



POLICY STATEMENT
Commonwealth of Pennsylvania • Department of Corrections

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| Policy Subject: Safety | | Policy Number: 15.1.1 |
| Date of Issue: June 10, 2019 | Authority: Signature on File John E. Wetzel | Effective Date: June 17, 2019 |

I. AUTHORITY

The Authority of the Secretary of Corrections to direct the operation of the Department of Corrections is established by Sections 201, 206, 506, and 901-B of the Administrative Code of 1929, 71 P.S. §§61, 66, 186, and 310-1, Act of April 9, 1929, P.L. 177, No. 175, as amended.

II. APPLICABILITY

This policy is applicable to all facilities operated under the jurisdiction of, or conducting business with the Department of Corrections.

III. POLICY

It is the policy of the Department to identify and address the safety issues that exist within a correctional environment. This policy shall provide procedures that ensure a minimum acceptable level of safety for all persons working in areas that deal with or cause exposure to the following:

1. General Safety;
2. Fire Safety Program;
3. Sanitation and Housekeeping;
4. Worker and Community Right-to-Know;
5. Control and Inventory of Toxics, Caustics, and Flammable Materials;
6. Flammable and Combustible Liquids;
7. Compressed Gases and Equipment;
8. Respiratory Protection Program;

9. Confined Space Entry;
10. Electrical Safety Standards;
11. Lockout/Tagout;
12. Environmental Standards for Noise Levels;
13. Excavation/Trench Safety;
14. Safety Standards for Radon in Department Buildings;
15. Safety Standards for Asbestos Containing Materials;
16. Safety Standards for Lead Containing Materials;
17. Safety Standards for Polychlorinated Biphenyls (PCB's);
18. Machine Guarding;
19. Community Corrections Centers Fire, Safety, and Sanitation;
20. Energy Conservation and Use of Personal Electrical Devices; and
21. Accident Investigations

IV. PROCEDURES

All applicable procedures are contained in the procedures manual that accompanies this policy document.

V. SUSPENSION DURING AN EMERGENCY

In an emergency or extended disruption of normal facility operation, the Secretary/designee may suspend any provision or section of this policy for a specific period.

VI. RIGHTS UNDER THIS POLICY

This policy does not create rights in any person nor should it be interpreted or applied in such a manner as to abridge the rights of any individual. This policy should be interpreted to have sufficient flexibility to be consistent with law and to permit the accomplishment of the purpose(s) of the policies of the Department of Corrections.

VII. RELEASE OF INFORMATION AND DISSEMINATION OF POLICY

A. Release of Information

1. Policy

This policy document is public information and may be released upon request.

2. Confidential Procedures (if applicable)

Confidential procedures for this document, if any, are not public information and may not be released in its entirety or in part, without the approval of the Secretary of Corrections/designee. Confidential procedures may be released to any Department of Corrections employee on an as needed basis.

B. Distribution of Policy

1. General Distribution

The Department of Corrections policy and procedures shall be distributed to the members of the Central Office Executive Staff, all Facility Managers, and Community Corrections Regional Directors on a routine basis. Distribution of confidential procedures to other individuals and/or agencies is subject to the approval of the Secretary of Corrections/designee.

2. Distribution to Staff

It is the responsibility of those individuals receiving policies and procedures, as indicated in the "General Distribution" section above, to ensure that each employee expected or required to perform the necessary procedures/duties is issued a copy of the policy and procedures either in hard copy or via email, whichever is most appropriate.

VIII. SUPERSEDED POLICY AND CROSS REFERENCE

A. Superseded Policy

1. Department Policy

15.1.1, Safety, issued **March 10, 2017, by Secretary John E. Wetzel.**

2. Facility Policy and Procedures

This document supersedes all facility policy and procedures on this subject.

B. Cross Reference(s)

1. Administrative Manuals

- a. DC-ADM 804, Inmate Grievance System
- b. DC-ADM 816, Inmate Compensation
- c. 1.1.1, Policy Management System
- d. 1.1.2, Inspections and Audits
- e. 5.1.1, Staff Development and Training
- f. 6.3.1, Facility Security
- g. 8.1.1, Community Corrections
- h. 10.2.1, Facility Maintenance

2. ACA Standards

- a. Administration of Correctional Agencies: 2-CO-2A-01, 2-CO-3B-01, 2-CO-4D-01
- b. Adult Correctional Institutions: 5-1D-4084, 5-2A-4123, 5-2A-4124, 5-2D-4146, 5-2D-4150, 5-2D-4151, 5-2D-4152, 5-2D-4153, 5-3A-4203, 5-3B-4211, 5-3B-4212, 5-3B-4213, 5-3B-4214, 5-3B-4215, 5-3B-4218, 5-3B-4221, 5-5D-4329, 5-5D-4331, 5-5D-4332, 5-5D-4333, 5-5D-4337, 5-6A-4358, 5-6E-4420, 5-7A-4455
- c. Adult Community Residential Services: 4-ACRS-1A-01, 4-ACRS-1A-02, 4-ACRS-1A-03, 4-ACRS-1A-04, 4-ACRS-1A-05, 4-ACRS-1A-06, 4-ACRS-1A-07, 4-ACRS-1A-08, 4-ACRS-1A-09, 4-ACRS-1A-10, 4-ACRS-1C-02, 4-ACRS-1C-03, 4-ACRS-1C-05, 4-ACRS-1C-08, 4-ACRS-1C-09, 4-ACRS-1C-10, 4-ACRS-1C-11, 4-ACRS-1C-12, 4-ACRS-1C-13, 4-ACRS-1C-14, 4-ACRS-1C-15, 4-ACRS-1C-16, 4-ACRS-1C-17, 4-ACRS-1C-18, 4-ACRS-4B-02, 4-ACRS-4B-04
- d. Correctional Training Academies: 1-CTA-2A-01, 1-CTA-2A-03, 1-CTA-2B-02, 1-CTA-2B-03, 1-CTA-3B-01, 1-CTA-3C-01, 1-CTA-3C-02, 1-CTA-3C-03, 1-CTA-3E-01, 1-CTA-3E-03

3. Other

- a. Act 1984-159, The Worker and Community Right-to-Know Act;
- b. Superfund Amendments and Reauthorization Act of 1986 (SARA Title II);
- c. OSHA CFR 29 §1926.652;
- d. OSHA CFR 29 §1910.1030;
- e. Management Directive 205.19, Smoking in Commonwealth Buildings and Facilities;
- f. Title 61, §§123, 382;
- g. 34 Pa. Code §203.1; and
- h. National Fire Protection Association (NFPA), Section 101, Life Safety Code (LSC).



PROCEDURES MANUAL
Commonwealth of Pennsylvania • Department of Corrections

Policy Subject:

Safety

Policy Number:

15.1.1

Date of Issue:

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Authority:

Signature on File

John E. Wetzel

Effective Date:

June 17, 2019

Release of Information:

Policy Document: The Department of Corrections policy document on this subject is public information and may be released upon request.

Procedures Manual: This Procedures Manual is not public information and **will not be released** in its entirety or in part, without the prior approval of the Secretary of Corrections or designee. This manual or parts thereof may be released to any Department of Corrections employee on an as needed basis.

Procedure Development: All required procedures will be developed in compliance with the standards set forth in this manual and/or the governing policy. These standards may be exceeded, but in all cases, these standards are the minimum standard that must be achieved. In the event a deviation or variance is required, a written request is to be submitted to the appropriate Executive Deputy Secretary/Deputy Secretary and the Bureau of Standards, Audits, Assessments, and Compliance for review and approval prior to implementation. Absent such approval, all procedures set forth in this manual must be met.

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Section 1 – General Safety

A. General

To improve awareness of health and safety conditions and to maintain compliance with Accident and Illness Prevention requirements in Department facilities, the following procedures shall be implemented.

B. Responsibilities

1. The Safety and Environmental Protection Division Chief/designee is the Department's key contact in all safety and environmental concerns. Duties include:
 - a. review all facilities annually for compliance with the Accident Illness Prevention Program (AIPP). Compliance with AIPP is essential to maintain Commonwealth self-insured status;
 - b. develop and manage all Department Safety and Environmental Policies and Procedures;
 - c. act as the Central Office point of contact regarding all accident and illness prevention requirements (i.e., annual dissemination of Safety Statement and policy review);
 - d. ensure that the Safety Committee operates in accordance with the provisions of the collective bargaining unit agreements and memoranda of understanding, and ensure that all unions required under contract are offered representation and an opportunity to appoint union committee members to the Safety Committee;
 - e. with the assistance from managers and employees, identify the types of workplace health and safety initiatives which are appropriate to meet Department needs in all workplaces;
 - f. monitor compliance with required program elements and protocols for the workplace health and safety program;
 - g. work with senior management, safety committees, and safety consultants to address the hazards and program areas in need of improvement within the Department;
 - h. maintain appropriate health and safety program records and documents to support implementation including, but not limited to, the following: policy and procedures, goals and objectives, training and education, communications, hazard identification, effectiveness and evaluation methods, and other safety-related information provided to employees;
 - i. review and communicate all Department policies and procedures as they relate to Safety and Environmental Protection on an annual basis;

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- j. provide changes and ensure compliance with all functions of the AIPP through all Correctional Institutional Safety Managers (CISM);
 - k. ensure that training for new CISM is provided as necessary. This includes updating the **CISM Responsibilities Outline (Attachment 1-A)**, which will serve as a guideline of related duties in accordance with Department safety policy/procedures and the AIPP;
 - l. ensure that annual safety program goals and objectives are provided to senior management to keep them informed and involved in the Department's safety efforts and initiatives. Goals and Objectives shall be developed using guidelines outlined in the **Goals and Objectives Trends and Analysis (Attachment 1-B)**. The methods for communicating agency goals and objectives include the following:
 - (1) the Chief of Safety and Environmental Protection Division is designated as the Department's Safety Coordinator. The Safety Coordinator is responsible for providing goals and objectives, information, and progress reports to the Office of Administration;
 - (2) goals and objectives are communicated in writing to the Secretary in accordance with **Section 1** of Department policy **1.1.1, "Policy Management System"** for approval and provided to other Executive Staff as necessary;
 - (3) following administrative approval, goals and objectives are communicated to managers/supervisors during management meetings and/or administrative memo or directive; and
 - (4) employees are informed of safety goals and objectives via staff meetings, memos, newsletters, emails, and/or training sessions.
 - m. ensure that appropriate performance indicators or measures are established to help determine if the desired results are being achieved. The status of Department goals and objectives is monitored at least semi-annually and changes are made where necessary and possible to improve performance. In the event that an established goal is reached before the defined target, a new goal will be established. The achievement or effectiveness of the goals and objectives is evaluated at least annually; and
 - n. monitor facility goals and objectives compliance via the Annual Operations Inspection.
2. Facility Manager
- a. Ensure that the facility is aware of and meets all elements of AIPP.
 - b. Ensure that all procedures established in this manual are implemented through the CISM.

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- c. Establish a Safety Committee that meets the requirements of **Subsection B.8. below.**
 - d. Support and fund activities and training for the CISM and other staff as necessary to ensure compliance and assist in mitigating workplace injuries.
3. Corrections Health Care Administrator (CHCA)
- a. Shall provide all documentation outlined in **Subsection E. below.**
 - b. Ensure training records for all staff administering X-rays shall meet the **required** training standards.
 - c. Ensure all X-ray producing machines will be tested every two years by a qualified vendor to ensure there is not more than 10% differentiation of 70 kVp setpoint (63 – 77 kVp required).
 - d. Ensure all records identified in **Subsection E. below** shall be copied and sent to the Radiological Safety Officer for retention.
 - e. Ensure that the Radiological Safety Officer shall be advised of any changes in the administration of radiological equipment.
4. **Deputy Superintendent for Facilities Management (DSFM)**
- a. **The DSFM shall ensure all components of the procedural manual related to security staff are implemented.**
 - b. **The DSFM will designate staff responsible for operation of the whole body scanning systems.**
5. Major
- a. Shall comply with this procedures manual as outlined in **Subsection E. below.**
 - b. Shall ensure any/all documents relating to X-ray machines used in security are submitted to the Radiological Safety Officer in a timely manner.
 - c. Ensure all security **and mail room** employees are properly trained in the use of all X-ray producing machinery **identified in Subsection E. below.**
 - d. Provide a copy of the annual training roster to the Radiological Safety Officer.
 - e. Ensure an annual inspection of X-ray equipment operation is conducted and forwarded to the Radiological Safety Officer for retention.

6. Correctional Industries (CI) Manager

- a. Shall comply with this procedures manual as outlined in **Subsection E. below.**
- b. Shall ensure any/all documents relating to CI X-ray machine(s) are submitted to the Radiological Safety Officer in a timely manner.
- c. Ensure all CI employees or inmates are properly trained in the use of all X-ray producing machinery **identified in Subsection E. below.**
- d. Provide a copy of the annual training roster to the Radiological Safety Officer.
- e. Ensure an annual inspection of X-ray equipment operation is conducted and forwarded to the Radiological Safety Officer for retention.

7. Correctional Institutional Safety Manager (CISM)

The CISM is responsible for the implementation of all Department policies under the auspices of the Safety and Environmental Protection Programs. The Safety and Environmental Protection Division directs the facility on implementation of local procedures as necessary to fully comply with Department policy and procedures. Duties include, but are not limited to:

- a. maintaining, at minimum, all elements of AIPP pertaining to the safety division;
- b. ensuring staff are aware of AIPP. Annual notification of AIPP shall be made to all staff via email, safety bulletin board, and through the Safety Committee;
- c. reviewing and following of responsibilities developed for CISM's in accordance with the **CISM Responsibilities Outline**;
- d. obtaining an Advanced Safety Certificate from the National Safety Council within five years of assuming position;
- e. ensuring compliance with all conditions set forth in this procedures manual as well as all federal, state, and local regulations that apply;
- f. monitoring compliance to ensure all appropriate staff receive the required safety training set forth in Department policy **5.1.1, "Staff Development and Training;"**
- g. providing reports and information as required to the Chief of the Safety and Environmental Protection Division;
- h. reviewing staff and inmate accidents and near misses reports and perform investigations and follow-up investigations as needed;¹

¹ 5-6E-4420

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- i. compiling, reviewing, and analyzing all staff/inmate accidents, including reported near misses to determine casual factors and agents to establish program goals for reduction of workplace accidents;²
 - j. monitoring and conducting safety inspections as required by **Subsection D. below**;
 - k. in accordance with the **Goals and Objectives Trend Analysis**, developing a minimum of one safety goal and objective using the **Safety Goals and Objectives for Fiscal Year (Attachment 1-C)** from the safety program annual review that will address any program conditions that were revealed through various data collection processes;
 - l. in addition to the Annual Operations Checklist, using the criteria listed in the **Safety Goals and Objectives for Fiscal Year** for developing trends and analysis of staff and inmate accidents, including reported near misses. The findings of this review are to be used in the development of the goals and objectives for the facility;
 - m. identifying as the facility Radiological Safety Officer. See **Subsection E. below** for details; and
 - n. **ensure decommissioning of all radiation producing devices is conducted in accordance with federal, state, and local regulatory requirements.**
8. Safety Committee
- a. The Safety Committee will be comprised of management and labor union members. Members of management will include the DSFM/designee who will serve as the Chairperson and the CISM as Vice-Chairperson, the Deputy Superintendent for Centralized Services (DSCS), Correctional Facility Maintenance Manager, Major of the Guard, Food Services Manager, Corrections Classification Program Manager (CCPM), and **Parole. Parole regional and satellite offices will maintain their local Safety Committee.**
 - b. The remaining composition of the Safety Committee will comprise of an equal number of representatives of the union who have negotiated union contracts that require union involvement in this committee. The following collective bargaining agreements require union representation on the Safety Committee: AFSCME, CIVEA, PSCOA, SEIU Healthcare, SEIU Local 668 (PSSU), OPEIU, and FOSCEP (**representatives as outlined by contract**).
 - c. Minutes of Safety Committee meetings shall be disseminated to all staff via email, safety bulletin board, and by committee members.

² 5-6E-4420

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- d. The Safety Committee shall review and recommend modifications/additions to safety procedures in the facility's safety program. Duties include, but are not limited to, the following:³
- (1) meet once a month, at a minimum;
 - (2) ensure that minutes are recorded and disseminated as appropriate for each meeting, documenting attendance, safety issues and procedures, training, review of injuries and/or accidents, health/safety suggestions, and progress toward safety goals;
 - (3) provide meeting minutes to the Chief of the Safety and Environmental Protection Division and the Facility Manager/designee;
 - (4) attend any training as established by the CISM that may be pertinent to the Safety Committee;
 - (5) assist in the communication of health and safety information to all employees;
 - (6) set committee goals and objectives and monitor progress and achievements;
and
 - (7) establish sub-committees as needed to fulfill the requirements of the committee.
9. Department Heads/First Line Supervisors duties include, but are not limited to:
- a. enforce all safety regulations and policies in effect. Be aware of unsafe work practices and conditions. Take prompt corrective action to eliminate hazards when identified and prevent incidents from recurring;
 - b. establish work methods and written procedures that promote safe work conditions for all areas under your direct supervision;
 - c. ensure that all unsafe work conditions, incidents, and injuries including near misses are reported promptly to the appropriate authority and the CISM;
 - d. consider all safety recommendations promptly and refer those items which cannot be corrected to the CISM and where applicable, addressed through the Safety Committee; and
 - e. assure that needed safety equipment and protective devices are provided and used for each job. The CISM shall be consulted regarding the selection and purchase of appropriate safety-related equipment; and investigate all inmate/employee incidents

³ 5-6E-4420

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to identify casual factors and agents and provide recommendations for the prevention of reoccurrence.⁴

10. Employee's duties include, but are not limited to, the following:
 - a. report any incidents or unsafe conditions to supervisor immediately;
 - b. report defective or damaged equipment immediately;
 - c. report all injuries to the supervisor and obtain immediate first aid;
 - d. become familiar with relevant work procedures and safe work practices with the use of **Intranet** to review safety policies and procedures and/or contact the CISM;
 - e. review Job Safety Analysis (JSA) for all equipment used within your scope of work;
 - f. follow safe work practices by not engaging in horseplay or playing practical jokes;
 - g. when in doubt, ask the supervisor what should be done or how to perform the work;
and
 - h. understand each and every employee is responsible for his/her safety and the safety of others.

C. Workplace Health and Safety Program and Accident and Illness Prevention Program (AIPP)

1. All agency workplace safety and health programs must include 15 mandatory program elements. The Program Requirement Guide explains all 15 mandatory program elements (A through O) in detail. This Guide can be found on the **Intranet** Safety web page or the Office of Administration, Human Resources, Benefits Section, Safety Program, Program Requirements, Program Requirements Guide.
2. Compliance with AIPP is mandatory for the Commonwealth to maintain self-insured status.
3. Each facility shall prominently post a safety bulletin within access to all employees. The minimum information required to be posted is:
 - a. monthly accident/injury metrics located on the Safety web page. This information is updated by the tenth of each month;
 - b. AIPP and the elements contained within the program including the P elements shall be posted; and

⁴ 5-5D-4337

- c. all annual communications required by AIPP.

4. Industrial Hygiene Surveys

This program must be communicated to all staff annually. The CISM shall notify staff at their respective facility. This is an AIPP requirement. The facility CISM/designee can request that a vendor on contract perform related testing using the following criteria:

- a. the bureau or division where the request for services originates is responsible to contact the CISM to place the **Industrial Hygiene Survey (Attachment 1-D)** into motion;
- b. ***the Industrial Hygiene Survey is to be completed by staff working in the area of the complaint. The questionnaire is essential for review by the Industrial Hygienist to determine the testing parameters;***
- c. the CISM shall review the **Industrial Hygiene Survey** and make recommendations accordingly (if any questions or health-related issues are indicated, the facility or Central Office Infection Control Nurse can be a resource);
- d. a vendor (**Industrial Hygienist**) on contract shall be contacted and a copy of the questionnaire shall be provided for their review; and
- e. testing conducted by the vendor shall be performed in a timely manner and meet all national standards.

5. Employee Health and Safety Suggestion Program

- a. Safety is important and a basic responsibility of all employees. To accomplish the goal of improving the health and safety of the Department, an Employee Health and Safety Suggestion Program has been made available.
- b. The Health and Safety Suggestion Program must be communicated to all staff annually. This can be managed via email, posting on the safety bulletin board, and through the Safety Committee. This is an AIPP requirement.
- c. Employees can improve health and safety by adhering to established safety procedures, identifying workplace hazards, and reporting accidents and near-misses. If an employee is aware of unsafe acts, has an idea for performing tasks safer, or wants to report a safety hazard, he/she may report it through the **Health and Safety Suggestion Program Form (Attachment 1-E)**.
- d. The completed suggestion form can be forwarded to the CISM via hard copy or email.
- e. The Chief and Assistant Chief(s) of the Central Office Safety and Environmental Protection Division are the overall Department program coordinators while the CISM is designated as the coordinator in the facility.

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- f. If the employee includes his/her name with the suggestion, he/she will receive a response after the suggestion is evaluated by the CISM.
 - g. If the suggestion contains merit and will benefit the Department, the CISM will present the suggestion to the Safety Committee for discussion.
 - h. Management will be notified, as appropriate, regarding approvals for suggested improvements.
6. Personal Protective Equipment (PPE)⁵
- a. The CISM is responsible for the availability and use of PPE.
 - b. Use of required PPE is the responsibility of all Department employees and management.
 - c. The facility shall develop local procedures when PPE use is identified, defining their use, availability, and site-specific requirements.
 - d. Current situations that require the use of PPE include, but are not limited to:
 - (1) Corrections Emergency Response Team (CERT)/Fire Emergency Response Team (FERT);
 - (2) any cutting/sawing operation;
 - (3) welding/grinding; and/or
 - (4) working in areas identified with high noise levels.
 - e. All facilities shall develop local procedures for the use, deployment, and storage arrangements for reflective vests. All staff and inmates shall wear the reflective vest when work or deployment requires them to be on or near public or private roadways or when there are climate conditions such as fog, dim light, rain, snow, etc., that result in poor visibility and staff/inmates not being easily identified.
7. Loss Analysis
- a. When evaluating and determining the effectiveness of a safety program, a loss analysis is conducted to identify possible injury trends. Identifying the types of accidents/incidents and where they are occurring is critical to discovering program needs and development of goals and objectives.
 - b. Additional documentation that is required to be maintained on file by the CISM includes, but is not limited to:

⁵ 5-5D-4337

- (1) statistical reports of accident/injuries of staff and inmates;
- (2) loss analysis (safety issues that have been addressed also including safety issues that are current or beyond the scope of capabilities for the facility);
- (3) all health and safety program reviews and reports; and
- (4) safety program Annual Inspections.

D. Inspections and Reports

1. Annual Inspections

- a. The Central Office Safety and Environmental Protection Division Chief/designee is the “Authority Having Jurisdiction,” and shall conduct an annual safety, sanitation, and fire prevention review of each facility to ensure compliance with all applicable Department policies, applicable laws, and related professional standards. This shall be completed in accordance with **Section 1** of Department policy **1.1.2, “Accreditation and Annual Operations Inspections.”**⁶
- b. A **Ventilation/Light/Sound/Temperature Testing Report (Attachment 1-F)** shall be completed annually by the Central Office Safety and Environmental Protection Division during the Annual Operations Inspection.⁷
- c. An annual review reflecting the effectiveness of the Safety Program shall be communicated to Executive Staff.

2. Quarterly Reports

- a. The Quarterly Summary of Fire/Safety/Sanitation Activities shall be completed by the CISM. This written summary is to contain a detailed account of events and work-related activities during the previous quarter. These summaries shall be submitted by the 15th day of the month following the end of a quarter to the DSFM and the Chief of the Safety and Environmental Protection Division.
- b. The CISM shall compile quarterly data for trends and analysis of employee/inmate injuries and/or accidents in accordance with the **Goals & Objectives Trends and Analysis Worksheet.**⁸

⁶ 5-5D-4329, 5-7A-4455, 1-CTA-3E-01; 2-CO-4D-01

⁷ 5-2D-4146, 5-2D-4150, 5-2D-4151, 5-2D-4152, 1-CTA-2B-03

⁸ 5-6E-4420

3. Monthly Inspections

- a. Monthly Fire/Safety/Sanitation and Hygiene inspections shall be conducted by the CISM. A report consisting of deficiencies noted and/or any previous deficiencies not corrected during the inspection shall be documented.⁹
- b. The completed report shall be submitted to the DSFM for review. Recommendations for corrective action of deficiencies can be provided upon the request of the responsible Department Head.
- c. Any area that has listed deficiencies shall submit a **Plan of Action (Attachment 1-G)** to the DSFM and CISM no later than the 15th day of the preceding month.
- d. In the event there is a serious issue or safety infraction, immediate action is necessary. Documentation of this action and recommended corrective action will be included in the monthly report. The affected operation cannot resume until re-inspection occurs and approval is issued in writing.

4. Weekly Inspections

- a. Fire/safety/sanitation and hygiene inspections shall be conducted weekly by a qualified Department Head/designee.¹⁰ This employee shall be trained on the inspection requirements by the CISM in accordance with **Section 2** of Department policy **5.1.1**. Inspections shall be completed using the **Fire/Safety/Sanitation Inspection Weekly Report (Attachment 1-H)**.
- b. The inspection forms are to be submitted to the CISM for review and retention.
- c. Items not referenced in the inspection reports listed above are to be considered in compliance with Department procedures or that no deficiencies were noted during the inspection.

E. Radiological Safety Officer

The CISM is designated as the **Primary** Radiological Safety Officer and will be the liaison for the facility related to interaction with the Department of Environmental Protection (DEP). The following information is required to be on hand and maintained by the Radiological Safety Officer.

1. **Radiation Safety program is outlined in the Personal X-ray Scanner Radiation Protection Safety Program (Attachment 1-I).**
2. **Body scanner operations are outlined in Department policy 6.3.1, "Facility Security," Section 30.**

⁹ 5-3B-4212, 1-CTA-3E-01

¹⁰ 5-3B-4212, 5-5D-4329, 4-ACRS-1A-03

3. Medical

- a. Registration of portable X-ray equipment must be provided for all devices used within the facility.
- b. All machine operators must have a license or certification.
- c. Copy of the contract identifying the training requirements for the contract staff conducting X-ray operations at the facility.
- d. Equipment inspection identifying kVp does not exceed the 10% differential of 70 kVp (testing required every two years).
- e. Radiological monitoring results are provided to the Radiological Safety Officer for retention.
- f. **Five**-year record retention is required for all documents.

4. **Security (Whole Body Scanner)**

SCOPE: The purpose of this procedure is to establish working guidelines and procedures for the use of a Whole Body Scanner inspection system. The system is designed and intended to assist in maintaining a safe and secure environment for staff and inmates to work and reside.

- a. **The Whole Body Scanner does not replace the need for basic security procedures such as random searches, pat searches, unclothed searches, and appropriate security procedures.**
- b. **Each time the Whole Body Scanner is used, the system will assign a scan number to the particular image. Scans can only be retrieved by scan number, time of scan, and/or date of scan.**
- c. **All information is confidential and cannot be downloaded for any purpose without the authorization of the Facility Manager, DSFM, or Major of the Guard.**
- d. **It is prohibited to use the Whole Body Scanner on staff.**
- e. **The procedures for proper operations of the Whole Body Scanner are outlined in Department policy 6.3.1, Section 30.**
- f. **Safety device (e.g., on-off switches and interlocks) inspections must be conducted annually as required by Chapter 255.101(e).**
- g. **Operating manuals must be available to operators when the machine is in use.**

- h. ***A list of qualified operators must be maintained at the location of the Whole Body Scanner. This list is to be maintained when additions or deletions occur.***

5. Dental

- a. Registration of all X-ray equipment is current and available for review in master document file.
- b. All machine operators must have a license or certification.
- c. “Notice to Employees” is conspicuously posted in areas where X-ray operations take place.
- d. Radiological monitoring is conducted and results are provided to the Radiological Safety Officer for review and retention.
- e. Testing, every two years, of all X-ray producing machinery to ensure the operation does not exceed a 10% kVp difference from the indicated value of 70 kVp. Results of this testing are to be forwarded to the Radiological Safety Officer for retention.
- f. Any deficiency noted in the inspection process requires a plan of action for repair. Any device shall be placed out of service until corrective actions are completed.
- g. Any individual not meeting certification and training requirements may not operate any X-ray producing equipment.
- h. ***Five***-year record retention is required for all documents.

