Agencies* supplies general information regarding state agency occupational health exposures and suggested techniques and methods to manage and control health exposures. It also identifies additional resources that may be available to assist state agencies in developing or enhancing its occupational health program. This chapter is not intended in any way to be a substitute for the advice and guidance of legal counsel, who should always be consulted regarding rights, duties, and responsibilities under the law.

Occupational safety (as previously discussed in Volume III, Section Two, Chapter 6) is generally defined as freedom from job-related injuries; occupational health means freedom from job-related diseases. Occupational safety focuses on physical hazards and acute or sudden events causing an immediate accident, injury, or loss. Occupational health deals not only with acute exposures but also with the adverse effects of longer-term, chronic exposures to forces causing or capable of causing disease, or environmental forces. Experts in the occupational health field include safety officers, industrial hygienists, occupational physicians, occupational health nurses, and others. State agency risk managers and safety officers will generally be called on to have a working knowledge of both the occupational safety as well as the occupational health concerns of the agency.

An occupational health program should include those loss prevention and control measures that address specific occupational health exposures and concerns in the employer's workplace. A state agency's executive management, assisted by supervisors, the risk manager, and/or the safety officer, must make every effort to ensure that safety and health concerns are fully addressed, understood, and supported throughout the organization.

The recognition, evaluation, and effective control of factors causing or contributing to occupational injury and disease are essential not only for effective risk control but also for an agency's overall vitality, stability, and success.(1)

This chapter of *Risk Management for Texas State Agencies* addresses certain occupational health exposures that may exist within state agency work environments. Discussions of these exposures



include suggestions for loss prevention and control. These suggestions are based on applicable industry standards, federal, and/or state agency rules and regulations. The State Office of Risk Management (Office) encourages Texas state agencies to adopt these suggestions and other industry standards as appropriate to manage and control occupational health exposures.

The State Office of Risk Management will periodically add new topics to this chapter of Risk Management for Texas State Agencies. Existing topics will also be updated as necessary in future revisions of this chapter. State agency safety officers and risk managers are encouraged to provide feedback to the Office regarding these existing topics and additional exposure areas or issues that should be addressed in these guidelines.

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### ***Endnotes***

1. Beck, D. Robert; "Loss Prevention and Control" in *Public Sector Risk Management*; 1998; p. 47.
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## Section Two - Employee Safety and Health Program

### Chapter 7

#### Occupational Health Program

##### Subchapter 7.1

#### Occupational Disease Exposures

Revised: December 2004

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### Volume III:

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This chapter of Risk Management for Texas State Agencies supplies general information regarding state agency occupational health exposures, and techniques and methods to manage and control those exposures. It also identifies additional resources that may be available to assist state agencies in developing or enhancing its occupational health program. This chapter is not intended in any way to be a substitute for the advice and guidance of legal counsel, who should always be consulted regarding rights, duties, and responsibilities under the law.

In order for state agency risk managers and safety officers to develop and implement an occupational health program that is appropriate for their agency, they must understand the basic environmental factors that can lead to loss and the nature of occupational disease exposures that exist within their agency. Furthermore, they should be familiar with the components of the Texas Workers' Compensation Act that form the basis for determining the compensability of occupational diseases.

#### *Exposures to Occupational Health Hazards*

The various environmental factors or stresses that can cause occupational health problems are numerous, but can be generally classified as chemical, physical, ergonomic, and biological.(1) These four classifications of exposures are briefly discussed below.

#### *Chemical Hazards*

The majority of occupational health problems arise from inhaling excessive airborne concentrations of mists, vapors, gases, or solids that are in the form of dusts or fumes. In addition to the hazard of inhalation, many of these materials may act as skin irritants or may be toxic when absorbed through the skin. The degree of risk associated with handling a given substance depends in part on the magnitude and duration of exposure.(2)

Recognizing occupational health risk factors or stresses in regard to chemicals used in processes or as raw materials requires health and safety professionals to assert some effort. The required information can be obtained from material safety data sheets (MSDS) that must be supplied for all hazardous

materials under the Occupational Safety and Health Administration's Hazard Communication Standard (see Volume III, Section Two, Chapter 7.12). The MSDS is a summary of important health, safety, and toxicological information related to the chemical or mixture ingredients. These MSDS forms are supplied by the chemical manufacturer or importer to the purchaser.

Examples of occupational health problems that may be caused by chemical exposures are provided below.

- **Occupational skin diseases or disorders**, such as contact dermatitis, eczema, oil acne, chrome ulcers, chemical burns, or inflammations and rashes caused by primary irritants, sensitizers, or poisonous plants.
- **Dust diseases of the lungs**, such as silicosis, asbestosis or asbestosis-related diseases, and coal worker's pneumoconiosis.
- **Respiratory conditions caused by toxic agents**, such as pneumonitis, pharyngitis, rhinitis, and acute congestion due to chemicals, dusts, gases, or fumes.
- **Poisoning (systemic effects of toxic materials)**, such as poisoning by lead, mercury, cadmium, arsenic, or other metals; poisoning by carbon monoxide, hydrogen sulfide, or other gases; poisoning by benzol, carbon tetrachloride, or other organic solvents; poisoning by insecticide sprays such as parathion, lead arsenate; poisoning by other chemicals, such as formaldehyde, plastics, and resins.(3,4)

### *Physical Hazards*

Excessive levels of electromagnetic and ionizing radiations, noise, vibration, and extremes of temperature and pressure are some of the known physical hazards. It is important that state agency managers, supervisors, and those responsible for safety and health be alert to these hazards because of their immediate or cumulative effects on the health of the employees in the workplace.(5)

Disorders caused by physical agents (other than toxic chemicals) include heatstroke, heat exhaustion, freezing, frostbite, and other effects of exposure to high and low temperatures; caisson disease (a disease resulting from working in watertight structures); effects of ionizing radiation (isotopes, X-rays, radium); and, effects of non-ionizing radiation.(6)

### *Ergonomic Hazards*

Ergonomics deals with human capabilities and limitations in the design of job tasks, work stations, tools, and equipment. These exposures include improperly designed tools or work areas. Improper lifting or reaching, poor visual conditions, or repeated motions in an awkward position can result in injuries in the occupational environment.

Disorders associated with cumulative or repetitive trauma include noise-induced hearing loss, synovitis, tenosynovitis, bursitis, carpal tunnel syndrome, and other conditions due to excessive vibration or pressure.(7)

Designing tools, the job area, and the tasks to be done to fit the worker are of prime importance in preventing ergonomic-related injuries, especially repetitive trauma injuries. Application of engineering and biomechanical principles is required to eliminate exposures of this kind.

The ergonomic approach goes beyond productivity, health, and safety. It includes consideration of the total physiological and psychological demands of the job upon the worker.

In a broad sense, the benefits that can be realized from designing work systems to minimize physical stress on employees are as follows:

- More efficient operations
- Fewer accidents
- Lower cost of operations
- Reduced training time
- More effective use of personnel
- Increased morale.

The human body can perform many awkward and unnatural movements for a limited period of time. However, when awkward conditions or motions continue for prolonged periods, the physiological limits of the worker can be exceeded. To ensure a continued level of high performance, work systems must be tailored to human capacities and limitations.(8)

For a more complete discussion of ergonomics and repetitive trauma injuries, refer to Chapters 7.10 and 7.19 (Volume III, Section Two) respectively.

### *Biological Hazards*

Biological hazards refer to plants, animals, or their by-products that may present a potential risk to the health and well-being of humans. Hazards of this nature include insects, molds, fungi, as well as bacterial contamination. These hazards can arise as a result of removal of industrial waste and sewage, food handling, and personal cleanliness.

Biohazards can be transmitted to a person through inhalation, injection, ingestion, or contact with the skin. The combination of biological hazards in the environment, the virulence of these organisms, and the resistance of the individual to these organisms ultimately determine whether a person will actually contract a disease. The effects of a biological agent are further compounded by the presence of other physical, ergonomic, and chemical hazards in the environment.(9)

### ***Definitions Relating to Occupational Diseases as Contained in the Texas Workers' Compensation***

## ***Act***

The Texas Workers' Compensation Act (*Vernon's Texas Codes Annotated*, Labor Code, Title 5, Subtitle A) includes several definitions relating to occupational diseases that should be understood by an agency in developing an occupational health program. The more important definitions are provided below.

- **Injury** - Damage or harm to the physical structure of the body and a disease or infection naturally resulting from the damage or harm. The term includes an occupational disease.(10)
- **Occupational Disease** - A disease arising out of and in the course of employment that causes damage or harm to the physical structure of the body, including a repetitive trauma injury. The term includes a disease or infection that naturally results from the work-related disease. The term does not include an ordinary disease of life to which the general public is exposed outside of employment, unless that disease is an incident to a compensable injury or occupational disease.(11)
- **Repetitive Trauma Injury** - Damage or harm to the physical structure of the body occurring as the result of repetitious, physically traumatic activities that occur over time and arise out of and in the course and scope of employment.(12)
- **Course and Scope of Employment** - An activity of any kind or character that has to do with and originates in the work, trade, or profession of the employer and that is performed by an employee while engaged in or about the furtherance of the affairs or business of the employer. The term includes an activity conducted on the premises of the employer or at other locations. Certain restrictions relating to transportation to and from employment and travel by the employee are specified in the Act.(13)
- **Date of Injury for Occupational Disease** - The date on which the employee knew or should have known that the disease may be related to the employment.(14)
- **Compensable Injury** - An injury that arises out of and in the course and scope of employment for which compensation is payable under the Act.(15)

## ***Compensability Issues***

In the case of occupational diseases, including repetitive trauma cases, it is not always easy to define or assess whether the occurrence will be compensable under the Texas Workers' Compensation Act because the "injury" is not always traceable to a specific and definite time, place, or cause. Unlike

traumatic injuries, causes of occupational diseases are not always clear. The following are examples of areas where difficulties in determining compensability may exist.

### *Date of Injury for Occupational Diseases*

The date of injury for an occupational disease is not always easy to determine. This is especially true for repetitive trauma cases where the injury occurs over time, and for occupational diseases where the disease manifests itself much later than the time of exposure (such as asbestosis). Therefore, the Texas Workers' Compensation Act defines the date of injury for occupational diseases as the date on which the employee knew or should have known that the disease may be related to the employment.(16)

### *Occupational Diseases vs. Ordinary Diseases of Life*

Occupational diseases, because they are progressive over time, present the most difficulty in determining compensability. In many cases they are not only nonspecific to time, place, or cause, but they can also involve diseases that are not directly associated with employment hazards. Therefore, it is necessary to distinguish between diseases that occur in the course and scope of employment that are peculiar to the employment setting and ordinary diseases of life. Occupational diseases may be compensable workers' compensation injuries; however, ordinary diseases of life are not.(17) Infectious diseases are common to the general population and are not easily traceable to employment situations. Therefore, it is unusual and highly unlikely for such diseases to be considered compensable.

### *Repetitive Trauma Injuries*

Sometimes a condition is traceable to a certain time period and to separate incidents, but not to an identifiable point in time or place. These conditions are also referred to as "microtraumas" and "cumulative traumas." For example, an employee suffering from a generalized condition may be able to identify a special project at work where a specific task or exposure to a specific stimulus was encountered. The project may have lasted for a given period of time, but the employee cannot pinpoint the exact task or the specific exposure that caused the condition. An example of a repetitive trauma injury is hearing loss from a work environment with a sustained high volume of noise.

### *Heart Attacks*

A heart attack is a compensable injury only if: the attack can be identified as occurring at a definite time and place; the attack is caused by a specific event occurring in the course and scope of employment; medical evidence regarding the attack indicates the employee's work rather than the natural progression of a preexisting heart condition or disease was a contributing factor of the attack; and, the attack was not triggered by emotional or mental stress factors, unless precipitated by a sudden stimulus.(18)

### *Mental Trauma*

In some other states, workers' compensation cases involving mental trauma are covered under that state's workers' compensation statute. However, under the Texas Workers' Compensation Act, a mental or emotional injury that "arises principally from a legitimate personnel action, including a transfer, promotion, demotion, or termination, is not a compensable injury."(19)

### *Alcohol and Drug Use*

The Texas Workers' Compensation Act addresses alcohol and drug use through its definition of "intoxication." According to this definition, a person is considered intoxicated if the person has an alcohol concentration of 0.10 or more, or if the person does not have the normal use of mental or physical faculties resulting from the voluntary introduction into the body of an alcoholic beverage, a controlled substance, a dangerous drug, an abusable glue or aerosol paint, or any similar substance regulated by state law. Specific references are made in the definition to other state laws regulating alcohol, dangerous drugs, and controlled substances to add clarity to the definition.

A person who is intoxicated according to this definition is not eligible to receive workers' compensation benefits. The definition of intoxication does not generally include drugs prescribed by the employee's doctor, nor does it include situations "incidental to the employee's work."(20)

### ***Provisions of the Health and Safety Code That Relate to the Texas Workers' Compensation Act***

The responsibility for administration of the Health and Safety Code (H&S Code) generally falls under the authority of the Commissioner of Health and the Board of Health. Chapter 81 of the Code relates to the prevention, control, and reporting of communicable diseases as enacted by the Communicable Disease Prevention and Control Act of 1989. Chapter 85 of the Code relates to specific actions concerning acquired immune deficiency syndrome (AIDS), human immunodeficiency virus (HIV) infection and Hepatitis B Virus as required by the Human Immunodeficiency Virus Services Act of 1991.(21)

In addition to the above, sections 84.002 and 84.003 of the H&S Code define "reportable disease" as a disease or condition required to be reported under this chapter, including asbestosis, silicosis, and elevated blood lead levels.<sup>22</sup> The Board of Health is authorized to adopt rules that require other occupational diseases to be reported and to maintain a list of reportable diseases. Reporting requirements are specified in Section 84.004 of the H&S Code and in the Texas Department of Health's (department) rules as originally adopted and published (*Texas Administrative Code*, Title 25, Sections 97.1-97.13 and 97.131-97.144).(23)

The following persons are required to make a report to the Texas Department of Health: physicians, dentists, veterinarians, or chiropractors; a reporting officer appointed by the chief administrative officer of a hospital; school authorities; persons in charge of clinical or hospital laboratories, blood banks, mobile units, or other facilities in which a laboratory examination of any specimen derived from a

human body yields microscopical, cultural, serological, or other evidence suggestive of the disease; and, any person having knowledge that a person is suspected of having a reportable disease or health condition (25 TAC §97.2).<sup>24</sup> For the department's rules on what and where to report communicable diseases, refer to (25) TAC §97.3 and §97.5.<sup>25</sup> The department's reporting rules (who, what, and how) regarding sexually transmitted diseases including AIDS and HIV are also detailed in (25) TAC §§97.132-97.134.<sup>26</sup>

Section 81.050 of the H&S Code specifies criteria for mandatory testing of persons suspected of exposing certain other persons to reportable diseases, including HIV infection.<sup>(27)</sup> The "certain other persons" referred to in this section are: law enforcement officers; fire fighters; emergency medical service employees or paramedics; and, correctional officers [subsection (b)]. These specifically named employees primarily are "first responders" employed by public sector state agencies and local units of government.

Subsection (j) also requires testing of persons who file claims for workers' compensation benefits based on work-related exposures to occupational diseases. It states the following:

For the purpose of qualifying for workers' compensation or any other similar benefits for compensation, an employee who claims a possible work-related exposure to a reportable disease, including HIV infection, must provide the employer with a sworn affidavit of the date and circumstances of the exposure and document that, not later than the 10th day after the date of the exposure, the employee had a test result that indicated an absence of the reportable disease, including HIV infection.

For more information, see (25) TAC §97.13 for the Texas Department of Health's rules as originally adopted and published.<sup>28</sup>

Section 85.116 of the H&S Code specifies essentially the same criteria for testing and counseling for state employees exposed to HIV infection on the job.

Subsection (c) of §85.116 states the following:

For the purpose of qualifying for workers' compensation or any other similar benefits or compensation, an employee who claims a possible work-related exposure to HIV infection must provide the employer with a written statement of the date and circumstances of the exposure and document that, within 10 days after the date of the exposure, the employee had a test result that indicated an absence of HIV infection.<sup>(29)</sup>

For more information, see (25) TAC §97.140 for the Texas Department of Health's rules as originally adopted and published.<sup>30</sup>

***Texas Department of Health, Industrial Hygiene Branch***



The Toxic Substances Control Division, Industrial Hygiene Branch of the Texas Department of Health, is responsible for abating certain occupational health conditions. Through response to requests for assistance and complaints, the industrial hygiene staff performs consultative and investigative surveys designed to recognize, control, and/or eliminate occupational health hazards resulting from exposure to chemical, physical, and biological hazards.

The foundation for protecting the health of public employees lies in the availability of regulations, standards, rules, and guidelines that are current in scope and content. The division's purpose is to bring to the attention of public agencies those guidelines that will provide reference information concerning occupational health topics that are based on current national standards.(31)

### ***Summary***

The purpose of including this subchapter is to raise awareness of exposures to occupational health hazards. These exposures should be given the same immediate, priority attention as an accidental injury whose definite time and place of occurrence is clearly defined. State agencies will want to consider their exposures and the seriousness of the exposures, as well as determine how to remove or control the hazard through a variety of methods. Appropriate personal protective equipment should be provided in the event engineering design controls and/or the inherent nature of the work process cannot be altered. Additionally, supervisors are responsible for ensuring that the equipment is effective for its intended purpose, that each worker's equipment is properly fitted, and that employees are adequately trained and retrained to properly maintain their assigned equipment.

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### ***Checklist for Essential Program Elements***

- |   |     |    |
|---|-----|----|
| 1. Are any personnel or job functions exposed to any hazards that may cause occupational diseases (such as cumulative trauma disorders, bloodborne pathogens, asbestos, chemicals)?           | Yes | No |
| 2. If yes, does the agency have an appropriate program in place to identify, increase employee awareness, and correct or mitigate (where possible) effects of occupational disease exposures? | Yes | No |
| 3. Does the agency have in place systems for risks of such exposures to be reported?  | Yes | No |
| 4. Does agency's identification process have preventative plans in place?   | Yes | No |
| 5. Is appropriate personal protective equipment (PPE) provided in the event that engineering design controls and/or the inherent nature of the work process cannot be altered?                | Yes | No |
| 6. Are supervisors responsible for ensuring the PPE is properly fitted and that employees are adequately trained in the use of the equipment?   | Yes | No |

***Additional Resources for Texas State  
Agencies***

***Publications***

*Rules and Regulations Governing the Control and Reporting of Notifiable Conditions* (October 1994)

Texas Department of Health

1100 West 49th Street

Austin, TX 78756

(512) 458-7111

*Identification and Confirmation of Reportable Diseases* (August 1991)

Texas Department of Health Infectious Disease Epidemiology & Surveillance Div. 1100 West 49th  
Street Austin, TX 78756

24-hour Toll Free Number for Disease Reporting (800) 705-8868

(512) 458-7676

*Guidelines for Prevention of Transmission of Human Immunodeficiency Virus and Hepatitis B Virus to  
Health-Care and Public Safety Workers* (February 1989)

and

*HIV Serologic Testing and Documentation Guidelines*

(September 1992)

Texas Department of Health

Bureau of HIV and STD Prevention

1100 West 49th Street

Austin, TX 78756

1-800-299-AIDS

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***Agencies and Organizations Providing  
Assistance***

**Texas Department of Health**

1100 West 49th Street

Austin, TX 78756

(512) 458-7111

Bureau of Disease Control and Epidemiology

(512) 458-7676

Bureau of HIV and STD Prevention

(512) 490-2500

Industrial Hygiene Branch

(512) 834-6600

## National Institute of Occupational Safety and Health

4676 Columbia Parkway  
Cincinnati, OH 45226  
(800) 356-4674

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### *Endnotes*

1. Plog, Barbara A., ed.; "Overview of Industrial Hygiene" in *Fundamentals of Industrial Hygiene*, Third Edition; National Safety Council; 1988; p. 6.
2. Plog, Barbara A., ed.; p. 6.
3. Plog, Barbara A., ed.; pp. 20-23 52-56, 84-85, and 366-367.
4. Reed, Presley, M.D.; *The Medical Disability Advisor, Workplace Guidelines for Disability Duration*; LRP Publications; 1991.
5. Plog, Barbara A., ed.; p. 9.
6. Plog, Barbara A., ed.; pp. 14 and 24.
7. Laing, Patricia M., ed.; "Ergonomics--Human Factors Engineering" in *Accident Prevention Manual for Industrial Operations, Administration and Programs*, 9th Edition; National Safety Council; 1988; p. 216.
8. Laing, Patricia M., ed.; "Ergonomics in the Workplace" in *Accident Prevention Manual for Business & Industry, Engineering & Technology*, 10th Edition; National Safety Council; 1992; pp. 103-130.
9. Plog, Barbara A., ed.; p. 17.
10. Texas Workers' Compensation Act, *Vernon's Texas Codes Annotated*, Labor Code, Title 5, Subtitle A, Section 401.011(26).
11. Labor Code, §401.011(34).
12. Labor Code, §401.011(36).
13. Labor Code, §401.011(12).
14. Labor Code, §408.007.

15. Labor Code, §401.011(10).
16. Labor Code, §408.007.
17. Labor Code, §401.011(34).
18. Labor Code, §408.008.
19. Labor Code, §408.006.
20. Labor Code, §401.013.
21. *Vernon's Texas Codes Annotated*, Health & Safety Code, Title 2, Subtitle D, Chapters 81-85.
22. Health & Safety Code, §§84.002-84.003.
23. *Texas Administrative Code*, Title 25, Sections 97.1-97.13 and Sections 97.131-97.144.
24. 25 TAC §97.2.
25. 25 TAC §97.3 and §97.5.
26. 25 TAC §§97.132-97.134.
27. Health & Safety Code, §81.050.
28. 25 TAC §97.13.
29. Health & Safety Code, §85.116.
30. 25 TAC §97.140.
31. *Program Impact Statement*; Texas Department of Health, Occupational Health Division; March 1993.

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## Section Two - Employee Safety and Health Program

### Chapter 7

#### Occupational Health Program

##### Subchapter 7.2

##### Asbestos Exposure

Revised: November 2004

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### Volume III:

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This chapter of Risk Management for Texas State Agencies supplies general information regarding state agency occupational health exposures, and techniques and methods to manage and control those exposures. It also identifies additional resources that may be available to assist state agencies in developing or enhancing its occupational health program. This chapter is not intended in any way to be a substitute for the advice and guidance of legal counsel, who should always be consulted regarding rights, duties, and responsibilities under the law.

Asbestos is a mineral-based material that is resistant to heat and corrosive chemicals. Properties that make asbestos fibers useful to industry are its high tensile strength, flexibility, heat and chemical resistance, and frictional properties.<sup>1</sup> Although asbestos was widely used in building construction and consumer products in the past, very few asbestos-containing products are being manufactured or installed at this time. Therefore, most exposures to workers occur during the removal of asbestos and the renovation and/or maintenance of buildings or structures that contain asbestos.<sup>(2)</sup>

Although asbestos has many practical uses, it is known to cause a number of diseases. Asbestos fibers are carried into the body as airborne particles and can then become embedded in the tissues of the lung and digestive systems. Once fibers are trapped in the lung's alveoli (air sacs), they cannot be removed.<sup>(3)</sup>

Exposure to asbestos over a long period of time is known to cause a number of disabling and fatal diseases. Among these are the following: asbestosis, an emphysema-like condition; lung cancer; mesothelioma, a cancerous tumor that spreads rapidly in the cells of membranes covering the lungs and body organs; and, gastrointestinal cancer, caused by ingesting asbestos contaminated food.<sup>(4)</sup>

Because of its adverse health effects, asbestos should only be handled by trained professionals who are knowledgeable about the abatement and containment process. If asbestos-containing materials (ACMs) are suspected or reported by any state employee, the general advice is to remove the employees from the area and notify the building/facility owner and/or the Asbestos Programs Branch, Toxic Substances Control Division, Texas Department of Health (TDH).

### *Federal Standards and Regulations*

The Environmental Protection Agency's *National Emission Standard for Hazardous Air Pollutants Asbestos Revision* defines ACMs and wastes. The standard identifies regulated asbestos-containing material (RACM) on the basis of its existing or impending friability (the capability of being easily crumbled, pulverized, or reduced to powder by hand pressure). Recordkeeping and emission monitoring for asbestos milling and manufacturing operations are also stipulated.(5) Several OSHA rules apply to asbestos exposure. The specific rules depend on the given situation.

The following asbestos-related rules and regulations can be found in the *Code of Federal Regulations* (CFR).

- 40 CFR 763 G is the EPA regulation that establishes requirements which must be followed during asbestos abatement projects by employers of state and local government employees not covered by OSHA standard 29 CFR 1926.58.
- OSHA's 29 CFR 1910.1001 is the General Industry Standard that applies to all occupational exposures to ACMs by all industries covered by OSHA. This standard sometimes is applied to building owners as the standard of protection for their employees and other employers.
- Respiratory protection is covered in 29 CFR 1910.134.
- Construction industry standards are covered in 29 CFR 1926.1101.
- National Emission Standard for Hazardous Air Pollutants (NESHAP) standards are covered in 40 CFR 61 M.
- Asbestos Hazard Emergency Response Act (AHERA) school regulations are in 40 CFR 763 E.
- Rules that relate to mine operations are in 30 CFR 56 and 57 D.
- Transportation of asbestos waste requires special handling and documentation standards that are issued by the Department of Transportation. These standards can be found in 49 CFR 171 and 172.
- The EPA also regulates removal, transportation, and disposal of asbestos in 40 CFR 61.145, 149-151, 154, and 155.

- Required engineering controls that correspond with the Toxic Substance Control Act (TSCA) are in 29 CFR 1910.1001(f).

OSHA's amended standards (effective October 11, 1994, and amended April 22, 1996) are published in 29 CFR 1910.1001 and 1926.1101 and are summarized in the following paragraphs. The April amendment is the result of a settlement agreement signed by OSHA with the building trades union that is outlined in the OSHA instruction CPL 2-2.63.

- Lower the permissible exposure limits (PEL) to 0.1 fiber per cubic centimeter of air (f/cc) averaged over eight hours. The employer shall ensure that no employee is exposed to an airborne concentration of asbestos in excess of 1.0 f/cc as averaged over a sampling period of 30 minutes. If this level is exceeded, employers must begin compliance activities such as air monitoring, employee training, and medical surveillance.
- The employer shall establish regulated areas wherever airborne concentrations of asbestos and ACMs are reasonably expected to exceed the time-weighted average (TWA). Employees should not eat, smoke, or apply cosmetics in the regulated areas.
- Building owners, employers, and occupants are required to notify any other occupants about ACM activities. Building and facility owners shall maintain records of all information, such as the presence, location, and quantity of ACMs in the building or facility. Records should be kept for the duration of ownership and shall be transferred to successive owners.
- Training is required of all ACM project participants.
- Employers are required to notify the proper authority prior to abatement activities. (NOTE: According to 25 TAC §295.61, the Texas Department of Health should be notified no less than ten days prior to commencing these activities. NESHAP requirements apply equally to both the NESHAP and the Texas Asbestos Health Protection Act [TAHPA] notification requirements.)

The Respiratory Protection Standard, 29 CFR 1910.134, should be followed whenever respirators are part of the protective equipment for asbestos abatement projects. This standard has very specific requirements for a monitored, written program. OSHA requires a medical exam for all respirator users.

AHERA applies only to elementary and secondary schools. However, many others follow the EPA rule because it is the most comprehensive standard for the industry. This is especially true for establishing the quality of inspections, training ACM project participants, and setting methods for conducting response

action.(6)

The National Emission Standard for Hazardous Pollutants (NESHAP) was revised for asbestos, effective November 20, 1990. The asbestos NESHAP rules clarify some important definitions with regard to what asbestos materials are and for which specific buildings the regulations are intended. Any institutional, commercial, public, industrial, or residential structure, installation, or building as well as any ship and waste disposal site is considered a facility and is subject to the rules. Residential buildings with four or less individual units are exempt, except for demolition for commercial development or nuisance housing abatement.(7)

The biggest impact of the NESHAP rules is the requirement that every facility be thoroughly inspected for the presence of asbestos prior to any demolition or renovation activities. Effective November 20, 1991, the rules also required the presence of at least one trained on-site representative during the abatement work.(8)

An asbestos management plan for a facility will generally be either the total removal of ACMs or a plan to maintain the ACMs in place. EPA promotes asbestos in-place management (encapsulation) as the acceptable alternative to immediate removal.(9) Depending on physical findings, cost projections, and alternatives available, the asbestos plans may present a mix of maintenance or removal. In many asbestos situations, a control program for attentive maintenance of in-place ACMs is a much more prudent strategy than radical abatement and the possibility of the associated danger of fiber release.(10)

### ***State Regulatory Authority***

The Asbestos Programs Branch, Toxic Substances Control Division, Texas Department of Health (TDH) has two programs to protect the public against the health hazards related to asbestos in public buildings. The Asbestos Licensing Section administers the licensing of all fields related to the management of asbestos in public buildings as required under the Texas Asbestos Health Protection Act (TAHPA). The Surveillance and Enforcement Section provides inspection of persons who are licensed under the Act. (11)

The Asbestos Programs Branch has recently entered into an interagency contract with the Texas Natural Resources Conservation Commission. This contract gives TDH the responsibility for performing inspections for the purpose of determining compliance with the Environmental Protection Agency, National Emission Standards for Hazardous Air Pollutants, Subpart M (NESHAP) regulation. This regulation covers asbestos removal in *all* buildings, not just public buildings.(12)

Information concerning TDH's reporting requirements for asbestosis as an occupational disease is detailed in the guideline chapter entitled Occupational Disease Exposures (Volume III, Section Two, Chapter 7.1).

### ***Asbestos Management Program***

An asbestos management program in state agency buildings that may contain asbestos is a necessary part of the employee safety and health program. The Environmental Protection Agency recommends a pro-



active operations and maintenance program to deal with buildings containing asbestos. A comprehensive asbestos management program should include the following:

- An appointed asbestos program manager and an organizational policy statement regarding asbestos management
- An inspection of buildings with samples taken of suspect materials
- The establishment of an ACM inventory and an assessment of the ACM's condition and potential for disturbance
- An operations and maintenance program
- Appropriate implementation of actions, which may include abatement or covering the ACM with a sealant to prevent fiber release (encapsulation).(13)

### ***Asbestos Identification***

A state agency that has a building that has not been surveyed for the presence of asbestos should seek the services of a licensed asbestos inspector as needed to determine the locations of their ACM. If minimal maintenance is planned for the building, then a limited survey, concentrating on those specific areas, may meet the needs of the agency. However, if much renovation is planned in the near future, a comprehensive survey may be better suited as it will address all areas of concern in the building and not require a specific inspection each time a renovation or maintenance is performed. Federal and state law require that an inspection be performed before disturbing any suspect material. For further information concerning asbestos inspections, contact the Texas Department of Health, Asbestos Programs Branch at 512-834-6644 or 1-800-572-5548.

### ***In-Place ACM Management***

Attitudes toward asbestos and its removal are changing. Building owners and managers are beginning to take notice of new scientific evidence that ACMs rarely present a health risk to building occupants if the material retains its integrity and performs as designed.(14) Incomplete data on asbestos has caused unnecessary and inadequately controlled asbestos removal projects and reinforces a more cautious approach--a control program that leads to the eventual removal of ACMs.

There is a body of scientific evidence that states occupational exposure to asbestos can cause health problems. What is needed is a more practical way for building owners and managers to deal with ACMs other than total and immediate removal. The in-place asbestos management approach, also known as encapsulation, addresses the containment of ACMs using techniques designed to safeguard the health

and safety of building occupants and workers while protecting the interests of building owners.(15)

The philosophy behind in-place ACM management is: ACMs are managed until the building is renovated, the condition of the material requires removal, or the building is demolished. When ACMs cannot be repaired, have lost effectiveness, or have to be disturbed to make repairs, it may be more cost effective to abate all ACMs in one area than to deal with only the material in question. Generally, the greater the chance that people will disturb ACMs, the greater the need to remove the materials, since disturbing ACMs can cause asbestos fibers to be released. However, where there is no urgent need to remove ACMs, effective and in-place management can protect occupants, maintenance workers, and outside contractors from potential asbestos exposure.(16)

Another area of in-place ACM management deals with brake and clutch repairs. If a state agency has employees who perform automotive brake and clutch inspection, disassembly, repair, or assembly operations, engineering controls and work practices must be implemented to protect those employees. Proper use of these controls and practices by trained employees will reduce employees' asbestos exposure below the PEL. The methods the employer should use to institute the appropriate work practices and engineering controls for these particular operations are detailed in Appendix F of the OSHA standard.(17)

Whenever ACMs are suspected, contact the Asbestos Programs Branch of the Texas Department of Health for assistance and guidance.

### ***Asbestos Handling and Removal***

To control and minimize public exposure to airborne asbestos fibers, any asbestos-related activities (including removal, encapsulation, and enclosure) should only be performed by trained individuals. The Texas Asbestos Health Protection Act specifies the requirements and education necessary for a person to become licensed and/or registered in the field.<sup>18</sup> In conjunction with the Act, the Texas Department of Health has adopted administrative rules that detail the licensing, registration, and training requirements for anyone engaged in asbestos-related activities.<sup>19</sup> Failure to comply with the Act and TDH's rules could result in civil, administrative, or criminal penalties.<sup>20</sup>

### ***Guidelines for Loss Prevention and Control***

OSHA and EPA standards contain the following methods to control asbestos exposures. Detailed explanations can be found in the federal standards and regulations previously listed in this subchapter.