6. Operators

Operators must practice safety to reduce exposure to themselves, other staff, and patients.

- a. Taking appropriate precautions when exposing films.
- b. Keeping proper distances.
- c. Using barriers when needed.
- d. Using lead aprons/shields over patients.
- e. Using the fastest film speeds and lowest exposure doses to complete the task.
- f. ***Following all manufacturer’s guidelines including 25 PA Code Chapter 255.101, and ANSI 43.17.***

- g. **ALARA, radiation level must be set as low as reasonably possible to conduct the task at hand. This process shall be implemented on all scans. A documented operational procedure review must occur on an annual basis.**
- h. **All completed documents shall be provided to the Radiological Safety Officer.**

7. Training

Training for all **operators (human use) of radiation producing equipment:** Training can be one or a combination of the following:

- a. **refresher training in radiation safety every four years which includes topics listed in PA Code Title 25 §221.205 Appendix A;**
- b. non-medical staff can be trained using the training outline provided (Mail Room/CI/Security);
- c. **Whole Body Scanner operators shall be trained on an annual basis using the manufacturer’s training outline and the topics listed in PA Code Title 25 §221.205; and**
- d. all training hours shall be forwarded to the Radiological Safety Officer for retention in the master file.

8. Waste (**Dental**)

- a. Silver recovery units shall be placed on all processing machines.
- b. Film-foil packets shall be recycled.
- c. Amalgam waste shall be managed as outlined in Department policy 13.2.1, “**Access to Health Care,**” **Section 4.**

9. Mail Room/Correctional Industries/Security

The X-ray equipment used for detection of explosives, weapons, or illegal items (Mail Room/CI/Security) shall meet the following criteria.

- a. Annual inspection for proper operation of all X-ray producing equipment criteria shall include the following: (Maintenance Work Order system can be used to create a preventative maintenance schedule to achieve compliance.)
 - (1) all operational lights;
 - (2) emergency stops;
 - (3) conveyor belt;

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- (4) condition of drapes;
 - (5) labeling;
 - (6) manufacturer's operation and maintenance manual; and
 - (7) staff training on proper operation.
- b. Any deficiencies shall render the device out of service until repairs have been completed.
- c. All documents shall be maintained in a master book or manual and remain in the possession of the Radiological Safety Officer.
- d. The Radiological Safety Officer shall be responsible for updating all documents as provided to them by the Department Head or designee.
- e. The Department Head shall ensure all employees assigned to the mail room are properly trained and the necessary documents are provided to the Radiological Safety Officer.

Section 2 - Fire Safety Program

A. Staff Responsibility

1. The Safety and Environmental Protection Division is responsible for the following:
 - a. monitor and review annual inspection reports, quarterly inspection reports, fire report forms, fire prevention programs, fire evacuation plans and life safety code compliance issues;
 - b. investigate unusual fire incidents;
 - c. critique and/or observe disaster drills;
 - d. assist in coordinating fire safety training; and
 - e. serve as a resource to facilities in fire safety matters.
2. The Facility Manager is responsible for the overall implementation of this procedures manual.
3. The Corrections Institutional Safety Manager (CISM) or Fire and Safety Specialist is responsible for the following:
 - a. develop and maintain a local fire safety program in compliance with Department policy and directives;
 - b. review the fire protection systems and develop the facility fire plans; the facility fire plans shall be reviewed at least annually and updated as necessary;
 - c. conduct and document the inspections/tests required for all fire protection, detection, and suppression systems, according to the requirements outlined within the **Annual Safety Inspection Record Review Form**,¹ and
 - d. ensure that the following are conducted:
 - (1) Monthly Inspections
 - (a) **Standpipe and Hose Systems Monthly Inspection (Attachment 2-A)**;
 - (b) **Fixed Extinguishing System (Attachment 2-B)**;
 - (c) **Monthly Fire Pump Inspection (Attachment (2-C))**;

¹ 4-4124, 2-CI-1B-1; 4-ACRS-1C-10

- (d) **Automatic Sprinkler/Fire Pump Systems *Monthly Inspection* (Attachment 2-D).**
- (2) Quarterly Inspections
 - (a) **Fire Drill Report (Attachment 2-E)** - quarterly fire drills are completed/documented for all required areas;² and
 - (b) **Automatic Sprinkler *Quarterly Inspection* (Attachment 2-F).**
- (3) Annual Inspections
 - (a) **Standpipe and Hose Systems Annual Inspection and Maintenance (Attachment 2-G);**
 - (b) **Fire Pump Annual Maintenance (Attachment 2-H);**
 - (c) **Fire Pumps Annual Performance Test (Attachment 2-I);** and
 - (d) **Fire Hydrant Annual Inspection and Flow Test (Attachment 2-J).**
 - (e) ***Automatic Sprinkler Systems Annual Inspection & Tests (Attachment 2-K).***
- (4) Five-Year Testing Inspection

Standpipe and Hose Systems 5- Year Testing Record (Attachment 2-L);

- e. submit an annual fire drill schedule for approval by the Deputy Superintendent for Facilities Management (DSFM);³
- f. ensure that all staff is trained in the essentials of fire prevention in accordance with Department policy **5.1.1, “Staff Development and Training”** and the Department’s approved lesson plan. Additional information may need to be added in order to cover unique facility issues/procedures;
- g. investigate all fires to determine causes, effects on materials/equipment, persons involved, whether proper procedures were followed and preventive/corrective measures. A **Fire Report Form (Attachment 2-M)** must be completed for all fires and forwarded to the DSFM with a copy to the Chief of the Safety and Environmental Protection Division;
- h. maintain all documentation in relation to the facility fire prevention program including, but not limited to the following: inspections/test results of fire protection systems/

² 4-4211, 4-4221

³ 4-4211, 4-4221

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equipment, fire evacuation drills, local fire department agreements/contracts, vendor service records and equipment inventories;

- i. review specifications for the selection and purchase of facility furnishings and renovation projects to ensure conformance with applicable fire safety requirements; and
- j. serve as a resource and assist department heads and unit managers in the development of new staff and new inmate fire safety orientation training.

4. Business Manager

Ensure that the **CISM** receives all pertinent information prior to the purchase and selection of facility furnishings and renovation projects in order to verify conformance with applicable fire safety requirements.⁴

5. Department Heads/Unit Managers

- a. Ensure that all new staff and inmates receive fire safety orientation training. This orientation shall serve as a review of the facility fire plan, fire safety procedures, and roles/responsibilities for that given area.
- b. **Maintain all training records of new inmate fire and safety orientation training.**

6. Training Coordinator

Maintain all training records of new staff fire and safety orientation training.

B. General Fire Safety Requirements

- 1. Every new and existing building or structure shall be constructed, arranged, equipped, maintained and operated in accordance with all applicable regulations and standards (Labor & Industry Fire and Panic Regulations, NFPA Life Safety Code Standards and ACA Standards) to ensure a reasonable level of safety for life and property from the actual and potential hazards created by fire, explosion and other hazardous conditions.⁵
- 2. Fire exit drills shall be conducted, **at a minimum**, one drill per quarter in all occupied buildings rotated over all occupied shifts. All drills will be reported on the standard **Fire Drill Report Form**. Drills will include evacuation of all staff and inmates, except when there is clear and convincing evidence that security may be jeopardized. When security is in question, actual evacuation during drills is not required. However, staff supervising

⁴ 4-4455, 4-4213, 1-CTA-3C-02, 4-ACRS-1C-15

⁵ 4-4124, 4-4221, 1-CTA-3C-03, 2-CO-2A-01, 2-CO-3B-01, 4-ACRS-1C-08; 2-CI-1B-1

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such inmates will be required to perform their roles/responsibilities as though the evacuation did occur.⁶

3. Where smoking is considered a fire hazard, the CISM/Fire Safety Specialist is authorized to order the posting of "No Smoking" signs.
4. No combustible waste material will be permitted to accumulate in a manner that could create a fire hazard. ***This includes the use of approved waste containers for rags used with flammable liquids. These waste containers will be emptied and cleaned daily***⁷.
5. Fire protection systems and equipment will be approved by the Safety and Environmental Protection Division prior to purchase or installation. Facility purchases will be approved by the **CISM** prior to purchase or installation.

C. Training

1. To ensure that all staff and inmates are aware of fire safety issues, appropriate training will be offered on a continuous basis.⁸ This training will be accomplished as follows:
 - a. all staff will receive annual fire safety training in accordance with Department policy **5.1.1**; and
 - b. all new staff and those assigned to a new area will be given a fire safety orientation in order to familiarize them with the fire plan and procedures for that area.
2. All inmates will receive a fire safety orientation during orientation and when assigned to a new job in order to familiarize them with fire prevention and evacuation procedures for a given area.

D. Facility Fire Plans

1. The facility will have a written fire plan that plans for protection of all persons in the event of a fire and/or an evacuation to an area of refuge. Facility fire plans will include, but are not limited to, the following:
 - a. internal and external fire notification procedures;
 - b. fire evacuation procedures⁹;
 - c. key control/remote-unlocking procedures;

⁶ 4-4221, 4-ACRS-1C-09, 2-CI-1B-3

⁷ 4-4214

⁸ 4-4084

⁹ 4-4221, 4-ACRS-1C-09, 1-CTA-3C-01, 2-CI-1B-3

- d. Fire Emergency Response Team (FERT) deployment procedures;
- e. detailed floor plans identifying primary and secondary routes of egress in relation to location;¹⁰ and
- f. available types of fire detection, notification and suppressions systems.¹¹

E. Fire Watch

- 1. In the event that there is a failure of the entire fire alarm system or any part of the system that is determined to pose undue risk, regardless of the reason, the CISM/designee will institute a "fire watch."¹²**
- 2. The "fire watch" will be documented to identify the following:**
 - a. what area(s) are affected;**
 - b. what action(s) must be followed in the event of a fire;**
 - c. who must be informed of this information;**
 - d. what is the projected length of time for the fire watch; and**
 - e. how the fire watch will be lifted when the problem(s) are resolved.**
- 3. The CISM will ensure that all affected staff members are aware of the activation of the "fire watch" and that their acknowledgement is documented by signature.**
- 4. In the event a "fire watch" is in place for longer than six months, all affected staff members will reaffirm their understanding by signature documenting their review of the procedures.**
- 5. This procedure must be included in the area Post Orders regarding emergency evacuation procedures.**

¹⁰ 4-4221

¹¹ 4-4211, 4-ACRS-1C-13, 2-CI-1B-1

¹² 4-4124, 4-ACRS-1C-13

Section 3 - Sanitation and Housekeeping

A. Housekeeping Plan¹

1. A written housekeeping plan shall be developed for all areas of the facility's physical plant that provides for daily housekeeping and regular maintenance by assigning specific duties and responsibilities to staff and inmates.²
2. Effective housekeeping requires the development of a definite cleaning schedule with personnel and inmates assigned specific duties. Cleaning activities should be supervised at all times to ensure that the work performed is proper and thorough.³
3. Each facility shall provide for the control of vermin and pests.⁴
4. Pest control professionals should be readily available to the facility to conduct regular monthly inspections and eradicate by whatever means is effective any insects, rodents, or vermin found.

B. Housekeeping Plan Coordinator

The Facility Safety Manager/Fire and Safety Specialist shall serve as the Housekeeping Plan Coordinator. This Department Head and/or area supervisor shall prepare area sanitation and housekeeping plans with the assistance of the Housekeeping Plan Coordinator. The Housekeeping Plan Coordinator shall review and approve all area plans.

C. Facility Inspections⁵

1. The Sanitation and Housekeeping Program shall be conducted on a continuous basis for all areas of the facility. Local procedure shall require the following:
 - a. weekly sanitation inspections of all facility areas by a qualified departmental staff member;
 - b. comprehensive and thorough monthly inspections by a safety/sanitation specialist; and
 - c. at least annual inspections by federal, state, and/or local sanitation and health officials or other qualified person(s).⁶
2. The facility shall comply with all applicable laws and regulations of the governing jurisdiction, and there is documentation by an independent, outside source that any past deficiencies noted in annual inspections have been corrected.⁷

¹ 2-CO-4D-01, 1-CTA-3E-01, 1-ABC-4D-01, 4-ACRS-1A-06

² 4-4333

³ 4-4333

⁴ 4-4332,

⁵ 4-4329, 4-ACRS-1A-03

⁶ 4-4455

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3. The safety/sanitation specialist responsible for conducting monthly inspections may be a facility staff member who is trained in the application of jurisdictional codes and regulations. Periodically and on an as-needed basis, this individual is provided assistance from specialists regarding safety and sanitation requirements and inspections. Training for this individual may be provided through the agency's central office specialist(s) or by other applicable agencies.

Section 4 - Worker and Community Right-to-Know

A. Regulatory Requirements

1. **To ensure the health and safety of staff and inmates, the following** major regulatory requirements must be met **in order** to comply with the **Worker and Community Right-to-Know Act, 35 P.S. §§7301-7320** and regulations of the Pennsylvania Department of Labor and Industry:
 - a. The **Employee Workplace Notice** must be prominently posted in English and Spanish.
 - b. Training must be provided to all employees on the provisions of the Act and their rights under the law. Annual training must be provided to those employees exposed to hazardous substances.
 - c. An inventory on all hazardous substances and/or products stored or used in the workplace must be completed annually.
 - d. Material Safety Data Sheets (MSDS) must be¹:
 - (1) obtained for all hazardous substances and/or products **used or stored in the facility;**
 - (2) readily available to **all** employees without intervention or permission of management or supervisors **through the electronic NETMSDS database on DOCNet or via hard copy located in the Control Center;**
 - (3) provided to the employee within five days upon written request;
 - (4) secured in a manner to **prevent unauthorized access by inmates; and**
 - (5) **provided to Central Office Safety and Environmental Protection Division for input into the database if the product is not currently listed in the NETMSDS database.**
 - e. A workplace **Hazardous Substance Survey Form (HSSF)** shall be **completed annually by the Corrections Institutional Safety Manager (CISM)/Designee** by April 1. **This form will be computer generated (Terms Program) by area with a master copy of the HSSF maintained with the master MSDS file in main/central Control. A copy of the completed HSSF shall be posted in a conspicuous location available to all staff.**
 - f. The HSSF must be revised as soon as a new hazardous substance **or** product is used or stored in the **facility or at least annually.**

¹ 4-4215

- g. Containers and ports of pipelines of hazardous and non-hazardous substances shall be properly labeled.
- h. No employee is to be discharged, disciplined or discriminated against for exercising his or her rights granted under the ***Worker & Community Right to Know Act***.

B. Staff Responsibilities

1. Safety and Environmental Protection Division

- a. ***Oversee the development and monitoring of the Worker and Community Right to Know Procedures.***
- b. ***Maintain the NETMSDS database for the Department. This includes the input of new MSDS.***

2. Facility Manager

The Facility Manager shall maintain overall responsibility for local compliance with the ***Worker and Community Right-to-Know Act*** and notify the Chief, Safety and Environmental Protection Division of any site inspection by a regulatory agency (Environmental Protection Agency, Department of Environmental Protection and the Department of Labor and Industry).

3. Corrections Institutional Safety Manager (CISM)/*Designee*:

- a. develop, implement and ensure compliance with these procedures at the local level;
- b. ensure that all staff receive Right-to-Know training in accordance with Department policy 5.1.1, “***Staff Development and Training***”;
- c. ***ensure that all staff are informed that MSDS can now be searched and viewed on-line through the NETMSDS Program on DOCNET;***
- d. ***ensure the placement, updating and periodic inspection of the master set of MSDS located in Control is completed;***
- e. ***compile a Master set of MSDS in separate manuals in alphabetical order;***
- f. ***compile a separate manual to include the products list followed by the HSSF by area in alphabetical order;***
- g. ***develop a products list (generated in the Terms Program) of all areas for the master set of MSDS;***
- h. ***include a copy of the HSSF by area;***

- i. **approve all chemical products (solid, liquid, gases) prior to order and purchase;**
- j. investigate accidents or injuries involving hazardous substances in coordination with the **Human Resources** Office and submit a report on the investigation to the Chief, Safety and Environmental Protection Division, Central Office; and
- k. coordinate the disposal of hazardous substance waste **and universal waste** in compliance with local, state, and federal regulations and ensure that disposal contracts are scheduled so hazardous substance waste accumulation is kept to a minimum.²

4. Medical Department

The Medical Department will maintain all medical/exposure files relative to hazardous substance exposures. The records must be maintained for the duration of employment plus 30 years. Files will be created using the **Exposure Data Sheet (EDS) (Attachment 4-A)**. All folders must be identified as Medical Reports of Employee Exposure to Hazardous Substance. Upon **separation** of the employee, a copy of the file stamped with the **separation** date should be forwarded to the employee. The file must be transferred to a 30-year file.

5. Business Office

- a. **To ensure that all manufacturers, importers, suppliers or distributors doing business with the Commonwealth properly label their products and provide MSDS for those products covered by the Worker and Community Right to Know Law, the Business Office shall ensure that the required contract language is included on all purchases of hazardous substances or products in accordance with 34 Pa. Code § 307.9. The specific language shall be as follows:**

Manufacturers, importers, suppliers or distributors

- (1) **shall ensure that all purchasers of hazardous substances or hazardous mixtures are provided with an appropriate MSDS at the following times:**
 - (a) **with their initial shipment; and**
 - (b) **with the first shipment after an MSDS is updated.**
- (2) **shall ensure that purchasers of any chemical delivered to a point within the Commonwealth are provided an appropriate MSDS if the manufacturer, importer, supplier or distributor produces or possesses the MSDS.**

² 4-4331, 4-ACRS-1A-04, 1-CTA-3E-03

- b. **Specifications for the selection and purchase of facility furnishings must indicate the fire safety performance requirements of the material selected and must be approved by the CISM;**³
- c. **Ensure the CISM is included in the approval process of chemical products prior to ordering them.**⁴

6. Warehouse Supervisor

The Warehouse Supervisor shall ensure that no materials are distributed within the facility until appropriate MSDS have been received and sent to the **CISM/Designee**.

C. Exposures

Persons who have been or suspect that they may have been exposed to a hazardous substance should immediately report the exposure incident.⁵

1. For inmates, the incident should be reported to the immediate work supervisor, housing unit officer or other official in charge of that area who will immediately notify the **CISM/Designee**. The immediate work supervisor, housing unit officer or other official shall complete a **DC-121, Extraordinary Occurrence Form**, for the Shift Commander, and an **Exposure Data Sheet (EDS)** for the **CISM/Designee**.
2. For staff, the incident should be reported to the immediate supervisor who will immediately notify the **CISM/Designee** and the Shift Commander and complete an **EDS form in conjunction with a DC-121**. Upon completion, the **EDS form** will be immediately forwarded to the **CISM/Designee** for review.
3. Upon notification, the **CISM/Designee** will inspect the area to assess the exposure and recommend appropriate actions.
4. The **CISM/Designee** will complete the appropriate section of the **EDS** form to determine if an exposure to a hazardous substance was incurred by the affected individual or any other persons in the surrounding area(s).
5. The completed **EDS form** shall be distributed as follows:
 - a. copy to the affected individual(s);
 - b. copy to the **CISM/Designee**;
 - c. copy to the **inmate/employee medical record**; and

³ 4-4213, 4-ACRS-1C-15

⁴ 4-4213, 4-ACRS-1C-15

⁵ 4-4203, 2-CI-1A-6

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- d. original to the Health Care Administrator for scheduling of medical assessment or record retention.
6. The **EDS** will be available from the **CISM/Designee**, Facility Maintenance Manager, or the Shift Commander/Designee.
7. In the event the **CISM/designee** is not available, the Shift Commander/designee shall receive the immediate notification of the incident.

D. Medical

In the event a known exposure to a hazardous substance occurs, **first responders will** immediately follow the emergency and first aid procedures outlined in the MSDS. The MSDS for the hazardous substance involved will be made available **through the NETMSDS program on DOCNET or through the master set of MSDS maintained in Control.**

E. Handling

All persons handling hazardous substances will follow the MSDS, manufacturer's labels, shipping containers and/or safe handling and storage instructions/warnings and usage of appropriate personal protective equipment prior to using any hazardous substance.

F. Training⁶

1. General

- a. All staff shall receive documented annual training on the **Worker and Community Right-to-Know Act** in accordance with Department policy **5.1.1**.
- b. In addition to annual training, any person who physically handles, or has more than casual contact with a hazardous substance during a normal work shift, or when new or updated information is made known on existing products already in the work area throughout the year, will be provided with additional training appropriate for their level of work. The additional **Right-to-Know Training on Specific Hazardous Substances form (Attachment 4-B)** is to be completed and a copy sent to the **CISM/Designee**.
- c. **Simply reading and understanding the product label by the receiving discipline is sufficient for initial staff training on new products introduced after completion of the Right to Know Computer-Based Training (CBT) course and/or prior to the beginning of the following fiscal year.**

⁶ 4-4215, 4-ACRS-1C-18, 2-CI-1A-8

2. Specific Hazardous Substances

- a. **Specific hazardous products with an HMIS rating of 2 or above that are newly added to an existing or new process or are a limited use product, must be included in additional training on the specific product for staff and inmates alike.**
- b. **The department head requesting the product for use is responsible to provide additional documented training required on the Right-to-Know Training on Specific Hazardous Substances Form for staff.**
- c. **The individual handling the product in end use will provide documented training for inmates on the Inmate Detail Assignment Training on Usage of Hazardous Chemicals Form (Attachment 4-C).**
- d. **The Department Head will seek assistance, if necessary, for clarification on training from the CISM.**

3. Inmate Training

- a. **Inmate Detail Supervisors are to provide training for inmates on hazardous substances that may be used while assigned to a particular detail *on an annual basis*.**
- b. **The inmate will be provided with specific information that clearly describes the hazards of working with the materials and the precautionary measures to be taken when using them, *including required personal protective equipment or clothing*.**⁷
- c. **Information that can be provided to inmates is:**
 - (1) **Do not drink the product;**
 - (2) **Do not eat the product;**
 - (3) **Do not inhale the product;**
 - (4) **Do not get product on skin; and**
 - (5) **Wear personal protective equipment as required.**
- d. **The information will not include the chemical characterizations of the product, including, flammability, reactivity or specific health hazards.**
- e. **MSDS shall not be provided to inmates nor are they allowed to view the MSDS body unless directed by the Office of Chief Counsel.**

⁷ 4-4337

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- f. This training is to be documented on the **Inmate Detail Assignment Training on Usage of Hazardous Chemicals Form**. A copy of the form must be sent to the Right-to-Know Coordinator/**CISM**/Designee, and the original kept by the Department Head for reference.

Section 5 – Control and Inventory of Toxics, Caustics, and Flammable Materials

A. Staff Responsibilities

1. The Safety and Environmental Protection Division is responsible to oversee the development and monitoring of these procedures.
2. The Facility Manager is responsible for the overall implementation of the procedures in this manual.
3. The Corrections Institutional Safety Manager (CISM) is responsible for the following:
 - a. monthly monitoring for policy compliance;
 - b. placement, updating, and periodically inspecting the Master Set of Material Safety Data Sheets (MSDS) located in Control;
 - c. serve as a resource for department heads and staff by providing training reference materials and hazardous assessments as needed;
 - d. assist department heads in ensuring that the least hazardous products that will adequately perform the desired task are chosen prior to purchase. The intent is to reduce the overall inventory and to find those products with the least amount of hazardous properties or that do not meet the criteria of being toxic, caustic, or flammable; and
 - e. approve all chemical products (solid, liquid, or gases) prior to ordering.
4. Business Manager is responsible for the following:
 - a. ensure that the following is included on all purchases of toxic, caustic, and flammable products:

“All products shall be accompanied by the product MSDS. The product MSDS shall include the Hazardous Materials Identification System (HMIS) or National Fire Protection Association (NFPA) rating.”
 - b. ensure that the least hazardous products to adequately perform the desired task are chosen prior to purchase. The intent is to reduce the overall inventory and find those products with the least amount of hazardous properties or that do not meet the criteria of being toxic, caustic, or flammable; and
 - c. ensure that the CISM is included in the approval process of chemical products prior to ordering them.

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5. Department Heads are responsible for the following:
 - a. ensure that all toxic, caustic, and flammable materials under their direct control are labeled, stored, used, inventoried, and disposed of in accordance with this procedures manual;
 - b. maintain the completed **Toxic, Caustic, and Flammable Materials Inventory Form (Attachment 5-A)** for their areas in accordance with **Subsection B.3.** of this procedures manual;
 - c. ensure that staff are trained in and knowledgeable of the requirements for maintaining inventories and the procedures contained in this manual; and
 - d. ensure that the least hazardous products that will adequately perform the desired task are chosen prior to purchase. The intent is to reduce the overall inventory and to find those products with the least amount of hazardous properties or that do not meet the criteria of being toxic, caustic, or flammable.

6. Staff working with toxic, caustic, and flammable materials are responsible for the following:
 - a. provide supervision and instruction to inmates to ensure the proper use of toxic, caustic, and flammable materials;
 - b. ***inmates are prohibited from using highly hazardous materials even under staff supervision;***
 - c. complete and maintain the **Toxic, Caustic, and Flammable Materials Inventory Form** using a perpetual inventory system for required items; and
 - d. ensure proper control of all toxic, caustic, and flammable materials in their work area.

B. Toxic, Caustic, and Flammable Materials¹

1. Mixing

Due to potential hazards, toxic, caustic, or flammable materials shall not be mixed or blended by inmates unless there is documentation of proper training and under the direct supervision of staff. Staff conducting such work shall ensure that all manufacturers' recommended procedures are followed.²

¹ 4-4215, 4-ACRS-1C-17

² 4-4215

2. Storage

- a. All toxic, caustic, and flammable materials shall be stored in a secure location that is not accessible to inmates.
- b. The amount of toxic, caustic, and flammable materials stored in any given area shall be kept to a minimum, based on operational needs.
- c. The arrangement of toxic, caustic, and flammable materials in storage areas shall be below or separate from personal care items. Liquids are to be stored at the lowest level and have a clear separation from adjacent shelves. Solid or powdered products will be stored in the mid section between liquid and paper products. Paper, cloth, and like items shall be stored on the upper level of the shelving. Quantities of each of these categorized products will determine the space required for storage.
- d. Flammable materials shall be stored in accordance with **Section 6, Flammable and Combustible Liquids** of this procedures manual.

3. Documentation

- a. A **Toxic, Caustic, and Flammable Materials Inventory Form** will be maintained for each required product stored in a given area. This form shall be maintained in the same storage compartment as the product. If this is not feasible, the form may be maintained in a secure location within the same proximity of the inventoried products.
- b. The inventory of toxic, caustic, and flammable materials will be maintained as a perpetual running inventory. Documentation must occur every time a product is issued or received.
- c. Facilities using a pre-metered system may be exempt from the perpetual running inventory of products if the product meets the following criteria:
 - (1) documentation is provided by the manufacturer that states that the products, in either concentration or diluted form, carry a HMIS rating of “0” or “1;”
 - (2) the product is in its final use container;
 - (3) the product is listed on the **Equipment and Cleaning Implements Master Inventory** as outlined in **Section 16** of Department policy **6.3.1, “Facility Security;”** and
 - (4) diluted products with a “0” or “1” HMIS rating still require a MSDS.
- d. Every facility is required to utilize a pre-metered system to ensure reduction of chemical usage and to maintain a safe working product that by definition is not considered a toxic/caustic.

- e. **Correctional Industries Correct Pac system is a manual dilution system. The only exception granted is for this system. The exception requirements are as follows:**
 - (1) **product is delivered in cases, with each case containing four boxes. Inventory will reflect total amount of boxes;**
 - (2) **boxes within the case shall be counted as boxes (usually four boxes to a case). For inventory purposes, four cases will be inventoried as 16 boxes;**
 - (3) **once the case is opened, each individual packet contained in the box must be inventoried;**
 - (4) **accountability and inventory shall have the same meaning for maintaining control of the product; and**
 - (5) **all products, regardless of HMIS rating, shall be maintained as outlined above on the Toxic, Caustic, and Flammable Materials Inventory Form.**
- f. At a minimum, for products that are not frequently used, there must be a monthly notation made to identify inventory.
- g. When the inventory form is completed, it shall be sent to the department head for retention.
- h. Completed **Toxic, Caustic, and Flammable Materials Inventory Forms** will be maintained for each area on a monthly basis in accordance with the Department's Records Retention Schedule.
- i. In warehouse locations, this procedures manual will only apply to those products that are being used at that location. The bulk storage of products for the entire facility will continue to be maintained on the current warehouse inventory system.

4. Disposal

All toxic, caustic, and flammable substances, residue and diluted forms of these products will be collected, stored, and disposed of in accordance with all applicable federal, state, and municipal laws and/or regulations.³

5. Miscellaneous Products

- a. Substances that are labeled "**Keep Out of Reach of Children**" or "**May be Harmful if Swallowed**" are not prohibited. The storage of these products shall be in a secure location that is not accessible to inmates.

³ 4-4214, 1-CTA-3B-01

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- b. All commissary items that are for sale are exempt from the documentation requirements of this procedures manual as they have been pre-approved for inmate purchase and possession.

6. Training⁴

Training shall be provided for staff and inmates by the vendor. The vendor shall repeat the training when inmate turnover requires initial training or when observations indicating re-training is necessary.

- a. ***Training shall be provided to all inmate custodial (block) workers as well as staff having supervision or care, custody, and control of workers.***
- b. ***Training shall be documented and a separate signed roster of staff and inmates shall be maintained in the specific work area.***
- c. ***All new inmates assigned to the custodial detail shall be trained within 30 days of assignment.***

⁴ 4-ACRS-1C-18

Section 6 - Flammable and Combustible Liquids

A. Staff Responsibility

1. Facility Manager

Responsible for the overall implementation and compliance with these procedures.

2. Facility Safety Manager

- a. Ensure compliance of facility flammable and combustible storage areas via monthly inspections.
- b. Development of inventory control regarding the types of flammable and combustible materials that are allowed to be stored or used within the facility.
- c. Assist the Emergency Preparedness Coordinator (EPC) in the development of emergency plans for potential emergencies involving flammable and combustible liquid storage.

3. Facility Maintenance Manager/designee

- a. Location, registration and testing of all storage tanks.
- b. Design and construction of storage rooms or sheds.
- c. Procurement of storage cabinets as required.

B. Storage Tanks

1. Tanks shall be designed, built, and installed in accordance with **NFPA Standard 30**.
2. Tanks shall be located outside facility perimeters where practical. In cases where installation is within a facility, appropriate security concerns shall be addressed.
3. All tank storage areas shall have the appropriate fire protection, leak detection, and inventory records.
4. All loading and unloading risers for liquid storage shall be identified by color code or marking to identify the product for which the tank is used.
5. All above ground and underground storage tanks shall be in accordance with all applicable federal, state, and local regulations.
6. ***All Regulated Aboveground Storage Tanks (ASTs) will be inspected monthly using the Monthly Checklist/Operations Inspection for ASTs (Attachment 6A). All Regulated Underground Storage Tanks (USTs) will be inspected monthly using the Continuous Monitoring System Operation Log (Attachment 6B).***

C. Container and Portable Tank Storage

1. This section shall apply to the storage of liquids in drums or other containers not exceeding 60 gallons (227 liters) individual capacity, and portable tanks not exceeding 660 gallons (2,498 liters) individual capacity, excluding liquids in fuel tanks.
2. Each portable tank shall be provided with one or more devices installed in the top with sufficient emergency venting capacity to limit internal pressure under fire exposure conditions to 10 psi (68.9 dp) or 30 percent of the bursting pressure of the tank, whichever is greater.
3. The maximum allowable size of approved containers and metal portable tanks shall not exceed that specified in Table I:

| TABLE I | | | | | |
|--|--|-----------------|-----------------|----------------------------|------------------|
| CONTAINER TYPE | FLAMMABLE LIQUIDS | | | COMBUSTIBLE LIQUIDS | |
| | CLASS IA | CLASS IB | CLASS IC | CLASS II | CLASS III |
| Glass | GLASS CONTAINERS WILL NOT BE PERMITTED | | | | |
| Metal (other than DOT drums) or approved plastic | NP | NP | NP | 5 gallon | 5 gallon |
| Safety Cans | 2 gallon | 5 gallon | 5 gallon | 5 gallon | 5 gallon |
| Metal Drum (DOT specification) | 60 gallon | 60 gallon | 60 gallon | 60 gallon | 60 gallon |
| Approved Metal Portable Tanks | 660 gallon | 660 gallon | 660 gallon | 660 gallon | 660 gallon |
| Polyethylene (DOT Specification 34, or as authorized by DOT exemption) | NP | NP | NP | 60 gallon | 60 gallon |
| SI Units: 1 pt = 0.473 L; 1 qt = 0.95 L; 1 gal = 3.8 L. | | | | | |

NP = Not permitted

EXEMPTION: Medicines, beverages, foodstuffs, cosmetics, and other common consumer products, when packaged according to commonly accepted practices for retail sales.

D. Design, Construction and Capacity of Flammable and Combustible Liquid Storage Cabinets

1. Not more than a combined 120 gallons (454 Liters) of Class I, Class II, and Class III A Liquids may be stored in a storage cabinet. Of this total, not more than 60 gallons (227 Liters) may be of Class I and Class II Liquids combined and not more than three such cabinets may be located in a single fire area unless separated by a minimum of 100 feet (30 meters).
2. Storage cabinets are not required to be vented for fire protection purposes, but, if vented for other reasons, they shall be vented outdoors in a manner that will not compromise the specified performance of the cabinet.

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3. Metal cabinets constructed in the following manner are acceptable: the bottom, top, door, and sides of the cabinet shall be at least No. 18 gauge sheet steel and double walled with one and one-half (1 1/2) inch (3.8 centimeters) air space. Joints shall be riveted, welded, or made tight by some equally effective means. The door shall be provided with a three point latch arrangement and the door sill shall be raised at least two inches (5 centimeters) above the bottom of the cabinet to retain spillage within the cabinet.¹

E. Design, Construction, and Operation of an Inside Flammable and Combustible Liquid Storage Area

1. Inside storage rooms shall be constructed with a maximum of 500 square feet floor area and two hour fire rating or 150 square feet and a one hour fire rating. Floors shall be liquid-tight and the rooms shall be liquid-tight at the floor wall joints.
2. Non-combustible liquid-tight raised sills or ramps shall be at least four inches (10 centimeters) in height or otherwise designed to prevent the flow of liquids to the adjoining areas. A permissible alternative to the sill or ramp is an open-grated trench, which drains to a safe location.
3. Electrical wiring and equipment located inside rooms used for Class I Liquids shall comply with **NFPA 70 (National Electrical Code) Article 501**.
4. Every inside storage room shall be provided with either gravity or a continuous mechanical exhaust ventilation system. Mechanical ventilation shall be used if a Class I Liquid is dispensed within the room.
 - a. Every inside storage room shall be provided with either gravity or a mechanical exhaust ventilation system. Such a system shall be designed to provide for a change of air within the room at least six times per hour.
 - b. The location of both the exhaust and inlet openings shall be arranged to provide, where practical, air movement across all portions of the floor to prevent accumulation of flammable vapors.
 - c. Exhaust from the room shall be directly to the exterior of the building.
 - d. If mechanical ventilation is used, it shall be controlled by a switch located outside of the door. The ventilating equipment and any light fixtures shall be operated by the same switch.

F. General Storage Requirements

1. Inside Storage
 - a. Safety cans containing Class I liquids that are stored outside of an approved flammable and combustible liquid storage cabinet (**Section D**) or an inside flammable

¹ 4-4214

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- and combustible liquid storage room (**Section E**) shall not exceed a total capacity of two gallons.
- b. Not more than 10 gallons of Class II liquids shall be stored in a single fire area outside of an approved flammable and combustible liquid storage cabinet or an inside flammable and combustible liquid storage room unless in safety cans.
 - c. Not more than 25 gallons of Class I and Class II liquids combined shall be stored in a single fire area in safety cans outside of an approved flammable and combustible liquid storage cabinet or an inside flammable and combustible liquid storage room.
 - d. Not more than 60 gallons of Class II A liquids shall be stored outside of an approved flammable and combustible liquid storage cabinet or an indoor flammable and combustible liquid storage room.
 - e. Flammable and combustible liquids shall be stored to ensure that they are protected from ignition sources.

2. Outside Storage

- a. An outside storage building for Class I A and Class I B shall meet the construction requirements of **Section E**, and must be a minimum of 25 feet from any other building and property lines.
- b. Storage of liquids in flammable liquid cabinets must meet the construction and capacity requirements of **Section D**.

Section 7 - Compressed Gases and Equipment

A. Staff Responsibility

1. Bureau of Operations

Administers the Department of Corrections compressed gases and equipment program by coordinating with the Chief of the Safety and Environmental Protection Division.

2. Facility Manager

The Facility Manager shall maintain overall responsibility for the local compressed gases and equipment program.

3. Facility Maintenance Manager

The Facility Maintenance Manager shall develop local compressed gases and equipment procedures and ensure that the procedures outlined in this manual are followed by all employees in the Maintenance Department who must work with stored compressed gas cylinders and equipment.

4. Facility Safety Manager

The Facility Safety Manager shall compile a list of all compressed gas cylinders from all Department heads to maintain a master list and provide a copy of this list to the Emergency Preparedness Coordinator (EPC) for review and identification of areas that need to be added to the Emergency Plan. In addition, the Facility Safety Manager shall monitor compliance of this procedure to ensure proper storage, use and handling of compressed gases and equipment through monthly inspections and visits to areas of the facility.

5. Emergency Preparedness Coordinator

The Emergency Preparedness Coordinator shall review the master list of locations within the facility where compressed gas cylinders are stored and determine which of these areas, if any, should be included in the facility emergency plan.

6. Department Heads

Department Heads shall compile a list of all compressed gas cylinders used and stored within the respective Department and provide a list of types and amounts of such cylinders to the Facility Safety Manager. The list shall be updated annually and Department Heads shall ensure procedures outlined in this policy are adhered to by all staff and inmates using compressed gas cylinders/equipment under their supervision.

B. Compressed Gas Cylinders

1. Cylinders shall be designed, fabricated, tested, and marked (stamped) according to regulations of the U.S. Department of Transportation (DOT). Marking shall be by means of stenciling, stamping or labeling, and shall not be readily removable.
2. Defective cylinders shall be returned to the supplier for repair, removed from service or disposed of in an approved manner.
3. Compressed gas cylinders having any residual product shall be treated as full.
4. Where compressed gas cylinders are designed to accept valve protective caps, the user shall keep such caps on the compressed gas cylinders at all times except when connected for use.
5. Where gas tight valve outlet caps or plugs are provided, the user shall keep such devices on the valve outlet at all times except when compressed gas cylinders are connected for use.
6. Compressed gas cylinders exposed to fire shall be treated as defective and returned to the supplier per Paragraph (2) above.
7. Compressed gas cylinders shall not be placed where they could become a part of an electrical circuit.
8. Compressed gas cylinders shall not be exposed to temperatures exceeding 125°F (38°C). Cylinders shall not be subjected to direct heat that would increase vapor pressure.
9. Only approved apparatus such as torches, regulators or pressure-reducing valves and acetylene generators shall be used.
10. Cylinders, cylinder valves, couplings, regulators, hoses and apparatus shall be kept free from oily or greasy substances. Oxygen cylinders or apparatus shall not be handled with oily hands or gloves. A jet of oxygen must never be allowed to strike an oily surface, greasy clothes, or enter a fuel oil or other storage tank.
11. Cylinders shall not be dropped, struck or allowed to strike each other violently.
12. Unless cylinders are secured on a special truck, regulators shall be removed and valve-protection caps, when provided for, shall be put in place before cylinders are moved.
13. Cylinder valves shall be closed at all times when not in use.
14. No person shall attempt to mix gases in a cylinder or refill a cylinder.
15. No person shall tamper with safety devices on cylinders or valves.

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16. A hammer or wrench shall not be used to open cylinder valves that are equipped with hand wheels. If valves cannot be opened by hand, the supplier shall be notified.
17. Before connecting a regulator to a cylinder valve, the valve shall be opened slightly and closed immediately. The valve shall be opened while standing to one side of the outlet, never in front of it. Never open a fuel gas cylinder valve near welding work or near sparks, flames or other possible sources of ignition.
18. Before a regulator is removed from a cylinder valve, the cylinder valve shall be closed and the gas released from the regulator.
19. If cylinders are found to have leaky valves, or fittings that cannot be stopped by closing of the valve, proper emergency procedures for the specific product shall be followed until the cylinder is empty

C. Safety Precautions

1. Smoking or open flames shall not be allowed within 20 feet (6.1 m) of any area where flammable, oxidizing, pyrophoric, or toxic compressed gases are stored.
2. Where a flammable gas may be ignited by static electricity, a means shall be provided to prevent a static discharge.
3. Electrical equipment and wiring in areas where flammable gases are stored, handled, or used shall be installed according to provisions of **NFPA 70, National Electrical Code**.
4. When the hazard caused by the gas is other than respiratory, other appropriate protective equipment shall be provided in accordance with the Manufacturer's Safety Data Sheet.
5. Where a special wrench is required, it shall be left in position on the stem of the valve while the cylinder is in use so that the fuel-gas flow can be quickly turned off in case of emergency.

D. Hazard Warnings

1. Hazard identification signs shall be placed at all entrances to locations where compressed gases are stored, used, or handled.
2. Signs shall not be obscured or removed.
3. Signs prohibiting smoking or open flames within 20 feet (6.1 m) shall be provided in areas where toxic, flammable, oxidizing, or pyrophoric gases are handled, stored or used.
4. The labels applied by the manufacturer to identify the compressed or liquefied gas cylinder contents shall not be altered or removed by the user.

E. Storage

1. The following procedures shall apply to the storage of all compressed and liquefied gases:
 - a. storage areas shall be secured against unauthorized entry;
 - b. toxic, pyrophoric, flammable and oxidizing gases are not compatible to each other and are to be stored no closer than within 20 feet of each other. This distance is allowed to be reduced without limit when separated by a barrier of noncombustible materials at least five feet high having a fire resistance rating of at least one-half (1/2) hour. Nonflammable gases are compatible with all the other subject gases and can be stored next to each other;
 - c. spill control, drainage and secondary containment shall not be required for the storage of compressed gases;
 - d. floors of storage areas shall be of noncombustible or limited-combustible construction;
 - e. shelves used for the storage of cylinders shall be of noncombustible construction and designed to support the weight of the cylinders;
 - f. compressed or liquefied gas cylinders in use or in storage shall be secured to prevent falling or knocking over; and
 - g. compressed gas cylinders shall be stored and used in accordance with the manufacturer recommendations.
2. Outdoor
 - a. Outdoor storage areas shall have a minimum of 25 percent of the perimeter open to the atmosphere. This open space shall be allowed to incorporate chain link fence, lattice construction, open block, or similar materials for the full height and width of the opening.
 - b. Storage areas shall be kept clear of dry vegetation and combustible materials for a minimum distance of 15 feet (4.6 m).
 - c. Cylinders stored outside shall not be placed on the ground (earth) or on surfaces where water can accumulate.
 - d. Storage areas shall be provided with physical protection from vehicle damage.
 - e. Storage areas shall be allowed to be covered with canopies of noncombustible construction.

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3. Indoor

- a. Heated indoor storage areas shall be arranged so that stored cylinders or other containers cannot be spot heated above 125°F (51.7°C).
- b. Cylinders inside buildings shall be stored in a well protected, well-ventilated, dry location, at least 20 feet from highly combustible materials such as oil or excelsior. Cylinders should be stored in assigned places away from elevators, stairs, or gangways. Assigned storage spaces shall be located where cylinders will not be knocked over, damaged by passing or falling objects or subject to tampering by unauthorized persons. Cylinders shall not be kept in unventilated enclosures such as lockers and cupboards.

4. Flammable Gases

- a. Flammable gas cylinders inside buildings, except those in actual use or attached ready for use, shall be limited to a total gas capacity of 2,000 cubic feet or 300 pounds.
- b. Storage locations by priority shall be: (1) outside; (2) in a separate building; or, (3) in a separate room. Storage is not allowed inside buildings that are not in a separate room and exposed to other occupancies.
- c. Electrical equipment shall conform to the provisions of **NFPA 70, National Electrical Code**.
- d. Liquefied flammable gas cylinders shall be stored in the upright position or such that the pressure relief valve is in direct communication with the vapor space of the cylinder.

5. Toxic Gases

- a. Indoor storage areas used to store toxic gases shall be equipped with a continuous gas detection system that provides an alarm to warn of the presence of toxic gases in levels that present a hazard to life.
- b. Exhaust ventilation systems shall be installed in all indoor areas used for toxic gases and shall comply with the following:
 - (1) Mechanical ventilation shall be operated continuously at a rate of not less than one (1) cfm/per square foot of floor area of the storage area.
 - (2) A manual ventilation shutoff shall be provided outside the room adjacent to the access door into the room or in a location approved by the authority having jurisdiction. The switch shall be labeled "Ventilation System Emergency Shutoff."
 - (3) Exhaust ventilation shall not be re-circulated within a room or building.

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- c. Outdoor storage of toxic gases shall be located 75 feet (22 m) from places of public assembly.
 - d. If storage of cylinders of toxic gases with a Health Hazard Rating of 3 or 4 is necessary, procedures outlined in **NFPA 55, "Standard for the Storage, Use and Handling of Compressed and Liquefied Gases in Portable Cylinders,"** shall be followed.
6. Proper Storage of Compressed and Liquefied Gas Cylinders
- a. Cylinders in Storage
 - (1) All cylinders in storage must be secured in a manner that prevents them from falling or being knocked over. This may be accomplished in the following ways:
 - (a) place cylinders in specially designed racks; or
 - (b) chain cylinders to a fixed/stationary object.
 - (2) All cylinders in storage are to be maintained in a manner and/or area that prohibits inmate access.
 - b. Cylinders in Use

All cylinders in use must be secured in a manner that prevents the cylinders from falling or being knocked over.
 - c. Inventory levels

Each area of the facility that uses and/or stores cylinders of this nature shall conduct a needs assessment to determine the need, type, and number of cylinders. The inventory shall be kept at the lowest possible number. Each area shall ensure that all cylinders in storage or in use are maintained on the inventory for the area.
7. Transport of Cylinders
- This section shall apply to the transportation of cylinders on Facility property.
- a. All cylinders that accept a valve protection device shall be utilized during transportation.
 - b. All cylinders shall be secured in the upright position to prevent them from falling or shifting during transport.

Section 8 – Respiratory Protection Program

A. Staff Responsibilities

1. The Bureau of Operations shall be responsible for the administration of the Respiratory Protection Program by coordinating with the Chief of the Safety and Environmental Protection Division.
2. The Facility Manager shall be responsible for the overall implementation of the local Respiratory Protection Program.
3. The Corrections Institution Safety Manager shall:
 - a. develop a local Respiratory Protection Program procedure specific to the site inclusive of:
 - (1) identification of site hazards and appropriate respirators; and
 - (2) written instructions on the use of each respirator, including maintenance, testing, inspection, parts/repair, donning/doffing, storage, engineering controls, respiratory hazards if not used properly, and emergency protocols.
 - b. select the appropriate type or class of respirator that will provide adequate protection for each contaminant, present or anticipated;
 - c. attend all respiratory protection training as required by the Bureau of Operations;
 - d. ensure that the initial and annual training for all respirator users and supervisors is provided as required;
 - e. perform the required fit tests for respirator users;
 - f. monitor compliance of the program in accordance with the requirements outlined in this procedures manual by documented periodic inspections, i.e., weekly, monthly or quarterly inspection reports;¹
 - g. inspect and document all Self Contained Breathing Apparatus (SCBA) and airline respirators on a monthly basis;
 - h. investigate malfunctions of respiratory protective equipment to determine the cause and corrective measures to be taken; and
 - i. maintain all applicable records and written procedures in a manner that documents the respirator program and allows for the evaluation of the program's effectiveness.

¹ 4-4211, 4-4455

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This evaluation shall be conducted, at minimum, on an annual basis to identify the effectiveness based upon Department requirements.

4. The Corrections Health Care Administrator (CHCA) shall:
 - a. assist the Corrections Institution Safety Manager in the scheduling of medical evaluations to ensure they are completed in a timely manner. Efficient completion of the evaluation shall help to reduce interruptions in work/job projects that require the use of respiratory protection;
 - b. ensure that all records pertaining to the medical evaluations are maintained in the confidential employee medical files or inmate medical records; and
 - c. ensure that the Corrections Institution Safety Manager receives a copy of the **Medical Clearance for the Use of Respiratory Protection (Attachment 8-A)**.
5. The Supervisor shall be responsible for overseeing the work activities of those individuals under their supervision who must wear respirators to ensure compliance with the requirements of this procedures manual.
6. The Respirator User shall:
 - a. use the provided respiratory protection in accordance with instructions and training received;
 - b. report any respirator equipment malfunctions to their supervisor immediately; and
 - c. report any change in their medical status that may impact their ability to wear a respirator safely.

B. Respirator Protection Program Requirements

1. Medical Clearance for Respirator Wearers
 - a. All staff and inmates selected to wear a certified respirator shall be included in the Respiratory Protection Program and must participate in a medical evaluation. The **Respiratory Protection Initial and Annual Medical Evaluation (Attachment 8-B)** must be completed. This medical evaluation shall be conducted by a Physician, Certified Registered Nurse Practitioner (CRNP) or Physician's Assistant to determine whether the individual has any medical conditions that would preclude the use of respirators. After initial placement into the Respiratory Protection Program, the medical evaluation shall be done on an annual basis. The Medical Evaluation Form also includes a basic physical that must include the following:
 - (1) clinical vital signs (temperature, pulse, blood pressure and respirations);
 - (2) examination of head, eyes, ears, nose and throat; and

- (3) auscultation of the chest (heart and lungs).
- b. The Physician, CRNP or Physician's Assistant shall ensure that the CHCA receives written notification (refer to the **Medical Clearance for the Use of Respiratory Protection** and the **Respiratory Protection Initial and Annual Medical Evaluation**) on the results of the medical evaluations.
- c. The Physician, CRNP or Physician's Assistant may approve an individual for respirator usage with limitations or restrictions if necessary. The most common restrictions would address the frequency and/or duration of use based upon the total evaluation and the tasks to be performed.
- d. It is anticipated that most people will be approved for respirator use based on the **Medical Clearance for the Use of Respiratory Protection** only. In some cases, additional information or medical testing may be necessary. The Physician, CRNP or Physician's Assistant may order pulmonary function tests to aid in their destination. A certified pulmonary function technologist or a person trained in spirometry in a program sponsored by an appropriate academic or professional institution must conduct the pulmonary tests. The tests that may be ordered are to include:
 - (1) Forced Vital Capacity (FVC);
 - (2) Forced Expiratory Volume at one second (FEV-1); and
 - (3) FEV-1/FVC ratio with interpretation and comparison to standardized norms and previous values when appropriate.
- e. The Corrections Institution Safety Manager shall advise the Physician, CRNP or Physician's Assistant of the following conditions to aid in the determination of the medical evaluation:
 - (1) type of respirator to be used;
 - (2) typical workload, environmental conditions, frequency and duration of use; and
 - (3) hazards for which the respiratory equipment will be used.

2. Selection of Respirators (Attachment 8-C)

The selections of the proper type(s) of respirator shall be based upon the following:

- a. the nature of the hazardous operation or process;
- b. the type of respiratory hazard:
 - (1) physical properties;

- (2) oxygen deficiencies;
 - (3) physiological effect on the body;
 - (4) concentration of the toxic material;
 - (5) established exposure limits for the toxic materials; and
 - (6) **Monitoring of Respiratory Hazards (Attachment 8-D).**
- c. the location of the hazardous area in relation to the nearest area having respirable air;
 - d. the duration and/or frequency for which respiratory protection must be worn;
 - e. the activities of workers in the hazardous area;
 - f. the physical characteristics, functional capabilities, and limitations of the various types of respirators;
 - g. **Assigned Protection Factors (Attachment 8-E);**
 - h. identifying the type of respirator that shall be used (i.e., asbestos, FERT, CERT, medical, etc.); and
 - i. if unable to determine what potentially hazardous contaminant may be present or if no exposure limit/guidance is available to determine estimates of the toxicity, then the atmosphere shall be considered Immediately Dangerous to Life and Health (IDLH).

C. Training

1. Each respirator wearer and supervisor of respirator wearer shall be given adequate orientation and instruction by a qualified individual(s) to ensure the proper use of the respirators and compliance with this procedures manual. The **initial** training shall be provided upon initial assignment of the respirator and annually thereafter. Failure to receive the training outlined in this procedures manual will remove an individual from the Respiratory Protection Program.
2. The **initial 1.5 hour** training shall include explanations and discussions of:
 - a. the respiratory hazard and the effect on the user if the respirator is not used properly;
 - b. the engineering and administrative controls being used and the need for respirators to provide protection;
 - c. the reason for selecting a particular type of respirator;

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- d. the function, capabilities, and limitations of the selected respirator;
 - e. the method of donning the respirator and checking its fit and operation;
 - f. the proper wearing of the respirator to include fit testing and fit checking requirements;
 - g. respirator maintenance, cleaning, inspection and storage;
 - h. recognizing and handling emergency situations;
 - i. proper notification to supervisory personnel of equipment or operational deficiencies experienced by the user(s) or co-workers; and
 - j. a review of the requirements outlined in the Department's Respiratory Protection Program procedure.
3. ***Annual refresher training will consist of the same criteria as listed above in a condensed and site-specific manner. This training can be conducted in conjunction with the annual fit testing requirements and forwarded to the facility Training Coordinator.***
4. ***The above information will be included in the training for each employee/inmate and for every respirator he/she is assigned/approved to wear. The length of time to complete this task is directly related to the number of respirators for which the employee/inmate is receiving the training.***

D. Fit Testing

1. All individuals that use a certified tight-fitting negative respirator shall receive a documented qualitative fit test and this shall be documented on the **Qualitative Fit Test Report (Attachment 8-F)**.
2. The initial testing shall be conducted prior to use of the respirator in a contaminated area and following the medical approval.
3. A qualitative fit test shall be carried out for each wearer of a certified tight fitting negative respirator at least once every 12 months. This frequency of testing shall serve as the minimum, unless stated differently by another Department procedure.
4. The fit test results shall be used as a guide in selecting the specific types, makes, and models of respirators for use by individual respirator wearers.
5. Only validated fit test protocols according to the type of fit test agent and filter media are acceptable. Recommended **OSHA-Accepted Fit Test Protocols (Attachment 8-G)** have been appended.
6. Other factors which may increase the frequency of fit testing include:

- a. a significant change in weight, 10 percent or more;
 - b. significant scarring in the area of the face seal;
 - c. dental changes;
 - d. reconstructive or cosmetic surgery; and/or
 - e. any other condition that may affect the fit of the face piece seal.
7. If a situation is encountered whereby a worker cannot obtain a satisfactory fit, recommended alternatives for providing adequate respiratory protection include:
- a. providing the individual with an alternative form of certified respirator which provides, at a minimum, the same level of protection; or
 - b. removal from the Respiratory Protection Program; or
 - c. re-assignment of job duties to exclude those activities which will require the use of respiratory protection.