- Methods of compliance (engineering controls and work practices)
- Respiratory protection
- Protective clothing and equipment
- Hygiene facilities and practices
- Communication of hazards to employees (information and training, to include sign specifications in regulated areas)
- Housekeeping
- Signage requirements in regulated areas

- Medical surveillance program
- Recordkeeping requirements
- Observation of monitoring.(21)

## **Summary**

State agencies that have asbestos exposures must be able to identify the magnitude of the exposures by monitoring. If the tests indicate there has been an exposure, the agency should take immediate action. The following preventive measures should be taken: engineering controls, use of personal protective equipment, training of employees, and good housekeeping practices. Agencies should establish an ACM program and implement a medical surveillance program. Accurate employee records can help determine if the employee has been exposed.

The adverse health aspects of asbestos exposure demand that any asbestos-related activities be handled only by trained individuals who have been licensed/registered by the Texas Department of Health. Contact the Asbestos Programs Branch of the Toxic Substances Control Division of TDH for advice and guidance.

For information regarding occupational diseases, refer to Volume III, Section Two, Chapter 7.1 of the *Risk Management for Texas State Agencies* guidelines. For information regarding the filing of workers' compensation claims, refer to Volume III, Section Three.

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### ***Checklist for Essential Program Elements***

1. Has a survey been performed by a licensed inspector?	Yes	No
2. Do any facilities for which the agency is responsible have asbestos-containing materials?	Yes	No
3. If yes, are asbestos-containing materials encapsulated, undisturbed, and/or inaccessible to agency employees and/or the general public?	Yes	No
4. Has the agency established an ACM inventory and an assessment of the ACM's condition and potential for disturbance?	Yes	No
5. Are agencies housed in older buildings inspected to ensure that asbestos is absent or safely contained?	Yes	No
6. Have appropriate state agencies or building owners (in the case of leased buildings) been properly notified?	Yes	No
7. Has an asbestos program manager been appointed?	Yes	No
8. Is a record kept of asbestos program activities?	Yes	No
9. If asbestos is soon to be encapsulated or removed, have the services of a person or firm certified or licensed by the Texas Department of Health, Asbestos Licensing Section been retained?	Yes	No

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***Additional Resources for Texas State  
Agencies***

***Publications***

*Vernon's Annotated Civil Statutes* (Texas), Volume  
12C, Art. 4477-3a - Texas Asbestos Health  
Protection Act, Sections 1-17.

*Texas Administrative Code*, Title 25, Chapter 295 -  
Environmental Health, Section 295.21 (Fees for  
Asbestos Services), Sections 295.31-295.71 (Texas Asbestos Health Protection), and Sections 295.101-  
295.102, 295.104, 295.106-295.107 (Occupational Health Rules and Guidelines)

*Environmental Protection Agency - 40 CFR Part 763, Subpart G - Asbestos Abatement Projects;*  
effective March 27, 1987

U.S. Environmental Protection Agency  
National Center for Environmental Publications and Information (NCEPI)  
P.O. Box 42419  
Cincinnati, OH 45242-2419  
(513) 489-8190  
FAX: (513) 489-8695

*Managing Asbestos in Place* (The Green Book),  
Publication, 20T-2003 (July 1990)  
United States  
Environmental Protection Agency  
Washington, D.C. 20460

*Occupational Safety and Health Standards - 29 CFR  
Part 1910, Section 1910.1001 - Asbestos;* effective  
October 11, 1994  
and

*Occupational Safety and Health Standards - 29 CFR Part 1926, Section 1926.1101 - Asbestos;* effective  
October 11, 1994  
U.S. Department of Labor (OSHA)  
525 Griffin Street, Room #602  
Dallas, TX 75202  
(214) 767-4731

*Asbestos Standard for Construction Industry,*  
Publication, OSHA 3096 (Rev. 1995)  
U.S. Department of Labor (OSHA)  
OSHA Publications Office, Room N3101

200 Constitution Avenue, NW  
Washington, D.C. 20210  
(202) 219-4667

*National Emission Standards for Hazardous Air  
Pollutants, Asbestos NESHAP Revision,*  
Environmental Protection Agency, Part III, 40 CFR 61

*Safety and Health Standards: Specific Industry  
Guides - Job Safety and Health*  
The Bureau of National Affairs, Inc.  
1231 25th Street, NW  
Washington, D.C. 20037

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### ***Agencies and Organizations Providing Assistance***

#### **Texas Department of Health**

1100 W. 49th Street  
Austin, TX 78756  
(512) 458-7111

Toxic Substances Control Division  
Industrial Hygiene Branch and  
Asbestos Programs Branch  
(512) 834-6600  
(800) 572-5548

#### **Texas Engineering Extension Service (TEEX)**

Occupational and Environmental Safety Training  
Division  
The Texas A & M University System  
College Station, TX 77843-8000  
(800) 252-2420  
(409) 845-3418

---

### ***Endnotes***

1. *Asbestos Standard for General Industry*; U.S. Department of Labor, Occupational Safety and Health Administration; Publication, OSHA 3095; Rev. 1989; p. 1.
2. *Asbestos Standard for the Construction Industry*; U.S. Department of Labor, Occupational Safety and Health Administration; Publication, OSHA 3096; Rev. 1995; p. 1.

3. *Asbestos Standard for General Industry*; p. 1.
4. *Asbestos Standard for General Industry*; p. 1.
5. Grohlich, Dietmar and William C. Monson; "Get a New Angle on Asbestos Management"; *Safety & Health*; February 1991; Volume 143, Number 2; p. 46.
6. Grohlich, Dietmar and William C. Monson; p. 48.
7. Grohlich, Dietmar and William C. Monson; p. 48.
8. Grohlich, Dietmar and William C. Monson; pp. 48-49.
9. Grohlich, Dietmar and William C. Monson; p. 49.
10. *Managing Asbestos in Place* (The Green Book); U.S. Environmental Protection Agency; Publication, 20T-2003; July 1990; p. 9.
11. *Program Impact Statement*; Texas Department of Health, Occupational Health Division; March 1993.
12. *Program Impact Statement*; March 1993.
13. *Guidance for Controlling Asbestos-Containing Materials in Buildings*; U.S. Environmental Protection Agency; Publication, EPA 560/5-85-024; June 1985; pp. S-1 - S-3.
14. Uhlig, Henry and Doug Whitaker; "When Managing Asbestos Means Leaving It Alone"; *Risk Management*; August 1991; p. 33.
15. Uhlig, Henry and Doug Whitaker; p. 33.
16. Uhlig, Henry and Doug Whitaker; p. 33.
17. *Code of Federal Regulations*, Title 29, Part 1910, Section 1910.1001, Appendix F; Rev. July 1, 1995.
18. Texas Asbestos Health Protection Act, *Vernon's Annotated Civil Statutes* (Texas), Volume 12C, Art. 4477-3a, Sections 3-10 (Vernon 1996).
19. *Texas Administrative Code*, Title 25, Sections 295.35-295.65.
20. *Vernon's Annotated Civil Statutes* (Texas), Art. 4477-3a, §§15-17 and 25 TAC §§295.67-295.70.
21. 29 CFR §§1910.1001(f)-1910.1001(n); and *Code of Federal Regulations*, Title 40, Part 763, Sections 763.121(f)-763.121(n); Rev. July 1, 1995.

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## Section Two - Employee Safety and Health Program

### Chapter 7

#### Occupational Health Program

##### Subchapter 7.3

#### Back Injury Protection Program

Revised: November 2004

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### **Volume III:**

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This chapter of Risk Management for Texas State Agencies supplies general information regarding state agency occupational health exposures, and techniques and methods to manage and control those exposures. It also identifies additional resources that may be available to assist state agencies in developing or enhancing its occupational health program. This chapter is not intended in any way to be a substitute for the advice and guidance of legal counsel, who should always be consulted regarding rights, duties, and responsibilities under the law.

Back injury rates in the state of Texas have risen at an alarming rate in recent years. Cases involving the back accounted for the highest percentage (28 percent) of the occupational injuries and illnesses involving days away from work (a median of 8 days). Published reports indicate that the number of back injuries in Texas increased by 4 percent in 1994 alone.(1)

Using incorrect lifting techniques can result in a variety of injuries. The importance of good physical conditioning cannot be overestimated. Years of poor posture, overeating, lack of exercise, stress, and improper lifting practices are cumulative and produce a condition conducive to a back injury.(2)

#### ***Contributing Factors***

The following conditions all contribute to back injuries:

- Repetitive motion/activity
- Fatigue
- Congenital defects of the spine
- Increase in hand-intensive jobs
- An aging workforce



- A reduction in worker turnover for economic reasons
- Widespread use of vibrating and air-powered tools
- Proliferation of assembly line techniques, increasing line speed and piece rate
- Increased awareness of workplace hazards.<sup>3</sup>

### ***Back Injury Controls***

Most unsafe lifting conditions can be controlled with job redesign or safe lifting practices.

#### ***Job Redesign to Minimize Back Injury***

The first level of control should consider engineering the problem out of the process involved. If this is not possible, engineering solutions should be implemented to assist the worker.

Job redesign involves all elements of a job: furniture redesign, the shape of items handled by employees, work scheduling, and organization. Tools, furniture, and work processes should be designed to reduce stress on the back and to minimize twisting, reaching, bending, and lifting. Rushed worked, jerky motions, repetitive motions, and jobs requiring employees to be in stationary positions for hours should be eliminated.

The costs of redesign can be considerable, but the benefits can outweigh the costs. In the United States, an average of \$7,000 is spent for each back injury.<sup>4</sup> The design and implementation of a back injury protection program should be a high priority. The program should include initial training and periodic refresher training for supervisors.

#### ***Safe Lifting Techniques***

- **Size Up the Load** - Always assess the object before lifting it. Make sure the load is stable and balanced. Carefully and slowly put force against the object to determine its weight. If the load is too heavy, get help. Use lifting devices and equipment to assist in lifting/carrying a load.
- **Plan the Job** - Plan a route that is free of tripping and slipping hazards. Ensure that the planned route allows for easy travel. Know where the object will be unloaded and plan for rest stops if necessary. Think through the lift. Face the object to be lifted and, if possible, face the direction in which the object is to be carried. Do not twist the body.
- **Establish a Base of Support** - Ensure firm footing. Keep the feet at least shoulder width apart. A staggered stance, with one foot slightly behind the other, often helps provide a firm base of

support.

- **Bend the Knees** - Bend at the knees, not at the waist. Bend down as far as necessary using the legs and not the back.
- **Get a Good Grip** - Grip the load firmly, using the whole hand, not just the fingers. Use gloves, as needed, to prevent "pinched" grips or to protect the hands during the lift.
- **Keep the Load Close** - Keep the load close to the body. The closer it is to the spine, the less force it exerts on the back. Maintain the natural inward curve of the lower back. Keep the back upright. Whether lifting or putting down a load, do not add the weight of the body to the load. Grasp the object with the palms, not just the fingers.
- **Lift with the Legs** - Lift with the legs to allow the body's powerful leg muscles to do the work. Flex the knees and hips, not the back. Avoid bending at the waist. Try to keep the back "straight" during the lift. Do not look down at the object during the lift -- look up. Looking up helps "straighten" the position of the back for a safer lift.
- **Pivot - Do Not Twist** - Do not twist the body when moving objects that have already been lifted. Pivot the feet and turn the entire body in the direction of movement.(5)

### ***Back Belts***

As of this writing, scientific evidence to support the use of back belts in the prevention of back injuries is inconclusive. After a review of available scientific literature, NIOSH has concluded that, because of the limitations of the studies that have analyzed workplace use of back belts, the results cannot be used to either support or refute the effectiveness of back belts in injury reduction.

The Institute, therefore, does not recommend the use of back belts to prevent injuries among workers who have never been injured. Instead, NIOSH suggests that employers focus on the design of the work environment and the work task in reducing the hazards of lifting.(6)

### ***Guidelines for Lifting***

To reduce back injuries, these guidelines should be closely followed:

- Engineering controls should be implemented whenever possible and feasible.

- Safe lifting techniques must be used by all employees.
- All employees must be trained on proper lifting techniques. Training should be conducted in the work environment in addition to general classroom instruction.
- Supervisors must be involved and must support the back injury protection program.
- All supervisors must receive initial and refresher training to recognize work habits and conditions that could result in back injuries to workers. Supervisor coaching of employees regarding proper lifting techniques should be expected and required by management.
- All back injury training must be documented.

***Checklist for  
Essential Program Elements***

1. Are engineering controls employed where feasible?	Yes	No
2. Have agency employees received back injury protection training?	Yes	No
3. Have employees been trained on safe lifting techniques?	Yes	No
4. Does management actively support the back injury protection program?	Yes	No
5. Do supervisors receive initial and refresher training to recognize and remove situations that could result in back injuries to workers?	Yes	No
6. Do supervisors actively coach employees in the work environment regarding back injury protection programs?	Yes	No
7. Is refresher back injury protection training provided to employees?	Yes	No
8. Are records kept identifying all personnel receiving back injury training?	Yes	No

***Additional Resources for Texas State  
Agencies***

***Publications***

Videos (English and Spanish) and Education/Training Materials, available through:

Workers' Health and Safety Resource Center  
Texas Workers' Compensation Commission  
7551 Metro Center Drive  
Austin, TX, 78744-1609  
(512) 804-4000

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### **Additional Videos Available**

Safe lifting, back injury prevention safety..... Safe Lifting and Back Injury Prevention Safety Videos.

<http://www.safetytrainer.com/videos>

Safety videos are the most frequently requested it..... extensive selections of safety videos between five and ... 1910.57), Back Injury Prevention & Proper Lifting. <http://www.safetytrainingnetwork.com>

Injury Prevention, WHMIS, TDG, OHS Products... Back Injury Prevention. PPE: Eye Protection; Hearing Conservation; Personal Protective ... Respiratory Protection. [http://www.hatscan.com/site\\_map.asp](http://www.hatscan.com/site_map.asp)

### ***Agencies and Organizations Providing Assistance***

#### **Texas Workers' Compensation Commission**

Workers' Health and Safety Division  
7551 Metro Center Drive  
Austin, TX, 78744-1609  
(512) 804-4000

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### ***Endnotes***

1. *Occupational Injuries and Illnesses in Texas, 1994*; Texas Workers' Compensation Commission, Division of Workers' Health and Safety, Safety Information Systems; July 1996; pp. 11-12.
2. "Take 5 for Safety, Safe Lifting Techniques"; Texas Workers' Compensation Commission, Division of Workers' Health and Safety, Safety Education and Training Programs.
3. U.S. Department of Labor, Occupational Safety and Health Administration; "Back Disorders and Injuries" in *OSHA Technical Manual*, Third Edition; Government Institutes, Inc.; 1993; p. 5-1.
4. Bruce, Stephen D., ed.; "Back Injuries" in *Manager's Guide to Workplace Ergonomics*, Part IV; Business & Legal Reports; Rev. July 1993; p. 10-1.

5. "Basic Lifting Safety Guide"; Texas Workers' Compensation Commission, Workers' Health & Safety Division; Rev. August 1995; pp. 4-11.

6. *Back Belts, Do They Prevent Injury?*; U.S. Department of Health and Human Services, National Institute for Occupational Safety and Health; DHHS (NIOSH) Publication, #94-127; 1994.

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## Section Two - Employee Safety and Health Program

### Chapter 7

#### Occupational Health Program

##### Subchapter 7.4

#### Baseline Testing Program

Revised: November 2004

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### Volume III:

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This chapter of Risk Management for Texas State Agencies supplies general information regarding state agency occupational health exposures, and techniques and methods to manage and control those exposures. It also identifies additional resources that may be available to assist state agencies in developing or enhancing its occupational health program. This chapter is not intended in any way to be a substitute for the advice and guidance of legal counsel, who should always be consulted regarding rights, duties, and responsibilities under the law.

Surveillance of the health status of employees by qualified personnel is desirable for agencies involved in certain kinds of hazardous industrial processes. It is also appropriate to perform post-job-offer testing for certain types of jobs that require performance of duties with specific physical requirements. Medical surveillance is required to maintain compliance with 29 CFR 1910.1020 standards.

The overall purpose of baseline testing and health screening is to monitor the health of the individual and to limit liability to the organization. Results obtained may be evaluated using baseline data from the post-job-offer examination, which should provide information for comparison with future medical data.

A baseline testing program must also comply with all other federal and state statutes, including but not limited to the Americans with Disabilities Act (ADA). Each agency should always consult legal counsel prior to conducting any baseline or physical testing for employees. All medical records should be retained for the duration of employment plus thirty years, as required by 29 CFR 1910.120.(1)

#### ***Post-Job-Offer Examinations***

The purpose of a post-job-offer physical is to determine an individual's physical capacity for the job. The individual should be matched to a specific job according to their physical capabilities. The scope of the physical should be determined by a physician who is familiar with the job and working conditions.  
(2)

#### ***Annual Examinations***

Periodic medical examinations are used in conjunction with post-job-offer screening examinations. Comparison of sequential medical reports with baseline data is essential for determining biological trends that may mark early signs of adverse health effects, and thereby facilitate appropriate protective measures.(3)

Every employee should have an annual examination if they are regularly or periodically exposed to hazardous substances. Examinations may be given more frequently depending on the extent of potential or actual exposure, type of chemical involved, and duration of work assignment. Examinations can include a comprehensive health evaluation or be limited to specific areas of the body.

To determine what should be included in baseline testing, a program should be created that is specific to the worker's job. Recommendations made by safety and health professionals, industrial hygienists, physicians, human resource specialists, and attorneys should be considered. The following tests may be appropriate, depending on the job duty:

- Chest X-rays
  
- Audiometric test
  
- Pulmonary function tests
  
- Vision tests for nearsightedness, farsightedness, or color blindness
  
- Flexibility and strength tests that measure degree of extension and strength
  
- Stress tests to identify aerobic conditioning and general physical fitness
  
- Tests to determine presence of chemicals and or sensitivity to chemicals and allergens
  
- EKGs or similar tests to monitor cardiac health.

The key to accurate diagnosis and treatment often lies in the adequacy and completeness of the medical profile; therefore, profile maintenance is of great importance.<sup>4</sup> The medical profile should include absences caused by illness or injury both on and off the job.

To comply with the ADA, a medical exam cannot be used to discriminate and should be given to all persons in a particular job category. Health screening or physical testing should not be scheduled until after an employment offer has been extended. The purpose of the test should always be to determine and record the physical condition of the prospective worker so that the employee can be assigned according to that individual's physical abilities or limitations.

An individual's physical capabilities should always meet or exceed the job requirements. If they do not, the agency should consult with their ADA coordinator to consider whether the individual's situation falls under ADA, and if so, how reasonable job accommodations can be made. The guideline chapter on the Americans with Disabilities Act (Volume IV, Section Two, Chapter 3) provides additional information regarding this issue.

### ***Summary***

Information obtained in the baseline test is used to evaluate whether an individual is suited for a particular job and to protect the employee from any further exposure and the employer from possible liability. Follow-up examinations or annual examinations are helpful in determining if an employee has had any additional exposures and whether any corrective action is necessary. Confidentiality of medical records and compliance with other federal and state laws should be addressed with appropriate legal counsel.

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### ***Checklist for Essential Program Elements***

1. Does the agency have any positions for which baseline testing is beneficial?	Yes	No
2. Does the agency conduct any post-job-offer medical/physical examination and/or testing?	Yes	No
3. Are periodic physical examinations given to employees who are exposed to occupational health hazards?	Yes	No
4. Has compliance with all other federal and state laws been evaluated by legal counsel?	Yes	No
5. Have issues concerning confidentiality of employee medical records in the possession and control of the employer been reviewed by legal counsel?	Yes	No

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### ***Additional Resources for Texas State Agencies***

#### ***Publications***

*Vernon's Annotated Revised Civil Status* (Texas), Volume 13, Art. 4495b - Medical Practice Act,



## Section 5.08

*Texas Administrative Code, Title 25, Chapter 295 - Environmental Health, Section 295.108 (Access to Employee Exposure and Medical Records)*

*Texas Human Resources Management Statutes Inventory, 2004-2005 Biennium*

Texas Research League

400 West 15th Street, Suite 400

Austin, TX 78701

(512) 472-3127

FAX: (512) 472-2636

*Occupational Safety and Health Standards - 29 CFR Part 1910, Section 1910.1020 - Access to Employee Exposure and Medical Records*

U.S. Department of Labor (OSHA)

525 Griffin Street, Room #602

Dallas, TX 75202

(214) 767-4731

*Americans with Disabilities Act: Employee Rights & Employer Obligations (1996)*

Matthew Bender & Company, Inc.

11 Penn Plaza

New York, NY 10001-2006

(212) 967-7707

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### ***Agencies and Organizations Providing Assistance***

#### **Texas Department of Health**

1100 W. 49th Street

Austin, TX 78756

(512) 458-7111

Toxic Substances Control Division

(512) 834-6600

#### **Texas State Library and Archives Commission**

Records Management Division

Lorenzo de Zavala Building

P.O. Box 12927

Austin, TX 78711-2927

(512) 463-5460

## ***Endnotes***

1. Nwaelele, O. Dan, Network Engineering Services, Inc.; "Medical Surveillance" in *Health and Safety Risk Management, Guide for Designing an Effective Program, Part III*; Government Institutes, Inc.; 1994; p. 12.
  2. Laing, Patricia M., ed.; "Occupational Health Programs" in *Accident Prevention Manual for Business & Industry, Administration & Programs*, 10th Edition; National Safety Council; 1992; p. 101.
  3. Nwaelele, O. Dan; p. 11.
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## Section Two - Employee Safety and Health

### Program

### Chapter 7

### Occupational Health Program

### Subchapter 7.5

### Bloodborne Pathogens

Revised: November 2004

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### Volume III:

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This chapter of Risk Management for Texas State Agencies supplies general information regarding state agency occupational health exposures, and techniques and methods to manage and control those exposures. It also identifies additional resources that may be available to assist state agencies in developing or enhancing its occupational health program. This chapter is not intended in any way to be a substitute for the advice and guidance of legal counsel, who should always be consulted regarding rights, duties, and responsibilities under the law.

### Description

The health care industry faces many challenges in maintaining the safety and health of its workers. Workers in the healthcare industry and related occupations are at risk of occupational exposure to bloodborne pathogens. Bloodborne pathogens (BBP) are microorganisms in human blood and other body fluids that can cause life threatening disease and illness. There are 20 types of bloodborne pathogens that if acquired, can result in serious morbidity, disability and death. Two of the most lethal bloodborne pathogens are the hepatitis B virus (HBV) and human immunodeficiency virus (HIV), which causes acquired immunodeficiency syndrome (AIDS). Other bloodborne infectious diseases include, but are not limited to, hepatitis C virus (HCV), syphilis, malaria, babesiosis, brucellosis and lymphoma. Although workers in the healthcare industry are at the greatest risk of contracting bloodborne illnesses through occupational exposure to blood, bodily fluids and other potentially infected materials, other workers, e.g., emergency medical responders, police and correction facility personnel, are at risk of becoming infected. State agencies need to be informed of the best ways to reduce the risk of infection.

Key elements of an Exposure Control Plan are the following:

- determination of occupational risk exposure;
- engineering and work practice controls for protecting employees;
- disposal and handling of contaminated waste;
- use of personal protective equipment;
- cleanup procedures and the use of disinfectants;

- use of labeling and signs;
- training and education programs;
- immunization programs;
- post-exposure evaluation and follow-up procedures; and,
- annual review and update to reflect changes in technology that eliminate or reduce exposure to bloodborne pathogens.

On April 18, 2001, OSHA made changes to the Bloodborne Pathogens Standard 1910.103 to conform with the requirements of the Occupational Exposure to Bloodborne Pathogens Act. The revised standard includes new definitions as well as mandates that require employers to annually review and revise exposure control plans to reflect how they will integrate engineering controls, such as safe medical devices/needles and sharps, that eliminate or reduce exposure to bloodborne pathogens. Employers are further required to solicit input from employees in the identification, evaluation and selection of engineering and work practice controls. The revised standard also requires certain employers to track all occupational contaminated sharps injuries.

As required by Health and Safety Code, Chapter 81, Subchapter H, the Texas Department of Health adopted new rules §§96.101, 96-201-96.203, 96.301-96.304, 96.401-96.402, 96.401, and 96.601, concerning the standard for occupational exposure of governmental unit employees to bloodborne pathogens. As per § 94.401, Health and Safety Code §81.306, a contaminated sharps injury is defined as "any sharps injury that occurs with a sharp used or encountered in a health care setting that is contaminated with human blood or body fluids." Contaminated sharps injury must be recorded in a written or electronic form on the Texas Department of Health Contaminated Sharps Injury Reporting Form available on the internet at [www.tdh.state.tx.us/ideas/report/sharps.htm](http://www.tdh.state.tx.us/ideas/report/sharps.htm) or from the Texas Department of Health Public Health Regional Offices.

### **Guideline Adopted by Reference**

State Vernon's Texas Code Annotated, Texas Administrative Code, Title 25 -Health Services, Part 1 - Texas Department of Health, Chapter 96 - Bloodborne Pathogen Control; <http://info.sos.state.tx.us/pub/>.

### **Resources**

#### **Federal Agencies**

Occupational Safety and Health Administration, Department of Labor

Occupational Safety and Health Standards - 29 CFR Part 1910, (General Industry) Section 1910.1030 - Bloodborne Pathogens

<http://www.osha.gov/SLTC/bloodborne pathogens/index.html>

This is OSHA's homepage for the revised Bloodborne Pathogens Standard. It updates an earlier directive

issued in 1992 and reflects the availability of improved devices, better treatment following exposure and OSHA policy interpretations.

U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health (NIOSH)

<http://www.cdc.gov/niosh/topics/bbp/#HIV>

## State Agencies

Texas Department of Health, [www.tdh.state.tx.us/ideas/report/sharps.htm](http://www.tdh.state.tx.us/ideas/report/sharps.htm) This takes the readers to TDH's Bloodborne Pathogen Control rules, forms, and plans.

This sample exposure control plan is adopted as the minimum standard to implement the Bloodborne Pathogens Exposure Control Plan required by Health and Safety Code, §81.304. Texas Workers' Compensation Commission <http://info.sos.state.tx.us/pub/>.

This link takes the readers to the Mandatory TWCC 9 posting requirement for all state agencies (TWCC rule, 28 TAC §110.10.108).

<http://info.sos.state.tx.us/pub/>

Reports and Publications Center for Disease Control and Prevention (CDC). "Guidelines for Infection Control in Healthcare Personnel, 1998."

American Journal of Infection Control. June 1998: 289-354.

Occupational Safety and Health Administration. "How to Prevent Needlestick Injuries: Answers to Some Important Questions." Publication No. 3161. Washington, DC: U.S. Dept. of Labor, OSHA 1999.

National Institute for Occupational Safety and Health (NIOSH). "Preventing Needlestick Injuries in Health Care Settings." DHHS (NIOSH) Publication No. 20000-108.

Texas Sharps Safety Manual Texas Hospital Association Video Libraries Texas Department of Health, Audio/Visual [Library http://www.tdh.state.tx.us/avlib/](http://www.tdh.state.tx.us/avlib/): Bloodborne Pathogens In Health Care Facilities (1998)

Bloodborne Pathogens For Corrections (1999) Bloodborne Pathogens Annual Retraining (1994) Texas Workers' Compensation Commission, TWCC Resource Center; <http://www.twcc.state.tx.us/information/videoresources/.html>

This link takes the reader to the Resource Center. Click on Audiovisual Resource Catalog. Titles

include: Bloodborne Pathogens: Part 1 and 2 Bloodborne Pathogens: Know the Risks Bloodborne Pathogens: Public Version.

[CD-ROM Training; http://www.sorm.state.tx.us/Training/Courses.php](http://www.sorm.state.tx.us/Training/Courses.php)

This is SORM's Agency Outreach & Training site containing information on interactive CD-ROMs available to state agencies for individual training. Click on Computer-Based Training. Titles include: Bloodborne Pathogens (health care version).

<b>Checklist</b>	
1. Does the agency have operations that expose employees or the general public to bloodborne pathogens?	Yes__ No__
2. Does the agency post the mandatory notice required by TWCC rule 110.108?	Yes__ No__
3. Does the agency have a written exposure control plan to minimize or eliminate exposures?	Yes__ No__
4. Has the exposure control plan been reviewed annually to reflect changes in technology that will help eliminate or reduce exposure to bloodborne pathogens?	Yes__ No__
5. Does the agency train employees annually?	Yes__ No__
6. Does the agency maintain training records?	Yes__ No__
7. Does the agency train new or transferred employees prior to job assignment?	Yes__ No__
8. Does the agency have an immunization program, Hepatitis B vaccinations, for employees at risk of exposure?	Yes__ No__
9. Are exposure records maintained?	Yes__ No__
10. Are logs kept of all sharps and contaminated sharp injuries?	Yes__ No__
11. Has a program manager been appointed to report all contaminated sharp injuries not later than 10 working days to the local health authority?	Yes__ No__

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## Section Two - Employee Safety and Health Program

### **Chapter 7**

#### Occupational Health Program

#### Subchapter 7.6

#### Confined Entry Space

Revised: November 2004

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### **Volume III:**

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This chapter of Risk Management for Texas State Agencies supplies general information regarding state agency occupational health exposures, and techniques and methods to manage and control those exposures. It also identifies additional resources that may be available to assist state agencies in developing or enhancing its occupational health program. This chapter is not intended in any way to be a substitute for the advice and guidance of legal counsel, who should always be consulted regarding rights, duties, and responsibilities under the law.

The National Institute for Occupational Safety and Health (NIOSH) defines a confined space as "a space which by design has limited openings for entry and exit, unfavorable natural ventilation which could contain or produce dangerous air contaminants, and which is not intended for continuous employee occupancy."<sup>1</sup> The Occupational Safety and Health Administration

(OSHA) has a similar definition - "a space that: (1) Is large enough and so configured that an employee can bodily enter and perform assigned work; and (2) Has limited or restricted means for entry or exit...; and (3) Is not designed for continuous employee occupancy."<sup>2</sup>

NIOSH estimates that millions of workers may be exposed to the hazards of confined spaces each year. Examples of confined spaces may include boilers, boiler rooms and steam tunnels, storage vessels, furnaces, railroad tank cars, manholes, cooking and process vessels, silos, sprinkler valve pits, and pump rooms. The spaces could have, by definition, inadequate ventilation, the potential for hazardous atmospheres, or limited means of entry or exit. Some 300 workers lose their lives in such accidents every year, frequently because they do not recognize the hazards.<sup>3</sup> Confined spaces can be highly dangerous areas even for rescue workers. Their hazards are often invisible, fast-working, and difficult to escape.<sup>4</sup>

According to the National Safety Council, 50 percent of worker deaths are the result of failed rescue attempts because the rescuers were not wearing the proper breathing apparatus.<sup>5</sup>

### ***Federal Regulatory Requirements***

OSHA has recently amended 29 CFR Part 1910 by adding a new Section 1910.146. This section contains



requirements for practices and procedures to protect employees from those hazards of entry into and work within confined spaces. OSHA standards regulating work in confined spaces took effect on April 15, 1993. OSHA's Permit-Required Confined Spaces (29 CFR Part 1910.146) affects more than 240,000 work places and more than 12 million workers.<sup>6</sup>

### *Types of Confined Spaces*

There are two types of confined spaces: permit-required and non-permit confined spaces. All permit-required confined spaces must have signs posted that would effectively prevent entry by unauthorized people. Non-permit confined spaces do not contain or have the potential to contain any hazards that can cause death or serious physical harm.

To qualify as a permit-required space, one or more of the following conditions must be met:

- Contains or has the potential to contain a hazardous atmosphere
- Contains a material that has the potential for engulfing an entrant
- Has an internal configuration such that an entrant could be trapped or asphyxiated
- Contains any other

recognized, serious safety or health hazard.

If it is decided that workers will enter a permit-required confined space, a program will be developed that keeps these workers safe. Unauthorized entry should be prevented, hazards should be identified and evaluated, and procedures should be established and practiced for safe entry and rescue.<sup>7</sup>

### *Atmospheric Hazards*

The atmosphere in a confined space may be extremely hazardous because of the lack of natural air movement. In addition, three atmospheric conditions have been identified as hazards in confined spaces.

1. Oxygen-deficient
2. Oxygen-enriched (flammable)
3. Toxic.

These atmospheric hazards are described in more detail in the following paragraphs.

#### *Oxygen-Deficient Atmospheres*

An oxygen-deficient atmosphere has less than 19.5% available oxygen. Any atmosphere with less than 19.5% oxygen should not be entered without an approved self-contained breathing apparatus (SCBA). A SCBA supplies clean breathing air from a compressed cylinder. It allows the worker to function without being confined by a hose or an airline.

Oxygen levels decrease as a result of work being done (welding, cutting, or brazing); because of chemical reactions (rusting); or, through bacterial action (fermentation).

Oxygen levels can be decreased if oxygen is displaced by another gas, like carbon dioxide or nitrogen.

Exposure to atmospheres containing 12% or less oxygen can cause unconsciousness without warning.

### *Oxygen-Enriched (Flammable) Atmospheres*

When the oxygen level exceeds 23.5% by volume, a different danger presents itself. Known as an oxygen-enriched atmosphere, this condition represents a serious fire hazard.