E. Maintenance of Respirators

1. Cleaning

Respirators not discarded after one shift's use shall be cleaned on a daily basis (or after each use if not used daily), according to the manufacturer's instructions, by the individual issued the respirator. Respirators shared by more than one individual or intended for emergency use shall be cleaned and sanitized after each use.

2. Inspection

The wearer shall inspect the respirator immediately prior to each use to ensure that it is in proper working condition. After cleaning, each respirator shall be inspected to determine if it is in proper working condition, if replacement parts or repairs are needed or if it should be discarded. Each respirator stored for emergency use shall be inspected at least monthly (all SCBA's and airline respirators). A record of inspection and dates shall be kept for each respirator maintained for emergency use. Emergency respirators, which do not meet applicable inspection criteria, shall be removed from service and repaired or replaced.

3. Repair

Replacement of parts or repairs shall be done only by persons trained in proper respirator maintenance and assembly. Repair and replacement must be done with parts designed for the respirator in accordance with the manufacturer's instructions. No attempt will be

made to replace components or make adjustments, modifications, or repairs beyond the manufacturer's recommendations.

4. Storage

Respirators shall be stored in a suitable container and/or location away from areas of contamination. The storage area shall protect the respirators against physical and chemical agents such as vibration, shocks, sunlight, extreme heat, extreme cold, and excessive moisture of damaging chemicals. Respirators shall be stored in such a manner as to prevent distortion of rubber or other elastomeric parts. Respirators shall not be stored in such places as lockers or toolboxes, unless they are protected from contamination, distortion, and damage.

F. Breathing Air Quality

All compressed air for use with SCBAs or airline respirators shall meet, at minimum, the requirements, and specification for Type I – Grade D breathing air. All vendors or suppliers shall provide periodical verification on the quality of the compressed breathing air.

G. Proper Usage of Respiratory Protection

1. Fit Checks

Each person using a tight-fitting respirator shall conduct a fit check of the respirator by appropriate means each time the respirator is donned or adjusted. This test is used to determine if the respirator is properly sealed to the face and it shall be conducted according to the manufacturer's recommendations.

2. Facial Hair

A respirator, either positive or negative pressure, equipped with a tight-fitting face piece shall not be worn if facial hair comes between the sealing surface of the face piece and the face or if the facial hair interferes with valve function.

3. Vision

- a. When a respirator user must wear corrective lenses, protective spectacles or goggles, face shields, a welding helmet, or other eye-and face protective devices, the item shall be fitted to provide good vision and shall be worn in such a manner as to not interfere with the seal of the respirator.
- b. Spectacles with straps or temple bars that pass through the sealing surface of negative or positive-pressure, tight fitting, full-face piece respirators shall not be permitted.

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- c. The wearing of head coverings or other protective equipment shall not pass between or interfere with the seal of the respirator. The head harness straps of tight-fitting respirators shall not be positioned or work over hardhats.

4. Environmental Factors

Respirators used in low-temperature environments must be equipped with face piece nose cups designed to maintain respirator certification in these atmospheres (below 32°F). All other manufacturer recommendations for respirator usage in low and high temperature environments should be followed.

Section 9 - Confined Space Entry

A. Staff Responsibility

1. Bureau of Operations

Responsible for the administration of the confined space entry program by coordinating with the Chief of the Safety and Environmental Protection Division.

2. Facility Manager

Responsible for the overall implementation of the local confined space program.

3. Facility Maintenance Manager (FMM)

The Facility Maintenance Manager (FMM) is responsible for the overall supervision of all confined space entries to ensure all safety procedures are followed. Other responsibilities include the following:

- a. develop the local confined space procedures, in conjunction with the Facility Safety Manager (FSM);
- b. complete a **Confined Space Survey Form (See Attachment 9-A)** for each confined space to determine classification and identification, in conjunction with the FSM;
- c. identify those staff who will be assigned the responsibilities as "On-Site Supervisor" for each entry;
- d. maintain a file for all documentation relevant to the confined space operations at the facility to include cancelled permits, cancelled certifications, confined space survey forms, training course outlines, training qualification records, project records, equipment inspection/maintenance records, calibration records, and any other pertinent paperwork; and
- e. ensure that the FSM is forwarded a copy of all confined space entry permits and certifications in a timely manner.

4. On-Site Supervisor

The On-Site Supervisor shall:

- a. determine if acceptable entry conditions are present at the confined space where entry is planned, to direct supervision of confined space procedure, and to monitor all aspects of compliance;
- b. sign off on permits and certifications;

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- c. serve as an Attendant or as an authorized Entrant, as long as he/she is trained and equipped for each role performed;
- d. ensure that the FSM is forwarded a copy of all permits and certifications in a timely manner;
- e. evaluate the need for entry into the confined space;
- f. provide all permits and certifications to the FMM upon completion;
- g. conduct a pre-entry briefing of all personnel to review the following:
 - (1) hazards associated with that space;
 - (2) required personal protective equipment;
 - (3) hazard control procedures;
 - (4) operating procedures;
 - (5) emergency procedures; and
- h. ensure that the confined space is returned to operating condition when the project is completed.

5. Entrant

The Entrant shall:

- a. ensure that the appropriate protective clothing and equipment are properly worn;
- b. maintain contact with the Attendant;
- c. follow instructions of the Attendant in case of an emergency; and
- d. ensure that safe work practices are always used.

6. Attendant

The Attendant shall:

- a. maintain an accurate account of Entrants in the confined space;
- b. monitor the activities of Entrants from outside the confined space;
- c. order Entrants to evacuate the confined space immediately when the following are detected:

- (1) a condition that is not allowed in the entry permit;
 - (2) behavioral effects of hazard exposure;
 - (3) a situation outside the space that could endanger the Entrants; and
 - (4) an uncontrolled hazard within the permit space.
- d. prevent unauthorized personnel from entering the confined space or work area;
 - e. monitor/test the atmosphere in the confined space according to the procedures for permit required and non-permit required entry;
 - f. watch for any hazards that may affect the confined space operation;
 - g. notify Entrants to evacuate when any unsafe conditions exist;
 - h. call for help if an emergency occurs; and
 - i. use a retrieval device from outside the confined space to retrieve an injured Entrant.
7. Facility Safety Manager (FSM)

The Facility Safety Manager (FSM) shall:

- a. assist the FMM in the development of the local confined space procedures;¹
- b. in conjunction with the FMM, complete a **Confined Space Survey Form (See Attachment 9-A)** for each confined space to determine classification and to ensure that all spaces are identified accordingly;
- c. ensure that all personnel are trained to the appropriate level according to the project functions and responsibilities;
- d. conduct periodic inspections during confined space entry projects to ensure proper safety procedures are being followed;
- e. maintain a file for all cancelled entry permits, cancelled certifications, and periodic safety inspections; and
- f. conduct an annual evaluation of the Confined Spaces Entry Program to determine if there are any factors that may influence classification or local entry procedures.

¹ 4-4215, 4-4455, 2-CO-3B-01, 1-ABC-5A-06

B. Confined Space Identification and Posting

1. The FMM and FSM shall evaluate the facility and develop a procedure for staff identification of all confined spaces.
2. A survey form shall be completed and put on file for each space that will identify it as either permit required or non-permit required.
3. Only authorized employees and inmates may enter a confined space with a written permit or certification.
4. No inmate is permitted to enter any confined space determined to be an Immediately Dangerous to Life or Health (IDLH) environment.

C. Permit System

Before anyone enters a permit required confined space, a **Confined Space Entry Permit (See Attachment 9-B)** must be completed by On-Site Supervisory Personnel.

D. Entry Procedures for Permit Required Confined Spaces

The On-Site Supervisor is responsible for ensuring the compliance with the following procedures:

1. monitor/test the atmosphere in the confined space prior to entry and continuously during operations;
2. when entrance covers are removed, the opening shall be properly guarded with a barrier to protect Entrants from an accidental fall or from foreign objects entering the confined space;
3. have a properly equipped Attendant on standby during the entire operation;
4. apply the appropriate engineering controls (forced air ventilation, inerting, etc.) to achieve acceptable entry conditions if possible;
5. use all proper personal protective clothing and equipment necessary for the entry;
6. isolate the space from external connections;
7. use adequate lighting with a backup;
8. eliminate or control all hazards;
9. maintain constant communications between the Attendant and Entrants; and
10. plan for emergencies.

E. Atmospheric Monitoring/Testing

1. Before any personnel enter a confined space, the internal atmosphere shall be tested with a calibrated direct-reading instrument for the following conditions in the order given: oxygen content; flammable gases/vapors; and, potential toxic air contaminants. Always monitor for oxygen concentration between 19 ½ (19.5) percent and 23 ½ (23.5) percent and flammable gases or vapors below 10 percent lower explosive limit.
2. Atmospheric monitoring equipment shall be calibrated at a minimum, once every 30 days.
3. Open the entry to the confined space and monitor the atmosphere just outside the opening.
4. Continue monitoring as the monitor is lowered slowly through the entire height of the space.
5. If the entry is horizontal, extend the monitor as far into the space as possible.
6. Correct any problems detected prior to entering the space.
7. After correcting the problem, retest the atmosphere.
8. Continue this cycle until acceptable atmospheric readings are obtained.
9. Continue to test conditions in the permit space to determine if acceptable entry conditions exist before entry is authorized to begin.
10. This pre-entry testing shall be performed to the extent feasible before entry is authorized and, if authorized, the permit space shall be continuously monitored in those areas where Entrants are working.
11. If operations are suspended for 30 minutes or more, additional pre-entry testing must be performed prior to re-occupying the space.

F. Personal Protective Equipment

Required personal protective equipment will be identified by the On-Site Supervisor. Entrants and Attendants are responsible for obtaining and properly using any required personal protective equipment.

G. Hazard Elimination and Control

The On-Site Supervisor will identify potential hazards concerning the confined space. Each hazard will be eliminated and controlled. Hazards may exist in the following categories:

1. Atmospheric conditions

Potentially hazardous conditions relating to or existing in the atmosphere.

2. Contents or residual contents

All contents should be removed from the space when possible. Entrants must assume that residues may be present and protect themselves from contact with harmful materials.

3. Potential energy

Proper procedures as identified in this procedures manual, **Section 11, Lockout/Tagout**, must be followed during all confined space operations when applicable. Potential energy sources include electrical equipment and circuits, hydraulic equipment and systems, pneumatic equipment and systems, mechanical equipment and systems.

4. Environment in the space

Entrants will need to address any safety issues that the environment inside the space may create. Examples include slippery surfaces, extreme temperatures, and extreme surface temperatures.

5. Configuration of the space

The configuration of the space can make safe operations more difficult. Use particular care when any of the following are present: unusual shapes or slopes; low overhead clearances; drop off in floors; and complex layouts.

H. Atmospheric Hazards

1. Forced fresh air ventilation is the first option for correcting an atmospheric hazard.
2. Place the ventilator outside the space with the inlet six to 10 feet from the entrance to the confined space.
3. Extend the flexible duct from the outlet of the ventilator into the confined space.
4. Ideally, the end of the duct should be suspended approximately two feet above the bottom of the space.
5. Ventilate the space for at least 10 minutes and test the atmosphere.
6. Continue until the atmosphere is acceptable.
7. Ventilation should continue during the entire space operation.

I. Alternate Entry Procedures for Non-Permit Required Confined Spaces

1. Any confined space may be classified as non-permit required if it meets the following criteria:

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- a. It can be demonstrated that the only hazard posed by the space is an actual or potential hazardous atmosphere.
 - b. It can be demonstrated that continuous forced air ventilation alone is sufficient to maintain that space free from atmospheric hazards and safe for entry.
2. Entry procedures for non-permit required confined spaces are as follows:
- a. Hazardous conditions shall be eliminated before entrance covers are removed.
 - b. When entrance covers are removed, the opening shall be properly guarded with a barrier to protect Entrants from an accidental fall or from foreign objects entering the confined space.
 - c. Before entry into the confined space, the internal atmosphere shall be monitored with a calibrated direct reading instrument for the following conditions in the order given:
 - (1) oxygen content;
 - (2) flammable gases and vapors; and
 - (3) potential toxic air contaminants.
 - d. Whenever Entrants are inside the space, no hazardous internal atmosphere is permitted.
 - e. Continuous forced air ventilation shall be used as follows:
 - (1) Entrants may not enter the space until the forced ventilation has controlled any hazardous atmosphere.
 - (2) Forced ventilation shall be directed to the immediate areas where work is done and shall continue until all Entrants have left the space.
 - (3) The air supply for the forced air ventilation must be from a clean source and may not increase the hazard in the space.
 - f. The atmosphere within the space shall be continuously monitored/tested whether or not forced ventilation is used.
 - g. If a hazardous atmosphere is detected during entry, the following procedures shall apply:
 - (1) All Entrants shall exit the space immediately.
 - (2) The space shall be evaluated to determine how the hazardous atmosphere developed.

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- (3) Measures shall be carried out to protect Entrants from the hazardous atmosphere before subsequent entry takes place.
- h. The On-Site Supervisory Person shall verify that the space is safe and that all **Non-Permit Required Confined Space Certificate (See Attachment 9-C)** entry procedures are followed by means of a written certification prior to entry.
- i. When there are changes in the use or configuration of a non-permit required space that may increase the hazards to Entrants, the FMM and FSM shall re-evaluate that space and, if necessary, reclassify it as a permit-required confined space.

J. Specific Confined Spaces

Any specific confined spaces that require special procedures beyond the general operating procedures in this procedure manual should be identified by each facility and outlined in local procedure.

K. Contractors

Any contractor performing work for the Department that may involve confined space operations will be furnished with information on the confined spaces that they may encounter during their work for the Department. The contractor will also follow all applicable federal, state and local confined space standards while performing confined space work.

L. Emergencies

1. An emergency exists any time a situation occurs which threatens or may threaten the health or safety of any person involved in the confined space operation whether inside or outside the confined space.
2. When an emergency occurs, the Attendant will immediately:
 - a. call for the evacuation of all Entrants;
 - b. if the injured Entrant is connected to a retrieval device, it should be used to retrieve the Entrant immediately; and
 - c. perform notification as defined in local procedure.
3. The Attendant will never enter the confined space to attempt a rescue under any circumstance.

M. Training

1. All employees will be made aware of the confined space policy during new employee safety orientation and annual safety refresher training. The confined space program review is to include:

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- a. confined space identification;
 - b. general locations and types of facility confined spaces; and
 - c. policy prohibiting entry by employees not specifically trained for confined space operations.
2. All staff required to conduct or supervise confined space work shall receive initial training in accordance with Department policy **5.1.1, "Staff Development and Training."** Training shall be completed before the individual is assigned to work on confined space projects.
3. All staff required to conduct or supervise confined space work shall receive annual refresher training. Training for entrants, attendants, and supervisors shall be limited to a maximum of one-half hour. The content of the training shall be based upon the needs of the facility as determined by the FSM. The FSM shall determine the content of the training by using any combination of the following facility established local procedures:
- a. Hazard Recognition and Control;
 - b. Communications;
 - c. Personal Protective Clothing and Equipment;
 - d. Atmospheric Testing Procedures and Equipment;
 - e. Safe Work Practices and Procedures;
 - f. Evacuation/Emergency Procedures and Equipment;
 - g. Entrant Retrieval Equipment and Procedures (Supervisor/Attendant Only); and/or
 - h. Work Planning and Supervision (Supervisor/Attendant Only).
4. The FMM shall confirm that contractor personnel have been trained in and adhere to OSHA confined space regulations.
5. All inmates required to conduct confined space work shall receive training to the entrant level. Inmates shall be prohibited from functioning as an attendant or on-site supervisory person.

N. Equipment

Suggested types of equipment are as follows:

1. Personal Protective Equipment
 - a. self-contained breathing apparatus;

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- b. airline breathing apparatus;
 - c. full-face respirators;
 - d. half-mask respirators;
 - e. hardhats;
 - f. safety glasses, goggles or face shields;
 - g. coveralls and leather gloves (also to include chemically resistant coveralls and gloves); and
 - h. safety shoes (also to include chemically resistant coveralls and gloves).
2. Confined Space Entry Equipment
- a. gas detector;
 - b. ventilator, saddle and duct;
 - c. tripod with retrieval device and body harness;
 - d. rope; and
 - e. lighting (stationary, portable, handheld, etc.)

Section 10 – Electrical Safety Program

A. General

To protect the safety of staff and inmates who may work on or near electrical or mechanical equipment, the following procedures have been established to ensure compliance with all NFPA Electrical Safety Standards.

B. Responsibilities

1. Central Office Safety and Environmental Protection Division

- a. Oversee and maintain the development and monitoring of the Department's electrical safety standards as they relate to workplace safety practices.
- b. Audit all electrical safety programs during annual Operation Inspections for compliance with training, documentation and procedures.

2. Facility Manager

Implement this procedures manual.

3. Facility Maintenance Manager

- a. Obtain required electrical safety equipment and ensure that items are properly used, stored, and inspected;
- b. Ensure that testing of all equipment is completed as required by **Subsection G.9. below**;
- c. Ensure that Electrical Trades Instructors: are knowledgeable in the requirements of this procedures manual; receive the necessary training required under **NFPA 70E**, and that they develop and provide training to the inmates under their supervision regarding requirements of this procedures manual;
- d. Maintain all required documentation regarding permits, testing, and training as required by these procedures; and
- e. Determine the level of work that inmates are permitted to perform using the existing requirements of the facility.

4. Correctional Institutional Safety Manager (CISM)

- a. Conduct random inspections of work sites to ensure safe work practices are in place and used; and

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- b. Provide assistance to the Facility Maintenance Manager in development of training programs, if requested.

C. Training

1. Electrical Safety Training

- a. The Facility Maintenance Manager shall ensure that staff and inmates are trained in safety-related work practices and procedures when risk of electrical hazard is not reduced to a safe level by the applicable electrical installation requirements.
- b. Staff and inmates shall be trained to understand the specific hazards of electrical energy and to ensure that they use appropriate personal protection equipment. They shall be trained to identify and understand the relationship between electrical hazards and possible injury.
- c. Training shall be classroom, on-the-job, or a combination of the two. The degree of training provided shall be determined by the risk to the staff or inmates.

2. Retraining

Additional training or retraining will be necessary under the following conditions:

- a. If supervisors or annual inspections determine that staff or inmates are not complying with the safety-related work practices;
- b. If new technology, new types of equipment, or changes in procedure require the use of safety-related work practices different from those that the staff or inmate would normally use; and/or
- c. If the staff or inmate must use safety-related work practices not normally used during their regular job duties.

3. Documentation

It will be documented that each staff or inmate has received the necessary training as outlined in this procedures manual. The document shall be completed when the staff or inmate demonstrates proficiency in the work practices involved and will be maintained for the duration of the staff or inmate employment. It will contain staff or inmate name, employee/inmate number, date of training and description of training.

D. Qualified Electrical Worker

- 1. A qualified person is trained and knowledgeable in the construction and operation of equipment or specific work methods with the ability to recognize and avoid electrical hazards that may exist with the equipment or work method. A qualified person is trained

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in avoiding the electrical hazards of working on or near exposed energized parts and demonstrates proficiency in each of the following:

- a. construction and operation of equipment on which work is assigned; and
 - b. proper use of special precautionary techniques, personal protective equipment, including, arc flash, insulating and shielding materials and insulated tools and test equipment. A person can be considered qualified with certain equipment and methods but still not qualified for others.
2. Staff/inmates permitted to work within the limited approach boundary of exposed energized electrical conductors and circuit parts operating at 50 volts or more shall, at a minimum, be trained in the following:
- a. the skills and techniques necessary to distinguish exposed energized electrical conductors and circuit parts from other parts of electrical equipment;
 - b. the skills and techniques necessary to determine the nominal voltage of exposed energized electrical conductors and circuit parts;
 - c. the approach distances specified in **Approach Boundaries to Energized Electric Conductors or Circuit Parts Handout (Attachment 10-A)** and the corresponding voltages that the qualified person would be exposed; and
 - d. the decision making process necessary to determine the degree and extent of the hazard, the required personal protective equipment, and planning of the job to perform the task safely.
3. Staff/inmates who have completed on-the-job training and have demonstrated an ability to perform duties safely at his or her level of training and is under direction of a qualified person, shall be considered to be a qualified person for the performance of those duties;
4. Tasks performed less often than once per year shall require retraining before the performance of the work practices involved.
5. Staff shall be trained to select an appropriate voltage detector and demonstrate how to use a device to verify the absence of voltage, including, interpreting indications provided by the device. The training shall include information that enables staff/inmate to understand all limitations of each specific voltage detector that may be used.

E. Unqualified Electrical Worker

1. An unqualified person has had little or no training in electrical hazards and how to avoid them; has not been trained and authorized to perform electrical work; or has been trained and authorized to perform electrical work but not on the specific hazards associated with some systems.
2. An unqualified person shall be trained and familiar with any of the electrical safety related work practices that might not be addressed specifically in safety related work practices but necessary for their safety;
3. Staff/inmates working on or near exposed energized electrical conductors or circuit parts shall be trained in methods of victim release from contact with exposed energized conductors. Staff shall be regularly instructed in methods of first aid and emergency procedures; such as, approved methods of resuscitation if their duties warrant such training. Unqualified workers shall be trained and familiar with any safety practices not covered in this procedures manual but necessary for their safety; and
4. Each facility electrical department shall maintain a record of all electrical safety training provided to their staff and inmates.

F. Implementation of Electrical Safety Program

1. The Facility Maintenance Manager, with the assistance of the CISM, shall implement and document an overall electrical safety program that directs activity appropriate for the voltage, energy level and circuit conditions related to their facility. The program shall include but not be limited to:
 - a. awareness and self-discipline for staff and inmates that may perform work involving electrical hazards;
 - b. **Electrical Safety Program Principles and Program Controls (Attachment 10-B)**; and
 - c. electrical Program Procedures that outline the steps to be taken while working within the limited approach boundary of energized electrical conductors and circuit parts operating at 50 volts or more or where an electrical hazard exists before work is started.
2. **Hazard/Risk Evaluation Assessments (Attachment 10-C)** shall identify procedures to be followed before work is started within the limited approach boundary of energized electrical conductors and circuit parts operating at 50 volts or more or where an electrical hazard exists. The procedures will include the step-by-step process for evaluating tasks before work is started.
3. Job Briefings shall be conducted using the **Job Briefing and Planning Checklist (Attachment 10-D)** prior to the beginning of each job. This will include but is not limited

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to, hazards associated with the job; work procedures involved; special precautions; energy source controls and personal protective equipment requirements.

- a. An initial briefing is acceptable for repetitive tasks. However, if the tasks change, additional information shall be included to cover the new tasks.
 - b. An initial briefing is acceptable for routine work or work that, by virtue of training and experience, staff and inmates can reasonably be expected to recognize and avoid hazards involved in the job.
 - c. A more extensive briefing shall be conducted if the work is complicated and/or particularly hazardous; or if the staff/inmates cannot be expected to recognize and avoid the hazards involved in the job.
4. For all in-house projects, the facility shall inform the contractor and or contract employees of the following:
- a. known hazards covered by this standard that are related to the contract employee's work and that might be recognized by the contract employer or its employees;
 - b. information about the employer's installation that the contract employer needs to make the assessments required in this section;
 - c. the host employer shall report observed contract employer-related violations of this procedures manual to the CISM; and
 - d. the meeting between the facility and the contractor shall be documented and added to the project file.
5. Use of Test Instruments and Equipment
- a. Rating and design for testing instruments and equipment shall be rated and designed to the circuits they will be testing.
 - b. All instruments and equipment shall be visually inspected prior to each use.
 - c. Operation verification should occur on conductors or circuit parts operating at 50 volts or more, the operation of the test equipment should be verified before and after the absence of voltage test is performed.
 - d. Handling of all instruments and equipment shall be in accordance with the Manufacturer's Instructions.
 - e. Grounding type equipment shall be used according to the Equipment Manufacturer's Guidelines. No alterations shall be made that allows the instrument or equipment to be used in any manner other than specified by the manufacturer.

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- f. Inspection of equipment prior to use shall be performed. Any piece of equipment that does not pass the visual inspection shall be tagged and taken out of service. All mating surfaces (male and female plugs) shall meet the proper mating configuration for that application.
 - g. Ground Fault Circuit Interrupter (GFCI) devices shall be tested according to the manufacturer's instructions.
6. Use of Personal and Other Protective Equipment (PPE)
- a. Staff/inmates working in areas where electrical hazards are present shall be provided with and use protective equipment designed and constructed for the specific part of the body to be protected and for the work being performed.
 - b. All personal protective equipment (PPE) shall be of safe design and construction for the specific parts of the body to be protected and for the work to be performed. All such protective equipment shall be maintained in a safe, reliable condition and inspected before each use. Storage of PPE shall be in accordance with the manufacturer's recommendations.
 - c. When arc rated clothing is required, it shall cover all ignitable clothing and allow for movement and visibility.
 - d. Staff/inmates shall wear nonconductive head protection wherever there is a danger of head injury from electrical shock or burns due to contact with energized electrical conductors or circuit parts or from flying objects resulting from electrical explosion. Staff/inmates shall wear nonconductive protective equipment for the face, neck, and chin whenever there is a danger of injury from exposure to electric arcs or flashes or from flying objects resulting from electrical explosions. Staff and inmates shall wear protective equipment for the eyes whenever there is a danger of injury from electric arcs, flashes or from flying objects resulting from electrical explosion.
 - e. Facility Maintenance Managers will ensure electrical protective equipment (arc flash gear) required by this program is provided at no cost to staff/inmate workers. Such equipment shall be identified in the **Simplified Two-Category Flame-Resistant Clothing System Table (Attachment 10-E)**.
 - f. Hand, Arm and Foot Protection
 - (1) Shock protection -- staff and inmates shall wear rubber insulating gloves with leather protectors where there is a danger of hand injury from electric shock due to contact with energized electrical conductors or circuit parts. Staff and inmates shall wear rubber insulating gloves with leather protectors and rubber insulating sleeves where there is a danger of hand and arm injury from electric shock due to contact with energized electrical conductors or circuit parts. Rubber insulating gloves shall be rated for the voltage the gloves will be exposed.

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- (2) Arc flash protection -- hand and arm protection shall be worn where there is a possible exposure to arc flash burns. Leather or fire-resistant gloves shall be worn for arc flash protection. Where rubber gloves are used for shock protection, leather gloves shall be worn over the gloves for adequate protection of hands from burns. Arm protection shall be accomplished by wearing clothing whenever there is a potential exposure to an electric arc flash above the threshold.
- (3) Electrical protective equipment shall be maintained in a safe, reliable condition. Insulating equipment shall be inspected for damage before each day's use and immediately following an incident that can reasonably be suspected of having caused damage. Insulating gloves shall be given an air test along with the inspection. Electrical protective equipment shall be subjected to periodic electrical tests in accordance with the **Rubber Insulating Equipment Testing Intervals Chart in Subsection G.9 below.**
- (4) When selection of PPE is performed in lieu of the incident energy analysis, the **Hazard/Risk Category Classifications and Use of Rubber Insulating Gloves and Insulated Hand Tools (Attachment 10-F)** shall be used to determine the hazard/risk category and requirements for use of rubber insulating gloves and insulated and insulating hand tools for a task.
- (5) For any task not listed in the **Hazard/Risk Category Classifications and Use of Rubber Insulating Gloves and Insulated Hand Tools Table**, an arc flash hazard shall be conducted. The simplified approach to ensure adequate protection will be used per the **Simplified Two-Category Flame-Resistant Clothing System Table.**
- (6) Wherever the insulating capability of insulating protective equipment may be subject to damage, the insulating materials shall be protected by means such as leather protectors over rubber gloves and suitable protection to prevent abrasion or puncture of rubber blankets.
- (7) Staff/inmates working in areas where electrical hazards are present shall be provided with and use protective equipment (arc flash gear) designed and constructed for the specific body part to be protected and for the work to be performed indicated in the hazard category listed in the **Simplified Two-Category Flame-Resistant Clothing System Table.**
- (8) Where insulated footwear is used as protection against step and touch potential, dielectric overshoes shall be required. Insulated soles shall not be used as primary electrical protection.
- (9) Additional illumination may be needed when using tinted face shields as protection during electrical work.