Flammable materials like clothing and hair will burn very rapidly in an oxygen-enriched atmosphere.

Unattended or leaking oxygen lines or cylinders can increase the oxygen concentration to unsafe levels and should be recognized as hazards. The effects of various oxygen concentrations on humans are shown on Table 1.

### *Toxic Atmospheres*

Most substances (liquids, vapors, gases, mists, solid materials, and dusts) should be considered hazardous in a confined space. Toxic gases can irritate the skin, eyes, nose, and throat. Some can prevent the body from using oxygen and can kill or injure the worker.

Some toxic gases are especially dangerous because they cannot be detected by sight or smell. Carbon monoxide, for example, is colorless and odorless. A by-product of combustion, it can be found in almost every industry. Table 2 shows the effects different levels of carbon monoxide have on humans.

Hydrogen sulfide is another common toxic gas that is colorless. It is detected by a strong "rotten egg" odor in low concentrations. Hydrogen sulfide is formed by the decomposition of organic plant and animal life by bacteria.<sup>8</sup>

Table 3 provides information regarding the effects of various hydrogen sulfide levels on human beings.<sup>9</sup>

### ***Guidelines for Loss Prevention and Control***

To reduce the number of confined space incidents, the employer first of all needs to identify confined spaces, assess the hazard potential of these spaces, and determine whether employees working in these spaces will need a permit to enter them.<sup>10</sup>

#### ***Entry Procedures***

The following conditions and procedures are intended to provide a minimum guideline for entering confined spaces:

- No employee should be

allowed to enter into any confined space until they have been trained and authorized to do so by a supervisor.

- The supervisor should ensure that the confined space is safe for entry.
- The supervisor should discuss with employees the proper preparation for entering a confined space and the hazards that may be encountered.
- Each entrant should be wearing all required protective equipment prior to entering a confined-space site.11

Sample permits for confined space entry are available in Appendix D of the OSHA standard, 29 CFR §1910.146. The OSHA appendix serves to provide information and non-mandatory guidelines to assist employers and employees in complying with the appropriate requirements of the standard.

The guideline information that follows was taken from "Hazard Prevention - Confined Spaces," a publication of the Texas Workers' Compensation Commission, Workers' Health and Safety Division.

### *Atmospheric Testing*

It is important to know that some gases are heavier than air, some are

lighter, and some are the same weight. Depending on their weights, hazardous gases could be at the bottom, middle, or top of a given confined space. Therefore, it is necessary to test all areas of the confined space with properly calibrated testing instruments to determine what gases are present. Testing instruments should first be checked for a proper zero indication for combustible and toxic gases and for a 20.8% oxygen indication in fresh air.

If toxic gases, combustible gases, or oxygen deficiency or enrichment are discovered, the confined space has to be ventilated and retested before any entry is permitted. Workers should use respiratory protection if entry is required for emergency situations and ventilation is not possible.

### *Confined Space Isolation*

Isolation of a confined space is a process where the space is removed from service by

- Locking out electrical sources, preferably at disconnect switches remote from the equipment
- Blanking and bleeding pneumatic and hydraulic lines
- Disconnecting belt and chain drives and mechanical linkages on shaft-driven equipment where possible

- Securing mechanical moving parts within confined spaces with latches, chains, chocks, blocks, or other devices.

### *Ventilating Confined Spaces*

The primary objectives of ventilating a confined space are as follows:

- To keep airborne concentrations of vapor fuel lean and air rich to prevent explosion or fire, and
- To maintain oxygen and air concentrations of dusts, toxic gases, and vapors at safe levels.

Natural ventilation is generally not adequate to remove airborne concentrations of flammable, toxic gases and vapors. There are several methods for ventilating a confined space. The method and equipment chosen are dependent upon the size of the confined-space openings, the gases to be exhausted, and the source of makeup air.

Ventilation should be continuous where possible, because the hazardous atmosphere can form again when the flow of air is stopped. Also, substances like residues or sludge that can release harmful gases should be removed and the area cleaned with steam or water according to OSHA regulations before entry.

### *Personal Protective Equipment*

The job, hazard, training, and person should be considered when selecting the proper respirator. There are two basic types of respirators that allow workers to safely breathe without inhaling toxic levels of gases or particles.

- **Air Supplying Respirators -**

These respirators receive air from auxiliary sources or are self-contained and deliver a supply of safe breathing air from a tank or an uncontaminated area nearby. Only a NIOSH- approved, pressure-demand SCBA or a pressure-demand airline respirator with a 5-10 minute escape tank (pressurized air supplied from a clear air area) with a low air warning should be used in oxygen-deficient atmospheres.

- **Air Purifying Respirators -**

These respirators have limited use and should only be used if the contaminant and its concentration are known, the oxygen content in the air is at least 19.5%, there is periodic monitoring of the work area, a successful fit-test is achieved, and the respirator is designed for protection against the contaminant and the concentration level.

## *Training*

Personnel who must enter and work



in confined spaces should be trained in the dangers and proper observance of confined spaces. The training should entail education in ventilation techniques and systems, respiratory protection, atmosphere testing, lockout/tagout procedures, use of protective equipment, and evacuation procedures.

A trained and properly equipped rescue team should be available to respond to an emergency any time that a confined space is to be entered.

### *Rescue Operations*

When working in a confined space, a standby person should be assigned to remain on the outside, be in constant contact (visual or speech) with the worker(s) inside, and be knowledgeable of the communications equipment used to order rescue operations. The standby person's only duty should be to serve as standby and to know who should be notified in case of emergency.

Two workers should be involved in all confined space entry operations: one is the individual who works in the confined space and the second is the outside attendant. Both individuals should be trained in the duties to be performed in the confined space and the duties of the outside attendant. The outside attendant should maintain continuous communications with the entrant. Under no circumstances should the outside attendant enter the confined

space to assist or rescue the entrant. The outside attendant is the entrant's only link to the outside world and to emergency assistance.

The outside attendant should not leave unless a qualified person is brought in as a replacement. If the outside attendant must leave, the workers should be ordered out of the confined space.

Over half of the workers who die in confined spaces are attempting to rescue other workers. Rescuers should be trained in and follow established emergency procedures and use appropriate equipment and techniques (lifelines, respiratory protection, outside attendant, etc.). Steps for safe rescue should be included in all confined space entry procedures. Rescues should be well-planned and drills should be frequently conducted on emergency procedures.<sup>12</sup>

### ***Summary***

Atmospheric monitoring is one of many important procedures that can minimize confined space hazards, including the risk of serious injury and sudden death. It is significant to realize that every confined space entry may have its own unique set of hazards. To reduce or avoid the dangers present in many such environments, established procedures should be required. These procedures should include requisites for planning, personal protective equipment and training in its use,

ventilation, entry permits, recordkeeping, and maintaining a continuous evaluation of the work area's atmosphere.<sup>13</sup>

If these precautions are followed, the health and safety hazards for state employees who must work in confined spaces can be reduced appreciably and, in some cases, virtually eliminated.

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***Checklist for  
Essential Program Elements***

1. Do the agency's facilities have any areas that may be classified as a confined space?	Yes	No
--	-----	----

If No, skip the remaining questions.

2. Does the agency have a confined space entry program?	Yes	No
---	-----	----

3. Does the agency have the proper breathing apparatus or other necessary equipment for its workers who work in confined spaces?	Yes	No
--	-----	----

4. Does the agency conduct training for employees who do work in confined spaces?	Yes	No
---	-----	----

5. Does the agency issue and control entry permits?	Yes	No
---	-----	----

6. Does the agency provide for the routine maintenance and inspection of SCBA?	Yes	No
--	-----	----

7. Do Yes No  
procedures  
require  
general  
contractors  
and contract  
workers to be  
trained in  
accordance  
with this  
program?

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***Additional Resources for Texas  
State Agencies***

***Publications***

*Occupational Safety and Health  
Standards - 29 CFR Part 1910,  
Section 1910.146 - Permit-Required  
Confined Spaces; amended May 14,  
1994*  
U.S. Department of Labor (OSHA)  
525 Griffin Street, Room #602  
Dallas, TX 75202  
(214) 767-4731

*Texas Administrative Code, Title 25,  
Chapter 295 - Environmental Health,  
Sections 295.101 (Occupational  
Health Rules and Guidelines)*

"Detecting Invisible Risk," John F.  
Rekus, MS, CIH, CSP (May 1994)  
*Occupational Health & Safety*  
P.O. Box 2573  
Waco, TX 76702-2573  
(817) 776-9000

Videos (English and Spanish) and  
Education/Training Materials,  
available through:

Workers' Health and  
Safety Resource Center  
Texas Workers'  
Compensation  
Commission  
7551 Metro Center  
Drive, Suite 100, MS 25  
Austin, TX 78744  
(512) 804-4622FAX  
(512) 804-4621  
E-mail: [Resource.  
Center@twcc.state.tx.us](mailto:Resource.Center@twcc.state.tx.us)

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*Agencies and Organizations  
Providing Assistance*

**Texas Engineering Extension  
Service (TEEX)**

Occupational and Environmental  
Safety Training Division  
The Texas A&M University System  
College Station, TX 77843-8000  
(800) 252-2420  
(409) 845-3418

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*Endnotes*

1. "Hazard Prevention - Confined  
Spaces"; Texas Workers'  
Compensation Commission, Workers'  
Health and Safety Division, Safety  
Education and Training Programs;  
Rev. September 1995.

2. *Code of Federal Regulations*, Title  
29, Part 1910, Section 1910.146(b);  
Rev. July 1, 1995.

3. Ellis, J. Nigel; "Plan Confined Space Fall Protection Before and Beyond Required Rescue"; *Occupational Health & Safety*; February 1992; Volume 61, Number 2; p. 17.
4. "Hazard Prevention - Confined Spaces"; Texas Workers' Compensation Commission, Workers' Health and Safety Division.
5. "Confined Spaces"; *Human Resources Executive*; December 1991.
6. "For the Record, Confined Space Permit Law Takes Effect"; *Record*; May/June 1993; Volume 70, Number 3; p. 18.
7. "OSHA Enacts Final Rules on Confined Space Entry"; *Periscope*; April 1993; pp. 3 and 6.
8. "Hazard Prevention - Confined Spaces"; Texas Workers' Compensation Commission, Workers' Health and Safety Division.
9. *A Guide to Detecting Unseen Hazards with Atmospheric Monitoring*; Industrial Scientific Corporation; Publication, 1704-6848; 1994; p. 9.
10. Colonna, Guy R.; "How to Work Safely in Confined Spaces"; *NFPA Journal*; September/October 1994; Volume 88, Number 5; p. 80.
11. Nwaelele, O. Dan, Network Engineering Services, Inc.; "Confined

Space" in *Health and Safety Risk Management, Guide for Designing an Effective Program, Part II*; Government Institutes, Inc.; 1994; p. 4.

12. "Hazard Prevention - Confined Spaces"; Texas Workers' Compensation Commission, Workers' Health and Safety Division.

13. *A Guide to Detecting Unseen Hazards with Atmospheric Monitoring*; pp. 16-17.

**TABLE 1:**

**Potential Effects of Oxygen-Deficient Atmospheres**

<b>% Oxygen by Volume</b>	<b>Resulting Condition/Effect on Humans</b>
23.5% and above	Oxygen enriched, extreme fire hazard.
21%	Oxygen concentration of "Air".
19.5%	Minimum "Safe Level": OSHA, NIOSH.
15-19%	Decreased ability to work strenuously. May impair coordination and may induce early symptoms in persons with coronary, pulmonary, or circulatory problems.
12-14%	Respiration increases in exertion, pulse up, impaired coordination, perception, judgment.
10-12%	Respiration in rate and depth increases further, poor judgment, lips turn blue.
8-10%	Mental failure, fainting, unconsciousness, ashen face, blueness of lips, nausea, and vomiting.
6-8%	8 minutes, 100% fatal; 6 minutes, 50% fatal; 4-5 minutes, recovery with treatment.



4-6%	Coma in 40 seconds, convulsions, respiration ceases, death.
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These values are approximate and vary as to the individual's state of health and his physical activities.  
Source: NIOSH

**TABLE 2:**

**Effects of Various Carbon Monoxide (CO) Levels**

<b>CO Level in PPM*</b>	<b>Resulting Condition/Effect on Humans</b>
35	Permissible exposure level, 8 hours (OSHA).
200	Possible mild frontal headache in 2 to 3 hours.
400	Frontal headache and nausea after 1 to 2 hours. Occipital (impaired vision) after 2-1/2 to 3-1/2 hours.
800	Headaches, dizziness, and nausea in 45 minutes. Collapse and possibly death in 2 hours.
1600	Headache, dizziness, and nausea in 20 minutes. Collapse and possibly death in 2 hours.
3200	Headache and dizziness in 5 to 10 minutes. Unconsciousness and danger of death in 30 minutes.
6400	Headaches and dizziness in 1 to 2 minutes. Unconsciousness and danger of death in 10-15 minutes.
12,800	Immediate effect unconsciousness. Danger of death in 1 to 3 minutes.

\*PPM-Parts Per Million

10,000 PPM-1% by volume

All values are approximate. The effects can vary depending on the individual's health and the type of physical activity being performed.

Source: American Industrial Hygiene Association

**TABLE 3:**

## Effects of Various Hydrogen Sulfide (H<sub>2</sub>S) Levels

H <sub>2</sub> S Level in PPM*	Resulting Condition/Effect on Humans
0.13	Minimal perceptible odor.
4.60	Easily detectable, moderate odor.
10.00	Beginning eye irritation. Permissible exposure level, 8 hours (OSHA, American Conference of Governmental Industrial Hygienists).
27.00	Strong, unpleasant odor, but not intolerable.
100.00	Coughing, eye irritation, loss of sense of smell after 2 to 5 minutes.
200.00-300.00	Marked conjunctivitis (eye inflammation) and respiratory tract irritation after one hour of exposure.
500.00-700.00	Loss of consciousness and possibly death in 30 minutes to one hour.
700.00-1000.00	Rapid unconsciousness, cessation (stopping or pausing) of respiration, and death.
1000.00-2000.00	Unconsciousness at once, with early cessation of respiration and death in few minutes. Death may occur even if individual is removed to fresh air at once.

\*PPM-Parts Per Million

10,000 PPM-1% by volume

All values are approximate. The effects can vary depending on the individuals health and the type of physical activity being performed.

Source: American National Standards Institute  
(ANSI STANDARD NO. Z37.2-1972)

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## Section Two - Employee Safety and Health Program

### Chapter 7

#### Occupational Health Program

##### Subchapter 7.7

#### Drug-Free Workplace Program

Revised: November 2004

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### Volume III:

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This chapter of Risk Management for Texas State Agencies supplies general information regarding state agency occupational health exposures, and techniques and methods to manage and control those exposures. It also identifies additional resources that may be available to assist state agencies in developing or enhancing its occupational health program. This chapter is not intended in any way to be a substitute for the advice and guidance of legal counsel, who should always be consulted regarding rights, duties, and responsibilities under the law.

The State of Texas has a vital interest in maintaining safe, healthy, and efficient working conditions for state employees. Drug and alcohol abuse is one of the major health problems in today's society. An employee under the influence of drugs and/or alcohol while on the job poses serious safety and health risks to themselves and coworkers. Therefore, all Texas state agencies should be concerned with providing a drug-free working environment.

Employees who use alcohol and drugs are often less productive than their fellow workers and may frequently miss work, show up late, or perform at less than 100 percent efficiency. These same employees file five times as many workers' compensation claims and their medical costs are 300 percent higher than other workers.(1)

Employee assistance programs (EAPs) are designed to identify and help troubled workers. Most provide help for mental health as well as drug-related problems of the employees and their families. Employees must learn how to recognize problems in a coworker. Managers and supervisors must know how to intervene discreetly and get the troubled person into a confidential EAP. Most EAPs even offer follow-up counseling programs and on-site support groups such as Alcoholics Anonymous. With any drug addiction, the danger of relapse is always great, but with help the majority of individuals can once again become useful, productive employees.<sup>2</sup> EAPs are covered in more detail in Volume III, Section Two, Chapter 7.8 of these guidelines.

### *Federal Regulatory Requirements*

Under the Drug-Free Workplace Act of 1988, the federal government currently requires that certain

employers take anti-drug initiatives, which may include drug testing. These anti-drug initiatives are requisite for employers subject to

- The Drug-Free Workplace Act of 1988
- Defense Department Contract Rules, and
- Department of Transportation Regulations.

Any state agency receiving federal grants must develop a drug-free workplace program to comply with the Drug-Free Workplace Act mandate.

Specific elements of a program are:

- The publication of a statement notifying employees that unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance is prohibited in the workplace, and specifying the actions that will be taken against employees for violation of such prohibition.
  
- The establishment of a drug-free awareness program to inform employees about
  - The dangers of drug abuse in the workplace
  - The policy of maintaining a drug-free workplace
  - Any available drug counseling, rehabilitation, and employee assistance programs, and
  - The penalties that may be imposed on employees for drug abuse violations occurring in the workplace.
  
- A requirement that each employee be given a copy of the required notification statement.
  
- A notification to employees in the required statement that, as a condition of employment under the grant, the employee will
  - Abide by the terms of the statement, and
  - Notify the employer of any criminal drug statute conviction for a violation occurring in the workplace not later than five days after such conviction.
  
- A requirement that the employer take one of the following actions, within 30 days of receiving notice under 28 CFR with respect to any employee who is so convicted:
  - Appropriate personnel action should be taken against such an employee, up to and including termination, or
  - The employee should be required to satisfactorily participate in a drug abuse assistance or rehabilitation program approved for such purposes by a federal, state, or local health, law enforcement, or other appropriate agency.

- The employer must make a good faith effort to continue to maintain a drug-free workplace.(3)

The Department of Transportation (DOT) modified the regulations for drug and alcohol testing in 1994 as part of the anti-drug initiative. Employers with more than 50 employees who are required to possess a commercial drivers license are subject to these DOT regulations effective January 1, 1995. Employers with one or more employees who are required to possess a commercial drivers license are required to meet the regulations effective January 1, 1996.(4)

It should be noted that there could be a conflict between the DOT regulations and the employers' obligations under the Americans with Disabilities Act (ADA), especially with respect to alcoholism. Although alcoholism is a protected disease under ADA, it can be grounds for removal from the job under the DOT regulations. Specific state regulations can also differ, which would necessitate a review of several sets of regulations to determine the proper implementation approach.(5)

Each state agency should always consult legal counsel for advice specific to that agency's individual circumstances prior to developing and implementing a testing program for its commercial drivers.

### ***State Regulatory Requirements***

In addition to federally mandated initiatives, a drug-free workplace policy is required by the Texas Labor Code, Sections 411.091-411.092; these sections apply to state agencies. The Texas Workers' Compensation Commission (TWCC) has adopted rules to implement this policy. These rules require employers (including state agencies) to administer a drug-free workplace program. The requirements of these rules are as follows:

- **Rule 169.1, Notification of Drug Abuse Policy**
  - Employers (including state agencies) who have 15 or more employees and who have workers' compensation coverage are required to adopt a drug abuse policy.
  - Employers who have become subject to the drug abuse policy requirement *after* January 1, 1991, shall adopt a drug abuse policy within 45 days of the date on which the employers become subject.
  - Employers must provide a written copy of the drug abuse policy to each employee on or before the first day of employment, or 30 days after the date the policy is adopted.
  - Employers must provide TWCC with a copy of the policy for a compliance audit, not later than 30 days after receipt of a written request.
  - Employers in compliance with the federal Drug-Free Workplace Act of 1988 must amend their policies to include alcoholic beverages and must provide their employees with a copy of the policy.(6)

- **Rule 169.2, Required Elements of Drug Abuse Policy** - The required elements of the drug abuse policy are as follows:
  - A statement of the purpose and scope of the policy.
  - A statement that the policy includes alcoholic beverages, as well as inhalants and illegal drugs. The policy *may include* prescription drugs.
  - A statement of any consequences the employee may suffer if found violating the policy.
  - A description of available treatment programs, if *any*, and how these programs may be requested. This description may include assistance provided by the employee's health care insurance or drug and alcohol abuse rehabilitation programs sponsored by the employer.
  - The availability of, and requirements for participation in, drug and alcohol abuse education and treatment programs, if any.
  - A description of any drug testing program the employer has in force.<sup>7</sup>
  
- **Intoxication Defined** - The definition of "intoxication" is expanded under the new Workers' Compensation Act. The term now includes substance abuse. If an injury occurs while an employee is in a state of voluntary intoxication, insurance carriers are *not* liable for compensation. However, intoxication must be proven. This may have practical applications for state employees and should be stated as such in the agency policy on drug abuse.

Intoxication that results from taking prescription drugs according to doctor's orders does *not* preclude compensation.

Intoxication is defined as:

The state of having an alcohol concentration of 0.10 or more, or the state of not having the normal use of mental or physical faculties resulting from the voluntary introduction into the body of

- An alcoholic beverage as that term is defined by the Alcoholic Beverage Code (§1.04)
- A controlled substance or controlled substance analogue as defined by the Texas Controlled Substances Act, Health and Safety Code (§481.002)
- A dangerous drug as defined by the Texas Dangerous Drugs Act, Health and Safety Code (§483.001)
- An abusable glue or aerosol paint as defined by the Health and Safety Code (§485.001), and
- Any similar substance, the use of which is regulated under state law.

Intoxication does not include the loss of normal use of mental or physical faculties resulting from the introduction into the body of a substance taken under and in

accordance with a prescription written for the employee by the employee's doctor.

Intoxication does not include the loss of normal use of mental or physical faculties resulting from the introduction of a substance listed above by inhalation or absorption incidental to the employees's work.<sup>8</sup>

***Checklist for  
Essential Program Elements***

1. Does the agency have a written policy for the elimination of drug abuse in the workplace?	Yes	No
2. Does the program contain the following elements:		
a. Statement of purpose and scope?	Yes	No
b. Alcoholic beverages and inhalants?	Yes	No
c. Consequences for any violations?	Yes	No
d. Availability of treatment/education programs?	Yes	No
e. Description of testing programs?	Yes	No
3. Does each employee receive a written copy of the program/policy?	Yes	No
4. Does the agency have an EAP program?	Yes	No
5. Does the written policy/procedure address federal motor vehicle regulations?	Yes	No

***Additional Resources for Texas State Agencies***

***Publications***

*Drug-Free Workplace Resource Guide*, Publication,  
HS92-002D (3-04)

Texas Workers' Compensation Commission

Workers' Health and Safety Division

7551 Metro Center Drive, Suite 100, MS 25

Austin, TX 78744

(512) 804-4622 FAX (512) 804-4621

E-mail Resource.Center@twcc.state.tx.us

*Federal Motor Carrier Safety Regulations*,

Management Edition, Publication, #C0875

(containing Title 49 CFR, U.S. Department of  
Transportation, Federal Highway Administration)

American Trucking Associations

2200 Mill Road

Alexandria, VA 22314-4677

FAX: (800) 225-8382

---

### *Agencies and Organizations Providing Assistance*

#### **National Clearinghouse for Alcohol and Drug Information (NCADI)**

P.O. Box 2345

Rockville, MD 20847-2345

(800) 729-6686

#### **Texas Commission on Alcohol and Drug Abuse (TCADA)**

Office: 9001 N. IH 35, Suite 105, Austin

Mail: P.O. Box 80529, Austin, TX 78708

Austin, TX 78753-5233

(800) 832-9623

(512) 349-6600

#### **Texans' War on Drugs (TWOD)**

11044-D Research Blvd. Suite 200 Austin TX 78759

(512) 343-6950

---

### *Endnotes*

1. "Confronting Drug Abuse in the Workplace"; *Working Solutions*; Texas Workers' Compensation Commission, Employee Assistance Program; Spring 1991.
2. "Confronting Drug Abuse in the Workplace"; Spring 1991.
3. Drug-Free Workplace Act of 1988, Title V, Subtitle D, Act of November 18, 1988, Public Law 100-690, 102 Stat. 4304, 41 U.S.C. 701.
4. Rae, Donald A., ed.; "Department of Transportation Issues Drug & Alcohol Testing Regulations"; *ADA Newsletter*; January 1995; Issue No. 2; p. 1.
5. Rae, Donald A., ed.; p. 1.
6. *Texas Administrative Code*, Title 28, Section 169.1.
7. 28 TAC §169.2.
8. Texas Workers' Compensation Act, *Vernon's Texas Codes Annotated*, Labor Code, Title 5, Subtitle



## A, Section 401.013 (Vernon Pamphlet 1996).

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## Section Two - Employee Safety and Health Program

### Chapter 7

#### Occupational Health Program

##### Subchapter 7.8

#### Employee Assistance Program

Revised: December 2004

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### Volume III:

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This chapter of Risk Management for Texas State Agencies supplies general information regarding state agency occupational health exposures, and techniques and methods to manage and control those exposures. It also identifies additional resources that may be available to assist state agencies in developing or enhancing its occupational health program. This chapter is not intended in any way to be a substitute for the advice and guidance of legal counsel, who should always be consulted regarding rights, duties, and responsibilities under the law.

An employee assistance program (EAP) is an employer-sponsored program designed to assist employees to alleviate personal and work-related problems that hinder effectiveness and performance in the workplace. The program deals with a wide variety of employee problems that ultimately affect productivity. An EAP can differ greatly in the scope of services provided and the cost per employee. However, EAPs have consistently proven that the benefits provided far exceed the costs.

#### *EAP Goals*

The primary goal of an EAP is to

- Provide a system where employees can be directed toward confidential, professional assistance in dealing with personal problems that also affect workplace job performance, and
- Restore individuals to optimal levels of social functioning and job productivity.

An EAP also provides a powerful tool to assist supervisors in dealing with job performance problems that are aggravated or caused by personal difficulties not related to the job.

#### *Benefits of an EAP*

An EAP is a humanitarian, job-based strategy for helping employees whose personal problems affect work performance.<sup>1</sup> EAPs have been found to reduce absenteeism, average health care costs, sickness

benefits, work-related accidents, and workers' compensation benefits.<sup>2</sup> An EAP also helps to

- Demonstrate and reinforce management's concern for all employees
- Promote high morale among employees and encourages them to take responsibility for their own personal well-being
- Provide management with an effective mechanism to deal with employees' personal problems, thus freeing more time for other management duties
- Increase productivity by relieving personal problems that adversely affect an employee's ability to function normally
- Decrease employer costs due to lost productivity, retraining, poor decisions, and theft
- Provide personal counseling within 48-72 hours of an incident of violence in the workplace
- Educate employees to help prevent problems from occurring or escalating.<sup>3</sup>

### ***How an EAP Works***

Employees come into contact with EAPs through self- referrals, supervisory referrals, and/or the urging of co-workers. An appointment is made by the employee with a counselor associated with the EAP. The appointment is usually set up within 1-3 days of the initial contact. During the first meeting, a trained counselor assesses the problem and discusses possible action. Additional follow-up consultations may be scheduled by the counselor. If additional professional help is needed, the EAP counselor will recommend qualified and appropriate resources that match an employee's treatment needs, as well as their personal and financial needs.

The initial counseling visit, crisis counseling, and short-term counseling are provided free of charge. Fees for any additional professional help are normally based on what the employee can afford and, in some instances, may be covered by insurance or other benefit plans.<sup>4</sup>

Complete confidentiality is one of the key elements of an effective EAP. Specific discussions between the employee and counselor remain strictly private. Aggregate statistical information is the only information provided to the agency. The only instance in which confidentiality may be breached is when there is a possible threat of violence to someone. However, even under these special circumstances, the specific case history information cannot be released to the employer.<sup>5</sup>

### ***Cost of Troubled Employees to an Employer***

State agencies need to have employees arrive ready to work and able to devote their attention to their

jobs. However, employees occasionally have personal problems severe enough to adversely impact personal effectiveness and job performance. Some of these problems may include stress, family and marital problems, financial problems, and alcohol or other drug abuse, to name a few.<sup>6</sup> These unresolved personal problems can have profound effects on an employee's performance and productivity. The cost of a troubled employee to an employer is growing each year.

### ***Cost of Implementing an EAP***

An EAP provides services and support to troubled employees and their families in times of need. Initial and short-term services typically are offered at no cost to the employee. Should a problem occur that requires more specialized help, the EAP will refer the employee to qualified and/or licensed professionals. If referred to one of these professionals, the employee would be charged for services rendered according to the employee's financial ability to pay.

The cost for EAP services to an employer can range from \$1.00 - \$2.50 per employee per month, depending on the number of EAP counseling sessions desired in the service package.<sup>7</sup> EAP packages range from assessment, referral, and short-term counseling to a broad array of alcohol, drug, family, and psychological services. Considering the value of an employee to an agency, the amount spent on an EAP is cost effective.<sup>8</sup>

### ***Selecting an EAP***

An EAP should be designed and customized to the agency with consideration given to the following variables:

- Number of employees to be covered
- Availability of service providers in the local area
- Cost of services to the agency
- Levels of service to be provided by the EAP, which may include
  - Counseling for depression or anxiety
  - Help in locating free legal advice and providing legal referral resources.
  - Short-term counseling and referral to financial experts in the community for financial problems
  - Alcohol and drug abuse counseling
  - Guidance and education for stress reduction
  - Counseling and referral resources for marital/family relationship problems
  - Education and training services covering a wide variety of topics informing employees how to avoid or alleviate problems before the problems occur.<sup>9</sup>

### ***Stress Management***

Much has been written about the negative aspects of stress, but there are positive aspects of stress. Stress is a physical reaction to a new situation. The human body works the same way whether the situation is welcome or unwelcome. The cardiovascular systems speeds up and a natural stimulant called adrenaline is produced. Breathing quickens and perspiration increases. When followed by periods of relaxation, these physical responses are beneficial and give an individual "the competitive edge" in sports, increase alertness and concentration ability, and literally may save an individual's life in an emergency.

However, when the human body is constantly under stress without periods of relaxation, these same responses can lead to increased blood pressure, anxiety attacks, and a wide range of physical disorders. Unfortunately, stress can be either the root cause or a contributing factor for substance abuse, disturbed relationships, and lower productivity. These factors contribute to employees losing interest and motivation for safety, and can lead to increased sick leave and missed time from work. There is definitely a clear reason for management to address the negative aspects of stress and to help workers manage stress.

### ***Addressing Stress in the Workplace***

Specialized, stress management employee training, as well as specific exercises done during the work day aimed at reducing stress levels, may be included most appropriately in an agency's employee wellness program. For more information on employee wellness programs, refer to Volume III, Section Two, Chapter 7.9 of these guidelines.

Stress management training typically includes teaching employees how to identify and alleviate sources of stress. When the source of stress is a part of the work process or work environment, further analysis may be needed to determine if any changes should be made in the work environment. The principles of creative problem solving may be explained to turn stressful situations into positive experiences or to illustrate how the cycle of continuous stress may be broken. Planning time for relaxation and exercise, stretch breaks, deep breathing, uninterrupted silence and meditation, and other relaxation techniques may be helpful. The training can take place by recruiting health professionals and outside vendors. Films and video tapes are also highly effective.

Stress that is caused by personal factors in the employee's life may best be handled through a counseling referral to the agency's EAP. Caution should be exercised in what is said to employees in the way of advice when it comes to personal problems, for the obvious liability exposure this action creates.

### ***Reducing Liabilities Associated with EAPs***

When initiating an EAP, an agency should look for an external existing EAP offered by independent companies, local hospitals, or mental health centers. Due to legal requirements regarding records retention, ethics, and confidentiality, an agency should contract with an external source that employs qualified personnel and has the resources and ability to maintain a recordkeeping system. Through

contractual transfer, an agency's liability exposure is transferred to the contracting provider.

External services tend to have a higher rate of usage because they are perceived by employees to be more confidential. Over the last few years more than 100 independent consulting firms offering EAP services on a contractual basis have been established in the United States. Private hospitals, community mental health centers, and family-service agencies also contract with companies to provide advice or actually maintain an EAP.

### ***State Legislation Relating to EAPs***

The incentive for EAPs for state agencies began with the passage of the State Employees Health Fitness and Education Act of 1983 by the Texas Legislature. This legislation recognized the direct correlation between personal fitness and agency productivity and provided the opportunity for agencies to implement EAPs.

According to the legislation, an agency implementing a program of this type shall develop a plan in writing that addresses the overall function that the program will serve. The plan proposal should include, but is not limited to, the participants, purpose, nature, duration, costs, and expected results of the program. The Texas Department of Health must review and approve the plan prior to implementation. Approval in writing by the governor or the governor's designated representative must be obtained if public funds are going to be used to implement the plan.

Each agency has the opportunity to budget funds for these programs as it determines. The Act encourages an agency to enter into agreements with other state, local, or federal departments to present jointly or participate in programs on health fitness education and activities.

To ensure the successful planning and implementation of an EAP, state agencies should contact the Texas Department of Health for assistance, as well as thoroughly review the relevant legislation and rules.<sup>10</sup>

### ***Guidelines for Establishing an EAP***

When planning for the establishment of an EAP, some basic guidelines should be followed to ensure the program's success. EAPs should include the following basic components:

- A policy statement defining the kinds of problems and services covered, how employees can get help, and a commitment to confidentiality. The policy statement should be prominently displayed and advertised.
- Identification of procedures used for referrals and handling cases. This process should include the scope of each program (i.e., what each particular program does as far as counseling vs. referring), how records are maintained, and follow-up client services.
- A statement of accountability that includes a definition of roles, support, and evaluation. This

section determines if the program meets the original specifications and expectations of employees and management, and if the program is getting the necessary support from management to make it a success.