G. Electrical Safety Work Practices

1. General Precautions

- a. Staff/inmates shall not reach blindly into areas that might contain exposed live parts.
- b. Staff/inmates shall not enter spaces containing live parts unless illumination is provided that allows the work to be performed safely.
- c. Conductive articles of jewelry and clothing (watchbands, bracelets, key chains, necklaces, metalized aprons, cloth with conductive thread, metal headgear or metal frame glasses) shall not be worn where they present an electrical contact hazard with exposed live parts.
- d. Conductive materials, tools, and equipment in contact with any part of an staff/inmate's body shall be handled in a manner that prevents accidental contact with live parts. Such materials and equipment include, but not limited to: long conductive objects such as ducts, pipes, tubes, conductive hose and rope, metal-lined rules and scales, steel tapes, pulling lines, metal scaffold parts, structural members and chains.
- e. When a staff/inmate works in a confined space or enclosed space (such as a manhole or vault) that contains exposed live parts, the staff/inmate worker shall use protective shields, barriers, or insulating materials as necessary to avoid contact with these parts. Doors, hinged panels and related items shall be secured to prevent them from swinging into workers.

2. Working on or Near Energized Equipment

- a. Facility Maintenance Manager shall complete **Facility Management PPE Requirements for Energized Tasks (Attachment 10-G)** prior to any work being performed.
- b. Energized electrical conductors and circuit parts safe work conditions require that energized electrical conductors and circuit parts that staff/inmates may be exposed to shall be put into an electrically safe work condition before staff or inmates work within the limited approach boundary of those conductors or parts unless energized work can be justified in accordance with this subsection.
- c. Only qualified staff/inmates will be permitted to work on electrical conductors or circuit parts that have not been put into an electrically safe work condition and meet the scope of this subsection. These conditions will require the completion of an **Energized Electrical Work Permit (Attachment 10-H)**.
- d. When working within the limited approach boundary on electrical conductors or circuit parts operating at 50 volts or more, lock-out/tag-out devices shall be applied in accordance with **Section 11** of this procedures manual.

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- e. An Electric Hazard Analysis is required if the energized electrical conductors or circuit parts operating at 50 volts or more are not placed in an electrically safe work condition. Other safety-related work practices shall be used to protect staff and inmates that may be exposed to electrical hazards. These work practices shall protect staff and inmates from arc flash and from contact with energized electrical conductors or circuit parts operating at 50 volts or more directly with any part of the body or indirectly through other conductive objects. All work practices shall be acceptable for the type of work being performed and for the associated voltages of the energized electrical conduits or circuit parts. Safe work practice shall be established prior to the beginning of the work by evaluating both shock hazard analysis and an arc flash analysis.
 - (1) Shock hazard analysis will determine the voltage that a worker would be exposed to, boundary requirements and the personal protective equipment necessary to minimize the potential of electrical shock to staff and inmates as indicated in **Subsection F.5 above**.
 - (2) Arc flash hazard will determine the arc flash protection boundary and the personal protective equipment that staff and inmates will use within this boundary as indicated in **Subsection G.5.i. below**.
- f. The completion of an **Energized Electrical Work Permit** is required when working on energized electrical conductors or circuit parts that are not placed in an electrically safe condition. Any work performed under the energized state shall require a written permit.
- g. Unqualified workers shall not be permitted to enter spaces that are required to be accessible to qualified staff/inmates only unless the electrical conductors or circuit parts are in an electrically safe condition.
- h. Energized work shall be permitted where the Facility Maintenance Manager can demonstrate that de-energizing introduces additional or increased hazards.
- i. Energized electrical conductors and circuit parts that operate less than 50 volts to ground shall not be required to be de-energized provided that where the capacity of the source and any overcurrent protection between the source and the worker are considered and it is determined that there will be no increased exposure to electrical burns or to explosion due to electrical arcs.

3. Establishing Electrically Safe Work Condition

The process to ensure electrically safe work conditions will be as follows:

- a. determine all possible sources of electrical supply to the specific equipment;
- b. after properly interrupting the load current, open the disconnecting device(s) for each source;

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- c. whenever possible, ensure that all blades of the disconnecting devices are fully open or that the draw-out type circuit breaker is in the fully withdrawn position;
- d. apply lock-out/tag-out procedures according to **Section 11** of this procedures manual;
- e. use an adequately rated voltage detector to test each phase conductor or circuit part to verify it is de-energized; test each phase conductor or circuit part phase to phase and phase to ground; ensure the voltage tester is functioning properly before and after each test;
- f. where possible induced energy or stored energy may be present, ground the phase conductors or circuit parts before touching them; a ground connecting device must be used if there is a possibility of contacting other energized conductors or circuit parts; and
- g. de-energized electrical conductors or circuit parts that have lock-out/tag-out applications shall be considered energized until such time that all sources of energy are removed; all lock-out/tag-out procedures specified in **Section 11** shall be followed.

4. Energized Electrical Work Permits

- a. When working on energized electrical conduits or circuit parts that are not placed in an electrically safe work condition for the reasons of increased or additional hazards or infeasibility as stated in **Subsection G.2. above** shall be considered energized electrical work and performed by Energized Electrical Work Permit only;
- b. Exemptions to Electrical Work permits include any work performed within the limited approach boundary of electrical conductors or circuit parts by qualified staff or inmates related to tasks such as testing, troubleshooting, voltage measuring, etc. Work will be permitted without an **Energized Electrical Work Permit** provided that appropriate safe work practices and personal protective equipment are provided and used. If the purpose of crossing the limited approach boundary is only for visual inspection and the restricted approach boundary will not be crossed, then an **Energized Electrical Work Permit** will not be required.

5. Approach Boundaries to Energized Parts

- a. Shock hazard analysis shall determine the voltage to which staff/inmates will be exposed, boundary requirements and the personal protective equipment necessary in order to minimize the possibility of electric shock to staff or inmates.
- b. Shock protection boundaries identified as limited, restricted, and prohibited approach boundaries are applicable to the situation in which approaching staff/inmate workers are exposed to energized electrical conductors or circuit parts. See distances

associated with various system voltages in **Approach Boundaries to Energized Electric Conductors or Circuit Parts**.

- c. In certain instances the arc flash protection boundary may be a greater distance from the exposed electrical conductor or circuit parts than the limited approach boundary. The shock protection boundaries and the arc flash boundary are independent of each other.
- d. No qualified staff or inmate shall approach or take any conductive object closer to exposed energized electrical conductors or circuit parts operating at 50 volts or more than the restricted approach boundary set forth in **Approach Boundaries to Energized Electric Conductors or Circuit Parts** unless any of the below listed apply.
 - (1) The qualified staff or inmate is insulated or guarded from the energized electrical conductors or circuit parts operating at 50 volts or more and no un-insulated part of the qualified worker's body crosses the prohibited boundary approach. Insulating gloves or insulating sleeves are considered insulating only with regard to the energized parts upon which work is being performed. If there is a need to cross the prohibited approach boundary, **Subsections G.3.a. through 3.c. above** shall be used to protect the un-insulated body parts.
 - (2) The energized electrical conductors or circuit parts operating at 50 volts or more are insulated from the qualified worker and from any other conductive object at a different potential.
 - (3) The qualified staff or inmate is insulated from any other conductive object as during live-line, bare-hand work.
- e. Unqualified workers shall not be permitted to enter spaces that are required to be accessible to qualified staff/inmates only, unless the electric conductors and equipment involved are in an electrically safe work condition.
 - (1) When one or more unqualified staff or inmate is working at or close to the limited approach boundary, the designated person in charge of the work space where the electrical hazard exists shall advise the unqualified staff or inmate of the electrical hazard and warn them to stay outside the limited approach boundary.
 - (2) When there is a need for an unqualified person to cross the limited approach boundary, a qualified person shall advise the unqualified staff or inmate of the possible hazards and continuously escort the unqualified staff or inmate while inside the limited approach boundary. Under no circumstances shall the escorted staff/inmate be permitted to cross the restricted approach boundary.
- f. An arc flash hazard analysis shall determine the arc flash protection boundary and the personal protective equipment that those within the arc flash boundary shall use. The arc flash hazard analysis shall be updated when a major modification or renovation

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takes place. It shall be reviewed periodically, not to exceed five years, to account for changes in the electrical distribution system that could affect the results of the arc flash hazard analysis.

- g. An arc flash hazard analysis is not required when all of the following conditions exist:
 - (1) the circuit is rated 240 volts or less;
 - (2) the circuit is supplied by one transformer; and
 - (3) the transformer supplying the circuit is rated less than 125 kVA.
- h. The requirements of the **Hazard/Risk Category Classifications** and **Simplified Two-Category Flame-Resistant Clothing System** may be permitted in lieu of a detailed incident energy analysis.
- i. Arc flash protection boundary
 - (1) In cases where detailed arc flash hazard analysis calculations are not performed for systems that are between 50 volts and 600 volts, the arc flash protection boundary shall be 4.0 ft. based on the product of clearing time of two cycles (0.033 sec.) and the available bolted fault current of 50 kA or any combination not exceeding 100 kA cycles (1667 ampere seconds). When the product of clearing times and bolted fault currents exceeds 100kA cycles, the arc flash boundary shall be calculated.
 - (2) At voltage levels above 600 volts, the arc flash protection boundary shall be the distance at which the incident energy equals 5 J/cm² (1.2 cal/cm²). For situations where fault-clearing time is equal to or less than 0.1 sec, the arc flash protection boundary shall be the distance at which the incident energy level equals 6.24 J/cm² (1.5 cal/cm²).
 - (3) Where it has been determined that work will be performed within the arc flash protection identified by **paragraphs 1) and 2) above**, one of the following methods shall be used for the selection of protective clothing and other personal protective equipment:
 - (a) the incident energy analysis shall determine and the Facility Maintenance Manager shall document the incident exposure of the worker (in calories per square centimeter). The incident energy exposure level shall be based on the working distance of the staff or inmate face and chest areas from a prospective arc source for the specific task to be performed. Arc related fire resistant (FR) clothing and other personal protective equipment (PPE) shall be used by staff and inmates based on the incident energy exposure associated with the specific task. Recognizing that incident energy increases as the distance from the arc flash decreases, additional PPE

shall be used for any parts of the body that are closer than the distance at which the incident energy was determined.

- (b) hazard risk categories are defined in the requirements of **Hazard/Risk Category Classifications and Use of Rubber Insulating Gloves and Insulated Hand Tools** and **Simplified Two-Category Flame-Resistant Clothing System** shall be used for the selection and use of personal protective equipment.
- (c) equipment shall be field marked with a label containing the available incident energy or required level of PPE.
- (4) Only qualified staff/inmate workers shall perform testing working within the limited approach boundary of energized electrical conductors or circuit parts operating at 50 volts or more.

6. Equipment Labeling

- a. Electrical equipment such as switchboards, panel boards, industrial control panels, meter socket enclosures, and motor control centers that are in other than dwelling units and are likely to require examination, adjustment, servicing, or maintenance while energized, shall be field marked with a label containing all the following information:
 - (1) at least one of the following:
 - (a) available incident energy and the corresponding working distance;
 - (b) minimum arc rating of clothing;
 - (c) required level of PPE; or
 - (d) highest Hazard/Risk Category (HRC) for the equipment.
 - (2) nominal system voltage; and
 - (3) arc flash boundary.

Exception: Labels supplied prior to September 30, 2011, are acceptable if they contain the available incident energy or required level of PPE.

- b. The method of calculating and data to support the information for the label shall be documented.

7. Insulated Tools and Equipment

- a. Staff and inmates shall use insulated tools and/or handling equipment when working inside the limited approach boundary of exposed electrical conductors or circuit parts where tools or handling equipment might make contact per the Hazard/Risk Category Classifications and Use of Rubber Insulating Gloves and Insulated Hand Tools, which provides further information for the tasks that require insulated and insulating tools. Insulated tools shall be protected from damage to the insulating material.
- b. The following requirements apply to insulated tools:
 - (1) insulated tools shall be rated for the voltage used;
 - (2) insulated tools shall be designed and constructed for the environment they are exposed to and the manner in which they are used; and
 - (3) insulated tools and equipment shall be inspected prior to each use. The inspection shall look for damage to the insulation or damage that may limit the tool from performing its intended function or could increase the potential for an incident (e.g. damaged tip on a screwdriver).
- c. Fuse or fuse holder handling equipment, insulated for the circuit voltage shall be used to remove or install a fuse if the fuse terminals are energized.
- d. Ropes and hand lines used within the limited approach boundary of exposed energized conductors or circuit parts operating at 50 volts or more, or when an electrical hazard exist, shall be non-conductive.
- e. Fiberglass-reinforced plastic rod and tube used for live line tools shall meet the requirements of applicable portions of electrical code and standards dealing with electrical installation requirements.
- f. Portable ladders shall have non-conductive side rails if used where the staff/inmates or ladder could contact exposed energized electrical conductors or circuit parts operating at 50 volts or more or where an electrical hazard exists.
- g. Protective shields, protective barriers, or insulating materials shall be used to protect staff/inmates from shock, burns, or other electrically related injuries while that staff/inmate is working within the limited approach boundary of energized conductors or circuit parts that might be accidentally contacted or where dangerous electric heating or arcing might occur. When normally enclosed energized conductors or circuit parts are exposed for maintenance or repair, they shall be guarded to protect unqualified workers from contact with the energized conductors or circuit parts.
- h. Rubber insulating equipment used for protection from accidental contact with energized conductors or circuit parts shall meet the requirements of **ASTM standards listed in Table 130.7(F) of NFPA 70E.**

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- i. Plastic guard equipment for protection of staff/inmates from accidental contact with energized conductors or circuit parts, or for protection of staff and inmates or energized equipment or material from contact with ground, shall meet the requirements of the **ASTM standards listed in Table 130.7(F) of NFPA 70E.**
8. Physical or mechanical barriers (field fabricated) barriers shall be installed no closer than the restricted approach boundary distance outlined in Approach Boundaries to Energized Electric Conductors or Circuit Parts. While the barrier is being installed, the restricted approach boundary distance specified in the Approach Boundaries to Energized Electric Conductors or Circuit Parts shall be maintained, or the energized conductors or circuit parts shall be placed in an electrically safe work condition.
9. Rubber Insulating Equipment Maximum Testing Intervals

| Equipment | When to Test | Governing Standard for Test Voltage |
|------------------|--|--|
| Blankets | Before first issue; every 12 months thereafter | ASTM F 479 |
| Covers | If insulating value is suspect | ASTM F 478 |
| Gloves | Before first issue; every six months thereafter* | ASTM F 496 |
| Line hoses | If insulating value is suspect | ASTM F 478 |
| Sleeves | Before first issue; every 12 months thereafter | ASTM F 496 |

* If the insulating equipment has been electrically tested but not issued for service, it may not be placed into service unless it has been electrically tested within the previous 12 months.

10. Alerting Techniques

- a. Safety signs, safety symbols, or accident prevention tags shall be used where necessary to warn staff and inmates about electrical hazards that might endanger them.
- b. Barricades shall be used in conjunction with safety signs where it is necessary to prevent or limit staff and/or inmate access to work areas containing energized electrical conductors or circuit parts. Conductive barricades shall not be used where it might cause an electrical hazard. Barricades shall be placed no closer than the limited approach boundary listed in the **Approach Boundaries to Energized Electric Conductors or Circuit Parts.**
- c. If signs and barricades do not provide sufficient warning and protection from electrical hazards, an attendant shall be stationed to warn and protect staff and inmates including contractors and visitors. The primary duty and responsibility of an attendant providing manual signaling and alerting is to keep unqualified staff, inmates and other

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persons outside a work area where the unqualified persons might be exposed to electrical hazards. An attendant shall remain in the area as long as there is a potential for staff, inmates or other persons to be exposed to electrical hazards.

11. Where work performed on equipment that is de-energized and placed in an electrically safe condition exists in a work area with other energized equipment that is similar in size, shape, and construction - altering methods in **NFPA 70E 130.7(E)(1), (2) or (3)** shall be employed to prevent the staff or inmate from entering look alike equipment.
12. Overhead Lines, Vehicular and Mechanical Equipment
 - a. When work is performed in locations containing energized overhead lines which are not guarded, isolated or insulated, precautions shall be taken to prevent staff/inmates from contacting such lines directly with any part of their body or indirectly through conductive materials, tools or equipment.
 - b. Any work being performed overhead near energized electrical conductors or circuit parts and for work being performed from vehicular or mobile/mechanical equipment shall be done in accordance with **NFPA 70E; Section 130.5**.

13. Additional Information

Information that provides direction in dealing with specific hazards can be found in **NFPA 70E “Electrical Safety in the Work Place,”** current edition.

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Section 11 – Lockout/Tagout

**This section is confidential and not for
public dissemination.**

Section 12 - Environmental Standards for Noise Levels

A. Staff Responsibility

1. Facility Manager

- a. The Facility Manager is responsible for the overall implementation of this procedures manual.
- b. The Facility Manager shall ensure the noise levels in inmate housing units do not exceed 70 dBA (A Scale) in daytime or 45 dBA (A Scale) at night.¹

2. Facility Safety Manager/Fire and Safety Specialist

The Facility Safety Manager/Fire and Safety Specialist is responsible for the following:

- a. conduct and document an initial noise level survey throughout the facility to identify any possible high noise level areas, work processes, or equipment (mobile/stationary);
- b. conduct testing of all identified high noise level areas/operations, a minimum of annually. This testing shall aid in the determination of hearing protection being made available or required;
- c. additional testing and retesting shall be performed when changes to the work environment may alter noise level exposures (i.e., new work process, additional equipment, and structural changes, etc.);
- d. develop procedures where testing indicates a need for change in the work environment or work procedures. Solutions to noise level concerns should be based on exploring engineering, administrative, and protective equipment controls in that order; and
- e. maintain all related documentation.

B. Environmental Noise Level Standards

1. Any areas of the facility with noise levels over ninety (90) decibels are to be considered high noise level areas. It is the responsibility of the Facility Safety Manager/Fire and Safety Specialist to survey the facility for high noise level areas, and to re-monitor when there are significant changes in machinery or production process that may result in increased noise levels. Hearing protection shall be made available in all high noise level areas.

¹ 4-4150, 1-ABC-2D-02, 1-CTA-2B-03, 4-ACRS-1A-10

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- The following chart shall be used as an aid in determining the need for required hearing protection in identified high noise level areas. All areas requiring hearing protection shall be posted accordingly.

| DURATION PER DAY, HOURS | |
|--|------------------------------|
| A-weighted Sound Level, L (Decibel) (Slow Response) | Reference Duration, T (Hour) |
| 90 | 8.0 |
| 91 | 7.0 |
| 92 | 6.1 |
| 93 | 5.3 |
| 94 | 4.6 |
| 95 | 4.0 |
| 96 | 3.5 |
| 97 | 3.0 |
| 98 | 2.6 |
| 99 | 2.3 |
| 100 | 2.0 |
| 101 | 1.7 |
| 102 | 1.5 |
| 103 | 1.3 |
| 104 | 1.1 |
| 105 | 1.0 |

- Impact noise cannot exceed a peak sound level of 140 dBA without the use of hearing protection. Frequent impact noise or impulse rates that occur at intervals of one (1) second or less are considered continuous noise.
- Each facility should engineer out as much noise as possible. Fire rated vibration dampening, acoustical paneling and other acceptable methods of sound vibration dampening should be used where possible. When administrative or engineering controls are not feasible, work practice controls including the use of personal protective equipment are required.

Section 13 - Excavation/Trench Safety

A. Staff Responsibility

1. Facility Manager

The Facility Manager shall maintain overall responsibility for local excavation/trenching procedures.

2. Facility Maintenance Manager (FMM)/Designee

The Facility Maintenance Manager (FMM)/Designee shall:

- a. plan, execute and document the procedure of any excavation;
- b. notify the Facility Safety Manager/Fire and Safety Specialist before any excavation;
- c. maintain a project log to include documentation of entrance safety briefing for staff/inmates and safety/monitoring equipment used in the project and inspections;
and
- d. make the necessary changes to facility plot plans/points.

3. Facility Safety Manager/Fire and Safety Specialist

The Facility Safety Manager/Fire and Safety Specialist shall:

- a. monitor trench/excavation sites to ensure that proper safety procedures are in place;
and
- b. provide consultation to the Facility Maintenance Manager/Designee during the planning stage of the project to evaluate the need for additional safety precautions/procedures.

B. Planning

The Facility Maintenance Manager/Designee shall locate and identify all underground utilities and structures before any excavation.

C. Briefing

Before any excavations, personnel involved with the excavation will be briefed by the FMM/designee as to the proper safety procedures and responsibilities of all involved.

D. General Safety Procedures

1. Safety procedures may vary on each job and shall be determined in the planning stage. Additional Department established safety procedures other than stated in this procedures manual may include confined space entry, lockout/tagout, respiratory protection, and other related equipment usage.
2. No employee/inmate shall be permitted underneath loads handled by lifting or digging equipment. Employees/inmates shall be required to stand away from any vehicle during operation or when being loaded or unloaded to avoid being struck by any spillage or falling materials.
3. When mobile equipment is operated adjacent to an excavation, or when equipment is required to approach the edge of an excavation and the operator does not have a clear and direct view of the edge of the excavation, a warning system shall be used such as barricades, hand or mechanical signals, or stop logs. If possible, the grade should be away from the excavation.
4. Employees/inmates entering bell-bottom pier holes, or other similar deep confined footing excavations, shall wear a harness with a lifeline securely attached to it. The lifeline shall be separate from any line used to handle materials, and shall be attended at all times while employees/inmates are in the excavation. Inmates are prohibited from supervising or attending lifelines during excavation/trench activities.
5. Employees/inmates shall not work in excavations in which there is accumulated water, or in excavations in which water is accumulating, unless adequate precautions have been taken to protect them against the hazards posed by the water accumulation. The precautions necessary to protect employees/inmates adequately vary with each situation, but could include special support or shored systems, to protect from cave-ins, water removal to control the level of accumulating water, or use of a safety harness and lifeline.
6. Under no circumstances shall employees or inmates be permitted to enter excavations containing an IDLH atmosphere.

E. Protective Systems

1. Each employee/inmate in an excavation shall be protected from cave-in by an adequate protective system except when:
 - a. excavations are made entirely in stable rock; or
 - b. excavations are four (4) feet or less in depth.
2. Protective systems are required as a minimum on all excavations/trenches that meet the definition as established by this section of the safety procedures manual.
3. All protective systems such as sloping, benching, shoring, and shielding must be in accordance with **OSHA 1926.652, (Excavation Trench Safety Reference Manual**

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attached) accepted engineering practices, or manufacturer's recommendations. (Refer to Excavation/Trench Safety Reference Manual for protective system requirements.)

4. All excavations greater than 20 feet in depth must be approved through the Central Office Safety and Environmental Protection Division.

F. Access and Egress

When employees/inmates are required to be in a trench four feet deep or more, adequate means of exit such as ladders, steps, ramps or other safety means must be provided and be within 25 feet of lateral travel.

G. Stability of Adjacent Structures

1. Where the stability of adjoining building, walls, sidewalks, pavement, or other structures is endangered by excavation operations, protective systems in accordance with **Section E** of this procedures manual shall be provided to ensure stability of such structures for the protection of employees/inmates except when:
 - a. the excavation is in stable rock; or
 - b. a registered engineer has approved the determination that such excavation work will not pose a hazard to employees.

H. Excavated Materials

1. Employees/inmates shall be protected from excavation or other material or equipment that could pose a hazard by falling or rolling into excavations. Protection shall be provided by placing and keeping such material or equipment at least five (5) feet from the edge of excavations, or by the use of retaining devices that are sufficient to prevent materials or equipment from falling or rolling into excavations or by a combination of both if necessary.
2. All excavations and excavated materials shall be surrounded by a hazard/work barrier at a minimum distance of fifteen (15) feet to prevent accidental entry by persons or vehicles. If fifteen (15) feet is not feasible, a barrier must be placed as far from the excavation as possible while still ensuring the safety of individuals in and around the excavation.

I. Inspections

1. Daily inspections of excavations, the adjacent areas, and protective systems shall be made by the Facility Maintenance Manager/Fire and Safety Manager or designee and for evidence of a situation that could result in possible cave-ins, indications of failure of protective systems, hazardous atmospheres, or other hazardous conditions. The inspection shall be conducted prior to the start of work and as needed throughout the shift.¹

¹ 4-4455, 1-ABC-5A-06

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2. Inspections shall also be made after every rainstorm or other hazard-increasing occurrence. These inspections are only required when employee/inmate exposure can be reasonably anticipated.

J. Fall Prevention

Walkways with a guardrail system must be provided when employees/inmates or equipment is required/permitted to cross over excavations at a height of six (6) feet or more above lower levels.

K. Project Completion

When work is completed, the excavation shall be backfilled and all hazard barriers may then be removed.

Section 14 - Safety Standards for Radon in Department Buildings

A. Staff Responsibilities

1. Facility Manager

Responsible for the overall implementation of this policy.

2. Chief of the Safety and Environmental Protection Division or Designee

- a. Upon review of facility screening results, identify any additional testing requirements which must be conducted beyond that established in Section D of this section of the procedures manual.
- b. Direct any additional screening of Department buildings based on updated or newly found information from the Environmental Protection Agency/Department of Environmental Protection on the hazards of radon.
- c. Act as liaison with the Department of Environmental Protection, Bureau of Radiation Protection, and the U. S. Environmental Protection Agency.
- d. Ensure that the Department provides diagnostic services through a **Radon Certified Individual (RCI)** when levels indicate the need for remediation.
- e. Procure contracts with other firms to perform remedies and/or projects beyond in-house capability.

3. Facility Maintenance Manager

Review remedies requested in coordination with the Safety and Environmental Protection Division. Oversee and engineer various in-house corrective actions including the installation of systems designed for the removal of radon gas from buildings.

4. Facility Safety Manager/Fire and Safety Specialist

- a. Ensure initial screening of all buildings for radon which meet the criteria established in **Section B** of this procedures manual.
- b. Communicate findings of all screenings to the Chief of the Safety and Environmental Protection Division.
- c. Maintain all records of testing.
- d. Conduct any additional testing as directed by the Chief of the Safety and Environmental Protection Division.

B. Screening Measurements Using Charcoal Canisters

1. Initial screening will be accomplished by the use of activated charcoal canister detectors.
2. Measurements are to be taken in all frequently (five hours or more per day) occupied areas at or below ground level. This includes all frequently occupied rooms above crawl spaces and excavated areas.
3. All such areas, which meet **Paragraph 2** above, must be initially sampled to establish levels by the Facility Safety Manager/Fire and Safety Specialist.
4. Additional testing is required only by the direction of the Safety and Environmental Protection Division.

C. Sampling Protocols for Charcoal Canisters

1. Unless previously approved by the Safety and Environmental Protection Division, all testing will be accomplished in compliance with the following U. S. Environmental Protection Agency protocols:
 - a. All windows and doors shall be closed, with the exception of normal entry and exit, for at least 12 hours prior to detector deployment.
 - b. Measurement should not be conducted if major weather or barometric changes are expected or when storms with high winds are predicted.
 - c. Tests should be conducted during the coldest months of the year in order to ensure worst-case conditions.
 - d. Detectors should not be placed near outside walls or near building obstructions.
 - e. Detectors should not be placed in high traffic areas or near sources of air movement such as windows, vents, and doors.
 - f. The measurement should not be taken in areas of high humidity or temperature change such as kitchens and bathrooms.
 - g. The detector should be placed on a table or shelf in open air that the occupants breathe (at least 20 inches above the floor). Do not place the detector in closets or drawers.
 - h. Charcoal canisters shall be deployed according to the manufacturer's specifications. Upon completion of the test period, the detector shall be returned to the laboratory for analysis.

- i. The measurement should be postponed if the building is undergoing/planning major renovations that might influence the radon concentration during the measurement period.

D. Follow-up Measurement Using Alpha Track Detector

1. Follow-up testing is to be accomplished by using Alpha Track Detectors, unless otherwise stated. These tests will be conducted over a period of one week to one year. Use of the Alpha Track detector will provide an average radon concentration over the test period.
2. Follow-up testing is to be performed when screening measurements reveal levels in excess of 4.0 pCi/l. For screening levels between 4.0 and 20.0 pCi/l, follow-up testing of one per year will be performed. For screening measurements of 20.0 to 200.0 pCi/l, follow-up testing of three months will be performed with the building under closed conditions. If screening levels are greater than 200 pCi/l, follow-up testing using charcoal canisters will be performed for a period of one week.

E. Sampling Protocols for Alpha Track Detectors

1. Unless previously approved by the Safety and Environmental Protection Division, testing will be accomplished in compliance with the following U. S. Environmental Protection Agency protocols:
 - a. The measurement should be postponed if the building is undergoing/planning a major renovation that might influence the radon concentration during the measurement period.
 - b. To a reasonable extent, the building should be closed during the measurement periods.
 - c. Central heating and ventilation systems should be operated continuously during the measurement period.
 - d. The detector should be placed in open air that the occupants breathe (at least 20 inches from the floor).
 - e. The detector should not be placed near drafts caused by HVAC systems, windows, doors, etc. Avoid locations near excessive heat such as radiators and baseboard heaters.

F. Quality Control/Quality Assurance Plan

1. Duplicate Detectors
 - a. Side-by-side samples are to be taken in order to analyze the precision of measurements. The number of side-by-side samples will be 10 percent of the detectors placed.

- b. Analysis of duplicate samples should agree to within 20 percent at levels greater than 4.0 pCi/L. If duplicate samples are non-compatible, it may indicate an error in the analysis and an investigation may be warranted. Results of the duplicate samples will be reviewed by the Safety and Environmental Protection Division.

2. Blank Detectors

- a. Blank detectors monitor whether there is a problem in the shipping, storage, or processing of the detectors. Five percent of the detectors placed should be blanks.
- b. Results of blank detectors should not be significantly greater than the Lower Limit of Detection (LLD) established by the supplier. If one or only a few of the blank detectors have concentrations significantly greater than the LLD, a request should be made to the laboratory for an explanation. Results of blank detectors will be reviewed by the Safety and Environmental Protection Division.

Section 15 - Safety Standards for Asbestos Containing Materials

A. Staff Responsibility

1. The Chief of the Safety and Environmental Protection Division shall:
 - a. maintain employee safety and occupational health features relative to Asbestos Containing Material (ACM) projects, consultation with the Correctional Institutional Safety Manager (CISM)/Fire and Safety Specialist relative to compliance and technical assistance in the area of asbestos safety;
 - b. coordinate with the Chief of the Maintenance/Construction/Capital Programs Division on all work determinations for large-scale, in-house, and contracted abatement projects.
2. The Chief of the Maintenance/Construction/Capital Programs Division shall:
 - a. provide facilities with technical assistance in the areas of engineering, maintenance work practices and contracting services relative to ACM abatement;
 - b. coordinate with the Safety and Environmental Protection Division on all work determinations for large scale in-house and contracted abatement projects and maintain documentation to support asbestos reimbursement claims against manufacturers and/or suppliers.
3. The Facility Manager shall maintain overall responsibility for the local ACM program.
4. The Business Manager shall ensure that any future purchases of consumer and/or building products are of non-asbestos materials.
5. The CISM/Fire and Safety Specialist shall:
 - a. implement and comply with the provisions of the Department's Safety Manual pertaining to safety standards for ACM;
 - b. develop the internal facility procedures pertaining to the asbestos abatement program;
 - c. conduct asbestos awareness training for all employees;
 - d. perform record keeping functions for bulk/air samples;
 - e. conduct inspections of abatement work to ensure employee safety;
 - f. ensure compliance with the safety provisions of the Safety Manual regarding respiratory protection; and

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- g. coordinate with the Facility Maintenance Manager (FMM) to ensure all record keeping complies with current requirements.
6. The FMM shall implement/comply with the provisions of the Safety Manual to include:
 - a. engineering/work determinations and proper reporting of in-house asbestos work;
 - b. incorporating ACM locations into the preventive maintenance program format and conducting semi-annual inspections of all ACM for the purpose of documenting their condition; and
 - c. maintaining all documentation and records pertaining to the preventive maintenance program, asbestos location identification, blueprints, work orders, and support documentation. These activities shall be accomplished in conjunction with the CISM/Fire and Safety Specialist to ensure compliance with current requirements.
 7. The Corrections Health Care Administrator (CHCA) shall:
 - a. assist the Correctional Institutional Safety Manager in the scheduling of asbestos medical evaluations to ensure they are completed in a timely manner;
 - b. ensure that all records pertaining to the medical evaluations are maintained in the confidential employee medical files; and
 - c. ensure that the CISM receives a copy of the **Medical Clearance for the Use of Respiratory Protection *in accordance with Section 8, Attachment 8-A of this manual.***

B. Documentation Requirements

1. Initial surveys are required to identify the location of all facility site asbestos. Documentation of this information shall be kept in the following manner:
 - a. Department of General Services (DGS) Survey Report by building;
 - b. Preventive Maintenance Systems Information;
 - c. locator lists; and
 - d. in-house surveys of buildings not covered by the DGS Survey.
2. The DGS contracts for the completion of bulk sampling analysis and identification of all suspected ACM in the state correctional facilities. The documents from these surveys shall be maintained in the Facility Maintenance Office and in Central Office. This information is to be used for updating the currently known ACM within the

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Preventive Maintenance System and is to be referred to when repair work and renovations are being planned.

3. In-house work shall be documented, per job, using the Preventive Maintenance System, to include the following documentation portfolio:
 - a. personnel involved in working the job;
 - b. personal and air sample results;
 - c. bulk sample analysis confirming the presence of asbestos;
 - d. copies of all required notifications of work;
 - e. photographs taken before, during and after the abatement;
 - f. waste shipment records;
 - g. final disposition records of waste from the landfill site; and
 - h. all related costs to include wages for straight and overtime rates.
4. On small jobs, not all of the documentation will be able to be completed. Wherever possible, this documentation is to be obtained for all work conducted.
5. Contracted work shall include the documentation listed in the preceding paragraph, with the exception of the Preventive Maintenance System, a copy of the contract specifications and proof of payment.
6. Records and documents pertaining to asbestos abatement actions are to be maintained in a separate file for each job. These records are required to be maintained on-site for a minimum of 30 years. The FMM and CISM/Fire and Safety Specialist are jointly responsible for coordinating and maintaining record and document retention programs pertaining to ACM records.

C. Inspection of ACM

1. Bi-annual Inspections

A bi-annual inspection by the maintenance staff is to be conducted and documented for all ACM to determine the level of friability. The CISM/Fire and Safety Specialist shall be provided with copies of all inspection results. When large amounts of friable asbestos are found in critical locations, air monitoring will be initiated by the CISM/Fire and Safety Specialist. Thereafter, semi-annual inspections will be conducted to determine the level of fiber release and need for abatement actions. Examples of critical locations include mechanical rooms, occupied areas, and highly frequented

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areas. Small amounts of friable asbestos such as the ends of pipe wrappings need not be air monitored semi-annually but must be repaired as routine preventative maintenance work as soon as possible.

2. Inspection of Newly Discovered Friable Asbestos

Should the presence of newly friable ACM be discovered by inspection or report, a site inspection by the CISM/Fire and Safety Specialist is to be performed immediately to determine and document the following:

- a. air sample results;
- b. safety precautions taken;
- c. temporary and permanent remedies based on the level of fiber release;
- d. potential exposure; and
- e. safety hazards.

D. Safety Inspections of Job Sites

1. Inspections to ensure adequate job-site safety are to be conducted before and during all ACM work. This inspection is to be performed and documented by the CISM/Fire and Safety Specialist. The initial inspection will occur prior to the commencement of the work and at a minimum of every four hours during ongoing work. The inspection will document the following:
 - a. barrier integrity;
 - b. presence/operability of emergency equipment;
 - c. negative pressure;
 - d. air sample results prior to the start of work, at the HEPA exhaust and/or outside barrier area and in the work area; and
 - e. shower facility.
2. Although safety inspections are not required on jobs that are less than 15 square feet or 15 linear feet, random checks and documentation should be accomplished.
3. A post work clearance inspection shall be conducted by the CISM/Fire and Safety Specialist to ensure the area is clean and ready for occupancy. This inspection shall include:

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- a. visual inspection of the area prior to barrier breakdown; and
- b. an aggressive air sample will be taken with the plastic sheeting down, except for the decontamination unit and all critical barriers, while the negative pressure system is in operation. Cleaning and documentation of the results will continue until the clearance level of .01 fibers per cubic centimeter is obtained.

E. Employee Training Requirements

1. Facility employees shall be provided information relative to asbestos material pursuant to **Act 1984-159, The Worker and Community Right-To-Know Act**. Employees needing additional asbestos information may be provided with an asbestos awareness session of one to two hours in length, which is conducted by the CISM/Fire and Safety Specialist.
2. Employees who do not perform asbestos abatement but work in an area that presents the potential of being in contact with an ACM shall receive additional documented training. This training identifies the location of the asbestos material and the procedures and care to be followed when working under these conditions. An initial orientation/training on ACM is required for those employees who are in this category. Refresher training is received as required.
3. Employees assigned to abatement activities must attend a Department of Labor and Industry four-day accredited training program initially, and an eight-hour refresher thereafter. They must be currently medically monitored in accordance with **Subsection F. below** prior to conducting any asbestos abatement. Annual refresher training is conducted when announced.
4. Supervisors/Inspectors responsible for employees assigned to abatement activities must attend a Department of Labor and Industry five-day accredited training program. Supervisors/Inspectors who enter work sites must meet requirements in accordance with **Subsection F. below**. There must be at least one supervisor in the maintenance department of each facility who is qualified to enter work sites where asbestos abatement is being performed.
5. Training records must be maintained by the Training Coordinator for a minimum of 30 years.

F. Medical Monitoring Program

1. In accordance with regulations, employees assigned to abatement activities shall receive medical examinations to assure initial and continued fitness to wear respirators. Employees assigned to abatement activities will receive initial medical examinations and tests prior to performing ACM work, and annually thereafter, and within 30 days before or 60 days after termination of assignment to the asbestos control program. An exit examination must be provided to terminated employees who have not received an evaluation within the previous six months.

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2. Based on the medical qualification specialties required for the medical tests and the potential liability involved, contracted medical services are recommended to be used to conduct the employee medical monitoring.
3. Medical examination and test requirements are listed below:
 - a. A clinical appraisal by a Pennsylvania licensed physician who is formally trained in respiratory diseases.
 - b. A medical and occupational health history. The required **Asbestos Medical Monitoring Initial Medical Questionnaire (Attachment 15-A)** and **Asbestos Medical Monitoring Periodic Medical Questionnaire (Attachment 15-B)** are available from the Safety and Environmental Protection Division or CISM/Fire and Safety Specialist and must be completed annually. The employee completes these forms prior to the physical examination.
 - c. The physical examination must include the head, eyes, ears, nose, throat, auscultation of the chest (heart and lungs) and measurement of blood pressure and pulse.
 - d. Pulmonary tests conducted by a certified pulmonary function technologist or a person trained in spirometry in a program sponsored by an appropriate academic or professional facility. Tests are to include:
 - (1) Forced Vital Capacity (FVC);
 - (2) Forced Expiratory Volume at one-second (FEV-1); and
 - (3) FEV-1/FVC ratio with interpretation and comparison to standardized norms and previous values when applicable.
 - e. Chest X-rays conducted by a certified radiology technician sponsored by an appropriate academic or professional facility, unless medically contra-indicated by the examining physician should provide the following:
 - (1) posterior/anterior and lateral views measuring 14 by 17 inches; and
 - (2) interpretation and classification by a Class B Reader/ Radiologist that complies with the National Institute for Occupational Safety and Health.
4. Medical records must be retained by facilities for 30 years after termination of employment. If the employee transfers to another Commonwealth agency/facility, the records must be transferred to that agency/facility. If the employee leaves Commonwealth employment, these records are maintained at the last facility of employment. These records must be kept separate from the employee's **STD-301, Personnel Folder**, and considered confidential material and maintained in a

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designated locked area within the medical department. The contents of these records shall be made available on an official need-to-know basis to the following individuals or for the following purposes:

- a. authorized Department staff;
- b. examining medical staff;
- c. Environmental Protection Agency representative;
- d. the Assistant Secretary of Labor and Occupational Safety and Health;
- e. the Director of the National Institute for Occupational Safety and Health;
- f. authorized physicians and medical consultants who because of their function or job have a direct need-to-know;
- g. a written request by employees or former employees that the records be provided to their personal physician; and
- h. upon request, employees are entitled to their medical records.

5. Written Interpretations

- a. Written interpretations stated in lay terms shall be accomplished by the examining physician for each of the medical examinations and test results and be provided to the employee on the **Asbestos Medical Evaluation (Attachment 15-C)**.
- b. A written interpretation must be accomplished to compare the results of past medical examinations and chest X-rays to the current examinations/X-rays.
- c. The examining physician shall ensure the CHCA receives written notification on the ability of staff to use respiratory protection.

6. Medical Record File Items

Medical records are maintained by the medical department. All occupational health medical records are to be maintained in one confidential medical file for each employee. The following items are maintained in the confidential medical file separate from the employee's **STD-301**:

- a. physical examinations/results and work history;
- b. chest X-rays and results;
- c. pulmonary function values;

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- d. results of test done at the physician's discretion;
 - e. written interpretations of examinations/tests; and
 - f. overall written statement regarding respiratory clearance.
7. If the previous medical monitoring was done, the facility contract administrator provides the past year results and chest X-rays to the employee to take to the current examining physician at the time of re-examination. Records older than one previous year will be provided to the examining physician upon request. The examining physician may consult the specialist/technologist in each specific area of examination for further evaluation and comparison of results. A current job description must be provided upon annual re-examination to the examining physician.
8. Additional testing recommended by the examining physician is to be accomplished only if the physician is unable to determine the employee's ability to wear a respirator from the components of the presently required examination. Additional testing is NOT to be used for any other purpose than to provide a determination for respiratory clearance.

G. Medical Monitoring for Incidental Asbestos Exposure

- 1. Procedures
 - a. Persons who believe that they have been exposed to a concentration of airborne asbestos fibers should immediately report the exposure incident (Phase I).
 - (1) For inmates, the incident should be reported to their Work Supervisor, Housing Unit Officer, or other official in charge of the immediate area, who, in turn, will immediately notify the CISM/Fire and Safety Specialist.
 - (2) For staff, the incident should be reported to their immediate Supervisor who, in turn, will immediately notify the CISM/Fire and Safety Specialist and Shift Commander.
 - (3) Upon notification of an incident, the CISM/Fire and Safety Specialist shall inspect the area to determine if an incidental exposure potential is present and take appropriate action.
 - (4) If the CISM/Fire and Safety Specialist are not available, the FMM or Shift Commander shall inspect the exposure area.
 - (5) After the inspection, the FMM or Shift Commander shall restrict access, limit access, or permit normal activities in the area.
 - (6) As soon as possible, the CISM/Fire and Safety Specialist shall also inspect the area to determine if the initial actions were appropriate.

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- b. After verbal notification, the exposed person should obtain and complete an **Asbestos Exposure Data Sheet (EDS) (Attachment 15-D)**. EDS forms shall be available from the Safety Manager, FMM or Shift Commander.
 - (1) The exposed person shall submit the completed EDS immediately to his/her Housing Unit Office, Work Supervisor, or Department Head who, in turn, will forward it to the CISM/Fire and Safety Specialist.
 - (2) The CISM/Fire and Safety Specialist shall investigate the claim and complete the "Correctional CISM Review" Section of the EDS to determine if the applicant has incurred incidental exposure to friable asbestos.
 - (3) Once completed, the EDS shall be distributed as follows: One copy to the applicant; one copy to the CISM/Fire and Safety Specialist; in the case of an inmate, one copy to the Inmate Records Officer; in the case of an employee, one copy to the Personnel Office; the original to the CHCA for scheduling of the Medical Assessment Phase or for their records.

2. Medical Assessment Phase (Phase II)

- a. Upon receipt of the EDS indicating incidental exposure, the CHCA will schedule each person for an interview to complete the **Asbestos Medical Monitoring Initial Medical Questionnaire - Program A - For Inmates Only (Attachment 15-E)**. Staff shall complete the **Asbestos Medical Monitoring Periodic Medical Questionnaire**.
- b. Upon completion of the IMQ, persons will be evaluated by the Review Panel. The Review Panel will examine the EDS and the IMQ and determine if the applicant is to be placed in the Medical Monitoring Program (Phase III).
 - (1) For staff, this panel shall consist of the CHCA or designee, the CISM/ Fire and Safety Specialist and a Personnel Manager or designee.
 - (2) For inmates, this panel shall consist of the CHCA/designee, CISM/Fire and Safety Specialist and the Corrections Employment and Vocational Coordinator (CEVC).
 - (3) Applicants will be notified in writing of the decision of the panel and the rationale of that decision by the CHCA/designee. Copies of that decision will be routed, as was the EDS.

3. Aspects of the Medical Monitoring Program (Phase III)

- a. A Medical Baseline shall be established for all individuals who are included in the Medical Monitoring Program Phase III. The CHCA/designee will schedule and coordinate the following:
 - (1) a clinical appraisal by a Pennsylvania licensed physician;

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- (2) physical examination to include:
 - (a) head, eyes, nose, and throat;
 - (b) auscultation of the heart and lungs; and
 - (c) clinical vital signs (blood pressure, pulse);
- (3) pulmonary tests:
 - (a) forced vital capacity; and
 - (b) forced expiratory volume;
- (4) chest X-ray read by a qualified Class B Reader; and
- (5) other medical tests as determined by the physician, in order to establish an adequate Baseline History.

4. Periodic Baseline Updates

- a. On a periodic basis, the Baseline information will be updated. These updates will include the completion by the inmate of the **Asbestos Medical Monitoring Periodic Medical Questionnaire (PMQ) (Attachment 15-F)**. Employees and others should use the **Asbestos Medical Monitoring Initial Medical Questionnaire**. These forms are available through the CHCA/designee. Completed forms should be returned to the CHCA/designee.
- b. Unless recommended more frequently on an individual basis, Baseline will be updated every five years.
- c. For inmates, upon release from the jurisdiction of the Department, the Medical Monitoring Program for that individual will terminate.
- d. For employees, upon leaving employment from the Department, the Medical Monitoring Program for that individual will terminate.
- e. For other non-employees and non-inmates, termination from the Medical Monitoring Program for that individual will be determined by the Facility Manager on a case-by-case basis.
- f. Prior to termination of an individual from the Medical Monitoring Program, a final Baseline update may be completed at the discretion of the CHCA/designee.

5. Other Aspects of the Program

- a. Information on the following areas will be provided to all personnel of the Department facilities:
 - (1) asbestos-related diseases;
 - (2) the danger of smoking and asbestos exposure;
 - (3) occupations or practices that may constitute a health hazard when coupled with asbestos exposure; and
 - (4) reporting procedures for incidental exposure.
- b. This information may be presented in various forms such as printed material, film, videotape, etc.

6. Record Keeping

- a. All initial and periodic medical questionnaires, medical test results, and physician opinions become the property of the Department.
- b. All reports shall be treated as "Confidential."
 - (1) Access to the Medical Monitoring Program information will be made to Department management and medical personnel on an official need-to-know basis. Medical personnel include those who may provide contracted medical services to the Department.
 - (2) Affected persons to whom the information pertains shall be provided access to their individual records.
- c. Records shall be maintained for 30 years after an individual is terminated from the Medical Monitoring Program.

7. Appeal Process

- a. Should an inmate appeal a non-placement in the Medical Monitoring Program, the appeal should be processed in accordance with the **DC-ADM 804, "Inmate Grievances."**
- b. Should an employee appeal the non-placement in the Medical Monitoring Program, the appeal should be directed to the Central Office Review Panel for Asbestos Medical Monitoring.

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- (1) The Central Office Review Panel for Asbestos Medical Monitoring shall meet periodically as needed.
- (2) The Panel shall consist of:
 - (a) the Director of the Bureau of Health Care Services (BHCS)/designee;
 - (b) the Chief of the Safety and Environmental Protection Division; and
 - (c) the Employee Services Coordinator.

H. Requirements for the Abatement of ACM

1. General

- a. ACM may be abated with remedial or permanent corrective action by properly trained Department staff, contracted vendors, or inmates that have completed the Department's Asbestos Abatement Program. Department trained staff will perform encapsulation, emergency and limited abatement within the capabilities of the facility.
- b. Abatement procedures will be accomplished by the wet method. If this is not possible, then approval by the Central Office Safety and Environmental Protection Division and the Environmental Protection Agency must be obtained prior to the commencement of work.
- c. Encapsulation for residual fibers (lockdown) will be accomplished in removal work where residual fibers remain on the surface from which the asbestos was removed.
- d. Cleaning measures used as remedial safety precautions for friable/emergency asbestos conditions are considered abatement and require appropriate worker protection.
- e. Where forced ventilation is utilized, all exit air will be HEPA filtered. In this case, clean air is brought through work areas with a minimum of four air exchanges per hour.
- f. A minimum of two trained persons is required for any abatement work.

2. Reporting Requirements

Prior to the initiation of work on ACM, the following reporting is required:

- a. Work on material greater than three square feet or three linear feet requires a 10 working day notification to the following agencies prior to the start of work:
 - (1) the Department's Safety and Environmental Protection Division;

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- (2) the Environmental Protection Agency Worker Protection; and
 - (3) the Department of Environmental Protection Regional Office; two copies.
- b. The Department of Environmental Protection is the only agency with a standard reporting form. The use of the **Asbestos Abatement and Demolition/Renovation Notification Form (Attachment 15-G)** is required for the Environmental Protection Agency with duplicates of the report sent to the other agencies. A cover letter is to accompany the duplicate report.
 - c. Work of 15 square feet or 15 linear feet or greater must be approved by the Department's Safety and Environmental Protection Division.
 - d. Emergency projects are reported by telephone to the agencies listed in **Subsection H.2.a. above** and confirmed in writing within 24 hours of project initiation.
 - e. On-site inspections/enforcement to ensure compliance with the safety standards relating to ACM are accomplished by the Department's Safety and Environmental Protection Division. The Department 's Safety and Environmental Protection Division is to be notified when on-site inspections are conducted by any regulatory authority.
3. A Respiratory Protection Program shall be established at each site where respirator protection is in use. Negative pressure respirators are not permitted for ACM work.
4. Personal Protection Program
- a. Employees engaged in ACM abatement shall be supplied with a total body covering designed for protection against asbestos fibers. Use of this body covering is mandatory. This includes hand, foot, and head coverings. In the event that the work performed would cause risk to the employee by wearing the standard disposal suit (welding/cutting operations), suitable clothing to conduct the work must be provided and treated as asbestos waste material when the work is completed.
 - b. A clean room immediately adjacent to work sites shall be provided for ACM workers. Refer to **Job Layout (Typical) - Asbestos Abatement (Attachment 15-H)** for a model clean room arrangement.
 - c. CISMs/Fire and Safety Specialists shall make a determination on all ACM work as to personal decontamination procedures. A shower facility immediately adjacent to work sites shall be provided for ACM workers. Decontamination is required prior to respirator removal. Disposal clothing is bagged/removed adjacent to the shower facilities.
 - d. In areas where a shower facility is not feasible or the work size does not warrant a shower facility, double suiting is an acceptable alternative. The outer dirty suit must be removed prior to entering the clean area.

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- e. In-house laundering of ACM clothing is not permitted. Disposal of clothing used during ACM work is to be treated as asbestos waste material.

5. Work Site Safety

- a. Danger signs, specifically asbestos warnings, shall be posted 20 feet in front of all work entrances to areas where abatement work is being performed.
- b. Work area requirements for ACM projects are:
 - (1) security precautions to prevent entry of unauthorized individuals;
 - (2) evacuation of all except pre-screened medically fit employees;
 - (3) appropriate coverings to prevent external contamination. A minimum of six millimeter thickness of plastic sheeting for floors, walls, and vertical surfaces. Entire work area to be sealed;
 - (4) prohibition of food, drink, or tobacco;
 - (5) if forced ventilation is needed, negative pressure HEPA systems must be utilized;
 - (6) a lockout system for the electric, air movement or HVAC system of any building; and
 - (7) during the breakdown procedure, asbestos containment areas are to be cleaned to the clean level before negative air and barrier systems are removed.
- c. A typical work layout for asbestos abatement projects is shown in the **Job Layout (Typical) – Asbestos Abatement**.

6. Asbestos Waste

- a. All ACM waste shall be disposed in approved Department of Environmental Protection asbestos disposal sites immediately after work completion. Pending disposal of the ACM waste, it shall be wetted, double bagged or wrapped in a total of 12 millimeter thick plastic sheeting and sealed. If bags are used, they must be "goose-necked" and duct taped. The labeling requirements for all waste containers are as follows:
 - (1) OSHA required **DANGER** label;
 - (2) name, address, and telephone number of the facility;
 - (3) U.S. Department of Transportation Class 9 label;
 - (4) typed or printed label RQ Class 9 PG III Asbestos NA-2212; and

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- (5) weight of each container.
- b. If the facility transports ACM outside the facility, all persons riding in the transport vehicle must be certified to handle ACM by the Department of Labor and Industry. Contingency plans are to be made for accidents or incidents that may occur during the transport of the ACM waste. These items, at a minimum, are to be included in the contingency plan:
 - (1) surfactant;
 - (2) personal and respiratory protective equipment;
 - (3) tools and materials (brooms, shovels, bags); and
 - (4) a means of communication with the facility (telephone, two-way radio).
- c. The Department of Environmental Protection requires the completion and availability of a vehicle log sheet, **Residual Waste Transportation Daily Operational Record, PQ-ER-WM-348 Form (Attachment 15-I)**. This log sheet must accompany any off-site transport of the ACM waste.
- d. A waste shipment record must be completed for all waste disposed, **STD-498, Asbestos Waste Shipment Record (Attachment 15-J)**. If the disposal of ACM waste is under contract, this form must be received before the contract is paid. Waste disposal records are maintained with the work file that generated the ACM waste and is maintained as an active record at the facility for 30 years.
- e. Waste water containing ACM must be filtered through HEPA filters to the three to five micron level prior to disposal into conventional sewage systems or disposed of as ACM waste.

7. Air Monitoring

- a. Locations having friable ACM shall be air monitored semi-annually to determine levels of fiber release. This includes breathing zone air analysis. Air monitoring of given sites can be accomplished at greater or lesser frequencies as justified and documented by the CISM/Fire and Safety Specialist, using the **Asbestos Abatement/Encapsulation - Air Sampling Log (Attachment 15-K)**.
- b. Air monitoring is done outside the work area to verify the integrity of the barriers. When negative air is used in the work area, air monitoring is done at the exhaust of the negative air system. Air monitoring is to be done at points where barrier integrity is considered most suspect.
- c. Personal air monitoring for a minimum of one employee must be done on all abatement work. The employee(s) selected will be working in the area where the

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most work will be done. Personal sample pumps are calibrated on a daily basis and are set at two liters per minute.

- d. An aggressive air sample must be done at the completion of abatement work. This is done by using a leaf blower or fan to stir the air. A reading of .01 fibers per cubic centimeter must be obtained for clearance to reoccupy the area.
- e. An air sample is to be conducted by using 25 millimeter cassettes with a two inch conductive cowl and analyzed by the National Institute for Occupational Safety and Health 7400 method by an accredited laboratory. A sample will be conducted by the "open face" method. To ensure acceptable laboratory readings, there must be a minimum of 25 liters collected for personal samples and a minimum of 1,000 liters collected for high volume samples. Clearance samples require a minimum of 3,850 liters collected.
- f. All air samples must be documented on an individual **Air Sampling Log** for all work.