- Identification of treatment resources and whether such resources are providing expedient and cost-effective service. The program should be evaluated at frequent intervals to ensure every employee is getting the help needed when it is most important. This includes ensuring the program is available 24 hours a day for emergencies.
- An effective means of ensuring the EAP is consistently visible and understood at all agency levels. A determination of the various methods of advertising the program, such as bulletins, mail outs, internal newsletters, and new employee orientations, should be included.
- Training for all managers and supervisors to recognize and deal with performance problems.
- Confidentiality of all recordkeeping. EAP records should be kept separate from all other agency records. This step is vital to ensure employee confidence in the program. The use of external EAP organizations will ensure this process.

Trust and credibility are critical to the successful establishment of an EAP. Ultimately, the success of the EAP depends on the quality of the staff and the commitment of those responsible for its operation.

### ***EAP Policy Example***

The (*name of agency*) realizes that the personal problems of an employee may become so severe that these problems may interfere with personal and/or job performance. For this reason, the agency provides the employee assistance program for employees.

This confidential counseling service is free to employees with family, marital, financial, or other problems that affect their work. Employees who believe they might benefit from the program are encouraged to seek assistance.

Strict confidentiality concerning employees who seek assistance and the nature of their problems is maintained. Employees are allowed to use accrued leave for counseling appointments in order to take advantage of counseling services during normal working hours. Assistance is normally provided one afternoon a week after regular work hours for those employees unable to attend between 8 AM and 5 PM.

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### ***Checklist for Essential Program Elements***

1. Does the agency have a written EAP program?	Yes	No
2. Has the EAP program been approved by the Texas Department of Health?	Yes	No
3. Does the agency have a stress management training program?	Yes	No
4. Does the agency use the services of the EAP for training?	Yes	No
5. Is the EAP program discussed at new employee orientation?	Yes	No
6. Does the policy contain a statement of confidentiality?	Yes	No

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***Additional Resources for Texas State Agencies***

***Publications***

*Vernon's Texas Codes Annotated*, Government Code, Title 6, Subtitle B, Chapter 664 - State Employees Health Fitness and Education Act of 1983, Sections 664.001-664.006

*Texas Administrative Code*, Title 25, Chapter 1 - Texas Board of Health, Sections 1.61-1.62 (State Employee Health Fitness and Education Programs)

*Drug-Free Workplace Resource Guide*, Publication, No. 94-003HS (Rev. October 1995)  
Texas Workers' Compensation Commission  
Workers' Health and Safety Division  
Safety Education and Training Programs  
7551 Metro Center Drive, Suite 100, MS 25  
Austin, TX 78744  
(512) 804-4622 FAX (512) 804-4621  
E-mail [Resource.Center@twcc.state.tx.us](mailto:Resource.Center@twcc.state.tx.us)

*Drug-Free, Texas Drug-Free Workplace Initiative* (1994) - Workers Assistance Program of Texas, Inc., in partnership with the Texas Commission on Alcohol and Drug Abuse

and

*Employee Assistance Program, Training Manual for Supervisors*  
Workers Assistance Program of Texas, Inc.  
3410 Far West Blvd., Ste. 250



Austin, TX 78731

(800) 522-0550

(800) 343-3822

(512) 343-9595

*Guide to Implementation of Employee Assistance Programs for State Agencies and Higher Education*

(February 1993)

Texas State Personnel Administrators Association

P.O. Box 182

Austin, TX 78767-0182

(512) 463-8252

(512) 305-6801

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***Agencies and Organizations Providing  
Assistance***

**Texas Department of Health**

Bureau of Chronic Disease Prevention and Control

Community and Worksite Wellness Program

1100 West 49th Street

Austin, TX 78756

(512) 458-7534

FAX: (512) 458-7254

**Workers' Assistance Program of Texas, Inc.**

3410 Far West Blvd., Ste. 250

Austin, TX 78731

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(800) 343-3822

(512) 343-9595

**Texas State Personnel Administrators Association**

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(512) 463-8252

(512) 305-6801

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***Endnotes***

1. "The Role of Employee Assistance Programs in a Drug Free Workplace"; Employee Assistance Professionals Association; 1989.

2. Major, Michael J.; "Employee Assistance Program: An Idea Whose Time Has Come"; *Modern Office Technology*; March 1990; p. 76.
  3. *Encouragement, Action, Performance - Employee Assistance Programs*; Workers Assistance Program, Inc.; 1993; pp. 1-2.
  4. "Your Employee Assistance Program"; Workers Assistance Program, Inc.; 1992.
  5. Weide, A. L. and Gayle E. Abbott; "Counseling Services and EAPs" in *A Manager's Guide... Deflecting Workplace Violence*; HUERCO, Inc.; 1994; p. 85.
  6. "Employee Assistance Programs" in *Drug-Free, Texas Drug-Free Workplace Initiative*; Workers Assistance Program, Inc.; 1994; p. 17.
  7. "EAP Benefits"; Workers Assistance Program of Texas, Inc.; July 1989; p. 4.
  8. Robert G. Wiencek, M.D. et al; *Guide to Developing an Employee Assistance Program*; National Safety Council; 1987; p. 1.
  9. *Guide to Implementation of Employee Assistance Programs for State Agencies and Higher Education*; Texas State Personnel Administrators Association; February 1993.
  10. State Employees Health Fitness and Education Act of 1983, *Vernon's Texas Codes Annotated*, Government Code, Title 6, Subtitle B, Sections 664.001-664.006.
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## Section Two - Employee Safety and Health Program

### Chapter 7

#### Occupational Health Program

##### Subchapter 7.9

#### Employee Wellness Program

Revised: December 2004

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### Volume III:

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This chapter of Risk Management for Texas State Agencies supplies general information regarding state agency occupational health exposures, and techniques and methods to manage and control those exposures. It also identifies additional resources that may be available to assist state agencies in developing or enhancing its occupational health program. This chapter is not intended in any way to be a substitute for the advice and guidance of legal counsel, who should always be consulted regarding rights, duties, and responsibilities under the law.

Many organizations across the nation are recognizing the value of promoting healthy lifestyles for their employees. Encouraging health and wellness is a proactive approach to preventing illness and injury as opposed to the traditional reactive approach of treating illnesses and disabilities after they have occurred. Promoting the concept of preventive health care and wellness for employees is a positive endorsement of good health, longer and more productive careers, and a higher quality of life. Creating an environment that promotes wellness can bring increased job satisfaction, lower turnover and absenteeism, higher productivity, and enhanced morale and creativity.

#### *What is Wellness?*

A wellness program in risk management terms is a risk control technique used by employers to promote preventive health care and healthy lifestyles.

Wellness, as defined by the National Wellness Institute, is the active process of becoming aware of and making choices toward a more successful life. It is a multi-dimensional concept that incorporates six interdependent areas of concern promoting the importance of a whole-person wellness philosophy.

- **Intellectual wellness** is evidenced by self-directed behavior. This behavior includes continuous self-directed acquisition, development, creative application, and articulation of critical thinking and expressive/intuitive skills and abilities. The goal is the achievement of a more satisfying existence. An intellectually well person assimilates what is learned in the classroom with what is experienced in everyday living to achieve his or her potential for experiencing a more fulfilled life.

- **Emotional wellness** is evidenced by an awareness and acceptance of a wide range of feelings for oneself and others. It includes the ability to freely express and effectively manage thoughts so that decisions can be made in an integrated fashion. An emotionally well person functions autonomously, yet is aware of personal limitations and the value of seeking interpersonal support and assistance.
- **Physical wellness** is evidenced by the willingness to take time each week to pursue activities that increase endurance, strength, and flexibility. A physically well individual employs sound nutritional concepts and understands the relationship between emotional and physical health.
- **Social wellness** is evidenced by the willingness to actively participate in and contribute to efforts that promote the common welfare of one's community. A socially well person lives in harmony with fellow human beings, seeks positive interdependent relationships with others, and works for mutual respect and cooperation among community members.
- **Occupational wellness** is evidenced by the personal satisfaction and enrichment of one's experiences through work. The occupationally well person has integrated his or her commitment to work into a total lifestyle that is rewarding and that seeks to express personal values through involvement in paid and unpaid activities.

### *State Employees Health Fitness and Education Act of 1983*

In 1983 the Texas Legislature determined that developing and promoting health and fitness programs in Texas state agencies could materially enhance the performance of state administration. The legislature decided that by encouraging state agencies to establish wellness programs, several purposes would be served. Included in these stated purposes are the following:

- An understanding of the diseases that are the leading causes of death today
- An improvement in productivity and work capacity
- A reduction in absenteeism and health insurance costs
- An increase in the general level of health fitness.(1)

### *Plans for Health Fitness Programs*

The legislation specifies that an agency implementing a health fitness program shall develop a plan, in writing, that addresses the overall function that the program will serve. The plan should include, but is

not limited to, the participants, purpose, nature, duration, costs, and expected results of the health fitness program. Prior to implementation of a health fitness program, the Texas Department of Health must review and approve the plan. If public funds are going to be used to implement the health fitness plan, approval in writing by the governor or the governor's designated representative must be obtained.  
(2)

### *Funds and Facilities for Health Fitness Programs*

The legislation authorizes the use of public funds by state agencies or commissions when planning and establishing a health fitness program. Each agency has an opportunity to budget funds for these programs.

The Act encourages a state agency interested in establishing a wellness program to enter into agreements with other state, local, or federal departments to present jointly or participate in programs on health fitness education or health fitness activities.(3)

### *Establishing an Employee Wellness Program*

The first step a wellness program needs to take to gain employee participation is making employees aware of their personal risk.<sup>4</sup> An employee wellness program should be initiated only after sufficient research about the needs of agency employees has been conducted. An agency should view a health and fitness program as an investment and should structure it with specific guidelines for goals and benefits to be achieved. Elements of a successful wellness program include involvement and participation from top management, knowledgeable stimulating leadership, and medically sound and professionally planned activities.

During the initial planning stage, a report should be prepared that details all aspects of the proposed employee wellness program. This comprehensive report should define and give the scope of the program, justify the program's existence, designate who will coordinate and implement the program, specify any risk exposures involved that the state might incur, and identify loss control measures to eliminate or reduce the exposures.

### *Preventive Health Care*

Preventative health care at the worksite recognizes the importance of illness prevention through self-care. The following steps have been identified as being necessary to ensure a lasting lifestyle change

- Awareness of lifestyle and disease
- Education about individual lifestyle actions
- Incentives to change to healthy lifestyles

- Structured programs to teach participants how to change behavior
- Guidelines for self-action
- Follow-up support to maintain lifestyle changes.

While the model addresses the requirements for individual lifestyle changes, certain items will help promote the success of an employee wellness program:

- Support from the agency's director
- Making health and wellness a stated priority
- Identifying on-site or off-site facilities and resources that are accessible to employees
- Offering the program to family members of employees to provide education and intervention (family members' participation usually uses more of the employer's health dollars)<sup>5</sup>
- Involvement with community health and wellness programs
- Internal marketing and communication to employees of the agency's commitment to the program
- Conducting needs assessments and internal evaluations
- Referral to qualified and/or licensed specialists only.

### ***Elements of an Employee Wellness Program***

Specific elements of a wellness program might include, but certainly are not limited to, the following:

- Classes on
  - Weight control
  - Nutrition

- Smoking cessation
  - High blood pressure control
  - Stress/anger management
  - Back problem prevention and care
- 
- Immunization
- 
- EAP program services provided under health benefits that include counseling to help manage
    - Marriage
    - Family
    - Parenting
    - Interpersonal relationships
    - Alcohol/drug misuse
- 
- For women, a mammography screening service
- 
- Encouragement and/or incentives to engage in
    - Aerobic exercises
    - Bicycling
    - Jogging
    - Weight lifting.

### ***Limiting Liability Exposures***

In order to limit the liability exposures that may occur when instituting a wellness program, a few precautions should be taken. For example, a physical fitness program would inherently possess the potential for injuries to occur. These potential injuries and ensuing liabilities suggest using off-site facilities rather than providing on-site, agency facilities. Community programs are licensed and provide qualified personnel. Use of community programs reduces risk to the state and may offer more variety and availability to agency personnel. Hold harmless agreements may be of some value in deterring charges against the state when on-site facilities are provided, as well as obtaining a release from the employee's physician whenever necessary.

### ***Summary***

The benefits of a wellness program include, but are not limited to, the following:

- A reduction in the number of on and off the job injuries

- An increase in employee safety and morale
- A reduction in sick leave days taken
- A reduction in the cost of health benefits and workers' compensation
- An improved employer image.

***Checklist for  
Essential Program Elements***

1. Does the agency have a wellness program?	Yes	No
2. Were the employees' needs determined prior to establishing specific wellness programs?	Yes	No
3. Does the agency have a policy on smoking?	Yes	No
4. Does the agency have a health fitness program plan?	Yes	No
If Yes:		
5. Is the health fitness program plan in writing?	Yes	No
6. Does the health fitness program plan contain required elements?	Yes	No
7. Has the health fitness program plan been approved by the Department of Health?	Yes	No
8. Has the health fitness program plan been approved by the governor/ governor's representative if public funds are used to implement the program?	Yes	No

***Additional Resources for Texas State  
Agencies***

***Publications***

*Texas Administrative Code*, Title 25, Chapter 1 - Texas Board of Health, Sections 1.61-1.62 (State Employee Health Fitness and Education Programs)

Videos (English and Spanish) and Education/Training Materials, available through:

Workers' Health and Safety Resource Center



Texas Workers' Compensation Commission Metro Center Drive, Suite 100  
Austin, TX 78744  
(512) 804-4622  
FAX (512) 804-4621  
E-mail [Resource.Center@twcc.state.tx.us](mailto:Resource.Center@twcc.state.tx.us)

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1100 West 49th Street  
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FAX: (512) 458-7254

**National Wellness Institute** 1300 College Ct., P.O. Box 827  
Stevens Point, WI 54481-0827 715-342-2969  
Fax: 715-342-2979

**Association for Worksite Health Promotion (AWHP)**

60 Revere Drive, Ste. 500  
Northbrook, IL 60062  
(708) 480-9660  
FAX: (708) 480-9282

**Well Call**, <http://www.wellcall.com>

**Wellness Junction**, <http://www.wellnessjunction.com>

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***Endnotes***

1. State Employees Health Fitness and Education Act of 1983, *Vernon's Texas Codes Annotated*, Government Code, Title 6, Subtitle B, Section 664.002.
  2. Government Code, §664.006.
  3. Government Code, §664.004.
  4. Sundahl, Linda; "Wellness Goes to Work"; *Public Risk*; October 1992; Volume 6, Issue 9; p. 16.
  5. Sundahl, Linda; p. 18.
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## Section Two - Employee Safety and Health Program

### Chapter 7

#### Occupational Health Program

##### Subchapter 7.10

##### Ergonomics

Revised: December 2004

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### Volume III:

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This chapter of Risk Management for Texas State Agencies supplies general information regarding state agency occupational health exposures, and techniques and methods to manage and control those exposures. It also identifies additional resources that may be available to assist state agencies in developing or enhancing its occupational health program. This chapter is not intended in any way to be a substitute for the advice and guidance of legal counsel, who should always be consulted regarding rights, duties, and responsibilities under the law.

Ergonomics is the science of fitting the work environment to the people who do the work and literally means the "laws of work." Essentially, it is the planning and adapting of equipment and tasks to promote the comfort and efficiency of workers. Achieving this goal requires that both workers and employers understand the potential risks associated with the job tasks and how to minimize or avoid exposure to such risks. Ergonomic problems are as much a concern to office workers as they are to persons doing physical labor.

Many times the design of the workplace has been based upon efficient movement of the product or the best location for machinery, with little consideration given to how the people fit in the workplace. Employees typically have been expected to adapt themselves to fit whatever system has been devised. However, people have physical differences and physical limitations. The concept underlying ergonomics is to design the workplace for the anatomy, physiology, and psychology of the employees. By fitting the job to the person, employee well-being and workplace efficiency can be improved. The most common injuries resulting from poor workplace design are repetitive trauma and back injuries. For more information on either of these topics, refer to Volume III, Section Two, Chapter 7.3 (Back Injury Protection Program) or Chapter 7.19 (Repetitive Trauma Injuries) of these guidelines.

OSHA does not yet have an official standard but does recommend a written ergonomics plan. This plan should consist of four elements: worksite analysis, hazard prevention and control, medical management, and training and education.1

### *Ergonomics Program*

Developing a good ergonomics program involves a systematic review and discussion of jobs. Often a program involves working with a team of people including the following:

- Ergonomists
- Managers
- Employees
- Safety/medical personnel
- Engineers.

## ***Roles and Responsibilities***

### *Ergonomics Team*

For ergonomics issues, a team approach works best. Those involved should represent the various agency functions needed to coordinate and implement any changes.

### *Management*

Responsibility needs to be assigned for overall coordination of the program and implementation of its various aspects. The decision-making authority should be defined and the resources committed to address the issues.

Managers should review loss analysis reports for trends to assist in identifying any ergonomic problems existing in the workplace that may result in injuries. A key consideration in reviewing worker injuries is to evaluate the job in terms of the human/machine interface. Every attempt should be made to keep the human body in a neutral posture. This posture is assumed when the human body is in a standing position. Neutral postures provide the greatest opportunity to avoid ergonomic-related injuries. It is for this reason that the workplace needs to be "adjustable" to fit workers' capabilities and limitations. Management should be alert to employees' complaints and unauthorized changes in the workplace. Employees may be trying to increase their comfort and productivity by using makeshift equipment. Managers and employees should be trained on the different types of ergonomic injuries, causes, early symptoms, and prevention.

### *Employees*

Employees often have special insight into ways of improving their own jobs, especially if they are given training in ergonomics principles. Participation often helps pave the way for accepting change.

Mechanisms should be established to obtain employee input. A variety of options can be chosen, such as the following:

- Suggestion/complaint systems

- Interviews with individuals during job evaluations
- Employee surveys
- Department-level ergonomics teams
- Small group discussions when certain jobs or areas are being addressed.

Employees should be informed of the overall objectives of the program and the progress being made in the program. In particular, employees should be notified in advance when jobs are going to be changed. Good communication should be maintained between various functions within the agency. Timely communication is essential to properly plan, coordinate activities, and build momentum for the program. Employee morale and ergonomics are closely related. Good ergonomics conditions keep morale high.

### *Safety/Medical Personnel*

The safety officer and occupational physician should be part of the ergonomics team as they can identify the hazards and make recommendations in the redesign of the workstation. Workplace design should be compatible with the limitations and capabilities of workers. Injuries, illnesses, higher accident rates, and lower productivity and efficiency are a direct result of a mismatch between the worker and the job. By measuring the various characteristics of human differences, a safety officer and/or occupational physician can use the resulting information to further maximize worker comfort and safety.<sup>2</sup>

### *Engineers*

Engineers should be involved in the design of the workstation so that the operator will not be overburdened and maximum production quantity and quality can be achieved.

The overall ergonomics program should be evaluated periodically, and the team should be adaptable to changes in recommendations.

### *Monitoring*

The impact of the program can be evaluated by the following techniques:

- **Job Analyses before and after Improvements Are Made** - Systematic reviews of jobs should be made to ensure that recurrent or unusual problems are recognized and preventive techniques are implemented.
- **Employee Survey Results** - An employee survey will indicate the problems and where the team should place their priority.

- **Workers' Compensation Costs** - An effective ergonomics program will lower the costs of workers' compensation.
- **Absenteeism** - The rate of absenteeism should be decreasing.
- **Quality and Productivity** - There should be a noticeable increase in quality and productivity.

An effective workplace design involves the following components: work area, chairs, video display terminals, lighting, temperature, noise, fatigue, and eyestrain.

Unless otherwise noted, the following information, which details these workplace design components, was extracted from the Texas Workers' Compensation Commission, Workers' Health and Safety Division's publication entitled *Workstation Adjustments for Comfort and Safety*.

## ***Workplace Design***

### ***Work Area***

The work area should fit the body size of the operator, as well as the task being performed. The work area should be large enough to accommodate the operator, allow the full range of motions involved in performing the task, and have room for the equipment and materials that make up the workstation.

An effective work area should be limited to the convenient reach of the operator's forearm. The maximum work area is the space the operator can reach by extending the arms without leaning forward. Ninety- five percent of all adults can reach from 22 to 26 inches in this position.

### ***Chairs***

The chair should be properly designed for comfort, efficiency, and the task being performed. A chair must not only fit the person but also the requirements of the task and the environment in which it is being used. When environmental factors, task requirements, and individuals' preferences have been determined, individual dimensions should be considered before a chair is selected.

- **Key Factors in Selecting a Chair**

- **Stability** - Select a chair that has good stability, such as a five-point base.
- **Seat** - An ideal seat-pan length allows three to three and one-half inches from the front edge of the seat to the back of the lower leg at the knee when the back contacts the backrest. For most people, a seat-pan with a length of less than 13 inches will not give adequate support under the thighs, since the weight load is shifted to other tissues and leads to discomfort when seated for long periods of time.

- **Chair Height Adjustment**

- Sit toward the front edge of the chair with feet squarely on the floor.

- With one hand, hold a straightedge (yardstick) horizontally so that it contacts the underside of each thigh just behind the knee.
- With the other hand, use a yardstick to measure the distance from the floor to the top of the straightedge.
- Begin the adjustment by setting the seat height at this level.
- Sit back in the chair and determine whether this height is comfortable.
- If there is uncomfortable pressure to the underside of the thighs, lower the chair slightly.
- If the chair is lowered too far, it may create excessive flattening of the lower back.

The chair height should be adjusted first, then the workstation adjusted. In most situations, the work surface height often cannot be adjusted. If the work surface is too high, the chair height should be adjusted upward until the work surface is at a comfortable level. If necessary, a footrest can be added to compensate for the increased chair-seat height. A footrest should be large enough to support the soles of both feet, and its inclination should not exceed 30 degrees. The top of the footrest should be covered with a nonskid material to reduce slippage.

- **Seat-Pan Padding** - Hard, unpadded, flat seat pans are uncomfortable for periods of more than one hour. Soft, deeply padded seat pans cause the person to sink too far, transferring the weight load from the buttocks to the surrounding tissues. This causes tension in the hip muscles and becomes uncomfortable. The seat-pan contour should promote lower back contact with the backrest. The front edge of the seat pan should have a softly padded, rounded front edge (waterfall edge). Straight, unpadded seat-pan front edges compress thigh tissues and restrict blood circulation. Seat covering materials should be porous and breathable, not slippery, since this may cause the operator to slide away from the backrest.
- **Backrests** - Backrests should have a 15 to 20-inch high support surface, be about 13 inches wide, and contour to the curve of the lower back. The key to a healthy back is proper posture. The ideal posture minimizes the anatomical strain of sitting and maximizes freedom of movement in the waist. Therefore, a backrest should be large enough to support the entire back, including the lumbar region. However, it should not be so large that it interferes with the use of arms during the performance of assigned tasks.
- **Armrests** - It is preferable to have a chair with armrests that can be adjusted to the height of the individual for the task being performed. Armrests should be low and short enough to fit the chair under the work surface, and allow the user to get close enough to the work surface to use the chair backrest. Armrests that are too high elevate the shoulders causing stiffness or pain in the shoulder or neck muscles. Armrests that are too low tend to promote slumping and leaning to one side. The most comfortable armrests are long enough to support the entire forearm.

## *Video Display Terminals*

Visual and musculoskeletal discomfort and fatigue can be reduced significantly when ergonomic design principles are applied to the equipment, furniture, and work environment of video display terminals (VDTs). The following information was developed to help workers and employers select, set up, and use VDTs in the workplace in order to minimize potential occupational safety and health hazards.

- **Display Screens** - When selecting a video display screen, choose one that is designed to fit the task(s) that is to be completed by the user. In general, it is best to choose a screen that is large enough to display a sizable amount of information at the same time. To allow for clear and stable images, the screen characters should not have a perceptible flicker or waiver. Geometric designs of letters and symbols should not be distorted or appear to melt together. Character size should be sufficient for the viewing distance (i.e., based on a 20-inch viewing distance, the minimum character height should be 1/9 of an inch). The screen should have user controls for character brightness and contrast. Screens that swivel horizontally and tilt or elevate vertically enable the operator to adjust for the best viewing angle. Mounting a video display monitor on an adjustable arm, which allows movement in all directions, is the most efficient way to build in adjustability and provide more workstation space. The optimum solution is an adjustable arm, but less expensive remedies such as small platforms should not be ruled out.

The light-adapted eye is most sensitive to light in the green part of the color spectrum. Although character color is secondary to the need for adequate contrast and clarity of the display, it is recommended that the characters should fall within the green-yellow part of the spectrum.

When adjusting the height of the screen, the top line of the display should not be higher than the user's eye level. Most users prefer a viewing distance of 20 to 26 inches between eyes and screen.

- **Keyboard** - A keyboard that is detached from the display screen and allows independent angle adjustment and positioning is ideal. The keyboard should have a thin profile to minimize wrist deviation.

A movable keyboard with tilt-angle adjustment from 0 to 25 degrees will allow the keyboard to be arranged to suit the task and the physical needs of the operator. A matte-finished keyboard surface reduces reflections and eases operator eyestrain. A keyboard fitted with a palm rest supports the heel of the operator's hand, minimizing both hand contact with sharp table edges and wrist deviation.

When the operator's hands are resting on the keyboard, the upper arm and forearm should be at approximately a 70- to 90-degree angle. The hands should be in a reasonably straight line with the forearms.



- **Document Holders** - The document holder should be stable and adjustable (height, distance, and angle of view).
  - The holder should fully support the document and be adaptable to either side of the monitor.
  - The document holder should be the same distance from the eyes as the display screen to avoid frequent changes of focus.
  - The holder should be adjacent to and at the same height as the display screen so the operator can look from one to the other without moving the neck or back.
  
- **Terminal Tables and Surfaces** - Select a terminal table that is stable. A work table with an adjustable surface and a separate, adjustable keyboard shelf is recommended. The table surface height should be adjustable from 23 to 28 inches. The keyboard height should range from 22 to 28 inches. Adjustable work tables and keyboards allow for different operators and a variety of tasks to be performed.

All work table surfaces should have a matte finish to minimize glare and reflection. The terminal table should also have sufficient leg room (depth and width). The minimum depth for knee space is 15 inches at knee level and 23.5 inches at toe level. The minimum width for knee space is 20 inches.

### *Lighting and Glare*

An environment with high illumination washes out images on a video display screen because a VDT produces its own illumination and contrast. For this reason, VDT work areas should have lower light levels than standard office areas. For these areas, illumination ranges should be 30 to 50 foot-candles for screen viewing and 50 to 70 foot-candles when reading printed documents.

Adjustable lamps may be needed to provide supplemental light for reading printed documents. To control directed glare and reflected glare sources, the walls, furniture, and other equipment located near a VDT should not have highly-reflective finishes. To reduce glare from walls, paint the walls with a nonreflective, subdued color paint.

Windows should have adjustable drapes, and the VDT work area should be located away from and at right angles to windows. Light fixtures located near VDTs should be equipped with diffusers, cube louvers, or parabolic louvers. Recessed or indirect lighting systems can eliminate glare and reflections but are not suitable for all workplaces. To reduce glare and reflection from overhead lights, place the VDT work areas between rows of overhead lights.

Screen glare filters can contribute to blurring and poor contrast of screen characters. Operator response to these filters is mixed. Using screen filters is a supplementary solution and not a substitute for proper lighting.

### *Temperature and Humidity*

Set room temperature controls to maintain thermal comfort (sufficient cooling and ventilation). Avoid overcrowding VDT work areas. Provide a fairly constant relative humidity level (30 to 60 percent is recommended). Do not direct the warm air units from central processing units (CPUs) and disk and diskette drives toward operators.

### *Noise*

Research has measured sound levels produced by VDT workstations and associated equipment. The levels found were consistently below those that damage hearing. However, equipment noise can still be disruptive, annoying, or distracting. It is a good practice to isolate main CPUs and disk drives and provide noise control covers on high-speed printers.

### *Fatigue*

Operator fatigue can be reduced by following a few simple steps.

- Encourage VDT operators to get up and move around regularly.
- Design the operator's workload to accommodate reasonable rest pauses.
- Encourage good posture.
- Encourage body and eye exercises to help prevent operator discomfort and fatigue.
- Base the work schedule and job length on the visual demands of the task and the total work time at the VDT. Job rotation or substitution of a less demanding activity can allow the operator to recover from fatigue.

### *Eyestrain*

Eyestrain is a common complaint of office workers. Eyestrain has become more noticeable in recent years by the widespread use of VDTs. However, eye problems can occur for a number of reasons which include aging, sleepiness, general fatigue, improper lighting, or untreated vision conditions.

The following tips can help reduce eyestrain and prevent more serious vision problems:

- Position the VDT away from a window. To reduce glare, use a hood or glare reduction screen.
- The VDT screen should be 16 to 22 inches from the operator's eyes and at eye level when seated. The document holder should be the same height as the screen.

- Use dim lighting near the VDT. Dim lighting reduces glare and makes the screen easier to read.
- For optimum comfort, adjust the screen's brightness and contrast controls. The screen should not flicker and the characters should not be difficult to see.
- Choose screen colors that are the easiest to see. The recommendation is green or amber text on black background.
- Take periodic breaks. Rest the eyes by focusing on a fixed point in the distance.
- Have the eyes examined by a vision care specialist if continual problems are experienced.<sup>3</sup>

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***Checklist for  
Essential Program Elements***

1. Are employees provided with ergonomics training?	Yes	No
2. Is management informed about new principles in ergonomics?	Yes	No
3. Does the agency have a program to identify ergonomic problems?	Yes	No
If Yes:		
a. Does the program include injury analysis?	Yes	No
b. Does the program include employee input?	Yes	No
c. Is management involved?	Yes	No
4. Has the agency inspected workstations?	Yes	No

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***Additional Resources for Texas State  
Agencies***

***Publications***

*Workstation Adjustments for Comfort and Safety*

(Publication NO. HS98-135B (June 2003)  
Texas Workers' Compensation Commission  
Workers' Health and Safety Division  
7551 Metro Center Drive, Suite 100, MS 25  
Austin, TX 78744  
(512) 804-4622 FAX (512) 804-4621  
E-mail [Resource.Center@twcc.state.tx.us](mailto:Resource.Center@twcc.state.tx.us)

*ANSI/HFS 100-1988 Human Factors Engineering of Visual Display Terminal Workstations*

American National Standards Institute  
25 West 43rd Street, (between 5th and 6th Avenues), 4 floor  
New York, NY 10036  
Tel: 1.212.642.4900  
Fax: 1.212.398.0023

*Manager's Guide to Workplace Ergonomics* (Rev. 7/93)  
Business & Legal Reports, Inc.  
141 Mill Rock Road East  
Old Saybrook, CT 06475  
800-727-5257 or 860-510-0100

*Keller's Industrial Safety Report, Special Report -  
Ergonomics, Volume 1, Number 10* (October 1991)  
J. J. Keller & Associates, Inc.  
3003 W. Breezewood Lane  
P.O. Box 368  
Neenah, WI 54957-0368  
(877) 564-2333

Videos (English and Spanish) and Education/Training  
Materials, available through:

Workers' Health and Safety Resource Center  
Texas Workers' Compensation Commission  
7551 Metro Center Drive, Suite 100, MS 25  
Austin, TX 78744  
(512) 804-4622 FAX (512) 804-4621  
E-mail [Resource.Center@twcc.state.tx.us](mailto:Resource.Center@twcc.state.tx.us)

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## ***Endnotes***

1. Christine, Brian; "OSHA Establishes Ergonomic Guidelines"; *Risk Management*; May 1994; Volume 41, No. 5; p. 71.
  2. Laing, Patricia M., ed.; "Ergonomics in the Workplace" in *Accident Prevention Manual for Business & Industry, Engineering & Technology*, 10th Edition; National Safety Council; 1992; pp. 129-130.
  3. *Workstation Adjustments for Comfort and Safety*; Texas Workers' Compensation Commission, Workers' Health and Safety Division; May 1996; pp. 3-9.
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## Section Two - Employee Safety and Health Program

### Chapter 7

#### Occupational Health Program

##### Subchapter 7.11

##### First Aid Program

Revised: December 2004

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### Volume III:

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This chapter of Risk Management for Texas State Agencies supplies general information regarding state agency occupational health exposures, and techniques and methods to manage and control those exposures. It also identifies additional resources that may be available to assist state agencies in developing or enhancing its occupational health program. This chapter is not intended in any way to be a substitute for the advice and guidance of legal counsel, who should always be consulted regarding rights, duties, and responsibilities under the law.

There is no question about the necessity of first aid and medical assistance in the workplace. Medical research has established that all the advanced medical technology is useless without concerned coworkers performing timely first aid in the first few minutes.<sup>1</sup>

First aid is the immediate, temporary treatment given in the event of accident or illness--before the doctor arrives. First aid also includes self-help in the absence of medical facilities and personnel. Immediate first aid (within four minutes) may be the difference between complete recovery, permanent impairment, or death.

Medical facilities in state agencies vary greatly depending on the size, type of operations, and purpose of the agency. Some will have full health service dispensaries, while a first-aid supply kit will suffice for others. These health service facilities and supplies are an integral part of an agency's health and safety program. Each agency should decide how to best provide these services.

State agencies can reference OSHA's regulation, 29 CFR 1910 Subpart K §1910.151 - Medical Services and First Aid, and the Texas Department of Health's rule, 25 TAC §295.109, which adopts the OSHA standard, for information regarding first aid in the workplace.

OSHA's regulation, 29 CFR 1910 Subpart K §1910.151(a)-(b), generally states that the employer shall have medical personnel available; when medical personnel are not available, first-aid training is required.

### ***First-Aid Programs***

The majority of state agencies do not have medical facilities and should therefore have a first-aid program and training. Effective training is an important aspect of every safety program and is critical to providing quality first-aid treatment. A first-aid program should include the following:

- Trained personnel. First aid should only be provided by individuals trained in first-aid principles. The initial step should be formal training that includes first-aid basics sufficient to meet the agency's needs and adult cardiopulmonary resuscitation (CPR) training.<sup>2</sup>

Personnel specifically trained and identified as first-aid responders should receive bloodborne pathogen and universal precautions training. Further, all employees identified as first-aid responders should be offered the hepatitis B vaccination series.<sup>3</sup>

To maintain currency, trained and identified personnel must attend refresher CPR courses at least once a year and refresher first-aid courses at least every three years.<sup>4</sup> From a proficiency point of view, those individuals who render first aid on an infrequent basis may want to receive refresher training in selected areas on an annual basis.

- A first-aid kit and supplies should be located in a readily accessible area.<sup>5</sup> Nonpermeable gloves and barrier devices, such as resuscitation masks and CPR face shields, should be included to reduce blood and body fluid contact hazards. One employee should be assigned and trained to maintain the supplies. Maintaining quantities of materials in the first-aid supply box is easier if each box contains a list of the original contents and the minimum quantities needed.

It is recommended that first-aid kits be inventoried monthly to ensure inventory supplies are adequately maintained. The inventory schedule can be adjusted based on an agency's particular operations and usage of supplies; however, an inventory should be done annually at the very least.

State agencies can reference American National Standards Institute (ANSI) Z308.1-1978 (1984) standard and the National Safety Council's Data Sheet 12304-0202 Rev. 1991, Unit First Aid Kits for recommended first-aid kit contents. Ultimately, it is the agency's responsibility to determine the necessary contents of first-aid kits that best meet their needs based on the scope of their operations.

- A first-aid instruction manual.
- Posted instructions for calling a physician and notifying the hospital that a patient is en route.
- A list of reactions to chemicals via routes of exposure.
- If the eyes of any person could be exposed to injurious corrosive materials, suitable facilities for quick flushing of the eyes shall be provided within the work area.<sup>6</sup>

- Instructions for calling emergency medical technicians or rescue squad. It is an important part of emergency planning to make sure that reliable, emergency medical service is available.
- An accurate recordkeeping system (which could include a hand-posting record book or log, pens, and instructions on how to complete the first-aid log, and a follow-up procedure) are important for the employer to have in place.<sup>7</sup>

### ***Basic Procedures for First Aid***

- Check the victim(s) quickly for any life-threatening conditions, such as the following:
  - Unconsciousness
  - Trouble Breathing
  - Chest Pain or pressure
  - Severe bleeding
  - Head, neck, or back injury.
- Call 911 or the local emergency number, and
  - Provide the location of the emergency
  - Describe what happened and what seems to be wrong
  - Describe what first aid is being given
  - DO NOT hang up until the dispatcher hangs up, and
  - Return to the scene to help care for the victim.
- If the victim is unconscious, open the airway and check for breathing, pulse, and severe bleeding.
- While waiting for medical professionals to arrive, begin rescue breathing or CPR and then control any severe bleeding and treat for shock or other appropriate first-aid treatment.<sup>8</sup>

### ***First Aid/Emergency Care Liability Considerations***

State employees who are placed in situations requiring first aid or emergency care should be aware of the Good Samaritan Law. The purpose of this statute is to encourage both certain medically trained persons and laypersons to render aid in emergency situations. The statute provides a waiver for acts constituting ordinary negligence. The basic provisions of this statute are as follows:

- A person who in good faith administers emergency care at the scene of an emergency but not in a hospital or other health care facility or means of medical transport is not liable in civil damages for an act performed during the emergency unless the act is wilfully or wantonly



negligent.

This provision does not apply to a person administering care for or in expectation of remuneration or whose negligent act or omission was a producing cause of the emergency for which care is being administered.

- Persons not licensed in the healing arts who in good faith administer emergency care as emergency medical service personnel are not liable in civil damages for an act performed in administering the care unless the act is wilfully or wantonly negligent.

This provision applies without regard to whether the care is provided for or in expectation of remuneration.<sup>9</sup>

For complete details, refer to the Good Samaritan Law, *Vernon's Texas Codes Annotated*, Civil Practice and Remedies Code, Title 4, Chapter 74.

***Checklist for  
Essential Program Elements***

1. Are first-aid kits available to agency employees?	Yes	No
2. Does the agency maintain a first-aid kit?	Yes	No
3. Are agency first-aid kits inventoried monthly to ensure adequate supplies are available?	Yes	No
4. Does the agency provide training in first aid?	Yes	No
5. Does the agency have a first responder program?	Yes	No
6. Are emergency phone numbers posted?	Yes	No
7. Does the agency provide bloodborne pathogen training for identified first-aid responders?	Yes	No
8. Are identified first-aid responders offered hepatitis B series vaccinations?	Yes	No

***Additional Resources for Texas State  
Agencies***

***Publications***

*Texas Administrative Code*, Title 25, Chapter 295 - Environmental Health, Section 295.109 (Occupational Health Rules and Guidelines)

"Take 5 for Safety, First Aid Kits" (March 1996)

and

"Emergency Response Plan" in *Management Leadership/Employee Participation* (Rev. August 1995)

Texas Workers' Compensation Commission

7551 Metro Center Drive, Suite 100, MS 25

Austin, TX 78744

(512) 804-4622; FAX (512) 804-4621

E-mail [Resource.Center@twcc.state.tx.us](mailto:Resource.Center@twcc.state.tx.us)

*Occupational Safety and Health Standards - 29 CFR Part 1910, Subpart K - Medical and First Aid,*

Section 1910.151; amended March 7, 1996

U.S. Department of Labor (OSHA)

525 Griffin Street, Room #602

Dallas, TX 75202

(214) 767-4731

*First Aid*

Safety Manual No. 3 (Rev. 1996)

U.S. Department of Labor

Mine Safety and Health Administration

National Mine Health and Safety Academy

P.O. Box 1166

Beckley, WV 25802-1166

(304) 256-3257

*Instructor's Resource Manual for First Aid and CPR* (Second Edition 1993)

National Safety Council

1121 Spring Lake Drive

Itasca, IL 60143-3201

(800) 621-7619

(708) 285-1121

*First Aid in the Workplace, What to Do in the First 5 Minutes* (1994)

Grant B. Goold, MPA/HSA, EMTP

Brady Publishing

Prentice Hall Bldg.

Englewood Cliffs, NJ 07632

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*Agencies and Organizations Providing Assistance*

## American Red Cross of Central Texas

Centex Chapter

2218 Pershing Drive

Austin, TX 78723-5885

(512) 928-4271

<http://mail@centex.redcross.org>

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### *Endnotes*

1. Goold, Grant B.; Preface to *First Aid in the Workplace*; Brady Publishing; 1994; p. ix.
  2. Starr, Larry M.; "CPR, First Aid Training May Not Meet Expectations of Federal Regulations"; *Occupational Health & Safety*; July 1994; Volume 63, Number 7; p. 47.
  3. *Occupational Exposure to Bloodborne Pathogens Interpretive Quips (IQs)*; Occupational Safety and Health Administration, Directorate of Compliance Programs; January 1994 Version; pp. 15-16.
  4. *American Red Cross First Aid and CPR Instructor's Manual*; Mosby Lifeline; 1993; p. 35.
  5. Laing, Patricia M., ed.; "Occupational Health Programs" in *Accident Prevention Manual for Business & Industry, Administration & Programs*, 10th Edition; National Safety Council; 1992; p. 94.
  6. *Code of Federal Regulations*, Title 29, Part 1910, Section 1910.151(c); Rev. July 1, 1996.
  7. Bruce, Stephen D., ed.; "Planning for Emergencies and Medical Care" in *How to Meet OSHA's Safety and Health Guidelines*; Business & Legal Reports, Inc.; 1990; pp. 12-14 - 12-15.
  8. *How to Get Medical Help Fast*; The American National Red Cross; Publication, 652043; July 1993.
  9. Good Samaritan Law: Liability for Emergency Care, *Vernon's Texas Codes Annotated*, Civil Practice and Remedies Code, Title 4, Sections 74.001-74.002 (Vernon 1996).
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## Section Two - Employee Safety and Health Program

### Chapter 7

#### Occupational Health Program

##### Subchapter 7.12

#### Hazard Communication Program

Revised: December 2004

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### Volume III:

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The Texas Legislature in 1993 revised the Texas Hazard Communication Act (HCA), Chapter 502 of the Health and Safety Code.<sup>1</sup> The Act applies to public employers over whom OSHA does not have jurisdiction, including the state (which includes all state agencies) and its political subdivisions, public schools, colleges and universities, river authorities and publicly owned utilities, and volunteer emergency service organizations.

Essentially, the HCA provides employees access to information on hazardous chemicals to which they may be exposed. The central concept behind the Act is the "right-to-know." State agencies are required to notify employees of the law and their rights, provide training as needed on the hazards and safe use of chemicals in their workplaces, provide appropriate protective equipment, make material safety data sheets (MSDSs) readily available to employees, ensure that chemical containers are labeled, and prepare workplace chemical lists if hazardous chemical inventories exceed 55 gallons or 500 pounds.

A companion Act, the Public Employer Community Right-to-Know Act, Chapter 506 of the Health and Safety Code, addresses the requirements of a public employer to inform the surrounding community of potential chemical hazards to which the community may be exposed. The Act also provides for access to hazard information for emergency response personnel and the director of the Texas Department of Health (TDH).

### *Guidelines for Loss Prevention and Control*

The following summarizes the minimum requirements of the HCA that state agencies must implement, if hazardous chemicals exist in the agency's workplace.

**Posting Notice** - The agency must post a notice and maintain the TDH Notice to Employees regarding the Texas Hazard Communication Act as specified in the Texas Administrative Code, Title 25, Part 1, Chapter 295, Subchapter A, Rule 295.12.

- **Written Program** - The agency must develop, implement, and maintain at the workplace a written hazard communication program for the workplace that describes how the criteria specified in Chapter 502 of the Health and Safety Code will be met.(2) The agency should identify responsible staff to implement and administer their hazard communication program.
- **Workplace Chemical List** - The agency must compile and maintain a workplace chemical list that contains the following information for each hazardous chemical normally present in the workplace or temporary workplace in excess of 55 gallons or 500 pounds:
  - The identity used on the MSDS and container label, and
  - The work area in which the hazardous chemical is normally present.

The workplace chemical list must be updated as necessary but at least by December 31 of each year. Each workplace chemical list should be dated and signed by the person responsible for compiling the information.

The workplace chemical list may be prepared for the workplace as a whole or for each work area or temporary workplace and must be readily available to employees and their representatives.

All employees shall be made aware of the workplace chemical list before working with or in a work area containing hazardous chemicals.

The workplace chemical list must be maintained by the agency for at least 30 years. Complete records must be sent to the Texas Department of Health if the agency ceases to operate.(3)

- **Material Safety Data Sheets** - Chemical manufacturers or distributors must provide appropriate material safety data sheets (MSDSs) 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.

State agencies must maintain a legible copy of a current MSDS for each hazardous chemical purchased. If the agency does not have a current MSDS for a hazardous chemical when the chemical is received at the workplace, the agency must request an MSDS in writing from the manufacturer or distributor in a timely manner or shall otherwise obtain a current MSDS.

Material safety data sheets must be readily available, on request, for review by employees or designated representatives at each workplace. If the Texas Department of

Health requests a copy of an MSDS maintained by an agency, the copy must be provided.  
(4)

- **Labels** - 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 (29 CFR 1910.1200(f)) or other applicable labeling requirement. Primary containers must be relabeled with at least the identity appearing on the MSDS, the pertinent physical and health hazards, including the organs that would be affected, and the manufacturer's name and address. Secondary containers must be relabeled with at least the identity appearing on the MSDS and appropriate hazard warnings. An employee may not be required to work with a hazardous chemical from an unlabeled container except for a portable container intended for the immediate use of the employee who performs the transfer.(5)
- **Employee Education Program** - The agency must maintain a written education and training program for employees who use or handle hazardous chemicals. The education and training program must include, as appropriate
  - Information on interpreting labels and MSDSs and the relationship between those two methods of hazard communication
  - The location by work area, acute and chronic effects, and safe handling of hazardous chemicals known to be present in the employee's work area and to which the employees may be exposed
  - The proper use of protective equipment and first- aid treatment to be used with respect to the hazardous chemicals to which the employees may be exposed
  - General safety instructions on the handling, cleanup procedures, and disposal of hazardous chemicals.

Training may be conducted by categories of chemicals. The agency must advise employees that information is available on the specific hazards of individual chemicals through the MSDSs. Protective equipment and first-aid treatment may be by categories of hazardous chemicals.

Supervisors should act as helpers and trainers for employees with poor English or reading skills to assist them in understanding how to use chemicals properly and how to avoid misusing them. Training is essential and may involve teaching employees in their native language, if necessary.

An agency must provide additional instruction to an employee when the potential for exposure to hazardous chemicals in the employee's work area increases significantly or when the agency receives new and significant information concerning the hazards of a chemical in the employee's work area. The addition of new chemicals alone does not necessarily require additional training.

An agency must provide training to a new or newly assigned employee before the

employee works with or in a work area containing a hazardous chemical. The agency must keep the written communication program and a record of each training session given to employees, including the date, a roster of the employees who attended, the subjects covered in the training session, and the names of the instructors. Those records must be maintained for at least five years by the agency. The Texas Department of Health shall have access to those records and may interview employees during inspections.

Emergency service organizations shall provide, to their members or employees who may encounter hazardous chemicals during an emergency, information on recognizing, evaluating, and controlling exposure to the chemicals.

As part of an outreach program created in accordance with Section 502.008 of the Health and Safety Code, the director of TDH is required to develop an education and training assistance program to assist employers who are unable to develop the programs because of size or other practical considerations. The program must be made available to those employers on request.(6)

- **Reporting Fatalities and Injuries** - Within 48 hours after the occurrence of an employee accident that directly or indirectly involves chemical exposure, or that involves asphyxiation, and that is fatal to one or more employees, or results in the hospitalization of five or more employees, the employer (state agency) of any of the employees so injured or killed must report the accident either orally or in writing to the Texas Department of Health, Toxic Substances Control Division, Hazard Communication Branch. This report shall relate the circumstances of the accident, the number of fatalities, and the extent of any injuries. If it is necessary to complete the investigation of an incident, TDH may require additional reports in writing as necessary.<sup>7</sup> The State Office of Risk Management (Office) should also be notified of any state agency fatalities. TDH's Hazard Communication Branch recommends that a report be made to the Bureau of Disease Control and Epidemiology at TDH, since that bureau also has a program that accumulates information on any injuries or deaths related to chemical incidents.
- **Employee Notice; Rights of Employees** - The agency must post and maintain adequate notice, at locations where notices are normally posted, informing employees of their rights under Chapter 502 of the Health and Safety Code. If the director of TDH does not prepare the notice under Section 502.008, the employer must prepare the notice. A sample notice is provided as an appendix to this guideline chapter.
- An agency may not discharge, cause to be discharged, otherwise discipline, or in any manner discriminate against an employee because the employee has
  - Filed a complaint
  - Assisted a TDH inspector who may make or is making an inspection under Section 502.011 of the Health and Safety Code
  - Instituted or caused to be instituted any proceeding under or related to Chapter 502

- Testified or is about to testify in a proceeding under Chapter 502
- Exercised any rights afforded under Chapter 502 on behalf of the employee or on behalf of others.

An employee's pay, position, seniority, or other benefits may not be lost as the result of the exercise of any right provided by Chapter 502. A waiver by an employee of the benefits or requirements of Chapter 502 is void. An agency's request or requirement that an employee waive any rights under Chapter 502 as a condition of employment is a violation of this chapter.<sup>8</sup>

### ***Investigations and Penalties***

Provisions are made for TDH to investigate complaints made by an employee or an employee's designated representative against an agency that is alleged to have violated Chapter 502 of the Health and Safety Code. Administrative, civil, and/or criminal penalties may be assessed, ranging from \$500 per each violation (administrative penalty), to \$2,000 per day with a total not to exceed \$20,000 for civil violations, to \$10,000 per violation not to exceed \$100,000 for criminal violations.<sup>(9)</sup>

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### ***Checklist for Essential Program Elements***

1. Does the agency have a written hazard communication (HAZCOM) program?	Yes	No
2. Does the agency compile and maintain a workplace chemical list?	Yes	No
3. Are legible copies of material safety data sheets (MSDSs) maintained for each hazardous chemical purchased/used?	Yes	No
4. Are MSDSs made readily available for review by the employee on request?	Yes	No
5. Are all hazardous chemicals properly labeled with the identity appearing on the MSDS, pertinent physical and health hazards, and the manufacturer's name and address?	Yes	No
6. Are secondary containers relabeled with the identity appearing on the MSDS and appropriate hazard warnings?	Yes	No
7. Does a written employee education program exist?	Yes	No
8. Does the employee education program include, as appropriate		
a. Information on interpreting labels and MSDSs and the relationship between those two methods of hazard communication?	Yes	No
b. The location by work area, acute and chronic effects, and safe handling of hazardous chemicals known to be present in the employee's work area and to which the employee may be exposed?	Yes	No



c. The proper use of protective equipment and first-aid treatment to be used with respect to the hazardous chemicals to which the employee may be exposed?	Yes	No
d. General safety instructions on the handling, cleanup procedures, and disposal of hazardous chemicals?	Yes	No
9. Is additional instruction to an employee provided when the potential for exposure to hazardous chemicals in the employee's work area increases significantly?	Yes	No
10. Is additional instruction to the employee provided when the agency receives new and significant information concerning the hazards of a chemical in the employee's work area?	Yes	No
11. Does the agency provide training to a new or newly assigned employee before the employee works with or in a work area containing a hazardous chemical?	Yes	No
12. Is a record kept of each training session given to employees, including the date, a roster of the employees who attended, the subjects covered, and the names of instructors?	Yes	No
13. Are training records kept for at least five years?	Yes	No
14. Are procedures in place to report to the Texas Department of Health within 48 hours the occurrence of an employee accident that directly or indirectly involves asphyxiation, and that is fatal to one or more employees, or results in hospitalization of five or more employees?	Yes	No
15. Does the agency post and maintain adequate notice, at locations where notices are normally posted, informing employees of their rights under Chapter 502 of the Health and Safety Code?	Yes	No
16. Are procedures in place to avoid the discharge, discipline, or discrimination against an employee that has filed a complaint, assisted a TDH inspector, instituted or testified in a proceeding, or exercised any rights under Chapter 502 of the Health and Safety Code?	Yes	No

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***Additional Resources for Texas State Agencies***

***Publications***

*Texas Administrative Code*, Title 25, Chapter 295 - Occupational Health, Sections 295.1-295.10 (Hazard Communication)

"TNRCC Rules," Publication, GI-32 (May 1995)  
 Texas Natural Resource Conservation Commission

P.O. Box 13087  
Austin, TX 78711-3087  
(512) 239-0010  
FAX: (512) 239-0055

*Chemical Hazard Communication*, Publication, OSHA 3084 (Rev. 1994)

U.S. Department of Labor/OSHA  
OSHA Publications  
P.O. Box 37535 Washington, D.C. 20013-7535  
Telephone: (202) 693-1888  
or by Fax: (202) 693-2498  
*You Have a Right to Know*, Publication, #200 106 00 (1993)  
Business & Legal Reports, Inc.  
39 Academy Street  
Madison, CT 06443-1513  
(203) 245-7448  
(800) 727-5257

Videos (English and Spanish) and Education/Training Materials, available through

Workers' Health and Safety Resource Center  
Texas Workers' Compensation Commission

7551 Metro Center Drive, Suite 100, MS 25  
Austin, TX 78744  
(512) 804-4622 FAX (512) 804-4621  
E-mail: [Resource.Center@twcc.state.tx.us](mailto:Resource.Center@twcc.state.tx.us)

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***Agencies and Organizations Providing  
Assistance***

**Texas Department of Health**  
Product Safety, Hazard Communication Branch  
Hazard Communication Branch  
1100 West 49th Street  
Austin, TX 78756  
(800) 452-2791  
(512) 834-6603

## Tier Two Help Line

Dial Toll Free in Texas: 1-800-452-2791

Alternate and out of state: (512) 834-6603

Environmental Epidemiology and Toxicology Division

Bureau of Epidemiology

Toll Free Number: 1(800) 588-1248

Fax: (512) 458-7222

### **Texas Engineering Extension Service (TEEX)**

Occupational and Environmental Safety Training Division

The Texas A&M University System

301 Tarrow

College Station, TX 77840-7896

Phone: 979-458-6800

### **Chemical Manufacturers Assn. (CMA)**

1850 M Street NW, Suite 700

Washington , D.C. 20036-5810

Telephone: (202) 721-4100 Fax: (202) 296-8120

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## *Endnotes*

1. Hazard Communication Act, *Vernon's Texas Codes Annotated*, Health and Safety Code, Title 6, Subtitle D, Chapter 502 (Vernon 1996).
2. Health and Safety Code, §502.009(b).
3. Health and Safety Code, §502.005.
4. Health and Safety Code, §502.006.
5. Health and Safety Code, §502.007.
6. Health and Safety Code, §502.009.
7. Health and Safety Code, §502.012.
8. Health and Safety Code, §502.017.
9. Health and Safety Code, §§502.014-502.016.

## **NOTICE TO EMPLOYEES**

The Texas Hazard Communication Act (revised 1993), 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.

### **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 made readily available for employees and their representatives on request.

### **MATERIAL 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 material safety data sheets, which detail physical and health hazards and other pertinent information on those chemicals.

### **EMPLOYEE EDUCATION PROGRAM**

Covered employees shall receive training by the employer on the hazards of the chemicals and on measures they can take to protect themselves from those hazards, and shall be provided with appropriate personal protective equipment. This training shall be provided as needed. Employers shall also provide training to new or newly assigned employees before the employees work with or in a work area

### **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.

### **EXEMPTIONS**

The following chemicals are exempt from coverage by this act: articles that do not normally release hazardous chemicals, food, drugs, cosmetics, hazardous waste, tobacco and tobacco products, wood or wood products, consumer products used in the same manner as normal consumer use, and radioactive waste.

### **REPORTING FATALITIES OR INJURIES**

Employers must report to the department within 48 hours the occurrence of a chemical accident that results in one or more employee fatalities or results in the hospitalization of five or more employees.

### **EMPLOYEE RIGHTS**

Employees may file complaints with the Texas Department of Health at the toll free

containing a hazardous chemical.

number below, and may not be discharged or discriminated against in any manner for the exercise of any rights provided by this act.

**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: 1-800-452-2791 (512) 834-6600

Texas Department of Health  
Division of Occupational Health  
Hazard Communication Branch  
1100 West 49th Street  
Austin, Texas 78756

3/94  
This notice is subject to approval by the Texas Board of Health.

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## **AVISO A TRABAJADORES**

La ley de comunicación de Peligros de Texas (revisada en 1993); codificada como Capitulo 502 de el Código de Seguridad de Salud de Texas, requiere que los empleadores publicos proveen a trabajadores con información específica sobre los peligros de químicos a los cuales los trabajadores pueden ser expuestos en el lugar de trabajo. Como es requerido por ley, su empleador debe de proveerle con cierta información y capacitación. Un breve resumen de la ley sigue:

### **LISTA DE QUIMICOS EN EL TRABAJO**

Los **empleadores** deberán desarrollar una lista de los químicos peligrosos que se usan o se guardan en el lugar de trabajo en exceso de 55 galones o 500 libras. Esta lista debe de tener toda la información al corriente segun vaya siendo necesario o por lo menos una vez al año y ser disponible para los **trabajadores** cuando ellos lo requieran.

### **HOJAS DE INFORMACION EN EL RECIPIENTE**

Si los recipientes que contienen químicos no tienen una hoja de información donde explica que contenido tiene el recipiente, el trabajador no deberá de ser requerido a usar químicos no identificados. Una excepción es el uso inmediato de los recipientes portatiles los cuales el trabajador tiene conocimiento del contenido.

## **HOJAS DE INFORMACION DE SEGURIDAD SOBRE MATERIALES PELIGROSOS**

Los **trabajadores** deben de ser informados sobre el posible riesgo de estar expuestos a químicos potencialmente peligrosos, por medio de las hojas de información de seguridad sobre materiales peligrosos que el empleador deberá de proveerles.

## **PROGRAMA DE EDUCACION PARA EL TRABAJADOR**

Los **trabajadores** que pueden ser expuestos a químicos peligrosos deberán de recibir capacitación de su empleador sobre los químicos peligrosos y sobre las medidas de protección que deben de tomar para poder protegerse de estos peligros. Los **trabajadores** deberán de ser previstos con equipo de protección personal apropiado. Esta capacitación deberá de ser prevista cada y cuando sea necesario. Los **empleadores** deberán de proveer capacitación a los **trabajadores** nuevos o a los trabajadores recién asignados antes de que el **trabajador** comience a trabajar con o en una área de trabajo que contenga químicos peligrosos.

## **EXEPCIONES**

No es requerido por esta ley el proveerle con información o protección sobre los siguientes químicos: artículos que normalmente no expiden químicos peligrosos, alimentos, drogas, cosméticos, desechos peligrosos, tabaco y productos de tabaco, madera y productos de madera, productos de consumidor usados en la misma manera que normalmente se usan en el hogar y desechos radioactivos.

## **REPORTANDO FATALIDADES O LASTIMADURAS**

Los empleadores deberán de reportarle al Departamento de Salud de Texas, dentro de 48 horas sobre el accidente de químico ocurrido con el resultado de una o más fatalidades de trabajadores o la hospitalización de cinco o más trabajadores.

## **DERECHOS DEL TRABAJADOR**

El trabajador puede someter sus quejas a el Departamento de Salud de Texas, y no podrá ser despedido o discriminado de ninguna manera por ejercer los derechos que se proveen por medio de ésta ley. Pueden llamar sin costo alguno al numero que se encuentra abajo.

**EL EMPLEADOR PUEDE SER SUJETO A PENAS CIVILES O CRIMINALES DESDE \$50 A \$100,000 DOLARES POR CADA VIOLACION DE ESTA LEY.**

Para obtener más información puede llamar o escribir al: 1-800-452-2791 (512) 834-6600

Texas Department of Health

Division of Occupational Health  
Hazard Communication Branch  
1100 West 49th Street  
Austin, Texas 78756

9/94

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## Section Two - Employee Safety and Health Program

### Chapter 7

#### Occupational Health Program

##### Subchapter 7.13

#### Hazardous Materials Management Program (HAZMAT)

Released: December 2004

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### Volume III:

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This chapter of Risk Management for Texas State Agencies supplies general information regarding state agency occupational health exposures, and techniques and methods to manage and control those exposures. It also identifies additional resources that may be available to assist state agencies in developing or enhancing its occupational health program. This chapter is not intended in any way to be a substitute for the advice and guidance of legal counsel, who should always be consulted regarding rights, duties, and responsibilities under the law.

Hazardous materials (HAZMAT) are any materials, chemicals, or wastes that would have an adverse effect on either the environment or on human health if released into the environment in a specific volume, quantity, or amount. These types of materials include chemicals that are ignitable, reactive, corrosive, and toxic.<sup>1</sup> OSHA defines a hazardous substance as any designated substance to which exposure results or may result in adverse safety or health effects. A hazardous material includes any substance defined under Section 101(14) of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA); any biological agent or other disease-causing agent defined in Section 104(33) of CERCLA; and, any substance listed by the Department of Transportation and regulated as hazardous materials under 49 CFR 172.101.2 It can be unusual chemicals or such common items as charcoal, matches, lighter fluid, or printer's ink.

This chapter describes the hazardous materials, regulatory agencies, problem areas, and methods of control for state agencies. State agency employees may use or come in contact with various chemicals or materials that are classified as hazardous. Such hazardous chemicals and materials create risk exposures to agency employees, members of the general public, and/or to the environment. If such hazardous materials exposures exist, a state agency should develop a program to guide the agency and its employees in appropriate procedures for safe use, handling, transporting, and disposal of these materials.

Rules to keep the process safe are found in 49 CFR Parts 171-180. Rules for the installation of bulk oxygen systems are in 29 CFR 1910.104. Section 1910.106 applies to any establishment handling flammable and combustible liquids having flashpoints at or above 100oF. The LP gas standard, Section 1910.110, covers the storage, handling, and use of LP gas, including use with commercial vehicles.



Section 1910.119, Process Safety Management of Highly Hazardous Chemicals, requires employers to implement safety management practices that protect workers from the consequences of chemical accidents. The final rule on hazardous waste operations, Section 1910.120, was added to protect employees at hazardous waste sites, including employees who respond to hazardous substance emergencies.<sup>3</sup> The Superfund Amendments and Reauthorization Act of 1986 (SARA) created a standard governing safety and health practices for hazardous materials handling. The Resource Conservation and Recovery Act (RCRA) created the "cradle to grave" system for handling hazardous waste. This law (1) tells what hazardous wastes are and how to keep track of them; (2) sets up rules for handling hazardous wastes safely; and (3) establishes a documentation system to track each hazardous waste from generation to disposal.

Volume III, Section Two, Chapters 5 and 7.12 of *Risk Management For Texas State Agencies* contain several sections on hazardous chemicals, hazardous waste, hazard communication, and transportation of hazardous materials. These chapters discuss areas of responsibility and reference enabling legislation and rules. Telephone numbers are included to request further information. Examples of chemical hazards, along with hazardous characteristics, and the definitions of the types of hazardous waste generators are also provided.

### ***Types of Hazardous Materials***

The following are types of hazardous materials:

- Chemical
- Biological/medical waste
- Radiological.

### ***Chemicals***

Chemicals can be hazardous in the following ways:

- **Toxic** - Most chemicals are toxic at some level of exposure. Fumes, dusts, and vapors from toxic materials can be especially harmful as they can be inhaled and pass quickly from the lungs into the blood, allowing the poisons to circulate throughout the body.
- **Corrosive** - Materials like acids and bases that can eat through other substances are considered corrosive. If splashed on the skin or in the eyes, they can cause serious burns. Some of these materials can break down into poisonous gases, making them doubly hazardous.
- **Explosive** - These types of materials can explode when exposed to heat or flame. Examples of these materials are flammable liquids and compressed gases.
- **Flammable** - Materials that catch fire easily, burn rapidly, spread quickly, and give off intense

heat. Many solvents and lubricants are flammable such as propane and acetylene.

- **Reactive** - Reactive materials burn spontaneously and give off vapors that can be hazardous if inhaled. These materials have to be isolated, stored in special containers, and used with extreme caution. Some can burn when exposed to air or water; some burn when mixed with other substances.<sup>4</sup>

The National Fire Protection Association (NFPA) provides a means for classifying hazardous chemicals. This classification can be accomplished through the use of the NFPA fire diamond.

- The NFPA fire diamond ("704 diamond") employs a basic symbol- and number-based system that is intended for use on fixed installations, like the following: storage tanks and bins, storage rooms and warehouses, entrances to laboratories, and chemical processing equipment. The system is designed for the benefit of firefighters.
- The "704 diamond" system is a visual representation of the health, flammability, and self-reactivity hazard categories, as well as the severity degree of each of these hazard categories. The degree of hazard (number) used in the diamond is assigned based on the worst hazard expected in the area, whether from the original material or from products resulting from the original material's breakdown or combustion. It is also important to consider the effects of local conditions.<sup>5</sup>

For more details concerning the NFPA fire diamond, refer to NFPA 704, Standard System for the Identification of the Fire Hazards of Materials, and the graphic examples at the end of this chapter.

In addition to the hazardous material information obtained from the fire diamond, material safety data sheets (MSDSs) must also be available for all chemicals in the workplace. For more information concerning MSDSs, refer to Volume III, Section Two, Chapter 7.12 (Hazard Communication Program [HAZCOM]).

### *Biological/Medical Waste*

Employees working in a laboratory (clinical, microbiological, or medical research) are subject to hazards created by the handling and manipulation of infectious agents. Administrative policies, work practice controls, and engineering controls are necessary to prevent exposure to these agents. For more information on laboratory safety, refer to Volume III, Section Two, Chapter 7.16 of these guidelines.

A hospital has many type of hazards. Chemical hazards include such things as waste anesthetic gases and cleaning materials. Biological hazards include exposure to bacteria, viruses, infectious aerosols, and bloodborne pathogens. Employees who work in laundry, housekeeping, and the laboratory are particularly at risk. Routes of entry for these agents include inhalation, ingestion, injection, and

absorption through the skin. Improperly managed sharps are the main cause of bloodborne pathogen exposures.