I. Emergency Procedures

- 1. Emergency procedures are to be developed by the CISM/Fire and Safety Specialist for all ACM abatement projects. The emergency procedures shall address the following areas:
 - a. fire/medical emergencies;
 - b. life safety requirements due to barrier placements;
 - c. breaks in barrier integrity and immediate resealing of the break;
 - d. monitoring and alarm mechanism to inform workers of potential asbestos emergencies;
 - e. informing employees in abatement work areas of emergency evacuation procedures; and
 - f. at a minimum, fire extinguisher and minor first aid supplies are to be in the barrier area and workers trained in their use.

J. Specialized ACM Procedures

Under certain circumstances, specialized procedures may be required for work on ACM. If ACM abatement work cannot be accomplished under the procedures outlined in **Section H**, then the specialized procedures shall be followed. Individuals assigned to ACM abatement and abatement-related work must be qualified for this type of work.

- 1. Minor Asbestos Work

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Work on less than three square feet or three linear feet is considered minor asbestos work by the Environmental Protection Agency and is not reportable under their criteria. These specific recommendations are guidelines for minor projects. They do not relieve the Safety and Maintenance staff of the responsibility to develop additional precautions needed to prevent asbestos fiber release.

- a. Personal protection requirements (respiratory and disposable body coverings) are required for minor abatement work. Personal protective clothing is removed and bagged at the completion of the work. Respirators are removed and wet-wiped clean after the work.
- b. The CISM/Fire and Safety Specialist may determine that if the amount of fiber release is insignificant, it is not necessary to air monitor and seal the work area.
- c. Areas adjacent to minor removal projects are wet-wiped clean at the completion of the work.
- d. Work areas are secured and vacated until the ACM abatement work is completed.

2. Bulk Sample of Suspected ACM

- a. Personal protection equipment, respiratory and body coverings are recommended during bulk sample procedures.
- b. Work done is secured and the unoccupied and adjacent areas to the sample area are wet-wiped before re-entry is permitted.
- c. Wet sample is the recommended method.
- d. Samples are in bulk and penetrate all depths of suspected ACM. Containers are date/time labeled and identified as suspected asbestos. An identification number is placed on the sample container and documented in the facility file.
- e. Adequate samples must be taken of the suspected ACM material to ensure a positive/negative determination is made. Samples of all layers of material must be accomplished. Multiple samples ensure correct determination.
- f. During large sample projects, control samples of non-asbestos material are to be used.
- g. Laboratory analysis of suspected ACM including percentage and type of asbestos is available from the DGS using the **Bulk Insulation Test Request (Attachment 15-L)** and sent to the following address:

Department of General Services/Laboratory Division
Room G-28
2221 Forster Street, Harrisburg, Pennsylvania 17125

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3. Glove Bag Procedures

Glove bags, designed for asbestos work, are permissible for ACM wet removal. Manufacturer guidelines must be followed. When glove bags are used, the following procedures apply:

- a. personal protective equipment (PPE) is required;
- b. glove bag procedures are accomplished in unoccupied areas;
- c. glove bags are disposed as ACM waste;
- d. emergency procedures are developed to plan for the loss of integrity of glove bags;
- e. air monitoring in areas adjacent to glove bag procedures may be required by the CISM/Fire and Safety Specialist to ensure glove bag integrity; and
- f. the FMM ensures appropriate glove bags are purchased for the scheduled work. Current market availability allows for a variety of glove bags relating to the different sizes, configurations, and conditions in which abatement must occur.

4. ACM Brake Lining Removal Procedures

- a. Additional safety precautions are not required if the Environmental Protection Agency approved brake lining removal equipment designed for safe removal of lining particles is available and meets safety conditions of this policy.
- b. If brake lining removal equipment is not available, the following procedures are then followed:
 - (1) PPE is required;
 - (2) only protected medically screened workers are permitted in the work area when brake inspections, removals and replacements are being permitted; and
 - (3) linings are to be HEPA vacuumed or wet-wiped for removal of particles. No forced air cleaning is permitted. Areas adjacent to the lining removal are to be wet-wiped or HEPA vacuumed before re-entry by unprotected workers is permitted.
- c. Brake removals for inspection purposes must be performed in accordance with preceding **Subsection J.4.a.** or **J.4.b. above.**

5. Outdoor Asbestos Removal/Encapsulation Requirements

The outdoor asbestos removal/encapsulation requirements are as follows:

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- a. PPE is required;
- b. ACM is to be wetted. Work area barriers may be required based upon the circumstances of the job;
- c. air monitoring in adjacent areas is to be done; and
- d. emergency procedures are to be developed in anticipation of incidents that may occur during specialized operations. Specialized safety precautions are approved by the Safety and Environmental Protection Division prior to the start of work.

6. Emergency Plans

Department Heads within the facilities are to establish procedures for employees to report suspected friable asbestos and evacuate an area when unexpected damage or deterioration occurs due to ACM.

7. All in-house asbestos abatement work must be documented on a per job basis using the **Asbestos Abatement Log (Attachment 15-M)**. In addition, a semi-annual inspection must be documented on the **Asbestos Containing Material Semi-Annual Preventive Maintenance Inspection (Attachment 15-N)**.

K. Equipment/Material Requirements for Facilities

1. Minimum Requirements

Facilities must maintain a limited supply of equipment and materials needed for the personal protection of workers who perform inspections, take samples or abatement of ACM. Items include:

- a. two sets of respiratory protection equipment;
- b. two cases or approximately 50 disposable total body coverings;
- c. spray encapsulates designed for asbestos and applicator;
- d. duct tape and six millimeter polyethylene;
- e. approximately 100 properly labeled disposable bags with a minimum thickness of six millimeters;
- f. one personal air sample pump; and
- g. one air pump calibration unit.

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2. Additional Equipment

These items are needed for the majority of asbestos abatement projects and it is recommended that the facilities have this equipment in their inventory:

- a. flexible/rigid duct work;
- b. number 10 electrical extension cords with ground fault protection;
- c. garden hose, nozzle, and garden spray bottle attachment;
- d. wetting agent;
- e. scrapers, brushes, brooms, dustpans and nonmetallic snow shovels;
- f. ladders, scaffolding, and railings;
- g. glove bags;
- h. temporary lighting devices;
- i. ventilation equipment and tubes; and
- j. airless paint sprayer.

3. All ACM equipment is to be maintained according to the manufacturer's specifications.

L. Contracting and Contract Specifications

All contract work completed at Department sites shall meet the requirements of the Department, the Environmental Protection Agency, and Occupational Safety and Health Agency. A sample comprehensive job specification for an asbestos abatement project is available from the Department's Safety and Environmental Protection Division.

M. Inmate Asbestos Abatement Crews

1. Selection of Inmates for Inmate Asbestos Abatement Crews

- a. In accordance with Department policy DC-ADM 816, "Inmate Compensation," the Corrections Employment and Vocational Coordinator (CEVC) and the Facility Maintenance Manager (FMM) shall select inmates fitting the established criteria for the Inmate Asbestos Abatement Crew.
- b. Upon selection of candidates, the sending facility's CEVC and the Safety Manager shall consult with the CEVC and Safety Manager at SCI-Camp Hill, to determine if the candidates are appropriate for the program.

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- c. If the selected candidates are approved by both facilities, the sending facility shall conduct a medical pre-screening process using the guidelines contained in Subsection F. above and Section 8, Attachment 8-B of this procedures manual.
 - d. The results of the medical screening shall be maintained, under the Respiratory Monitoring Program Divider, in the inmate's medical record. If the candidate(s) pass the pre-screening they shall be permanently transferred to SCI-Camp Hill. If the candidate(s) fails the pre-screening, the candidate shall be dropped from further consideration for the program and SCI-Camp Hill will be notified of the removal. In all cases, the medical pre-screening results shall be maintained in the inmate's medical records.
 - e. Once the inmate candidates are transferred to SCI-Camp Hill, the results of their medical/asbestos screening shall be reviewed by the SCI-Camp Hill Medical Department, and the medical monitoring requirements of Subsection F. above, shall be conducted. Those inmates who fail the requirements of this section shall be removed from any consideration for this program.
2. Housing of Inmate Asbestos Abatement Crew at SCI-Camp Hill
- a. Inmates shall be permanently transferred to SCI-Camp Hill for the duration of the Inmate Asbestos Abatement Program.
 - b. Inmates approved for the Inmate Asbestos Abatement Program shall be housed with other inmates/candidates for the Asbestos Abatement Program unless there are security/housing concerns.
3. Inmate Asbestos Abatement Crew Training
- a. The Training Academy is the designated training center for the Inmate Asbestos Abatement Crew.
 - b. Upon the candidates being screened and approved by SCI-Camp Hill Medical Department and the Safety Manager, arrangements shall be made with the Training Academy for daily transportation, supervision, and feeding of the Inmate Asbestos Abatement Crew and associated staff members/certified instructors.
 - c. In the event a candidate for the Inmate Asbestos Abatement Crew misses any training sessions, the inmate shall be removed from the program. The inmate's future participation in Inmate Asbestos Abatement Certification classes may be considered if the absence was not related to a misconduct or other situation that was not the fault of the inmate.
 - d. If a member of the Inmate Asbestos Abatement Crew is removed from the program, the inmate shall remain at SCI-Camp Hill and shall be reassigned to another job assignment or depending on the reasoning for the absence, returned to the facility

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from which he was transferred. Once an inmate is removed from this program, he shall not be permitted to work on any in-house asbestos abatement projects.

- e. Once the Asbestos Abatement training has been completed and the Asbestos Certification license photo has been obtained and the required paperwork has been certified by the Safety Manager at SCI-Camp Hill and the staff at the Department's Bureau of Operations, Safety & Environmental Protection Division, the Inmate Asbestos Abatement Crew shall be eligible for asbestos abatement projects.

4. Assignments of Inmate Asbestos Abatement Projects

- a. Facilities requesting the Inmate Asbestos Abatement Crew shall contact the Safety & Environment Protection Division, in person, via telephone, or the Video Conference System, to discuss the proposed abatement project and any operational concerns.
- b. If the Safety & Environmental Protection Division agrees to the project, the Inmate Asbestos Abatement Crew shall be temporarily transferred to the requesting facility.
- c. The requesting facility is responsible for all costs associated with the project. This includes the purchasing of consumable items, inmate and staff payroll, permits, disposal of waste, as well as other costs associated with the project.
- d. If the proposed project is too complex, the Safety & Environmental Protection Division, and the requesting facility, shall attempt to develop alternatives to the proposed project in order to reduce the complexity or make the project more manageable.

5. Supervision of Inmate Asbestos Abatement Crew at the designated facility

- a. Prior to the arrival of the Inmate Asbestos Abatement Crew, the FMM shall assign a staff member certified in Asbestos Abatement as a Project Manager. The Project Manager shall ensure the procedures established in **Subsection H.** above are in place.
- b. The receiving facility shall ensure the Inmate Asbestos Abatement Crew is appropriately housed and has access to programming such as visiting, activities, religious programming, and other activities in accordance with Department procedures.
- c. The Project Manager shall submit the Inmate Asbestos Abatement Crew payroll reports to the facility's Inmate Employment Office to ensure for the period the inmates are working on the abatement project they are paid the payroll rate established by Department policy **DC-ADM 816, "Inmate Compensation."**
- d. If a member of the Inmate Asbestos Abatement Crew is removed from the project for a misconduct, health reasons or cannot continue as part of the Inmate Abatement Crew, the inmate shall be returned to SCI-Camp Hill. The inmate's status at SCI-

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Camp Hill shall depend on the reason for his return/removal from the Inmate Asbestos Abatement Crew.

- e. At the completion of the project, the Project Manager shall then arrange the return of the Inmate Asbestos Abatement Crew back to SCI-Camp Hill.

6. Return of the Inmate Asbestos Abatement Crew

- a. Prior to the Inmate Asbestos Abatement Crew returning to SCI-Camp Hill, the Project Manager shall contact the Safety & Environmental Protection Division at Central Office as well as the Safety Manager at SCI-Camp Hill and discuss any concerns that could affect the Inmate Asbestos Abatement Crew or future projects.
- b. The Inmate Employment Office shall ensure that the inmates are returned to their prior work assignment and pay rate. If the inmate's prior work assignment has been filled or the Inmate Employment Office determines the inmate needs to be used in another assignment, that inmate shall retain his pay rate from the previous assignment when starting a new assignment.

Section 16 - Safety Standards for Lead Containing Materials

A. Staff Responsibility

1. Facility Manager

Each Facility Manager is responsible for the overall implementation of this procedures manual.

2. Facility Safety Manager/Fire and Safety Specialist

The Facility Safety Manager/Fire and Safety Specialist shall:

- a. assist the Facility Maintenance Manager in the development of work practices and procedures that involve lead paint;
- b. conduct inspections on all projects that involve lead paint to ensure the appropriate work practices and procedures are in place; and
- c. conduct sampling/testing as needed to determine air, surface dust, bulk, and wastestream lead levels.

Acceptable methods of bulk sampling include atomic absorption spectroscopy (AAS) and XRF analysis.

3. Facility Maintenance Manager

The Facility Maintenance Manager shall:

- a. ensure all work is conducted in compliance with this procedure manual;
- b. obtain needed cleaning supplies and equipment;
- c. ensure all staff receives documented training in all required subjects; and
- d. notify Central Office prior to starting any abatement work.

4. Inmate Crew Supervisor

The Inmate Crew Supervisor shall:

- a. ensure compliance with all requirements of this procedures manual; and
- b. provide documented training in accordance with the **Inmate Training Outline (See Attachment 16-A)** to all inmates under his/her supervision prior to allowing them to perform any work involving lead containing materials.

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5. Health Care Administrator

The Health Care Administrator is responsible for providing for Blood Lead Level (BLL) and Zinc Protoporphin (ZPP) testing as required under this procedures manual.

6. Community Work Details

Community Work Details will not be allowed to conduct any lead-based paint related activities outside the facility. Any work conducted within the facility must fully comply with this procedures manual.

B. Lead-Containing Materials Handling

1. Lead-Based Paint Activities

Projects involving the disruption of lead-based paint fall into one of two categories, abatement or renovation.

- a. Abatement projects, by law, require person(s) who perform such work to be certified in accordance with Labor & Industry regulations.
- b. Renovation projects, although not regulated by Labor & Industry, must comply with the renovation section of this procedures manual.

2. Abatement Projects

- a. All work done on abatement projects must comply with Labor & Industry Lead Based Occupation Accreditation & Certification **34 PA. Code §203.1**.
- b. NO inmates shall be assigned to abatement projects.

3. Renovation Projects

- a. All renovation projects will be conducted only by properly trained staff and inmates.
- b. Work practices for conducting renovation work will be as follows:
 - (1) No dry scraping is allowed.
 - (2) High Efficiency Particulate Air Filter (HEPA) attached equipment or wet methods will be used on all work, unless written approval is granted by the Chief of the Safety & Environmental Protection Division, Bureau of Operations.
 - (3) Air sampling will be conducted as determined by the Facility Safety Manger (FSM)/designee to establish airborne concentrations, compliance with action

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levels/permissible exposure levels, and historical data regarding work practices.

- (4) Wipe sampling will be conducted as determined by the Facility Safety Manager/Designee to evaluate re-occupancy and establish historical data.
- (5) Tri-Sodium Phosphate (TSP) cleaning will be conducted on all projects.
- (6) Respirators shall be worn when HEPA equipped tools are not used.
- (7) All person(s) wearing respiratory equipment must comply with **Section 8, Respiratory Protection Program**, of this procedures manual.
- (8) Open-flame burning or torching of lead-containing surfaces and/or use of heat guns above 1,100° Fahrenheit is strictly prohibited.
- (9) The facility shall conform to applicable federal, state, and/or local building codes for all renovations, additions, and/or new construction.¹
- (10) All facility work programs shall meet minimum applicable federal, state, or local work, health, and safety standards.²
- (11) The waste disposal system shall be in accordance with a plan approved by the appropriate regulatory agency, which will avoid hazards and protect the health and safety of inmates and staff.³

C. Training

1. All employees involved in conducting lead abatement and/or supervising inmate crews conducting lead based paint activities (renovation projects) must receive training in accordance with Department policy **5.1.1, "Staff Development and Training."** Employees that receive this training shall maintain their certification as long as they are conducting the above stated activities.
2. Employees that supervise inmate crews that conduct lead based paint activities (renovation projects) shall provide documented training in accordance with the **Inmate Training Outline (See Attachment 16-A)**. This training shall be conducted prior to the assignment of duties that involve the disturbance of lead containing surfaces.

D. Health Assessments

1. All employees and inmates participating in lead abatement/renovation projects shall receive an annual Blood Lead Level (BLL) and Zinc Protoporphyrin (ZPP) test.

¹ 4-4123, 1-CTA-2A-01, 1-ABC-2A-01, 4-ACRS-1A-09, 1-CTA-3E-01

² 4-4455, 1-ABC-5A-06, 2-CO-2A-01

³ 4-4331, 4-4358, 2-CO-4D-01, 4-ACRS-1A-04, 1-ABC-4D-03, 1-CTA-3E-03, 4-ACRS-1A-02

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2. All person(s) required to wear respiratory protection equipment must receive medical clearance in accordance with **Section 8, Respiratory Protection Program**, of this procedures manual.
3. Any person(s) believed to have experienced unprotected exposure at levels above the established permissible exposure limit shall receive a Blood Lead Level (BLL) test.
4. Records documenting all testing shall be maintained confidentially for a minimum of thirty (30) years.

E. Waste Disposal⁴

1. Storage, removal, and final disposal of hazardous materials shall be conducted in accordance with all applicable regulatory agency criteria.⁵
2. Removed materials and any contact items for disposal must be bagged and/or drummed for disposal.
3. Prior to disposal, a Toxicity, Characteristic, Leachate Procedure (TCLP) test for lead only must be performed to characterize the waste stream.
4. The TCLP test will define if waste is to be treated as hazardous or construction waste.
5. Recycle waste materials when possible.

F. Special Work

All other work involving the use of lead-containing materials shall conform to this procedures manual as it applies. Concerns regarding the extent of compliance required will be identified by the Chief of Safety & Environmental Division, Bureau of Operations.

⁴ 2-CO-4D-01, 1-CTA-3E-03, 1-ABC-4D-03, 4-ACRS-1A-04

⁵ 4-4331

Section 17 - Safety Standards for Polychlorinated Biphenyls (PCBs)

A. Staff Responsibility

1. Facility Manager

The Facility Manager is responsible for the overall implementation of this procedures manual.

2. Facility Maintenance Manager/Designee

The Facility Maintenance Manager/Designee shall perform the following:

- a. laboratory test all suspect PCB containing equipment and document;
- b. label and inspect all PCB containing equipment according to procedure requirements;
- c. ensure proper storage of all PCB containing equipment;
- d. maintain all documentation on PCB equipment;
- e. report all PCB incidents to the Facility Safety Manager/Fire and Safety Specialist; and
- f. refer to the facility **Compliance Check Guide for Polychlorinated Biphenyls (See Attachment 17-A)** to ensure/monitor facility compliance.

3. Facility Safety Manager /Fire and Safety Specialist

The Facility Safety Manager/Fire and Safety Specialist shall:

- a. make all contacts for spills/leaks of PCB containing materials;
- b. ensure proper protective equipment, procedures and training are provided when staff are going to perform PCB spill/leak cleanup and disposal versus contract employees;
- c. ensure any PCB generated waste is properly disposed; and
- d. ensure regulatory compliance for any contract clean-up and disposal.

4. Emergency Preparedness Coordinator

- a. Incorporate all appropriate PCB emergency response procedures/notifications into the facility emergency plan.
- b. Ensure the **EPA/PCB Report Format (See Attachment 17-B)** is prepared and distributed according to procedure requirements.

B. Regulatory Requirements

1. All PCB transformers in use or in storage must be reported/registered with all primary fire brigades/fire departments that provide services. Use **Attachment 17-B** and include the following information:
 - a. location;
 - b. principal constituent of the dielectric fluid; and
 - c. name and number of the person to contact in case of a fire.
2. All combustible materials must be removed from PCB transformer enclosures, or if unenclosed from within 16 feet of a PCB transformer.
3. Labeling of all PCB transformers and large capacitors is to be in accordance with **40 CFR 761.3**.
4. Any means of egress/entrance to a PCB transformer area must be labeled according to the Environmental Protection Agency specifications.
5. Other electrical equipment items such as fluorescent light fixtures manufactured prior to 1977, hydraulic equipment, circuit breakers, switches, electromagnet, and voltage regulators may contain PCB and should be identified.

C. Reporting PCB Incidents

1. All PCB incidents are to be reported to the Safety and Environmental Protection Division at Central Office. Calls may be made to (717) 975-4884 during normal working hours Monday through Friday.
2. All PCB incidents involving 10 pounds (one gallon) or more of PCB's or incidents involving fires are to be reported to the **National Response Center at 1-800-424-8802**, the **Environmental Protection Agency at (215) 597-4651**, and the **Pennsylvania Emergency Management Agency** standby watch officer at **(717) 783-8105** by the highest ranking Department official on site during the incident.
3. Any incident involving contamination of the following is to be reported to the **Regional Environmental Protection Agency Office of Pesticides and Toxic Substances at (215) 597-4651**:
 - a. surface waters;
 - b. sewage;
 - c. surface area greater than or equal to one-half (.5) acre;

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- d. drinking water supplies;
- e. vegetable gardens or grazing lands; and
- f. any type of fire.

NOTE: Spills of 10 pounds (one gallon) or less of any PCB fluid not covered in the above sections are not reportable to the National Response Center/Environmental Protection Agency. However, they are required to be cleaned in compliance to the referenced Environmental Protection Agency policies and reported to the Department.

4. The reporting is to be done immediately (in no case later than the morning of the next workday) and confirmed in writing. Additional assistance during chemical emergencies can be gained from **Chemtrek (Chemical Manufacturer's Emergency Response Hot Line) at 1-800-424-9300**.

D. Emergency Response Cleanup

In addition to emergency reporting requirements contained in this manual, the following is required for sites possessing PCB low or high concentration equipment or untested mineral oil dielectric fluids or equipment:

1. Immediate action when PCB releases occur is required by federal law. At a minimum, a facility emergency plan shall address the following:
 - a. identifying an individual to coordinate activities when PCB releases occur including the notifications as required in **Section C** above;
 - b. evacuation of buildings within which releases occur or relocation to safe distances from outside PCB vessels;
 - c. provisions for initiation of leak containment and 48 hour cleanup of low concentration spills; and
 - d. unless proven otherwise, PCB incidents are assumed to be at maximum concentrations for the purpose of selection of respiratory and personal protection equipment. This includes testing of suspected PCB items to determine PCB presence.
2. Where possible, all items used in PCB cleanup disposal shall be disposed of as hazardous waste. Where this is not possible, a double wipe method with a solution indicated for PCB cleaning can be used. A decontamination area for personnel/equipment is to be established adjacent to spill areas. Materials indicated for environmental protection shall be used at decontamination areas. Decontamination areas shall be included in final sampling to assume a clean environment exists. Xylene,

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toluene, kerosene, hexane triton X-1 00 or penta power cleaner (commercial) is indicated for PCB cleaning.

3. Wastes from PCB cleanup activities are considered hazardous. These are to be contained at the point of cleanup in any of the below listed approved Department of Transportation items:
 - a. Liquid: 5, 5B, 6F, 17C, 17E, Drums
 - b. Non-Liquid: 5, 5B, 17C, Drums
4. Spill areas are to be secured and posted and upon examination, all visible contamination recorded. Areas are to be kept secure until final clearance levels exist for spilled materials. Secure areas are to be located at a minimum of 12 feet from the visible spill area.
5. Spill areas are to be cleaned to the levels published by the Environmental Protection Agency for the applicable area. Where back filling occurs, this is to be done with clean soil.
6. All PCB spills must be decontaminated to the levels identified in the **Decontamination Requirements. (See Attachment 17-C)**
7. Cleanup Record Keeping Requirements are as follows:
 - a. maintained for five years;
 - b. identification of source of spill;
 - c. date and time of spill;
 - d. date and time cleanup was completed;
 - e. description of spill location and nature of materials contaminated;
 - f. any pre-cleanup sampling data used to establish the spill boundaries;
 - g. description of surfaces cleaned;
 - h. amount and depth of soil removed; and
 - i. post cleanup sampling data; and
 - j. a certification statement signed by the responsible party stating that the cleanup requirements have been met and that the information contained in the record is true to the best of his/her knowledge.

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8. All cleanup of spills involving less than one pound (one pint) of PCB or less than 270 gallons of untested mineral oil must be completed within 48 hours of the spills discovery. Any furnishings or other easily replaceable items shall be disposed if contaminated within PCB spill areas. These shall be disposed as hazardous waste.
9. Certain spills may require more stringent cleanup than those stated in this procedures manual. When stipulated by the Environmental Protection Agency, the most stringent cleanup requirements will be met.
10. Determination of spill boundaries shall be initially all visible spill areas plus a buffer of one lateral foot to a depth of 10 inches. In the absence of visible traces, a statistical scheme of no more than two foot intervals between sample points shall determine the spill area.
11. Post-cleanup sampling is required to verify cleanup levels. The number of samples must be sufficient to ensure that the areas contamination of a radius of two feet or more within the sampling area will be detected, except that the minimum number of samples is three and the maximum number is 40. The sampling area is the greater of the area cleaned and an additional one foot boundary or an area 20 percent larger than the original spill area.
12. Fires involving PCB equipment have the potential of forming furon and dioxins as incomplete products of combustion. When these occur in or near buildings, relatively large amounts can be released causing adverse health affects. Individuals adjacent to or in these buildings should be evacuated immediately if the PCB's are suspect in fires.

E. Inspections

1. The Facility Maintenance Manager shall ensure that all PCB capacitors and transformers are inspected quarterly, per **40 CFR 761.40**. The inspection is visual with documentation maintained on site for three years in the Facility Maintenance Manager's office.
2. Inspections are to include the areas around transformers/capacitors for removal of combustibles and marking of equipment and rooms.
3. Record keeping on PCB vessels is to include:
 - a. location;
 - b. date of inspections and status;
 - c. person performing inspections;
 - d. leaks, including the amount of fluid leaked, cleanup activities and repairs; and result of any contamination.

4. Daily inspections are to occur on active/leaking PCB vessels. Such activity is considered emergency responses for the purpose of this section of the procedures manual. Federal regulations prohibit certain equipment and configurations including the reuse of PCB equipment in or near buildings, the use of PCB transformers/capacitors in food areas, large capacitors in other than restricted areas and electrical substation. Information of these items, as well as other use prohibitions, is coordinated by the Chief of the Safety and Environmental Protection Division.

F. Storage/Disposal Requirements

1. PCB items that contain more than 50 ppm PCB require specialized storage and disposal procedures.
2. Storage is required in a weatherproof building with an impervious floor with continuous curbing, minimum of six inches, capable of providing a containment of two times the internal volume of the largest PCB item stored, or 25 percent total PCB contained in the building.
3. The building must be located above the 100 year flood water elevation.
4. Maximum storage time is one year, day-to-day. Items are to be dated/tagged for same.
5. Items are to be visually inspected every 30 days for leaks and documented by the maintenance office.
6. Storage/disposal of PCB waste cleanup materials (drums, etc.) is also required in specialized storage areas as defined in Paragraph one above.
7. Disposal of any PCB contaminated materials or any materials containing PCB waste is to be in accordance with Environmental Protection Agency specifications by means of incineration. Lighting fixture ballast containing PCB shall be incinerated at an Environmental Protection Agency approved facility. Particular attention is to be paid to projects containing lighting fixture ballast manufactured prior to 1979. Any leak or spill of PCB contaminated materials is required to be cleaned up in accordance with Environmental Protection Agency regulations and this procedures manual.
8. Leaking PCB vessels, PCBs not in approved containers and any packaging or storage of PCB containing material is to be in the U.S. Department of Transportation certified drums, certified under the following schedules: 5, 5B, 6D, 17C or 17E.
9. Storage of PCB wastes in areas not meeting the above criteria may be stored for a maximum of 30 days with notation on the drum as to the day of storage.