Biological/medical exposures also occur in agriculture. The biohazard sources are the diseases that both animals and humans share. Among the most common diseases are anthrax, brucellosis, tetanus, rabies, and salmonellosis. The infection enters the body through ingestion, inhalation, or through skin and mucous membranes. Employees who work with animals are prime targets.<sup>6</sup>

### *Radiological*

The human body can tolerate a certain amount of exposure to radiation without damage to any organ. Effects on the organs or tissues depend on the type and energy of the radiation and the length of time in the body. There are two types of injurious effects associated with ionizing radiation: somatic (injury to individuals) and genetic (changes passed on to future generations). The maximum dose for an adult worker is 5 rem per year, but exposures should be kept to a minimum.<sup>7</sup>

Devices available for radiation monitoring and measurement are: film badge, pocket dosimeter, ionization chambers, and Geiger-Mueller counters. Calibration of ionization chambers and Geiger-Mueller counters should be done by experts.<sup>8</sup>

### *Guidelines for Loss Prevention and Control*

A state agency should first conduct an internal, comprehensive inventory of all hazardous waste, materials, and chemicals at the agency. The inventory must be updated as necessary, but should be done annually at the very least. (Refer to Volume III, Section Two, Chapter 7.12 of these guidelines for complete information.) This initial step is important in determining the scope of an agency's hazardous waste and materials program.

### *Training*

Any agency that has hazardous materials must be aware and make employees aware of the associated exposures. Training and supervision must ensure that each employee

- Reads labels and material safety data sheets before working with a chemical
- Uses protective clothing and equipment
- Follows procedures
- Practices good hygiene
- Knows what to do in an emergency
- Is thoroughly trained.<sup>(9)</sup>

A regulation issued under docket number HM-126F, which covers Training for Safe Transportation of Hazardous Material, requires that all individuals who transport, or affect the safe transportation of hazardous materials receive training in their safe handling, storage, and transportation.

Training is the most crucial element. If employees are not thoroughly familiar with the hazards connected with the materials they are handling, as well as the required procedures for safety, then incidents are certain to occur. Recent studies of hazardous materials incidents have concluded that human error was the primary cause in over 60% of all spills.<sup>10</sup>

### *Spills*

In case of spills, follow these procedures:

- Evacuate the area.
- Notify the emergency coordinator.
- Stay out of the area unless assigned to a clean-up team and trained.<sup>11</sup>

For reporting discharges, spills, and releases and getting technical guidance, contact the Texas Commission on Environmental Quality (TCEQ), Emergency Response Unit at 512-239-2508 or 1-800-832-8224.

Once a spill has been cleaned up, it is necessary to properly dispose of the spilled materials according to Environmental Protection Agency (EPA) guidelines (40 CFR Parts 260-280).

A provisional plan for safe cleanup of spillage and safe disposal of contaminated materials should be posted in the storage area. Storage areas containing ignitable, reactive, or incompatible wastes should be readily accessible to

- Internal emergency personnel (fire fighters or spill response teams)
- Outside organizations that might be called on to provide emergency services.<sup>12</sup>

Also, security precautions should be taken to prevent unauthorized entry into the storage area.

### *Storing Hazardous Materials*

The primary constraints of hazardous materials storage deal with the safety of workers, equipment, and

structures in the event of a release, fire or explosion, or mixing of incompatible wastes. Ignitable and reactive wastes should be protected from processes or operations that could act as sources of ignition (e. g., cutting and welding). Flammable liquids should be stored according to the standards in NFPA 30, Flammable and Combustible Liquids Code.<sup>13</sup>

The storage area of chemical wastes or other hazardous materials should be well ventilated.<sup>14</sup> Installing an exhaust fan or other type of ventilation can reduce the risk of fire and explosion. Whatever type of ventilation is provided, care should always be exercised to prevent exhausted air from reentering the building through doors, windows, and air intakes on the building's ventilation system. Also, proper respiratory protection should be provided for employees who may be exposed to vapors or fumes.<sup>15</sup>

Portable containers (drums, barrels, carboys) of liquid chemicals should be properly stored. As a rule, only a minimum amount of flammable liquid should be kept at the point of operation (enough for use on one shift). The main stock should be stored in a safe, isolated place. Corrosive or highly toxic liquids should be isolated by impervious walls and flooring. To protect workers and equipment, a separate building or specially constructed chemical storage room should be used for storage of different materials. When this is not feasible, different materials should be stored in separate, designated areas that are divided by wide aisles.<sup>16</sup>

Containers used for collecting hazardous waste must meet the Department of Transportation (DOT) standards. The containers should not show signs of deterioration and should be capable of being completely sealed. Containers can be reused only to transport waste from the same wastestream.<sup>17</sup>

For more information concerning labeling of hazardous wastes, state agencies can also refer to EPA's rules in 40 CFR Part 261 - Identification and Listing of Hazardous Waste.

The Hazard Communication standard [29 CFR 1910.1200(f)] requires that warning labels be placed on all packages and containers in the workplace that contain hazardous chemicals or other dangerous materials.<sup>18</sup> Read all labels carefully. If no label is present, do not use the materials.

Weather is an important factor in determining storage conditions. Heat, cold, moisture, and wind can have adverse effects on the safe storage of chemicals. Weather conditions can cause labels to deteriorate, which increases the risk of improper handling and disposal.<sup>19</sup>

Storing flammable materials outside in drums during a hot summer can present problems, such as the following:

- Pressure buildup from high temperatures can damage a container's integrity if venting is not provided.
- Pressure buildup can result in the "spraying" of hazardous waste on an employee who unknowingly opens a drum to add more waste.<sup>20</sup>

If waste materials have to be stored outside, cover with a roof or tarpaulin, away from direct sunlight. Drums or other containers should be stored on pallets, or kept off the ground. Secondary containment devices (berms, dikes, trays, liners) should be provided in the event of a leak or spill. Ideally these devices should be capable of holding at least 10 to 15% of the total volume of the stored containers.<sup>21</sup>

Storage area locations are often regulated by the following:

- State and local fire codes
- Building codes, or
- Zoning ordinances.<sup>22</sup>

If an exterior storage area is used, it should be located a minimum distance from the following:

- Buildings and property lines
- Streets and alleys
- Public ways or exits to a public way.<sup>23</sup>

State agencies can also refer to the following NFPA standards: NFPA 231, Standards for General Storage; and NFPA 82, Standards on Incinerators, Waste and Linen Handling Systems and Equipment.

### *Transportation and Disposal of Hazardous Materials*

The information contained in this section was extracted from the TNRCC publication entitled *Hazardous Waste Regulations for Small Quantity Generators, A Handbook for Small Business*, which as of this writing is under revision. For complete information and assistance, contact TNRCC.

The three most important things to remember when shipping hazardous waste off-site are the following:

1. Choose a hauler and facility that have Environmental Protection Agency (EPA) identification numbers.
2. Package and label the wastes for shipping.
3. Prepare a hazardous waste manifest.

Under federal regulations, if an agency is a 100-1000 kg/mo generator, hazardous wastes are allowed to accumulate on the premises without a permit for up to 180 days (270 days if wastes must be shipped more than 200 miles), as long as the agency never accumulates more than 6000 kilograms. These limits are set to make shipping and disposal more economical.

- **Choosing a Hauler and Facility** - Before choosing a hauler or designating a facility, check

with the following sources:

- The TCEQ or the EPA regional office, which will have information on whether a company has a U.S. EPA Identification Number, and may know whether the company has had any problems
  - Friends and colleagues who may have used a specific hazardous waste hauler or designated facility in the past
  - Trade associations, which may keep a file on companies that handle hazardous wastes
  - The Better Business Bureau or Chamber of Commerce for information on any complaints registered against a hauler or facility.
- **Packaging and Labeling** - Regulations allow hauling of hazardous waste to a designated facility by the agency itself. The agency must obtain a state and EPA transporter identification number and comply with the DOT regulations (49 CFR Part 172) for packaging, labeling, marking, and placarding the shipment. The agency may be exempt from the financial responsibility and liability requirements under the Federal Motor Carrier Act if it does the following:
    - Uses a vehicle (van or pick-up truck) with a gross vehicle weight rating of less than 10,000 pounds
    - Transports wastes for commerce within the state in non-bulk shipments (i.e., containers with capacities of less than 3,500 gallons)
    - Transports hazardous wastes that meet the "limited quantity exclusion" requirements of Section 172.101 of the DOT regulations.
  - **Preparing a Manifest** - A hazardous waste manifest is a multicopy shipping document that must be completed and used to accompany an agency's hazardous waste shipments.

The manifest form is designed so that shipments of hazardous waste can be tracked from the point of generation to the final destination -- the so-called "cradle to grave" system.

The following parties must sign and keep a copy of the manifest

- Hazardous waste generator

- Hauler

- Designated facility.

The designated facility operator must return a copy to the agency as confirmation that the shipment arrived. This copy, which is signed by the hauler and the designated facility, must be kept on file for three years.<sup>24</sup>

***Checklist for  
Essential Program Elements***

1. Does the agency have any operations that produce biological and/or medical wastes?	Yes	No
2. Does the agency have a written hazardous waste program?	Yes	No
3. Are employees trained on proper disposal of hazardous waste?	Yes	No
4. Are procedures available for the removal, transportation, and disposal of hazardous waste?	Yes	No
5. Has the agency conducted an internal, comprehensive inventory of all chemicals and hazardous materials?	Yes	No

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***Additional Resources for Texas State  
Agencies***

***Publications***

*Vernon's Texas Codes Annotated*, Water Code, Title 2, Subtitle D, Chapter 26 - Water Quality Control, Sections 26.039, 26.121, and 26.262-26.268

*Texas Administrative Code*, Title 30, Chapter 327 - Spill Prevention and Control

*Texas Administrative Code*, Title 25, Chapter 295 - Occupational Health, Section 295.102 (Occupational Health Rules and Guidelines)

*Hazardous Waste Regulations for Small Quantity Generators, A Handbook for Small Business Rules and Regulations for Small-Quantity Generators* (RG 234, PDF Version Revised October 1999)

Texas Commission on Environmental Quality

P.O. Box 13087

Austin, TX 78711-3087

(512) 239-1000

*Occupational Safety and Health Standards - 29 CFR Part 1910*, Subpart H - Hazardous Materials, Sections 1910.101-1910.120; amended March 7, 1996

U.S. Department of Labor (OSHA)

525 Griffin Street, Room #602

Dallas, TX 75202

(214) 767-4731

*Research and Special Programs Administration, Department of Transportation, Title 49, Subchapter C - Hazardous Materials Regulations, Parts 171-180*

For mail orders:



Superintendent of Documents  
Attention: New Orders  
P.O. Box 371954  
Pittsburg, PA 15250-7954

For telephone orders:

Washington, D.C.  
(202) 512-1800

*1996 North American Emergency Response Guidebook, A Guidebook for Initial Responders During the Initial Phase of a Hazardous Materials/Dangerous Goods Incident*(October 1996)

U.S. Department of Transportation  
Research and Special Programs Administration  
400 Seventh Street, S.W.  
Washington, DC 20590-0001  
(202) 366-8553  
(800) 467-4922

*Fire Protection Guide to Hazardous Materials* Publication, NFPA No. HAZ-91 (10th Edition 1991); contains complete text of NFPA 49, 325M, 491M, and 704

National Fire Protection Association (NFPA)  
1 Batterymarch Park  
P.O. Box 9101  
Quincy, MA 02269-9101  
(800) 344-3555

*Transportation of Hazardous Materials* (Second Edition, 1992)

Government Institutes, Inc.  
4 Research Place, Suite 200  
Rockville, MD 20850  
(301) 921-2300

Videos (English and Spanish) and Education/Training Materials, available through:

TWCC Resource Center  
Texas Workers' Compensation Commission  
Southfield Building  
4000 South IH-35  
Austin, TX 78704-7491  
(512) 440-3993

***Agencies and Organizations Providing  
Assistance***

**Texas Natural Resource Conservation Commission**

Office of Waste Management

Industrial and Hazardous Waste Division

P.O. Box 13087

Austin, TX 78711-3087

(512) 239-2334

Emergency Response Unit

(512) 239-2508

(800) 832-8224 (environmental release hot line)

Pollution Clean-Up Division

(512) 239-2454

(512) 463-7727 (24-hour hot line)

**Texas Engineering Extension Service (TEEX)**

Occupational and Environmental Safety Training  
Division

The Texas A&M University System

College Station, TX 77843-8000

(800) 252-2420

(409) 845-3418

**American Institute of Hazardous Materials Management**

900 Isom Road, Suite 103

San Antonio, TX 78216-4102

(800) 729-6742

**Chemical Transportation Emergency Center (CHEMTREC)**

c/o Chemical Manufacturers Association (CMA)

2501 M Street, NW

Washington, DC 20037

(202) 887-1255

(800) 424-9300

## ***Endnotes***

1. McGovern, G. J. and P. T. Vavala; "Storing Hazardous Materials"; *NFPA Journal*; September/October 1994; Volume 88, Number 5; p. 73.
2. "Hazardous Materials" in *OSHA Reference Manual - Occupational Safety & Health Compliance Simplified*, Volume 1; The Merritt Company; 1993; p. H-v.
3. "Hazardous Materials"; pp. H-i - H-ii.
4. *Play It Safe...Handle Hazardous Materials with Care*; Bureau of Business Practice, Inc.; Publication, HZB; 1993 (reprinted); p. 3.
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7. Plog, Barbara, ed.; "Ionizing Radiation" in *Fundamentals of Industrial Hygiene*, Fourth Edition; National Safety Council; 1996; pp. 255-257.
8. Plog, Barbara, ed.; pp. 258-261.
9. *Working Safely with Chemicals*; Business & Legal Reports, Inc.; Publication, #200-045; Rev. February 1993.
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11. *Working Safely with Chemicals*; Publication, #200-045.
12. Lindgren, Gary F.; "Container Handling and Storage" in *Managing Industrial Hazardous Waste*; Lewis Publishers, Inc.; 1989; p. 284.
13. Lindgren, Gary F.; p. 284.
14. Phifer, Russell W. and William R. McTigue Jr.; "On-Site Storage and Handling" in *Handbook of Hazardous Waste Management for Small Quantity Generators*; Lewis Publishers, Inc.; 1989; p. 77.
15. Phifer, Russell W. and William R. McTigue Jr.; p. 78.
16. Laing, Patricia M., ed.; "Manual Handling and Material Storage" in *Accident Prevention Manual for Business & Industry, Engineering & Technology*, 10th Edition; National Safety Council; 1992; p.

230.

17. Nwaelele, O. Dan, Network Engineering Services, Inc.; "Hazardous Waste Issues" in *Health and Safety Risk Management, Guide for Designing an Effective Program*, Part III; Government Institutes, Inc.; 1994; pp. 10-11.

18. *Code of Federal Regulations*, Title 29, Part 1910, Sections 1910.1200(f) and 1910.1201(a)-(b); Rev. July 1, 1996.

19. Phifer, Russell W. and William R. McTigue Jr.; p. 79.

20. Phifer, Russell W. and William R. McTigue Jr.; p. 79.

21. Phifer, Russell W. and William R. McTigue Jr.; p. 79.

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23. Lindgren, Gary F.; p. 284.

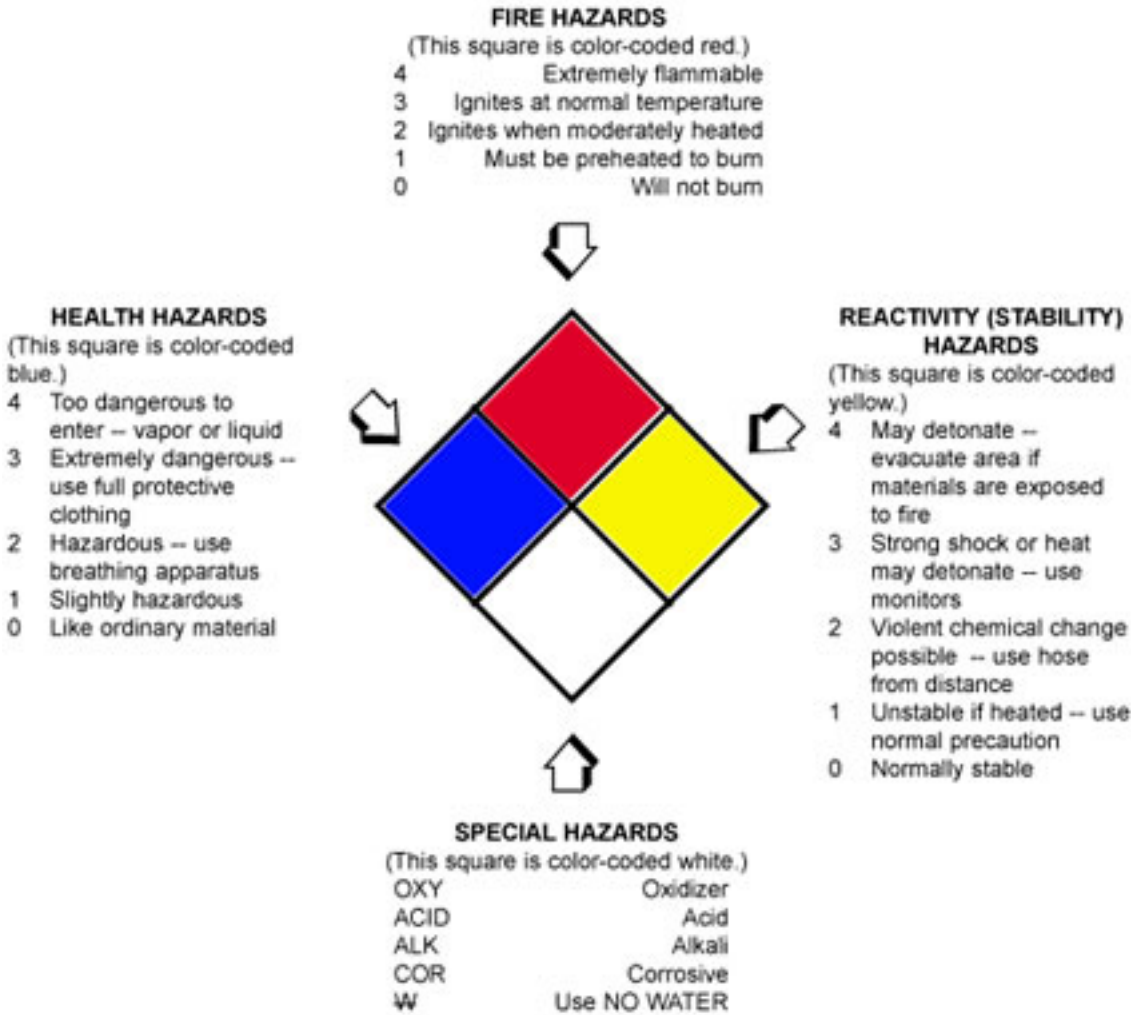
24. *Hazardous Waste Regulations for Small Quantity Generators, A Handbook for Small Business*; Texas Natural Resource Conservation Commission; Publication, RG-5; Rev. September 1993 (and currently under revision); pp. 15-17.

Identification of Health Hazard Color Code: BLUE		Identification of Flammability Color Code: RED		Identification of Reactivity Color Code: YELLOW	
Type of Possible Injury		Susceptibility of Materials to Burning		Susceptibility to Release of Energy	
Signal		Signal		Signal	
4	Materials that on very short exposure could cause death or major residual injury.	4	Materials that will rapidly or completely vaporize at atmospheric pressure and normal ambient temperature, or that are readily dispersed in air and that will burn readily.	4	Materials that in themselves are readily capable of detonation or of explosive decomposition or reaction at normal temperatures and pressures.

3	Materials that on short exposures could cause serious temporary or residual injury.	3	Liquids and solids that can be ignited under almost all ambient temperature conditions.	3	Materials that in themselves are capable of detonation or explosive decomposition or reaction but require a strong initiating source or which must be heated under confinement before initiation or which react explosively with water.
2	Materials that on intense or continued but not chronic exposure could cause temporary incapacitation or possible residual injury.	2	Materials that must be moderately heated or exposed to relatively high ambient temperatures before ignition can occur.	2	Materials that readily undergo violent chemical change at elevated temperatures and pressures or which react violently with water or which may form explosive mixtures with water.
1	Materials that on exposure would cause irritation but only minor residual injury.	1	Materials that must be preheated before ignition can occur.	1	Materials that in themselves are normally stable, but which can become unstable at elevated temperatures and pressures.
0	Materials that on exposure under fire conditions would offer no hazard beyond that of ordinary combustible material.	0	Materials that will not burn.	0	Materials that in themselves are normally stable, even under fire exposure conditions, and which are not reactive with water.

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## QUICK REFERENCE TO NFPA 704 IDENTIFICATION SYSTEM



Source: Benedetti, Robert P., rev.; "Identification of the Hazards of Materials" in Fire Protection Handbook, Seventeenth Edition; National Fire Protection Association; July 1991; pp. 9-144 - 9-145.

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## Section Two - Employee Safety and Health Program

### Chapter 7

#### Occupational Health Program

##### Subchapter 7.14

##### Heat Stress

Revised: December 2004

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### Volume III:

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This chapter of Risk Management for Texas State Agencies supplies general information regarding state agency occupational health exposures, and techniques and methods to manage and control those exposures. It also identifies additional resources that may be available to assist state agencies in developing or enhancing its occupational health program. This chapter is not intended in any way to be a substitute for the advice and guidance of legal counsel, who should always be consulted regarding rights, duties, and responsibilities under the law.

The American Conference of Governmental Industrial Hygienists (1989) defines heat stress as "the total net heat load on the body" that results from exposure to external sources and from internal metabolic heat production.<sup>1</sup>

Many state agency employees perform tasks requiring them to work in overheated environments, both outdoors and indoors (kitchens and laundries). Exposure to extreme heat can place employees at serious risk, especially those working in agriculture, logging, manufacturing, and construction.<sup>2</sup>

No two people will react in the same manner, but supervisors and employees who are exposed to heat should recognize the symptoms of heat stress and its complications.

#### ***Bodily Reactions to Heat***

Under normal conditions, the brain causes alterations in the rate and amount of blood circulating through the skin when the body's temperature rises above 98.6 degrees Fahrenheit. When this happens, the heart begins to pump harder, blood vessels expand to handle the extra flow, and tiny capillaries in the skin fill with blood. When the blood circulates closer to the surface of the skin, the extra heat is transferred away from the body. If the body temperature continues to rise, the body's sweat glands begin to work. Cooling takes place when sweat evaporates from the skin's surface.

Employees are affected by heat stress when the body no longer can release enough heat to maintain normal body temperature. This is caused by a combination of heat generated in the body and the heat from the environment. When air temperatures become as warm or warmer than the skin, sweat does not

evaporate efficiently and the body begins to store heat. With much of the blood going to the body's external surface, the muscles, brain, and other internal organs may not get enough oxygen. When this happens, employees may begin to feel ill or may experience anxiety, irritability, or a reduction in mental capacity. An employee who is exerting a great deal of physical strength to perform a task generates more internal heat than an employee who is not; the harder the physical labor, the less the body is able to tolerate heat.<sup>3</sup> Outdoor operations conducted in hot weather, especially those that require semipermeable or impermeable protective clothing to be worn, are also likely to cause heat stress among exposed employees.<sup>4</sup>

### *Contributing Factors*

Heat stress is not simply a response to environmental conditions; it is also determined by several individual factors. These individual factors include general physical condition, age, gender, weight, medical condition, and degree of acclimatization (the process of adapting to a hot environment). There are also four basic environmental factors that affect heat stress - temperature, humidity, radiant heat (such as from the sun or a furnace), and air velocity. When combined, these factors can lead to heat-induced illness. Other components that may lead to heat stress include: consuming alcohol or caffeine, use of certain prescription drugs, fatigue, strenuous physical work, and certain medical conditions such as heart disease.

Heat-induced illnesses are avoidable since the body can adapt to heat exposure to a certain extent. Under normal circumstances, acclimatization takes about a week and involves subjecting employees to short exposures followed by longer periods of work in a hot environment. Although acclimatization can greatly reduce heat stress, it is lost more rapidly than it is gained. Time away from a hot environment means that employees must be reacclimatized when they return again to the hot environment.

Clothing is an important consideration when attempting to prevent heat stress. If employees are required to wear heavy protective clothing, their tolerance to heat will be greatly reduced. Sweat evaporation also can be affected by the type and amount of clothing worn. If an employee must wear thick or heavy clothing or personal protective equipment that inhibits the body's cooling process, breaks may be necessary more often to cool down.

High (air) temperatures and humidity also can lead to accidents. These environmental factors can cause employees to become mentally confused, tired, and irritable. An overheated employee is more likely to faint, fall, or develop poor judgment, causing him or her to abandon regular safety practices. Humidity may cause safety goggles to fog. A sweaty palm may be unable to properly grasp a tool or cutting device. Overheated metals may come into contact with the skin and cause serious burns. Also, employees may feel it is too hot to wear personal protective equipment and decide to work without it; this may result in a potentially harmful or lethal exposure to chemicals.

Heat stress can be deadly if not recognized and treated immediately. If heat stress goes untreated, it can lead to a variety of problems, including heat stroke, heat exhaustion, heat cramps, fainting, heat rash, and reduced mental performance. Heat stress may go unreported since employees sometimes have difficulty identifying the symptoms. Therefore, supervisors need to watch for signs of heat-induced



illness, and employees should be made aware of the symptoms and methods to prevent adverse health reactions.<sup>5</sup>

### ***Associated Health Risks and Treatment***

#### ***Heat Rash***

Heat rash (also known as prickly heat) may occur in hot and humid environments where sweat is not easily removed from the surface of the skin by evaporation. When it is extensive or complicated by infection, heat rash can be so uncomfortable that it inhibits sleep and impairs an employee's performance; it can even result in temporary disability.

- **Treatment** - Heat rash can be relieved by resting in a cool place and allowing the skin to dry.<sup>6</sup>

#### ***Fainting***

Fainting may be a problem for an employee who is not acclimatized to a hot environment and is performing a job that requires standing in one position. Have the employee move around, rather than let them stand still. This usually reduces the possibility of fainting.

- **Treatment** - Have a victim of fainting sit or lie down for a brief period. This enables the victim to recover more quickly. Fainting can be a sign of a more serious condition. Medical help should be summoned.<sup>7</sup>

#### ***Heat Cramps***

Heat cramps are often the first signs that the body is having trouble regulating its response to heat. The legs and abdomen muscles are most commonly affected.<sup>8</sup> Heat cramps are painful spasms of muscles caused when employees drink large quantities of water but fail to replace salt. Tired muscles (those used for performing the work) are most susceptible to cramps that may occur during or after working hours.

- **Treatment** -- Generally, rest and replacement of fluids is sufficient treatment for heat cramps. Give cool water or a commercial sports drink, about 4 ounces every 15 minutes. Also, lightly stretching and gently massaging the affected muscles can be useful in relieving discomfort.<sup>9</sup>

#### ***Heat Exhaustion***

Heat exhaustion develops as a result of the loss of fluid through sweating, combined with an employee's failure to drink enough fluids. An employee suffering from heat exhaustion still sweats but experiences extreme weakness or fatigue, giddiness, nausea, or headache. The skin is clammy and

moist, the complexion pale or flushed, and the body temperature normal or slightly higher.

- **Treatment** - Once the signals of heat exhaustion begin to appear, the victim can quickly get worse. Immediate treatment is necessary. The victim should rest in a cool place and drink plenty of water. A severe case involving a victim who vomits or loses consciousness may require longer treatment under medical supervision. Salt tablets should NOT be taken. These tablets contain the wrong type of salt, and the concentration is too high for a person to take all at once.<sup>10</sup>

### *Heat Stroke*

Heat stroke is the most serious health problem for employees in hot environments. Heat stroke is caused by the failure of the body's internal mechanisms to regulate the body's core temperature. Sweating stops and the body can no longer rid itself of excess heat. Signs include mental confusion, delirium, loss of consciousness, convulsions, or coma; a body temperature of 106 degrees Fahrenheit or higher; rapid, weak pulse; rapid, shallow breathing; and, hot, dry skin that may be red, mottled, or bluish.<sup>11</sup> In cases where victims have been wearing impermeable protective clothing, the skin will more likely be very wet rather than dry.

Victims of heat stroke can die unless treated promptly.

- **Treatment** - When an employee appears to be suffering from heat stroke, medical help must be called immediately; prompt first aid can prevent permanent injury to the brain and other vital organs. Remove the victim immediately from the heat to a cool place and cool them down by applying towels soaked in water and fanning vigorously to increase cooling. Wet towels should be applied to the wrists, ankles, arm pits, groin, and neck to cool the large veins. If the victim is fully conscious, fluids should be replaced as soon as possible. Do not let the victim drink too much too quickly. Give about one 4-ounce glass of water every 15 minutes.<sup>12</sup>

### *Guidelines for Loss Prevention and Control*

Preventing serious, heat-induced illness depends on early recognition and the following corrective actions:

- Monitor workplaces to determine areas that could pose a heat stress hazard.
- Breaks may be necessary to rest and cool down.<sup>13</sup>
- Encourage employees to drink large amounts of water regularly to avoid dehydration. The current fluid intake recommendation for people who work in hot or humid environments is at least 4 to 8 ounces every 15 to 20 minutes.<sup>14</sup>

- Allow employees time to acclimatize to heat.
- Encourage general physical fitness and wellness among employees. Being physically fit reduces the chances of being affected by heat stress. Employees who are overweight or in poor health are more susceptible to heat illness; when it is hot, they become tired sooner than employees who are in good physical condition.<sup>15</sup>
- In addition to basic precautions (e.g., engineering controls, longer breaks, protective clothing), management should consider adjusting the work schedule to minimize employee exposure.

Employees who are exposed to the heat should be trained to recognize the hazards as well as the signs of heat stress. They also should be familiar with personal practices that can reduce individual risk. Employee education is vital so that employees are aware of the need to replace fluids and salt lost through sweat and are able to recognize dehydration, exhaustion, fainting, heat cramps, heat exhaustion, and heat stroke as heat-induced illnesses.<sup>16</sup>

***Checklist for  
Essential Program Elements***

1. Are workplaces monitored to determine areas that may pose a heat stress hazard?	Yes	No
2. Are control measures taken to reduce heat stress among workers?	Yes	No
3. Do employees who work in areas with high temperatures use prevention measures to reduce the chance of heat stress related problems?	Yes	No
4. Are managers and supervisors of employees who work in heated work environments knowledgeable about heat stress?	Yes	No
5. Are employees who work in areas making them susceptible to heat stress trained to recognize symptoms and react properly?	Yes	No

***Additional Resources for Texas State  
Agencies***

***Publications***

*Texas Administrative Code*, Title 25, Chapter 295 - Environmental Health, Section 295.106 (Occupational Health Rules and Guidelines)

*OSHA Technical Manual*, Chapter 3 - Heat Stress,

OSHA Instruction CPL 2-2.20B (Third Edition, October 1993); prepared by Directorate of Technical Support, U.S. Department of Labor (OSHA) Government Institutes, Inc.  
4 Research Place, Suite 200  
Rockville, MD 20850  
(301) 921-2355

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E-mail: [Resource.Center@twcc.state.tx.us](mailto:Resource.Center@twcc.state.tx.us)

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## Section Two - Employee Safety and Health Program

### Chapter 7

#### Occupational Health Program

##### Subchapter 7.15

##### Indoor Air Quality

Revised: December 2004

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### Volume III:

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This chapter of Risk Management for Texas State Agencies supplies general information regarding state agency occupational health exposures, and techniques and methods to manage and control those exposures. It also identifies additional resources that may be available to assist state agencies in developing or enhancing its occupational health program. This chapter is not intended in any way to be a substitute for the advice and guidance of legal counsel, who should always be consulted regarding rights, duties, and responsibilities under the law. **Description**

The quantity and severity of health problems caused by the poor quality of indoor air has increased over the last fifteen years. This is attributed to many factors. Most Americans spend up to 90% of their time indoors and many spend most of their working hours in an office environment. Studies conducted by the United States Environmental Protection Agency (EPA) and others indicate that indoor environments sometimes can have levels of pollutants that are actually higher than levels found outside. To lower energy costs, buildings are often sealed better to prevent infiltration of outside air, and the amount of fresh air added to buildings via ventilation systems can be significantly decreased. To lower material and construction costs, as well as to provide for easy care, products are sometimes used that emit toxic and irritating vapors. As a result, employees may experience headaches, nausea, sinus congestion, dizziness, and several other physical problems both at home and at work.

### Health Effects

People may complain of one or more of the following symptoms: dry or burning mucous membranes in the nose, eyes, and throat, sneezing, stuffy or runny nose, fatigue or lethargy, headache, dizziness, nausea, irritability, and forgetfulness. Poor lighting, noise, vibration, thermal discomfort, and psychological stress may also cause, or contribute to, these symptoms. A group of indoor contaminants, commonly termed "microorganisms," include bacteria, fungi, and viruses. These microorganisms are known to cause some serious illnesses; such as Legionnaire's disease, humidifier fever, Pontiac fever, and hypersensitivity pneumonitis. Most of these diseases can be treated, although some can pose serious risks to individuals with other health conditions or toxic sensitivities.

There is no single manner in which these health problems appear. In some cases, problems begin soon after workers enter their offices and diminish soon after workers leave (typically called sick building syndrome). At other times, symptoms continue until the illness is treated (typically called building-related illnesses). Sometimes there are outbreaks of illness among many workers in a single building; in other cases, health symptoms show up in only certain employees.

## **Source Identification**

There are usually some occupant complaints about health and comfort in new buildings. In fact, the ventilation guidelines for indoor air quality set forth by the American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) are intended to satisfy 80 percent of a building's occupants.

In the opinion of some experts, up to 30 percent of new or remodeled commercial buildings may have unusually high rates of health and comfort complaints from occupants. These complaints may potentially be related to indoor air quality.

Occasionally, significant numbers of building occupants experience symptoms that do not fit the pattern of any particular illness and are difficult to trace to any specific source. This phenomenon has been labeled sick building syndrome (SBS).

## **Sources of Indoor Air Problems in Offices**

Three major reasons for poor indoor air quality in office buildings are the following:

- The presence of indoor air pollution sources
- Poorly designed, maintained, or operated ventilation systems
- Uses of the building that were unanticipated or poorly planned for when the building was designed or renovated.

The most important factor influencing indoor air quality is the presence of pollutant sources. Common sources of office pollutants include the following:

- Environmental tobacco smoke (ETS)
- Asbestos from insulation and fire-retardant building supplies
- Formaldehyde from pressed wood products
- Other organics from building materials, carpeting, and similar office furnishings
- Cleaning materials and related activities
- Restroom air fresheners
- Paints and adhesives
- Copying machines, photography, and print shops
- Biological contaminants from dirty ventilation systems or water damaged walls, ceilings, and

carpets

- Pesticides generated by pest management practices.

NIOSH recommends that exposure to ETS in the workplace be reduced to the lowest feasible level through the elimination of smoking or the establishment of isolated smoking areas. A smoke-free building reduces the need for recirculation, requires less cleaning, reduces maintenance of air handling equipment, and lowers heating-ventilation-air-conditioning (HVAC) operating costs. The elements of a smoke-free workplace policy are as follows:

- Management is involved and supportive.
- A smoke-free policy is issued.
- Smoking is prohibited except in designated smoking areas.
- There is separate, dedicated ventilation for the smoking area.

## **Ventilation Systems**

Mechanical ventilation systems in large buildings are designed and operated not only to heat and cool the air, but also to draw in and circulate outdoor air. Ventilation systems can contribute to indoor air problems in several ways when these systems are poorly designed, operated, or maintained.

For example, problems may arise when, in an effort to save energy, ventilation systems are not used to bring in adequate amounts of outdoor air. Inadequate ventilation also occurs if the air supply and return vents within each room are blocked or placed in such a way that outside air does not actually reach the breathing zone of building occupants. Improperly located outside air intake air vents can also bring in air contaminated with automobile and truck exhaust, boiler emissions, fumes from dumpsters, or air vented from restrooms. Finally, ventilation systems can be a source of indoor pollution themselves by spreading biological contaminants that have multiplied in cooling towers, humidifiers, dehumidifiers, air conditioners, or the inside surfaces of ventilation ductwork.

## **Building Use**

Indoor air pollutants can be circulated from portions of the building used for specialized purposes, such as restaurants, print shops, and dry cleaning stores, into offices in the same building. Carbon monoxide and other components of automobile exhaust can be drawn from underground parking garages through stairwells and elevator shafts into office spaces.

Buildings originally designed for one purpose may end up being converted for use as office space. While new structures are normally used according to the designer's plan, as time passes renovations occur: building machinery is changed or replaced; the occupants engage in different activities; and systems degrade. If not properly modified during building renovation, room partitions and ventilation systems may contribute to indoor air quality problems by restricting air recirculation or by providing an inadequate supply of outside air.



Each of these stages of a building's life can present different indoor air quality problems. New buildings frequently suffer from IAQ problems due to the off-gassing of irritants from structural materials and furnishings.

Middle-aged buildings often have a significant amount of asbestos within the structure. The problems in older buildings commonly result from antiquated mechanical systems that fail to provide uniform heating and cooling and grow microorganisms that are spread through the system. To measure the quality of air in a building, a building survey inspection should be conducted.

## **Building Surveys/Inspections**

Building surveys are a set of procedures used to evaluate the current performance of a building and to predict the quality of future performance. These procedures are useful in all stages in the life of a building, but are of most use when a problem has been identified. For indoor air quality survey and inspection information, Texas state agencies should contact the Texas Department of Health (TDH), Toxic Substances Control Division, Indoor Air Quality Branch, or retain the services of a commercial indoor air quality inspection firm. TDH only does inspections for Texas state agencies and locations where the public may be at risk, e.g., a mall or shopping center.

It is best to work with one individual agency or firm that is able to handle the project from start to finish. A qualified agency or firm will be able to provide a comprehensive report with details on how to approach remediation, including specific design recommendations and cost estimates.

Recommendations from a qualified, indoor air quality inspector will typically center around six approaches to controlling IAQ problems. These include the following:

- Outside air supply
- Contaminant source control
- Contaminant source substitution
- Policy implementations
- Air distribution
- Filtration

## **Guidelines for Loss Prevention and Control**

If sufficient information and recommendations have been obtained from the building survey to identify the problem(s) or source of concern, corrective action can be taken. Depending upon the complexity of the problem, it may be necessary for management to call in expert help, such as that of an engineering/ventilation consultant or an industrial hygienist. Early recognition of a problem, and a timely and systematic evaluation of the problem are key factors to a quick and effective resolution of indoor air quality problems or concerns.

**Guideline Adopted by Reference Texas Department of Health Texas Administrative Code, Title 25, Part 1, Chapter 297 "Indoor Air Quality Guidelines in Government Buildings"**

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## Section Two - Employee Safety and Health Program

### Chapter 7

#### Occupational Health Program

##### Subchapter 7.16

#### Laboratory Safety Program

Revised: December 2004

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### Volume III:

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### Description

The primary goal of this program is to insure that the safety and well being of employees, laboratory instructors, students, and the visiting public will not be compromised in the laboratory. To accomplish this, the State Office of Risk Management is committed to achieving the following goals:

1. Maintain a safe environment for all employees, staff, students, and the visiting public;
2. Provide the necessary facilities, staff and equipment for safety;
3. Minimize all chemical exposures;
4. Avoid underestimation of risk;
5. Provide adequate ventilation;
6. Institute a Chemical Hygiene Plan;
7. Observe Threshold Limit Values (TLVs) for Chemicals;
8. Protect the environment from hazardous chemicals and wastes; and
9. Conduct periodic laboratory inspections to ensure these goals are being met.

While the Chemical Hygiene Plan is an important part of laboratory safety, not all safety issues involve chemicals. Therefore, it is important to establish additional safety policies and practices regarding biological, physical, electrical and life safety considerations and incorporate them into the overall laboratory safety program.

Although these guidelines are applicable to all research, teaching, and academic laboratories, your lab may require more specialized rules that apply to specific materials and equipment.

Key elements of an asbestos program are the following:

#### A. Laboratory Awareness

Label all storage areas, refrigerators, cabinets, etc., appropriately and keep all chemicals in properly labeled (noting date of receipt or generation and the date of the opening of the chemical) container(s).

Be alert to unsafe conditions and actions, and call attention to them so that corrections can be made as soon as possible.

Pour more concentrated solutions into less concentrated solutions to avoid violent reactions. Know the reactivity result when mixing chemicals, chemical mixtures, or chemical solutions.

Be familiar with the appropriate measures you should take when you or someone in your lab is working with or is exposed to the following:

- Corrosive Chemicals
- Radioactive Materials
- Carcinogens
- Biohazards
- Compressed Gases
- Toxic Chemicals
- Reactive Chemicals
- Flammable Substances

## B. Personal Safety

### 1. Respiratory and Body Protection

- Use fume hoods whenever possible.
- Safety goggles/glasses with side shields should be worn at all times in the laboratory.
- Laboratory coat/apron should be worn in the laboratory.
- Gloves should be worn as needed.

### 2. Personal Hygiene

- Wash hands before leaving laboratory.
- Launder clothing worn in laboratory separately from other clothing.
- Never use you mouth to pipette chemicals.
- Avoid having long hair, loose sleeves/cuffs, rings, bracelets, etc. in close proximity to open flames or operating electrical machinery.
- Keep exposed skin covered. Shorts, skirts, or open-toed shoes should not be worn in the laboratory.
- Do not store food in laboratory refrigerators.

## C. Fire Prevention

Be aware of ignition sources in your laboratory area (open flames, heat, electrical equipment).

Purchase and store flammable reagents in the smallest quantities possible.

Do not store flammable liquids in standard refrigerators (an explosion-proof refrigerator should be used).

Store flammable liquids and flammable metals in appropriate safety cabinets and/or safety cans.

Do not store incompatible reagents together (e.g. acids with flammables). Lists of incompatible reagents can be found in several source books (for example, Handbook of Reactive Chemical Hazards).

Do not store ethers for extended periods of time as explosive peroxides could form.

Make sure that all electrical cords are in good condition. All electrical outlets should be grounded and should accommodate a 3-pronged plug.

#### D. Housekeeping

Eliminate safety hazards by maintaining laboratory work areas in a good state of order (free of debris and clutter).

All equipment should be inspected before use. Do not use defective equipment.

Use borosilicate glassware for laboratory work. If dichromate/sulfuric acid glass cleaner is used in your laboratory, make sure that cleaning is confined to the fume hood (toxic chromyl chlorides are released from the dichromate/sulfuric acid solution). Better yet, switch to using a non-chromatic containing cleaning solution (e.g. NoChromix).

If experiments are to be continued unattended overnight, place a note next to experimental apparatus indicating the chemicals involved, your name, and a number where you can be reached in case of emergency.

Keep the laboratory floor dry at all times. Immediately attend to spills of chemicals/water and notify other lab workers of potential slipping hazards. Neutralize acid and base spills prior to disposal. Follow all local, state, and federal regulations for disposal of chemicals.

All machinery under repair and adjustment should be properly locked out and tagged prior to servicing. All service work should be done by authorized personnel.

#### E. Emergency Procedures

In the event of an emergency, remember one number: 911.

Be sure the names and phone numbers of lab personnel to be contacted in an emergency are posted on

the outside of the laboratory door(s).

Be familiar with the location and use of the following safety devices:

- Safety Shower
- Fire Blanket
- Eye Wash Station
- Fire Alarm
- Protective Respiratory Gear
- First Aid Kit
- Fume Hood
- Spill Cleanup Kit
- Fire Extinguisher

Clean up all small spills immediately. If a large chemical spill occurs that you are unable to clean-up call your Chemical Hygiene Officer/Safety Officer or 911.

If volatile, flammable, or toxic materials spill, shut off flames and spark-producing equipment at once.

Do not cover window of laboratory doors, except for special experimental requirements. This allows passers-by to notice if anyone is in need of emergency assistance.

## F. Waste Collection

Minimize Waste at the source by limiting the quantities of materials purchased and used.

Segregate and prepare chemical wastes for collection in accordance with the agency/university procedures.

Deposit all waste in designated containers. Label all containers. There may be many different types of containers used/available, be able to recognize these containers, and know which ones are appropriate for the wastes you generate.

## G. Children and After Hours Experiments

Small children and pets should not be brought into the laboratory.

If work is being conducted after hours, let other laboratory personnel know of your presence. Avoid carrying out experimental laboratory work in an unoccupied building.

## H. Safety Checklist

- The procedures for completing this form are as follows:
1. Designate an individual to inspect each laboratory using this form, or an equivalent.
  2. Send a copy of the completed form to your Departmental Safety Coordinator/Chemical Hygiene Officer/Safety Office.
  3. Share the completed form with other laboratory users. Discuss the findings and corrective actions in a laboratory meeting and encourage others to voice their safety concerns.
  4. Correct each identified deficiency as soon as possible and document the correction on the form.
  5. Keep the original form on file in the laboratory for at least one year, so that it will be available if requested.
  6. If you need assistance correcting conditions identified during the self-inspection or have any questions or concerns about laboratory safety, whether they pertain to this inspection or not, contact your Departmental Safety Coordinator/Chemical Hygiene Officer/Safety Office.

This form does not address specific activities involving research animals, bio-hazardous agents, lasers, radioactive materials or radiation-producing machines.

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## **Resources**

### **Federal Agencies**

Occupational Safety and Health Administration, Department of Labor

Occupational Safety and Health Standards - 29 CFR Part 1910, (General Industry) Section 1910.1450 - Lab Standard; 1910.1450 Appendix A - Recommendations Concerning Chemical Hygiene in Laboratories. 1910.1450 A - References.

Guiding Principles for Chemical Accident Prevention, Preparedness, and Response, Organization for Economic Co-Operation and Development (OECD).

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### **State Agencies**

Texas Commission on Environmental Quality administers the environmental laboratory certification and accreditation program established by the Health and Safety Code, Chapter 421 and the Texas Administrative Code and Texas Administrative Code, Title 25 - Health Services, Part 1 - Texas Department of Health, Chapter 73 - Laboratories, Rule 73.25 - Environmental Laboratory Certification and Accreditation.

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### **Reference Materials**

Improving Safety in the Chemical Laboratory: A Practical Guide, 2nd Edition by Jay A. Young, (Editor).

Prudent Practices in the Laboratory: Handling and Disposal of Chemicals, Committee on Prudent Practices for Handling, Storage, and Disposal of Chemicals in Laboratories, National Research Council.

Handbook of Laboratory Health and Safety, 2nd Edition by R. Scott Stricoff and Douglas B. Walters.

**Video Libraries**

Texas Department of Health, Audio/Visual Library

Twenty-eight grams of prevention : safety for today's laboratories, 1975

Laboratory chemical safety, 1990

Safety : isn't it worth it?, 1981

Texas Workers' Compensation Commission, [TWCC Resources Center](#)

Laboratory Safety: The OSHA Laboratory Standard. Lab Safety: Handling Hazardous Chemicals.

Lab Safety For Non-Laboratory Personnel. 2002 Laboratory

**Self-Inspection Checklist**

**Please check the boxes indicating:**

- Yes (satisfactory),
- No (needs correction),
- or N/A (not applicable).

<b>General Hazards</b>	
<p>1. Are aisles, exits, and adjoining hallways maintained free of obstructions that would hinder emergency access or exiting?                      Corrective Action: Remove obstructions from aisles, exits, and adjoining hallways. Contact Department Safety Coordinator if help is needed clearing adjoining hallways.                      Completion Date: _____</p>	<p>Yes__ No                      __ N/A __</p>
<p>2. Are there at least 18 inches (47 cm) of vertical clearance maintained between all stored items and the ceiling-mounted fire sprinklers? (If there are no sprinklers, measure to the ceiling itself.)                      Corrective Action: Remove stored items that could block sprinklers or contribute to burning of the ceilings.                      Completion Date: _____</p>	<p>Yes__ No                      __ N/A __</p>



<p>3. Is furniture and equipment over 4 feet tall bolted to the wall or otherwise secured?</p> <p>Corrective Action: Contact your Departmental Safety Coordinator/Chemical Hygiene Officer/Safety Office for assistance with installing seismic restraints.</p> <p>Completion Date: _____</p>	<p>Yes__ No __ N/A __</p>
<p>4. Are approved Sharps' waste containers available for disposal of needles, blades, and other sharps? (Reminder: There should be a proper procedure for disposal of broken glass.)</p> <p>Corrective Action: Purchase a sharps container, if needed. Train all laboratory personnel to avoid bending, cutting, or re-capping syringe needles.</p> <p>Completion Date: _____</p>	<p>Yes __ No __ N/A __</p>
<p><b>EMERGENCY EQUIPMENT</b></p> <p>5. Are all eyewash and emergency shower stations free of obstructions that would prevent quick access by someone temporarily blinded by a chemical splash?</p> <p>Corrective Action: Remove all obstructions from emergency eyewashes and showers.</p> <p>Completion Date: _____</p>	<p>Yes __ No __ N/A __</p>
<p>6. Are the emergency eyewashes for the laboratory tested (flushed) monthly and are the tests documented?</p> <p>Corrective Action: Verify that eyewashes that would be used in an emergency are being flushed monthly, including eyewashes that you rely on but that may be outside of the laboratory (such as, in the hallway). Document each test on an attached tag. Contact Physical Plant-Campus Services for repairs.</p> <p>Completion Date: _____</p>	<p>Yes __ No __ N/A __</p>
<p><b>CHEMICAL STORAGE</b></p> <p>7. Are chemical fume hoods kept uncluttered so that air flows properly (e.g., is storage minimized and are adequate work areas provided)? (Note: Chemical fume hood sashes must be in good condition and used at the proper setting.)</p> <p>Corrective Action: Train laboratory occupants to minimize hood clutter and place sashes to maintain good airflow and provide splash protection. Contact Physical Plant-Campus Services for repairs.</p> <p>Completion Date: _____</p>	<p>Yes __ No __ N/A __</p>
<p>8. Are all sinks (including those not regularly used) labeled with "No Hazardous Chemicals" stickers, and are all laboratory personnel aware of the Campus Drain Disposal Guidelines?</p> <p>Corrective Action: Contact EH&amp;S (642-3073) for additional stickers.</p> <p>Completion Date: _____</p>	<p>Yes __ No __ N/A __</p>

<p>9. Are all chemical containers kept closed when not in use?  Corrective Action: Train all laboratory occupants to keep chemical containers closed when not in use to avoid the evaporation of volatile materials.  Completion Date: _____</p>	Yes __ No __ N/A __
<p>10. Are all chemical containers (including squirt bottles) clearly labeled with their contents and are they in good condition (not corroded or leaking)?  Corrective Action: Label all chemical containers and replace those which are corroded or leaking.  Completion Date: _____</p>	Yes__ No __ N/A __
<p>11. Are corrosives stored below eye level and are incompatible chemicals stored appropriately (e.g., acids separate from bases, oxidizers separate from flammables)?  Corrective Action: Segregate chemicals by hazard class.  Completion Date: _____</p>	Yes __ No __ N/A __
<p>12. Are containers of hazardous chemicals [1-gallon (4-liters) or larger] stored in secondary containment to contain a spill?  Corrective Action: Provide secondary containment such as chemically-resistant tubs or coated bottles.  Completion Date: _____</p>	Yes __ No __ N/A __
<p>13. Are peroxide formers (such as isopropyl ether and diethyl ether) stored away from light and heat and labeled with the date they were opened and the expiration date?  Corrective Action: Label all peroxide formers with opening and expiration dates. These chemicals may become explosive after prolonged storage. If any of these chemicals are present and have not been used for a long time, do not handle them.  Completion Date: _____</p>	Yes __ No __ N/A __
<p><b>FLAMMABLE MATERIALS</b></p> <p>14. Does the total quantity of flammable liquids stored in the laboratory comply with each of the following?</p> <ul style="list-style-type: none"> <li>● The amount of flammables stored outside of storage cabinets must not exceed 10 gallons (or 40 liters).</li> <li>● The amount of flammable liquids stored in approved flammables cabinets within laboratories or classrooms must not exceed 60 gallons (or 240 liters).</li> </ul> <p>The capacity of glass containers must not exceed 1 gallon (or 4 liters) and the capacity of all other containers (including safety cans) must not exceed 2 gallons (or 8 liters).  Corrective Action: Reduce the quantity of stored flammable liquids to meet the above criteria.  Completion Date: _____</p>	Yes__ No __ N/A __

<p>15. Are all refrigerators and freezers in the laboratory labeled as either "safe" or "unsafe" for storage of flammables?  Corrective Action: Contact your Departmental Safety Coordinator/Chemical Hygiene Officer/Safety Office for assistance in determining if refrigerator are suitable for storage of flammables.  Completion Date: _____</p>	Yes __ No __ N/A __
<p><b>LABORATORY EQUIPMENT</b>  16. Are all refrigerators and microwave ovens properly labeled either "Food Only" or "No Food"?  Corrective Action: Label all refrigerators and microwave ovens as "Food Only" or "No Food."  Completion Date: _____</p>	Yes __ No __ N/A __
<p>17. Are all compressed gas cylinders adequately secured with non-combustible restraints to keep the cylinders from falling? (Bench clamps are not adequate to secure large cylinders, and gas cylinders should be capped when not in use.)  Corrective Action: Use metal straps or chains. There should be one chain for the upper half and another for the lower half of the cylinder. Contact your department shop or Physical Plant-Campus Services for assistance in installing gas cylinder restraints. In addition, laboratory users should cap compressed gas cylinders when not in use and return them to the supplier if no longer needed.  Completion Date: _____</p>	17. Yes __ No __ N/A __
<p><b>HAZARDOUS CHEMICALS</b>  18. Is there a yellow Chemical Hygiene Plan (CHP) flipchart in the laboratory that has been completed or updated within the last 12 months and have all laboratory personnel reviewed the CHP and documented their understanding by signing the last page?  Corrective Action: Contact your Department Safety Coordinator if you need a CHP flipchart. Assign a Chemical Hygiene Officer for the laboratory and have him/her read, fill out, and follow the guidance in the flipchart.  Completion Date: _____</p>	Yes __ No __ N/A __
<p>19. Has the laboratory's chemical inventory been completed or updated within the last year and forwarded to your Departmental Safety Coordinator /Chemical Hygiene Officer/Safety Office? (Also, in addition to the scheduled update, if there were any significant changes such as room relocations, increased maximum amounts, addition of new or dangerous chemicals, or changes in names and phone numbers of key contacts, updates must be submitted to Departmental Safety Coordinator /Chemical Hygiene Officer/Safety Office EH&amp;S within 30 days of the change.)  Corrective Action: Submit or update the chemical inventory.  Completion Date: _____</p>	Yes __ No __ N/A __

<p><b>ELECTRICAL</b></p> <p>20. Are extension cords used only as temporary wiring ( &lt; 30 days) and not connected in a series (daisy-chained) with other extension cords or power strips? (Cords must be in good condition with no breaks or exposed wiring.)                  Corrective Action: Dispose of, or repair, all electrical cords that are not in good condition. Remove all daisy-chained and permanent extension cords.                  Date: _____</p>	<p>Completion                  Yes __ No                  __ N/A __</p>
<p>21. Is high voltage equipment clearly labeled, properly guarded, and is its use restricted to trained personnel only?                  Corrective Action: Label all high voltage equipment with appropriate warning. Restrict use of this equipment to properly trained personnel. Retain documentation of the training.                  Completion Date: _____</p>	<p>Yes __ No                  __ N/A __</p>
<p><b>ERGONOMICS</b></p> <p>22. Have ergonomic evaluations been done for all laboratory employees who use a computer for four or more hours per day and for those who have requested an evaluation?                  Corrective Action: Contact your supervisor or Department Safety Coordinator to have a trained ergonomic evaluator assess the computer workstations and document the evaluations.                  Completion Date: _____</p>	<p>Yes __ No                  __ N/A __</p>
<p><b>OTHER HAZARDS</b></p> <p>List any other hazardous conditions in need of correction that are not covered on this general Laboratory Self-Inspection Form. Assign and document correction of each hazardous condition or concern.</p>	<p>1.                  2.                  3.</p>

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## Section Two - Employee Safety and Health Program

### Chapter 7

#### Occupational Health Program

##### Subchapter 7.17

##### Noise Exposure

Revised: December 2004

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### Volume III:

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This chapter of Risk Management for Texas State Agencies supplies general information regarding state agency occupational health exposures, and techniques and methods to manage and control those exposures. It also identifies additional resources that may be available to assist state agencies in developing or enhancing its occupational health program. This chapter is not intended in any way to be a substitute for the advice and guidance of legal counsel, who should always be consulted regarding rights, duties, and responsibilities under the law.

Noise induced hearing loss in the workplace has been a problem since tools were introduced. Certain levels of noise can produce irreversible damage to an individual's hearing. Usually, the first loss of hearing occurs in the high frequency range. If high noise levels continue, the individual eventually will experience hearing loss in the lower frequency range. Excessive noise can destroy hearing and has the potential of affecting other body organs, including the heart. Exposure to excessive noise can cause high blood pressure and a quickened pulse rate.<sup>1</sup> Noise can also cause an abnormal release of body hormones and the tensing of muscles.

Excessive noise can cause permanent hearing damage; yet the OSHA noise standard is one of the most commonly violated standards. It is management's responsibility to make sure employees are not exposed to a noise level in excess of the standard, referenced in 29 CFR 1910.95. The regulation covers the following:

- Noise monitoring
- Audiometric testing program
- Definition of standard (permanent) threshold shift
- Employee follow-up and referral
- Hearing protection
- Employee training
- Recordkeeping.

At an 85 dBA or greater exposure (eight hours per day) or for higher noise levels in excess of the

allowable time, a continuing, effective hearing conservation program must be administered. It is required that either engineering controls, such as enclosing noisy equipment, or administrative controls, such as limiting time of exposure, be used to reduce noise levels or the exposure times to comply with the standard. If these control measures are not feasible, then effective personal protective equipment is required at no cost to the employee. There are many forms and types of ear protection that can be used, such as ear muffs or ear plugs. It is necessary to provide protection that is effective and yet reasonably comfortable to the wearer.

State agencies can reference OSHA's regulation, 29 CFR 1910 Subpart G §1910.95 - Occupational Noise Exposure, and the Texas Department of Health's rule, 25 TAC §295.103, which adopts the OSHA standard, for information regarding noise exposure and hearing conservation programs in the workplace.

### ***Noise Exposure Factors***

The following nontechnical rules-of-thumb can be used to determine if the work area has excessive noise levels:

- If it is necessary to speak very loudly or shout directly into the ear of a person in order to be understood
- If employees say that they hear noises and ringing in their ears at the end of the workday
- If employees complain that the sounds of speech or music seem muffled after leaving work, but that their hearing is fairly clear in the morning when they return to work.<sup>2</sup>

The factors that affect the degree and extent of hearing loss include the following:

- Intensity of noise
- Frequency of noise
- Length of exposure each day
- Total work duration
- Individual susceptibility
- Age of worker
- Coexisting hearing loss and ear disease
- Character of surroundings in which noise is produced
- Distance from the source
- Ear position with respect to sound waves.<sup>3</sup>

### ***Agency Hearing Conservation Program***

Agencies that have facilities with a potential for harmful noise levels must evaluate the workplace for hearing hazards and determine the need for hearing protection devices. Before requiring any employee

to wear hearing protection, management must measure and evaluate the noise in each workplace that has the potential for damage. This evaluation serves the following purposes:

- Identifies areas where controls are needed
- Provides physical evidence of individual exposures
- Prioritizes noise control and noise reduction efforts
- Documents exposures for medical and legal purposes
- Provides a basis for analyzing cause-and-effect relationships between noise exposure and an individual's hearing condition
- Provides insights for improving education and compliance among workers, supervisors, and managers.<sup>4</sup>

### *Noise Survey*

The noise survey procedure is a three-step process that involves the following:

- **Step 1 - Area Measurements** - Using a sound level meter, the minimum and maximum noise levels are recorded at the center of the work area. If the noise levels at the center of the work area measure between 80 and 92 dBA, then more information is needed.
- **Step 2 - Workstation Measurements** - Measurements should be taken at each employee's workstation. If there is a variation in the level, record the levels. If the level is not higher than 85 dBA, the noise exposure can be considered satisfactory.
- **Step 3 - Exposure Duration** - If there are varying work patterns in different locations, noise levels should be taken in each work area. To know where to record levels, employees should keep a log of their daily activities.<sup>5</sup>

### *Noise Control Programs*

After it has been determined that employees are overexposed to noise, a hearing conservation program should be implemented. Every noise problem can be broken down into three parts: source, noise path, and receiver.

To minimize noise at the source, the following steps should be taken:

- Modify the existing equipment or process, and
- Introduce noise reduction measures at the design stage.

Noise reduction along the path can be accomplished in the following ways:

- Shielding or enclosing the source
- Increasing the distance between source and receiver
- Acoustical treatment of ceiling, walls, and floor to absorb sound.

Reduce noise at the receiver by

- Personal protection (plugs, muffs)
- Enclosures
- Reducing exposure time
- Changing job schedules.

When it is not possible to use the above methods or extra protection is needed, hearing protection devices must be implemented.<sup>6</sup>

### ***Types of Hearing Protection***

The most convenient method by which to gauge the adequacy of a hearing protector's reduction capacity is by checking its noise reduction rating (NRR). The NRR is printed on the device. The NRR is compared to the employee's environment to determine the appropriateness of the device.

Each hearing protector must be fitted to each worker. Employees must be taught proper insertion techniques and maintenance procedures.<sup>7</sup>

### ***Personal Protective Equipment Selection Criteria***

In selecting protective hearing devices, one should consider the type of job and the work area in which the employee must use it. Devices should be practical for the person who is working in confined areas with little headroom. In this situation, a small or flat ear cup or insert protector would work better. Special hazardous areas of work should also be considered. In an area of high voltage, protectors must be made of nonconductive materials. Managers and supervisors should also consider how often the employee is exposed to high noise levels. If the exposure is infrequent, an insert or plug device may be the best. If the noise exposure is for long periods, a muff device is the best choice. As with all personal protective equipment, managers and supervisors must let the workers who will be wearing the devices



select from a variety of suitable protectors (two or more). Hearing protection devices have different abilities to reduce noise levels and afford varying protection at different noise frequencies.<sup>8</sup> A trial period, while experimenting with several different types and makes, is best if it is possible.

To ensure that hearing protectors serve as intended, they should be part of a comprehensive hearing conservation program, including at a minimum, annual follow-up through audiometric testing of the individual.

### ***Audiometry Testing***

Audiometry testing is an important part of a hearing conservation program. Two types of audiograms required in the hearing conservation plan are baseline and annual. Post-job-offer hearing tests should be given to prospective employees who might be exposed to noise hazards. This test will serve as a baseline hearing threshold for each employee for the future. Periodic tests should be conducted on employees working in areas where noise exceeds the permissible levels. If a loss in hearing is detected, the cause should be detected. Many times excessive noise unrelated to the job affects the test results.

### ***Training***

Training is important to motivate the employees to support the program. Employees will understand why they must wear their protectors. Employees exposed to time-weighted averages (TWAs) of 85 dBA and above must be retrained annually.

### ***Recordkeeping***

Noise exposure measurement records must be retained for two years. Records of audiometric test results must be maintained for the duration of an employee's employment.

### ***Summary***

The effectiveness of a hearing conservation program depends on the cooperation of employers, supervisors, and employees.<sup>9</sup> Management's responsibility includes taking noise measurements, initiating control measures, testing employees, providing hearing protection devices, and enforcing the use of protective equipment. The employee's responsibility is to use the protective equipment provided and to observe the rules on equipment use.

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### ***Checklist for Essential Program Elements***

- |   |     |    |
|---|-----|----|
| 1. If a noise problem is suspected, have noise levels been accurately measured?   | Yes | No |
| 2. If a noise problem exists, have plans to reduce noise levels by engineering methods been implemented, e.g., enclosure, maintenance, different methods of processing? | Yes | No |

3. If engineering controls cannot reduce the noise to safe levels,

- |   |     |    |
|---|-----|----|
| a. Have administrative controls, such as limiting worker exposure in a given area, been started?      | Yes | No |
| b. Are affected employees given annual audiometric tests, if necessary?                               | Yes | No |
| c. Do all employees in high noise areas wear hearing protection?                                      | Yes | No |
| 4. Is a hearing conservation program in effect?   | Yes | No |
| 5. Are ear plugs or muffs provided and worn while performing work in designated noise exposure areas? | Yes | No |

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***Additional Resources for Texas State Agencies***

***Publications***

*Texas Administrative Code*, Title 25, Chapter 295 - Environmental Health, Section 295.103 (Occupational Health Rules and Guidelines)

*Occupational Safety and Health Standards - 29 CFR Part 1910*, Subpart G - Occupational Health and Environmental Control, Section 1910.95 - Occupational Noise Exposure; amended March 7, 1996

U.S. Department of Labor (OSHA)

525 Griffin Street, Room #602

Dallas, TX 75202

(214) 767-4731

*Hearing Conservation*, Publication, OSHA 3074 (Rev. 1995)

U.S. Department of Labor (OSHA)

OSHA Publications Office, Room N3101

200 Constitution Avenue, NW

Washington, D.C. 20210

(202) 219-4667

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***Endnotes***

1. Kavianian, H. R. and C. A. Wentz Jr.; "The Management of Personal Protective Equipment" in *Occupational and Environmental Safety Engineering and Management*; Van Nostrand Reinhold; 1990; p. 111.

2. Plog, Barbara A., ed.; "Overview of Industrial Hygiene" in *Fundamentals of Industrial Hygiene*, Fourth Edition; National Safety Council; 1996; pp. 11-12.

3. Plog, Barbara A., ed.; "Industrial Noise" in *Fundamentals of Industrial Hygiene*, Fourth Edition; National Safety Council; 1996; p. 207.
  4. Laing, Patricia M., ed.; "Personal Protective Equipment" in *Accident Prevention Manual for Business & Industry, Engineering & Technology*, 10th Edition; National Safety Council; 1992; p. 422.
  5. Plog, Barbara A., ed.; pp. 214-215.
  6. Plog, Barbara A., ed.; pp. 216-217.
  7. Laing, Patricia M., ed.; pp. 422-424.
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  9. Plog, Barbara, A., ed.; p. 231.
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## Section Two - Employee Safety and Health Program

### Chapter 7

#### Occupational Health Program

##### Subchapter 7.18

#### Personal Protective Equipment

Revised: December 2004

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### Volume III:

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This chapter of Risk Management for Texas State Agencies supplies general information regarding state agency occupational health exposures, and methods to manage and control those exposures. It also identifies additional resources that may be available to assist state agencies in developing or enhancing an occupational health program. This chapter is not intended, in any way, to be a substitute for the advice and guidance of legal counsel, who should always be consulted regarding rights, duties, and responsibilities under the law.

An estimated four lives and 700,000 lost workdays can be saved per year, and 65,000 non-lost, workday injury cases can be prevented by following personal protective equipment (PPE) standards. Additionally, a reported savings of \$3 in workers' compensation costs can be expected for every \$1 spent on PPE.<sup>1</sup> Chemical burns, skin rashes, and dermatitis are all occupational health problems. It is imperative that proper personal protective clothing be used and maintained to prevent exposure to substances that are skin irritants. Personal protective equipment is also required whenever toxic substances or physical agents can do bodily harm through absorption, inhalation, or ingestion. The equipment must be safely designed and be well constructed so as to provide the protection for which it is intended.

The Texas Hazard Communication Act requires state agencies to provide PPE to employees who may be exposed to hazardous chemicals or materials during normal employment activities, during emergency situations, or as a result of proximity to the manufacture or use of those chemicals.

In 1994, OSHA updated the PPE standard. The final rule issued updated the existing requirements to reflect the current technology and improvements in PPE and added provisions for assessing hazards and employee training. The new rule also improved worker acceptance of wearing personal protective equipment by permitting better, more comfortable designs not permitted by the previous standards and by providing information on selecting the appropriate equipment for a particular work activity.<sup>2</sup>

State agencies can reference OSHA's regulation, 29 CFR 1910 Subpart I §1910.134 - Respiratory Protection, and the Texas Department of Health's rule, 25 TAC §295.104, which adopts the OSHA standard, for information regarding respiratory protection programs in the workplace.

If a state agency has working conditions or specific jobs that require the use of PPE, the agency must write a policy and a procedure on the usage of PPE and communicate these to employees and visitors as needed. When machine safeguarding, equipment redesign, or administrative actions are not possible, mandatory use of personal protective equipment is a practical and effective method of limiting employee exposure to hazardous working conditions. Risks associated with employee contact with hazardous working conditions, airborne particles, dusts, mists, and excessive noise can be controlled by requiring employees to wear PPE.

Once it is decided that personal protective equipment is needed, the following steps should be observed:

- Select the proper type of equipment for the hazard.
- Implement a training and education program.
- Ensure that employees are trained in the correct use and maintenance procedures for the equipment and that this training is documented.
- Ensure that equipment is properly fitted and maintained in a clean and serviceable condition to reduce the possibility of failure.
- Strictly enforce employee use of PPE.
- Solicit employee feedback on equipment used.

### *Types of PPE*

PPE should be chosen carefully according to what the hazard is, the extent of its use, and the suitability of the PPE to the task intended. The most important criterion is the degree of protection that a particular piece of equipment affords under various conditions.<sup>3</sup> The material safety data sheet, the chemical label, or equipment operating instructions may be consulted for specific instructions to ensure PPE's adequate protection.

The device provides a barrier between the hazard and the employee. Personal protective equipment includes the following:

- **Head protection**, such as helmets, bump caps, and other protective headgear to protect against head injuries. Protective helmets that meet the requirements of the American National Standards Institute's standard Z89.1 are required wherever workers are subject to impact or penetration from falling or flying objects.

- **Face and eye protection**, such as eyeglasses, contact lenses, face shields, and goggles to protect against eye hazards. Face and eye protection is required where there is a reasonable potential for injury, especially in areas where toxic or caustic substances might spray or splash. If face and eye protection must be worn by a person whose vision requires corrective lenses, goggles must be of the type that can be worn over glasses or be constructed so that corrective lenses can be mounted behind the protective shield. Industrial eye injuries occur at a rate of two per minute and are the costliest type of injury in terms of lost production.<sup>4</sup>
- **Hearing protection**, such as ear muffs and aural inserts to protect against hearing loss and damage. Wherever noise levels are in excess of the allowable limits, hearing protection must be provided and employees must be required to wear it. For more information, refer to Volume III, Section Two, Chapter 7.17 of these guidelines.
- **Fall protection systems**, such as lifelines, safety belts, body supports, and guardrails to protect against falling hazards. Employees performing a task that exposes them to a potential hazard of falling from a location of six feet or more above the ground, a water surface, or a continuous floor level must tie off with a harness and lanyard. Tying off should be required if any of the following work situations exist:
  - A sloping roof
  - A flat roof without handrails within four feet of the edge of the roof or roof opening
  - A suspended platform or stage
  - A scaffold with incomplete handrails or decking
  - A ladder near the edge of a roof or floor opening
  - A pit, such as a utility (sewer, telephone) line
  - Any elevated work with no fall protection.<sup>5</sup>
- **Respiratory protection**, such as masks and respirators to protect against respiratory hazards. Unlike many other dangers, respiratory or breathing hazards are often invisible. These hazards may take the form of smoke, fumes, dusts, mists, gases, vapors, or an insufficient supply of oxygen.

According to the OSHA standard (29 CFR 1910.134(b)(10)), employees should not be assigned to tasks requiring the use of respirators unless it is determined that they are physically able to perform the work and use the respiratory equipment. The local physician shall determine what health and physical conditions are pertinent. Also, the respirator user's medical status should be reviewed periodically (for instance, annually).<sup>6</sup>

- **Protective footwear and gloves** to protect the feet and hands. Foot protection is required to prevent injury from falling or rolling objects, particularly during receiving and transferring inventory. In wet-process areas, non-skid footwear is required.

When handling toxic liquids or particulates (dusty powder or granules), employees

should wear gloves that are impervious to such substances. The gloves should be long enough to protect the forearms. Care should be taken to keep impervious gloves sanitary to prevent dermatitis. Gloves should be inspected frequently for pinholes and discarded when holes are found. Disposable cotton inner liners and hand lotions add further protection. If glove liners are used, they should be changed at least as often as protective clothing is changed.

- **Special work clothing** to protect against exposures to fire, heat, molten metal, corrosive chemicals, cold temperature, body impact, cuts, and other specialized hazards. This type of clothing includes water-cooled garments, air-cooled garments, and ice-packet vests.

### ***PPE Training and Education***

Supervisors and employees must be trained in the proper selection, use, and maintenance of PPE. Training should occur when new processes are introduced, when a change in respirators is required, and/or when a new employee is introduced to the hazard.

The PPE training and education program must be documented and include the following:

- A description of the hazard and/or condition in the work environment
- An explanation of the reason a certain type of PPE has been selected
- A discussion of the capabilities and/or limitations of the PPE
- A demonstration of how to use, adjust, or fit the PPE
- Practice in the use of PPE
- An explanation of agency policy and its enforcement
- A discussion on how to deal with emergencies
- A discussion of how PPE will be paid for, maintained, repaired, cleaned, and stored
- A demonstration by employees that they understand and have the ability to use selected PPE before they are allowed to perform work requiring its use.

### ***Use and Maintenance***

All equipment should be inspected before and after each use. Records should be kept of all inspection dates and inspection results. Manufacturers' recommendations should be followed for the maintenance, repair, and replacement of parts.

### ***Enforcement***

All employees are responsible for wearing the necessary PPE to comply with the agency program. Employees should conduct their own personal safety checklist prior to using PPE. This personal checklist should be composed of the following practices:

- Wear PPE properly; ask the supervisor if unsure.
- Check for leaks, tears, and signs of wear before each use.
- Use the right size.
- Keep equipment clean (decontaminate when necessary).
- Follow strict guidelines for removing contaminated PPE.
- Report any health problems while using PPE.

### ***Summary***

In final analysis, the best protection comes from interested management and a workforce committed to sound work practices.

Personal protective equipment can be effective only if the selection of equipment is based on its intended use, the employees are trained, and the equipment is properly tested, maintained, and worn. By following these rules, employees can be protected from several hazardous exposures.

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### ***Checklist for Essential Program Elements***

1. Are any agency personnel exposed to any hazardous conditions that require personal protective equipment (PPE)?	Yes	No
If Yes:		
2. Does the agency have a policy regarding use of PPE?	Yes	No
3. Does the agency have a PPE training program?	Yes	No
4. Is PPE available to all employees who require it?	Yes	No



- |   |     |    |
|---|-----|----|
| 5. Is PPE provided, used, and maintained wherever it is necessary?  | Yes | No |
| 6. If employee-owned PPE is being used by the employee, does the agency ensure that the equipment is adequate and is being properly maintained by the employee? | Yes | No |
- 

***Additional Resources for Texas State Agencies***

***Publications***

*Texas Administrative Code*, Title 25, Chapter 295 - Occupational Health, Section 295.104 (Occupational Health Rules and Guidelines)

*Occupational Safety and Health Standards - 29 CFR Part 1910*, Subpart I - Personal Protective Equipment, Sections 1910.132-1910.138

and

*Occupational Safety and Health Standards - 29 CFR Part 1926*, Subpart E - Personal Protective and Life Saving Equipment, Sections 1926.95-1926.107  
U.S. Department of Labor (OSHA)  
Region VI  
525 Griffin Street, Room #602  
Dallas, TX 75202  
(214) 767-4731

*ANSI Z87.1-1989 Practice for Occupational and Educational Eye and Face Protection*

and

*ANSI Z88.2-1992 Respiratory Protection*

and

*ANSI Z89.1-1986 Protective Headgear*  
American National Standards Institute  
25 West 43rd Street,

New York, NY 10036  
(212) 642-4900  
Fax: 1-212-398-0023

*Respiratory Protective Devices; Tests for Permissibility; Fees - 30 CFR, Subchapter B, Part 11*

U.S. Department of Labor  
Mine Safety and Health Administration  
National Mine Health and Safety Academy  
P.O. Box 1166  
Beckley, WV 25802-1166  
(304) 256-3257  
Fax:(214) 767-4693

**Videos (English and Spanish) and Education/Training  
Materials, available through:**

Texas Workers' Compensation Commission ([TWCC](#))[Resource Center](#)  
7551 Metro Center Drive, Suite 100, MS 25  
Austin, TX 78744  
(512) 804-4622FAX (512) 804-4621  
E-mail [Resource.Center@twcc.state.tx.us](mailto:Resource.Center@twcc.state.tx.us)

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*Agencies and Organizations Providing  
Assistance*

**Texas Department of Health**

1100 West 49th Street  
Austin, TX 78756  
(512) 458-7111

**Texas Society to Prevent Blindness**

3211 West Dallas  
Houston, TX 77-19  
(713) 526-2559

**National Fire Protection Association (NFPA)**

1 Batterymarch Park  
P.O. Box 9101  
Quincy, MA 02269-9101  
(617) 770-3000  
(800) 344-3555

## **Safety Equipment Institute (SEI)**

1901 N. Moore Street  
Arlington, VA 22029  
(703) 525-3354

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### ***Endnotes***

1. Foster, Roger W.; "Hazard Assessment for Personal Protective Equipment: An Investigative Process"; *Professional Safety*; April 1996; Volume 41, Number 4; p. 30.
  2. "OSHA Upgrades PPE Standards"; *PRIMA Riskwatch*; May 1994; Volume X, No. 5; p. 3.
  3. Laing, Patricia M., ed.; "Personal Protective Equipment" in *Accident Prevention Manual for Business & Industry, Engineering & Technology*, 10th Edition; National Safety Council; 1992; p. 410.
  4. Brady, John F., ed.; "Protective Equipment Policies" in *OSHA Compliance Encyclopedia*, Volume I; Business & Legal Reports, Inc.; July 1994; p. 520-1.
  5. Nwaelele, O. Dan, Network Engineering Services, Inc.; "Accident Prevention Programs" in *Health and Safety Risk Management, Guide for Designing an Effective Program*, Part II; Government Institutes, Inc.; 1994; p. 14.
  6. Ruskowski, Marty; "Breathing Easy Every Day, Minimal Requirements for Respiratory Protection Programs"; *Occupational Health & Safety*; February 1995; Volume 64, Number 2; p. 66.
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## Section Two - Employee Safety and Health Program

### Chapter 7

#### Occupational Health Program

##### Subchapter 7.19

##### Repetitive Trauma Injuries

Reviewed: December 2004

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### Volume III:

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Repetitive trauma injuries or cumulative trauma disorders are terms used to describe health disorders arising from repeated biomechanical stress due to ergonomic hazards. These disorders are a class of musculoskeletal disorders involving damage to the tendons, tendon sheaths, synovial lubrication of the tendon sheaths and the related bones, muscles and nerves of the hands, wrists, shoulders, neck, and back. Some of the more frequently occurring occupationally-induced disorders in this class include carpal tunnel syndrome, epicondylitis (tennis elbow), tendonitis, tenosynovitis, De Quervain's syndrome and low back pain. Carpal tunnel syndrome (CTS) can also occur from a blow to the wrist, a laceration, or a burn.

If cumulative trauma disorders are recognized and treated early, more serious conditions are more likely to be prevented. The most discussed cause of repetitive trauma syndrome is work at a computer terminal. It is estimated that nearly half of the U.S. workforce uses computers and most state agencies use computers a significant percentage of the time. Keyboard work in itself is blamed for the injuries, and claimants have alleged that keyboard design forces users to place their hands in an unnatural position. OSHA is placing emphasis on preventing and treating CTS cases. Prevention and early detection are not only crucial to treatment of the syndrome, but also to controlling the costs of the claims and litigation currently being generated. Early action on the part of employers and employees is necessary to halt the progress of repetitive trauma disorders before medical intervention becomes necessary.

### Elements of Ergonomic Hazards

Ergonomic hazards refer to workplace conditions that pose a biomedical stress to the worker. These hazards are discussed further in Volume III, Section Two, Chapter 7.10 (Ergonomics).

- Faulty workstation layout
- Improper work methods

- Improper tools
- Excessive tool vibration
- Job design problems that include:
  - Aspects of work flow
  - Line Speed
  - Posture and force required
  - Work/rest regimens
  - Repetition rate

Repetitive trauma injuries are a type of ergonomic hazard caused by a combination of factors provided in the preceding list. Risk factors specific to cumulative trauma injuries include repetition, excessive force, awkward body posture, vibration, duration, temperature extremes and no rest.

## **Carpal Tunnel Syndrome**

The carpal tunnel is the bone cavity in the wrist through which nerves and tendons extend to the hand. When the employee repeats the same hand and wrist movements day in and day out, the excess strain causes tendons to swell and press on the main nerve of the hand. This persistent irritation of the nerve can result in pain, numbness, and dysfunction not only in the hands and wrists, but may extend up to the forearm and elbow as well. Cumulative trauma disorders can occur in other parts of the body, such as the elbows or arms. Elbow problems are caused by too much wrist extension. If this extension is accompanied by a twisting motion, more damage can occur.

There are two types of carpal tunnel syndrome, short term and long term. Short term occurs at the beginning of employment, within two years of starting a job. In most cases, the employee is fully recovered within six to eight weeks. Long term, the employee has been on the job for 15 to 20 years. Long term usually results in surgery.

Conditions that increase tissue edema such as diabetes mellitus, obesity, congestive heart failure and hypothyroidism can also cause CTS. Cold temperature and vibration also increase the risk of injury. Whenever an employer is faced with a CTS claim, it is important to establish whether the employee's symptoms are caused by one of these associated conditions. According to a national study, carpal tunnel syndrome cases required an average of 32 lost days. Professions such as painters, textile workers, word processors, cashiers, electronics assemblers, and many others have this disorder.

## **Hand Positioning**

Flexing, squeezing and extending can lead to CTS disorders. If these hand motions are mixed with force, repetition, or pressure, injuries are likely to occur. The best way to reduce the risk of cumulative trauma disorders is to design the job so that the underlying factors causing the problem are eliminated. However, it is important to realize that carpal tunnel syndrome is often preventable through proper hand positioning and hand exercises. Learning how to position the hands properly and by exercising the

hands regularly, the excess pressure on the tendons and nerves and unnecessary pain and disability can be prevented.

When the employee keeps the wrists and elbows straight, less pressure is placed on the tendons and nerves in the hands. The work can be adjusted so that employees can keep forearms and hands straight. Hand tools with the appropriate width, size, and shape should be used. Ensure that the tool can be gripped comfortably, that it can absorb vibration, and that the tool handles are positioned to keep the employee's wrists and hands in alignment.

## **Hand Exercises**

Certain hand exercises, when done daily, can help strengthen the wrist and hand muscles and help relieve strain caused by tasks requiring repetitive motions.

- **Wrist Rotation-** Make a fist and rotate the entire hand (at the wrist) in one direction. Repeat 15 times. Switch directions and repeat 15 times. Then extend the fingers and do the same rotations.
- **Hand Stretch-** Make a fist, then extend the fingers as far apart as possible. Hold for about ten seconds. Relax, then repeat the entire sequence 5 to 10 times until the hands and fingers feel relaxed.

## **Guidelines for Loss Prevention and Control**

Ergonomic problems or hazards that can result in repetitive trauma injuries can be reduced or prevented by implementing a combination of administrative and engineering controls. Proper work practices should also be used and involve employee education and training, good housekeeping, labeling, proper storage, personal hygiene, rules compliance, and use of personal protective equipment. These controls and practices include, but are not limited to, the following:

- **Ergonomic Design -** Integration of several different workplace elements can be the best solution to improving an ergonomic hazard. These elements include changes in the design of equipment and fixtures, modifications to the work area layout, and improvements in the various environmental factors that may have an effect on work performance. Attention should be focused on design components such as work area, chairs, video display terminals, lighting, temperature, noise and eyestrain. Engineering controls applied to the work area design can reduce or eliminate employees' exposure to excessive force or exertion, awkward postures, repetition motion, extreme temperature, poor lighting levels and vibration. Ergonomic workplace design is discussed in detail in Volume III, Section Two, Chapter 7.10 of these guidelines.
- **Job Rotation -** If at all possible, rotate personnel between repetitive tasks, each having totally different motions. Identify ergonomic stressors at each task and periodically switch employees to a task that stresses different muscle tendon groups. Hand and wrist injuries due to repetitive

motions can be reduced if the job can be done by several employees on a rotation basis. The advantages of a job rotation program are: (a) employee morale is improved; (b) employees are less likely to become injured or reinjured; and (c) employees are less likely to become bored and disheartened doing repetitive tasks. In addition, employers benefit because they and the employees can gain a better feel for what skills are transferable, thus enhancing productivity.

- **Frequent Breaks** - Work breaks are recommended along with regular "stretch breaks" to give workers a chance to relax stressed muscles, especially when working the hands at a fast pace. Train employees to mix tasks so they can move around at intervals. If employees take breaks in what they are doing and perform very different tasks that use different parts of the body, then no one area becomes overloaded.
- **Exercises** - The employees' potential for injury is affected by the degree of flexibility, endurance, and total body muscle tone, regardless of their strength. Employees who are physically fit are generally healthier and less vulnerable to injury and should be encouraged to exercise to maintain their health. Exercises for all body parts that are involved in repetitive motion should be especially encouraged. Some suggested exercises include: stretching and rotation exercises to reduce wrist, hand, and elbow strain; shifting positions frequently and simple stretching exercises to release the muscle tension caused by sitting to reduce lower back stress and strain; one-minute eye exercises done every 20 minutes to reduce eyestrain.

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***Checklist for  
Essential Program Elements***

1. Does the agency have a program to detect repetitive motion trauma?	Yes	No
2. Does the agency provide exercises for employees who hold jobs with continued repetition of routine movements?	Yes	No
3. Are workstations and equipment provided that are ergonomically designed?	Yes	No
4. Are employees who are exposed to cumulative trauma rotated to perform other jobs?	Yes	No
5. Are frequent breaks allowed?	Yes	No

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**Additional Resources:**

A Patient's Guide to Cumulative Trauma Disorder(CTD). In a Nutshell. ... The following topics are types of cumulative trauma disorder: ... <http://www.healthpages.org/AHP/LIBRARY/HLTHTOP/CTD/>

Cumulative Trauma Disorders in Office Workers. August, 1992. All sedentary ... WHAT ARE CUMULATIVE TRAUMA DISORDERS? Cumulative trauma ... <http://www.state.nj.us/health/eoh/>

[peoshweb/ctdib.htm](http://peoshweb/ctdib.htm)

Cumulative Trauma Disorders. What are cumulative trauma disorders? ... What causes cumulative trauma disorders? Awkward or deviated postures. Excessive force. ... <http://www.hooah4health.com/environment/occuphealth/CumulativeTD.htm>

Cumulative Trauma Disorders . . . Including Carpal Tunnel Syndrome. ... What Is Ergonomics? Cumulative Trauma Disorders. Eyestrain. Workstation Design. Quiz. ... <http://www.pp.okstate.edu/ehs/modules/ergo/CTD.htm>

## Videos

<http://www.labour.gov.sk.ca/safety/video/video7.htm>

Designed to assist managers and workers in preventing repetitive motion injuries through better workplace design. Stresses ergonomic principles.

<http://www.repetitiveusetherapy.com/catalog.htm>

Learn the most effective technique used today to rid clients of chronic pain and restore muscle memory. This is a common sense approach to taking clients out of pain, while prolonging your longevity as a therapist.

<http://www.chirotx.com/video/index.htm>

ART is a patented system of soft tissue treatment that is the #1 choice for conditions like carpal tunnel syndrome, whiplash, back pain and other muscle, nerve and joint conditions. It has become the world wide gold standard in the treatment of such conditions and is provided only by healthcare practitioners certified in ART.

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### *Additional Resources for Texas State Agencies*

#### *Publications*

*Manager's Guide to Workplace Ergonomics* (Rev. 7/93)

Business & Legal Reports, Inc.

39 Academy Street

Madison, CT 06443-1513

(203) 245-7448

*Principles of Ergonomics* - OSHA Course 225, Module 5 - CTD's (1995 Course Materials)

U.S. Department of Labor (OSHA)

Office of Training and Education



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Des Plaines, IL 60018  
(708) 297-4810

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Materials, available through:

[TWCC Resource Center](#)

Texas Workers' Compensation Commission

7551 Metro Center Drive  
Austin, TX, 78744-1609  
(512) 804-4000

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***Endnotes***

1. *Ergonomics Program Management Guidelines for Meatpacking Plants*; U.S. Department of Labor, Occupational Safety and Health Administration; Publication, OSHA 3123; 1991 (reprinted); p. 20.
2. Laing, Patricia M., ed.; "Ergonomics in the Workplace" in *Accident Prevention Manual for Business & Industry, Engineering & Technology*, 10th Edition; National Safety Council; 1992; p. 120.
3. Statistics Department; "Carpal Tunnel Syndrome" in *Accident Facts*, 1994 Edition; National Safety Council; 1994; p. 53.
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5. Wasung, John S. and Kent D. Riesen; "Repetitive Stress Injury, A Growing Threat to American Business"; *Claims*; May 1993; Vol. 41, No. 5; p. 68.
6. Wasung, John S. and Kent D. Riesen; p. 69.
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9. Bruce, Stephen D., ed.; p. 9-9.
10. Bruce, Stephen D., ed.; pp. 9-3 - 9-4.
11. Wasung, John S. and Kent D. Riesen; p. 68.

12. Bloomquist, James, ed.; "New BLS Workplace Injury Data Examines Injury Types and Demographics of the Injured"; *Riskletter*; 1994; Vol. 3, No. 3; p. 3.
  13. "Carpal Tunnel Syndrome, Preventing Repetitive Motion Problems"; 1993.
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  16. "Carpal Tunnel Syndrome, Preventing Repetitive Motion Problems"; 1993.
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  18. Adams, Edie; "Second Stage: Using Macro-Ergonomics to 'Design Out' Cumulative Trauma Risk"; *Occupational Health & Safety*; January 1993; Volume 62, No. 1; p. 40.
  19. *Manual Material Handling: An Ergonomic Approach*; Texas Workers' Compensation Commission, Workers' Health and Safety Division; November 1995; p. 11.
  20. *Manual Material Handling: An Ergonomic Approach*; November 1995; p. 8.
  21. "Repetitive Motion Injuries: What You Need to Know" in *ERB (Employee Relations and Human Resources Bulletin)*; Bureau of Business Practice; Report No. 1788, Section III; July 21, 1993; p. 18.
  22. Laing, Patricia M., ed.; p. 107.
  23. "Repetitive Motion Injuries: What You Need to Know"; p. 19.
  24. *Workstation Adjustments for Comfort and Safety*; Texas Workers' Compensation Commission, Workers' Health and Safety Division; May 1996; p. 9.
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## Section Two - Employee Safety and Health Program

### Chapter 7

#### Occupational Health Program

##### Subchapter 7.20

##### Sanitation Program

Revised: December 2004

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### Volume III:

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This chapter of Risk Management for Texas State Agencies supplies general information regarding state agency occupational health exposures, and suggested techniques and methods to manage and control those exposures. It also identifies additional resources that may be available to assist state agencies in developing or enhancing its employee occupational health program. This chapter is not intended in any way to be a substitute for the advice and guidance of legal counsel, who should always be consulted regarding rights, duties, and responsibilities under the law.

One of the basic tenets of an occupational health program is maintaining a clean and sanitary work environment. This type of environment is a prerequisite to and provides the foundation on which an occupational health program is developed. A clean and sanitary environment will help prevent occupational diseases, particularly dermatoses. Managers, health and safety personnel, and employees should take responsibility for monitoring the cleanliness of agency facilities. A good sanitation program incorporates approved engineering design considerations, good housekeeping practices, personal hygiene and cleanliness, as well as an inspection program.<sup>1</sup> OSHA's Sanitation standard (29 CFR 1910.141) contains details on housekeeping, waste disposal, vermin control, water supply, toilet facilities, washing facilities, change rooms, consumption of food and beverages on premises, and food handling. The OSHA standard is summarized later in this subchapter.

The following areas should be kept sanitary for employees:

- Water supply for drinking and washing facilities
- Personal service facilities (e.g., washrooms, drinking fountains, restrooms, locker rooms)
- Food service facilities
- Sewage and waste disposal facilities
- Heating, ventilation, and cooling system maintenance (HVAC).<sup>2</sup>

## ***Basic Considerations for a Sanitation Program***

ANSI Z4.1 Minimum Requirements for Sanitation in Places of Employment serves as a general guide to the types and sizes of washrooms, locker rooms, and accessories.

Some of the general guidelines from the National Institute for Occupational Safety and Health (NIOSH) are as follows:

- Safe drinking water must be provided in all places of employment. The use of a common drinking cup is forbidden.
- Receptacles for waste food must be covered and kept in a clean and sanitary condition.
- Restrooms must be kept in a clean and sanitary condition.
- Separate toilet facilities must be provided for each sex. If only one person at a time uses a toilet room and the door can be locked from the inside, separate facilities are not required.<sup>3</sup>

Personal service facilities comprise an essential part of the occupational health program. Basic requirements for the most common of these personal service facilities are summarized in the following subsections.

### *Janitorial Service*

Daily janitorial service should be provided for all personal service facilities. Floors and fixtures should be mopped and cleaned with detergent and hot water. A sanitizing cleaner should be used as necessary. Rubber gloves and goggles should be worn and fixtures flushed following use.

### *Drinking Fountains*

Drinking fountains, one to every 50 employees, should be installed in convenient locations throughout the facility. It is important that the fountain have an angle jet and a lip guard and the water stream be directed and projected so that users cannot contaminate it. Fountains in dusty areas should be covered.

### *Eating Areas*

The cafeteria or lunchroom should be clean and attractive to encourage employees to eat away from their work area. Floors should be made of impervious, water-resistant, non-skid material to minimize the hazards of slips and falls.

### *Lockers*

Lockers should be perforated for ventilation and be large enough to permit clothing to be hung up to dry. Lockers should have sloped tops to prevent storage of material on the top.

### *Showers*

Body soap or other appropriate cleaning agents should be placed near the shower. Employees who use showers should have their own towel.

Shower rooms and stalls should be well ventilated and adequately lighted to prevent the formation of mold. The shower floor should be cleaned daily to prevent athlete's foot. If chemicals are stored, handled, or used, emergency flood showers and eyewash fountains should be available and clearly identified.

### *Washing Facilities*

These facilities should be maintained in a sanitary condition. Each lavatory should have hot and cold running water, at the very least tepid water. For drying hands, use one of the following methods: individual paper or cloth towels, individual section of continuous toweling, or warm air blowers. Lavatories should not have stoppers as standing water invites disease. Light fixtures should be installed in all toilet rooms. Switches for the lights or for electric driers should be located away from piping or other ground conductors. A maintenance schedule should be in effect and employees should report any defective equipment.

The choice of soap is important for the prevention of dermatitis. The soap used should have no free alkali and should have a PH of less than 10.5.4

### ***Guidelines for Loss Prevention and Control***

State agencies can reference OSHA's regulation, 29 CFR 1910 Subpart J §1910.141 - Sanitation, and the Texas Department of Health's rule, 25 TAC §295.107, which adopts the OSHA standard, for information regarding sanitation in the workplace.

OSHA's standard (effective August 27, 1971) is summarized in the following paragraphs:

- **Housekeeping**

- Floors should be maintained in a dry condition as much as possible. All floors, work areas, and passageways should be free from protruding nails, splinters, loose boards, and unnecessary holes and openings to facilitate cleaning.
- Receptacles for solid or liquid waste, which could become rotten, should be constructed to avoid any leaking, to allow thorough cleaning, and to be maintained in a sanitary condition.
- Sweepings, wastes, and garbage should be removed in a way that avoids creating health hazards.
- Enclosed workplaces should be constructed and maintained as far as practicable to

provide effective vermin control.

- **Water Supply**

- A potable (drinkable, clean, uncontaminated) water supply should be provided in all workplaces for drinking and washing. Portable dispensers should be constructed to maintain sanitary conditions, be capable of being closed, and equipped with a tap. Open containers and common drinking cups are prohibited.
- Outlets for nonpotable water should be marked to clearly indicate the water is unsafe and not to be used for drinking or washing any part of the body, food, utensils, food preparation areas, personal service rooms, or clothes.
- Nonpotable water systems should not allow backflow or backsiphonage into a potable water system.

- **Toilet Facilities**

- Toilet facilities should be provided in all workplaces. The number of facilities for each sex is based on the number of employees of that sex that require the toilet rooms. If a toilet room will be occupied by no more than one person at a time, can be locked from the inside, and has at least one toilet bowl, separate facilities for each sex are not required.
- Toilet rooms should be constructed to provide separate compartments and to assure privacy.

- **Washing Facilities**

- Lavatories with hot and cold or tepid running water should be provided in all workplaces. Cleansing agents and hand towels (or other means of drying) should also be provided.
- If showers are required, there should be one shower for each ten employees of each sex. Soap or other cleansing agents, hot and cold water, and individual clean towels should be provided.

- **Change Rooms**

- If there is a possibility of contamination with toxic materials, change rooms equipped with separate storage facilities for street clothes and protective clothing should be available.
- If work clothes provided by the employer become wet, there should be facilities for clothes drying.

- **Food and Beverage Consumption**

- Eating and drinking should not be allowed in toilet rooms or areas exposed to toxic materials. No food or beverage should be stored in these areas.
- Appropriate waste disposal containers should be provided, emptied not less than once each working day, and maintained in a sanitary condition.

- **Food Handling**

- Food service facilities should be operated using sound hygienic principles.
- Food should be processed, prepared, handled, and stored in ways to protect against contamination.

### **Summary**

To prevent the spread of disease and germs, good housekeeping practices that include cleaning and sanitizing should be used. These practices can reduce illnesses and make the workplace more comfortable.

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### ***Checklist for Essential Program Elements***

1. Does the agency consider sanitation issues within their health and safety program?	Yes	No
2. Does the agency provide regular janitorial services for its personal service facilities?	Yes	No

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### ***Additional Resources for Texas State Agencies***

#### ***Publications***

*Texas Administrative Code*, Title 25, Chapter 295 - Occupational Health, Section 295.107  
(Occupational Health Rules and Guidelines)

*Occupational Safety and Health Standards - 29 CFR Part 1910*, Section 1910.141 - Sanitation;  
effective August 27, 1971

*ANSI Z4.1-1986 Minimum Requirements for Sanitation in Places of Employment*

and

*ANSI Z9.2-1979 Fundamentals Governing the Design and Operation of Local Exhaust Systems*  
American National Standards Institute  
25 West 43rd Street  
New York, NY 10036  
(212) 642-4900

Fax: 1-212-398-0023

Safe Drinking Water Act, Act of December 16, 1974, Public Law 93-523; last amended by Public Law 103-382, October 20, 1994; majority of the Act in 42 U.S.C. 300f - 300j-25

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***Agencies and Organizations Providing  
Assistance***

**Texas Department of Health**

1100 West 49th Street  
Austin, TX 78756  
(512) 458-7111

**Texas Engineering Extension Service (TEEX)**

Occupational and Environmental Safety Training Division  
The Texas A & M University System  
College Station, TX 77843-8000  
(800) 252-2420  
(409) 845-3418

**National Sanitation Foundation**

P.O. Box 1468  
3475 Plymouth Road  
Ann Arbor, MI 48106

**National Institute for Occupational Safety and Health (NIOSH)**

Office of Publications Dissemination  
4676 Columbia Parkway  
Cincinnati, OH 45226  
(800) 356-4674

**U.S Environmental Protection Agency (EPA)**

Water Supply Program Division  
Washington, DC 20460

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***Endnotes***

1. *Health and Safety Guide for Pesticide Formulators*; U.S. Department of Health, Education, and Welfare, National Institute for Occupational Safety and Health; DHEW (NIOSH) Publication, #77-100; 1987.



2. Laing, Patricia M., ed.; "Industrial Sanitation and Personnel Facilities" in *Accident Prevention Manual for Business & Industry, Engineering & Technology*, 10th Edition; National Safety Council; 1992; p. 191.
  3. *Health and Safety Guide for Pesticide Formulators*; p. 58.
  4. Laing, Patricia M., ed.; pp. 198-203.
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