Section 18 – Machine Guarding

A. Staff Responsibilities

1. The Facility Manager shall be responsible for the following:
 - a. overall implementation of this procedures manual; and
 - b. ensure compliance with all manufacturers' requirements and applicable federal and state standards of machine guarding.
2. The Facility Maintenance Manager (FMM)/Correctional Industries (CI) Manager shall be responsible for the following:
 - a. ensure all records of requests, approvals, hazard analyses, checklists etc. are forwarded to the Facility Safety Manager (FSM) and a copy shall be maintained on file by the generator;
 - b. develop a list of machines/equipment that require machine guarding;
 - c. prior to any installation of new equipment, modification of existing equipment, introduction of a new operation or change to an existing operation, the **Process Change Worksheet Form (Attachment 18-A)** is completed. The FSM shall be involved in the review process;
 - d. ensure notification is provided to the FSM as soon as practical when a potential change is proposed to a safety-critical process or equipment;
 - e. contact the FSM early in the design/procurement/equipment selection process for assistance in hazard analysis and risk assessment;
 - f. ensure that the Department/Division requesting machine/equipment completes the **Hazard Machine Guarding Checklist (Attachment 18-B)**. The FSM shall be involved in the review process; and
 - g. ensure that a system/operation hazard analysis is conducted on the proposed modifications to identify potential hazards and required control methods via the **Job Safety Analysis Template (Attachment 18-C)**.
3. The FSM shall be responsible for the following:
 - a. assist Department Head/designee when requested in determining the machine guarding requirements on existing equipment (mobile/stationary);
 - b. participate in the review of proposed equipment in accordance with **Subsections A.2.a. & d. above**;

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- c. periodically monitor the usage of machine guards according to manufacturer's specifications during operation. List any observations or deficiencies in the monthly report;
- d. review and recommend processes/controls on any/all existing equipment that may be in operation that did not include machine guarding at the time of manufacturing;
- e. assist Department Head/designee when requested in establishing a safe work practice in/around equipment/machinery that is antiquated; and
- f. maintain all related documentation.

4. Department Heads

Department Heads/designee shall evaluate their areas to determine if existing machines are compliant. If uncertain about compliance requirements, the Department Head should contact the FSM to discuss conducting a review of existing equipment.

5. Supervisors

Supervisors shall ensure their staff are familiar with this procedures manual, adhere to its guidelines, are provided necessary direction for guarding compliance and personnel protective equipment (PPE), if required.

B. Machine Guard Safety

1. Machine hazards must be identified and controlled to avoid injury to employees and inmates working on/or near one of the machines. A hazard is an existing or potential condition which has the potential to harm people, property or the environment. Thus, any machine motion or condition which can cause injury is considered hazardous and must be guarded.
2. Any guarding supplied by the manufacturer must remain in place on the equipment, except during properly protected repair and maintenance that utilizes emergency neutralization procedures, such as Lockout/Tagout as outlined in **Section 11** of this procedures manual. All guards shall be re-installed before the equipment is returned to service.
3. There are four major areas of safety which must be considered for every machine:
 - a. maintenance;
 - b. servicing and adjustment;
 - c. points of operation where the machine works on materials; and
 - d. protection from moving parts, other than points of operation.

C. Points of Operation

1. Points of operation are areas of machines where material is processed or changed by the machine and where work is actually being performed on the material.
2. Points of operation safeguarding depend on the nature of the specific machine and the materials being processed.
3. A description of various safeguards for machines, their advantages and limitations are outlined in **Types of Machine Safeguarding (Attachment 18-D)**. Also, refer to the **Hazards Inventory Checklist (Attachment 18-E)** to be completed by employees evaluating machine safeguards. The **Hazards Inventory Checklist** shall be submitted to the Department Head with a copy forwarded to the FSM.

D. Machine Motions

Mechanical motions which may be hazardous are outlined below.

1. Rotation Motion

Even slow smooth rotating shafts can pull body parts into dangerous positions. The resulting injuries can be severe or even deadly. Such things as collars, couplings, cans clutched flywheels, shaft ends, spindles and horizontal or vertical shafting are examples of common rotating parts that are dangerous. Those dangers are increased by bolts, nicks, abrasions, projecting keys, or set screws which can serve as a cleat to grab clothing and/or as a protruding cutter head. These projections are difficult to see during rotation and must be made flush with the shaft if possible. There are three basic in-running nip point hazards that are created by rotating parts.

- a. If there are parts rotating in opposite directions that are touching or there are rotating parts that are in close proximity, then a hazard exists where workers could be pulled in between the rotating parts. This type of hazard is commonly found on rolling mills or machines with intermeshing gears.
- b. Another nip point is created between rotating and tangential moving parts such as chain and sprocket drives, v-belt drives, or rack and pinions.
- c. Nip points can also occur between fixed and rotating parts which create a shearing, crushing or abrading hazard. They include: spoked wheels, or flywheels, screen conveyors, or an abrasive wheel and the work rest.

2. Reciprocating Motion

Reciprocating motions create hazards during their back and forth or up and down motion that may strike a worker or cause them to be caught between a moving and a stationary part. This could include a bed of a milling machine.

3. Transverse Motion

Transverse motion or movement in a straight or continuous line creates a hazard when the worker is pulled into the pinch or shear point or is dragged by the moving parts into other moving parts.

E. Mechanical Actions

Mechanical actions are machine motions (actions) as outlined below.

1. Cutting Action

A cutting action may be created in any rotating, reciprocating or transverse motion. The hazards of a cutting action are created in many points of operation activities. Injuries may occur to fingers, hands, head, arms, or where flying chips or scrap material may strike the eyes or face. Many examples including the cutting hazards of band saw, circular saw, boring or drilling machines, turning lathes, or milling machines.

2. Punching Actions

A punching action is created when power is applied to a stud or dies for the purpose of blanking, drawing or stamping material. A hazard is created at the point where material is inserted, held or withdrawn by hand. These hazards could be created on power presses or iron workers.

3. Shearing Action

Shearing action hazards are created when power is applied to a slide or knife in order to shear or trim materials, such as metal or paper shears.

4. Bending Action

- a. A bending action occurs when two dies are brought together under power in order to bend, draw, or stamp metal or other material. The hazard is created at the point where hands are used to insert, hold or withdraw material from the point of operation.
- b. Equipment creating hazards due to bending action are power presses, press brakes, or tube benders.

F. Machine Safeguards

One or more methods of machine guarding must be used to protect the operator and others in the machine area from hazards such as:

- 1. points of operation;

2. in-going nip points;
3. rotating parts; or
4. flying chips and sparks.

G. Safeguard Requirements

All machine safeguards must:

1. conform to or exceed Federal, State and Local requirements;
2. be considered a permanent part of the machine;
3. afford maximum protection;
4. prevent access to danger zone during operation;
5. not weaken the structure of the machine;
6. not interfere with machine operation;
7. be designed for the specific machine and job;
8. be durable; and
9. not be a source of additional hazard.

H. Methods of Machine Guarding

Virtually all machines have hazardous motions and/or energy that must be effectively guarded to prevent employee and/or inmate injury. Machines purchased or fabricated must be properly guarded prior to use following guidelines outlined in **Types of Machine Safeguarding** for the various methods of machine guarding requirements. All fabricated or purchased guards shall meet all Federal, State and Local Specifications for Machine Guards.

I. Maintenance, Servicing and Adjustment

1. All staff/inmates performing service and maintenance of machines must be properly trained, qualified, and competent to perform the task.
 - a. Staff shall be considered qualified by any of the following:
 - (1) experience in the use and maintenance of a particular machine;
 - (2) training received from supervisory personnel;

- (3) training obtained from the manufacturer; and/or
 - (4) demonstrate the ability to operate and maintain the equipment by reading and understanding the equipment manufacturer's literature.
- b. Inmates shall be trained by staff using **Subsections I.1.a.(1)-(3) above**. **Subsection I.1.a.(4) above** shall not be an acceptable training method for inmates.
2. Only authorized staff/inmates are permitted to perform service and maintenance on machines.
 3. The FMM will take all necessary measures to ensure that, throughout its working life, machinery is maintained to meet the relevant safety requirements. The manufacturer's instructions should be taken into account when maintenance is carried out.
 4. The FMM will ensure the safety of machinery through a system of preventive maintenance, including regular inspections and testing where appropriate, of protective devices, guards, and emergency stops. Any defects should be rectified promptly. In the event that serious defects are noted, the machinery should not be used until the defects have been corrected.
 - a. The Maintenance Work Order system shall include the preventative maintenance and inspection of machine safeguarding used by the Maintenance Staff.
 - b. Correctional Industries shall develop a system of inspection and maintenance that identifies the systems components related to the safe operation of the machinery. (Job Safety Analysis can be a useful tool in the development of this protocol).

J. General Housekeeping

1. Work areas and machinery shall be kept clean and free of debris.
2. All floors and aisles shall be kept in good repair and free from obstructions. Floors in working areas should be kept clean to prevent workers from slipping.
3. Dust collection systems shall be used in areas where woodworking machinery is being used.
4. Aisle ways shall be kept open and clean to maintain safe egress.

K. Training

1. Employee/inmates who are working on or around equipment/machinery shall be trained according to the manufacturer's recommendations and all sections of this procedures manual. The training curriculum shall include but is not limited to:
 - a. the proper use of the equipment/machinery;

- b. the dangers of using the equipment for any purpose other than that specified by the manufacturer; and/or
 - c. the necessary ancillary tools required to be used for the machine or process.
2. Staff/inmates must receive training on recognizing the hazards and the methods to minimize exposure to those hazards.
 3. All training records for staff shall be maintained in accordance with Department policy **5.1.1, “Staff Development and Training.”**
 4. All inmate training records shall be maintained on the work site by the inmate supervisor.

L. Recordkeeping

1. Hazard Evaluations will be recorded and maintained by the FSM/designee in the Safety Department.
2. Training

Each Department and the Training Coordinator must maintain machine guarding training records. The following minimum data must be recorded:

- a. employee name and employee number;
- b. inmate name and number;
- c. date of training; and
- d. instructor name.

Section 19 - Community Corrections Centers (CCC) Fire, Safety, and Sanitation

A. Responsibilities

1. Regional Directors are responsible for the following:
 - a. oversee the Fire, Safety, and Sanitation Programs in all CCC's in the region;
 - b. review all CCC Fire, Safety, and Sanitation procedures during annual inspections;
 - c. review all Fire, Safety, and Sanitation Reports prior to submission to the Bureau of Community Corrections Fire, Safety, and Sanitation Committee; and
 - d. follow through on all recommendations of the Bureau of Community Corrections and the Department's Safety and Environmental Protection Division.
2. Community Correction Center Directors are responsible for the following:
 - a. assign an individual to serve as the Fire, Safety, and Sanitation Officer for the CCC;
 - b. develop local fire, safety, and sanitation procedures in conjunction with the CCC Fire, Safety, and Sanitation Officer; and
 - c. review all Fire, Safety, and Sanitation Reports and follow through on all appropriate recommendations.
3. Chief of Safety and Environmental Protection is responsible for the following:
 - a. endorse and promote Department-wide safety programs;
 - b. review minutes and major issues from the Bureau of Community Corrections Fire, Safety, and Sanitation Committee for discussion, recommendations, and possible resolution; and
 - c. review investigations and recommendations submitted by the personnel at all Department locations involving work loss by staff.
4. Bureau of Community Correction Safety Committee is responsible for the following:
 - a. promote safety programs in CCC and Contract Facilities for staff and residents;
 - b. review the Monthly Safety Committee minutes and quarterly Fire, Safety, and Sanitation reports submitted from each facility;
 - c. oversee the training curriculum of Fire, Safety, and Sanitation Officers;

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- d. review investigative reports from the Fire, Safety, and Sanitation Officers to ensure that the reports are complete and that discrepancies in CCC procedures are corrected; and
 - e. report to the Department's Safety and Environmental Protection Division regarding Fire, Safety, and Sanitation issues from CCC and Contract Facilities.
5. Fire, Safety, and Sanitation Officer¹ is responsible for the following:
- a. develop with the CCC Director, a CCC Fire, Safety, and Sanitation procedure as indicated by Department policy;
 - b. work with qualified sources in the community to review the fire protection systems within the CCC to assure that adequate fire protection is available;
 - c. ensure weekly, monthly, and quarterly fire, safety and sanitation inspections of the facility are conducted;²
 - d. ensure that all fire protection equipment in the facility is maintained according to manufacturer's recommendations;
 - e. oversee the training of employees in the essentials of fire, safety, and sanitation;
 - f. ensure that the CCC has an ongoing program for maintaining proper sanitation, including proper housekeeping procedures and pest and vermin control. **Refer to Section 5 of this procedures manual for training information;**³
 - g. conduct monthly fire drills at the direction of the CCC Director;
 - h. maintain a log of inspections, tests, and drills;
 - i. investigate any accidents, injuries or fires in the CCC in order to:
 - (1) identify cause or suspected cause;
 - (2) determine affects on materials and equipment;
 - (3) assess damage;
 - (4) determine if proper procedures were followed;
 - (5) determine if preventive measures could have been taken; and

¹ 4-ACRS-1C-10, 4-ACRS-1C-12, 4-ACRS-1C-13, 4-ACRS-1C-14

² 4-ACRS-1A-03

³ 4-ACRS-1C-18

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- (6) complete the proper report to the CCC Director, Regional Director, and Director of the Bureau of Community Corrections on the facts and findings involved.
 - j. review specifications with the CCC Director for the selection and purchase of CCC furnishings to assure their conformance to the fire safety requirements of the Department;
 - k. inspect any electrical devices brought into the CCC by residents to ensure they meet the fire safety requirements of the CCC;
 - l. participate as a permanent member of the CCC Safety Committee; and
 - m. provide reports and information as required by the Central Office Safety and Environmental Protection Division.
6. Community Corrections Center Safety Committee
- a. Each facility shall establish a CCC Safety Committee, chaired by the Fire, Safety, and Sanitation Officer. Members shall include staff representation from all classifications in the Center including the CCC Director and both full-time and part-time CCC monitors.
 - b. The duties of this Committee shall be to monitor fire, safety, and sanitation programs, review fire drills, assure that equipment is properly tested, and to promote employee and resident participation, education, and training.

B. Fire/Safety

- 1. Evacuation Plan⁴
 - a. All facilities are to develop a written evacuation plan to be used in case of a fire or other major emergency. This plan shall be incorporated into the Center's emergency plan. The plan must be reviewed, updated, and reissued annually to the local fire department and other appropriate jurisdictions.⁵ The evacuation plan must include the following:
 - (1) building floor plans;
 - (2) location of exit signs and directional arrows for traffic flow;
 - (3) locations of publicly posted plan;
 - (4) directions to staff and residents for the orderly evacuation of the building;

⁴ 4-ACRS-1C-02, 4-ACRS-1C-09

⁵ 4-ACRS-1C-05

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- (5) specific instructions to the staff on duty regarding records and reports which should be secured or taken from the CCC;
 - (6) a site in close proximity to which all staff and residents must report during quick emergency evacuation; and
 - (7) provisions for emergency medical care, transportation, and communications.
- b. In accordance with Department policy **8.1.1, "Community Corrections Centers"** the Community Corrections Centers Emergency Plan will further delineate procedures to be followed by staff when evacuation is imminent.
 - c. Emergency evacuation drills are to be conducted at least monthly with documentation of all drills being maintained at the facility.⁶ Evacuation drills are to be reported to the Regional Office via a monthly report.
2. Flammable, Toxic, and Caustic Materials
- Control and handling of flammable, toxic, and caustic materials shall follow the procedures in **Section 5** of this procedures manual.⁷
3. Purchases⁸
- a. CCCs shall develop procedures for Fire, Safety, and Sanitation Officers to evaluate the flammability and toxicity characteristics of items purchased or being considered for purchase.
 - b. Arrangements shall be made with the Support Facility's Business Office to ensure that Manufacturer's Safety Data Sheets (MSDS) are requested for all purchases.
4. Smoking Areas⁹
- a. The CCC Rules and Regulations must indicate where smoking is permitted in the facility. In those areas, non-combustible receptacles for smoking materials must be available. Separate containers for other combustible refuse must be available at locations throughout the CCC.
 - b. Special containers should be provided for flammable liquids and for rags used with flammable fluids. A system for daily emptying and cleaning of receptacles must be in place and utilized.

⁶ 4-ACRS-1C-03

⁷ 4-ACRS-1C-17

⁸ 4-ACRS-1C-15

⁹ 4-ACRS-1C-16

5. Right-to-Know

- a. The CCC Director shall designate a “Right-to-Know” Coordinator. It shall be the responsibility of the Right-to-Know Coordinator to assure, with the assistance of the CCC Director, the CCC’s compliance with **Section 4, Worker and Community Right-to-Know** as outlined in this procedures manual. It is expected that only a minimal amount of substances of this nature can be found in a CCC. Support facilities should be used as a resource in this endeavor.
- b. The CCC Director shall have overall responsibility for local compliance.

C. Housekeeping/Sanitation¹⁰

1. Housekeeping/Sanitation

- a. The Fire, Safety, and Sanitation Officer shall be responsible to oversee the CCC Housekeeping and Sanitation Program. The program shall encompass all areas of the facility including but not limited to the following areas:
 - (1) sleeping areas;
 - (2) kitchens;
 - (3) recreation areas;
 - (4) laundries;
 - (5) rest rooms and showering/bathing area;
 - (6) visiting areas;
 - (7) public rest rooms;
 - (8) offices;
 - (9) storage; and
 - (10) outside areas.
- b. The issues to be addressed shall include but not be limited to the following areas;
 - (1) sanitation;
 - (2) housekeeping;

¹⁰ 4-ACRS-1A-06

- (3) personal hygiene;
 - (4) vector control;
 - (5) water temperature control;
 - (6) water quality;
 - (7) trash disposal;
 - (8) clothing, linens, bedding (exchange or cleaning);
 - (9) biological/infectious waste;
 - (10) detergents/cleaning agents control;
 - (11) refrigeration temperatures; and
 - (12) fire safety.
- c. A written housekeeping and sanitation plan shall be developed by the CCC Director, utilized, and monitored in all areas of the facility. These plans shall comply with all applicable legal statutes, Department policies, ACA Accreditation Standards, and any guidelines of government regulatory agencies.

2. Waste Disposal¹¹

Provisions should be made for the disposal of all wastes in a manner that is acceptable to the city or municipality in which the CCC is located. Health authority inspections should address the propriety of the waste disposal system.

3. Vermin and Pest Control¹²

The housekeeping plan should include provisions for a contract for vermin and pest control with a vendor providing these services. The contract should delineate the frequency of those services. Documentation of services should be maintained at the CCC.

4. Water Supply¹³

Each CCC's water supply shall be tested and approved by an independent source outside of the Department. The report shall be maintained at the CCC. All future testing

¹¹ 4-ACRS-1A-04

¹² 4-ACRS-1A-05

¹³ 4-ACRS-1A-01

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shall be at the direction of the Department's Bureau of Operations, Safety and Environmental Division.

5. Clothing and Bedding Supplies¹⁴

The housekeeping plan shall include written procedures for cleaning, storage, and distribution of bedding and linen supplies. It shall delineate how and when residents have access to washers and dryers and how clothing is disinfected when necessary.

D. Maintenance

All maintenance problems shall be handled in accordance with Department policy **8.1.1**.¹⁵

E. Reports and Inspections

It is the purpose of the following reports to ensure compliance with good fire, safety, and sanitation practices and assure the collection of comprehensive, accurate, and uniform data regarding fire, safety, and sanitation issues.

1. **DC-121, Part 2, Extraordinary Occurrence Report (Attachment 19-A)**

This report shall be used for incidents involving accidents, injuries, property damage, or equipment failures in accordance with Department policy **6.3.1, "Facility Security."**

- a. All initial reports of accident/injuries that involves employees or residents are to be submitted by the end of the following workday.
- b. Follow-up reports are to be submitted as necessary.
- c. All reports are to be submitted by the CCC Director to the Regional Director who will forward the reports via facsimile to the Director of the Bureau of Community Corrections and any other necessary offices.

2. **CCC Fire Report Form (Attachment 19-B)**

In the event of a fire, a **Fire Report Form** shall be completed by the Fire, Safety, and Sanitation Officer and submitted to the Director of the Bureau of Operations, the Director of the Bureau of Community Corrections, CCC Regional Director, and the CCC Director. The report shall be placed on the agenda for the Bureau of Community Corrections Safety Committee meeting.

¹⁴ 4-ACRS-4B-02, 4-ACRS-4B-04

¹⁵ 4-ACRS-4B-02

3. CCC Weekly Inspection Report Fire/Safety/Sanitation Area (Attachment 19-C)¹⁶

All weekly inspection reports by CCC staff are to be reviewed by the Fire, Safety, and Sanitation Officer. The attached **Weekly Inspection Report Fire/Safety/Sanitation Area** form is only an example. Forms are to be developed locally to reflect specific facility physical plants while retaining the necessary elements of the attached report.

4. Monthly Fire/Safety/Sanitation Inspection Report (Attachment 19-D)

Monthly inspection reports by the Fire, Safety, and Sanitation Officer are to include a narrative summary that identifies problem areas and makes recommendations regarding those areas. These reports are to be submitted to the Regional Director via the Monthly Community Corrections Center Reports.

5. CCC Quarterly Fire/Sanitation/Safety Inspection Report (Attachment 19-E)

Quarterly reports are to be completed by the Fire, Safety, and Sanitation Officer. This report will include a summary of the weekly and monthly reports. The Quarterly Report will consist of a narrative of completed Bureau of Community Corrections forms and shall be submitted to the Regional Director. The Regional Director shall submit this report to the Department's Director of the Bureau of Operations. A copy of this report shall be sent to the Director of the Bureau of Community Corrections. This report is to be submitted by the 15th of the month following the end of a calendar quarter.

6. Annual, Fire, Safety, and Sanitation Inspection Report

The Annual Fire, Safety, and Sanitation Inspection Report is to be a narrative report that includes, at a minimum, yearly uncorrected life safety problems, training needs, long and short range goals regarding fire and safety, equipment needs, and a copy of the Annual Fire Inspection from an outside qualified source. The Annual Fire, Safety, and Sanitation Inspection Report will be submitted to the Regional Director. The Regional Director will forward the report to the Director of the Bureau of Community Corrections.

7. Local Health Inspection Report

A written report from the local health authorities shall be requested and distributed with a copy forwarded to the Regional Director and the Director of the Bureau of Community Corrections.

8. Annual Fire Inspection

An annual fire inspection will be requested from an outside qualified source in order to ensure compliance with local and national fire regulations.¹⁷ A report of that inspection shall be included in the Annual Fire, Safety, and Sanitation Report described above.

¹⁶ 4-ACRS-1A-03

¹⁷ 4-ACRS-1C-08, 4-ACRS-1C-11

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9. Annual Health Inspections¹⁸

The CCC Director shall request an annual health inspection by local health department personnel or state health department personnel when no local health department exists. A written report shall be requested and distributed with copies forwarded to the Regional Director and the Director of the Bureau of Community Corrections.

10. Fire, Safety, and Sanitation Committee Monthly Meeting Minutes

Minutes of the meeting shall be submitted to the Regional Director and to the Bureau of Community Corrections Fire, Safety, and Sanitation Committee representative of the region and to the Director of the Bureau of Community Corrections as indicated in the master calendar. These minutes can then be made available to the Bureau Fire, Safety, and Sanitation Committee at the next scheduled meeting. Copies of the Monthly Safety Committee meeting minutes must be sent to the building owner with deficiencies noted in accordance with Department policy **8.1.1**.

¹⁸ 4-ACRS-1A-02

Section 20 – Energy Conservation and Use of Electrical Devices

A. General

To conserve energy and provide improved fire/life safety in all Department owned or leased facilities, the procedures outlined below have been established to ensure compliance with **Management Directive 720.5, Energy Conservation and Electrical Devices in Commonwealth-Owned or Leased Buildings.**

B. Responsibilities

1. The Safety and Environmental Protection Division shall:
 - a. develop and monitor the Department's energy conservation program and use of personal electrical devices; and
 - b. maintain copies of completed approval forms for requests from Central Office.
2. The Facility Manager/Bureau Director/designee shall:
 - a. maintain overall responsibility for local compliance with these procedures;
 - b. assign appropriate staff responsible for ensuring staff comply with these procedures; and
 - c. ensure staff is provided annual training in energy conservation practices.
3. The Corrections Institutional Safety Manager (CISM) shall:
 - a. review each request for electrical device use and provide a recommendation to the Deputy Superintendent for Facilities Management (DSFM);
 - b. comment on any approval or disapproval of personal electrical devices;
 - c. provide direction to Department Heads/Managers/Supervisors on removal and/or replacement of appliances that do not comply with this policy; and
 - d. maintain copies of all completed approval forms.

C. Energy Conservation

1. Energy Efficiency Requirements to improve energy efficiency of Department owned and leased facilities, ENERGY STAR® requirements of specific electrical devices and/or appliances must be met.¹
 - a. Those appliances include dehumidifiers, room air conditioners, refrigerators and water coolers in Department-owned and leased facilities must be ENERGY STAR® qualified models.
 - b. Qualified products for the specified appliances can be found at www.energystar.gov under the “products” tab. Qualified products may also be recognized by the ENERGY STAR® mark, which may appear on the appliance, packaging or Energy Guide Label.
2. Department Purchased Electrical Devices
 - a. Each electrical device purchased by the Department shall fully comply with all of the above requirements.
 - b. The Facility Maintenance Manager/designee shall ensure that every Department-owned electrical device is maintained according to the manufacturer’s specifications as outlined in **Section 13** of Department policy **10.2.1, “Facility Maintenance.”**²
3. Office Equipment
 - a. All powered office equipment shall be turned off when not in use unless it is detrimental to the operation of the equipment or facility to do so.
 - b. Items such as computers, copiers, calculators, paper shredders, etc. shall be turned off at the conclusion of each work day, and in particular, during the weekend and/or holiday periods.
4. Interior Environment
 - a. The temperature in all Department-owned facilities will be maintained at 67 degrees in the winter and 75 degrees in the summer.³
 - b. This excludes areas that are not heated or cooled and areas with unique environmental needs.

¹ ENERGY STAR® is a National Symbol for energy efficiency in America and is in partnership with the U.S. Environmental Protection Agency and the Department of Energy in order to improve energy usage and greenhouse gas emissions.

² 4-4218, 1-CTA-2A-03, 2-CI-6A-7

³ 4-4153, 1-CTA-2B-02

5. Lighting

- a. Every effort shall be made to reduce the usage of electric lighting in Department facilities. Employees should maximize the usage of natural light by turning off all non-essential lighting.
- b. Where possible and appropriate, all Department facilities will install in either new areas or retrofit in existing areas, lighting products that are technologically superior in energy savings efficiency.
- c. The usage of incandescent lighting shall be discontinued wherever ENERGY STAR® qualified compact fluorescent light bulbs can be used. At no time shall both types of lighting be used simultaneously in the same fixture.

D. Use of Electrical Devices

1. General Requirements

All electrical devices must meet the criteria listed below.

- a. All Commissary devices applicable under this procedure manual shall be pre-approved by the Commissary Committee;
- b. Each device must be Underwriters Laboratories (UL) tested and certified, and shall be appropriate for the intended use;
- c. The device must be in good working condition with no visible signs of age or damage;
- d. The device must be plugged directly into a receptacle;
- e. While the use of extension cords or power strips is discouraged, if it is determined these devices are necessary, they shall be used in accordance with the manufacturer's specifications;
- f. Hair Dryers and curling irons in approved facilities shall be plugged into ground fault circuit interrupter outlets, as found in restrooms and kitchenettes, etc.;
- g. Space heaters may be approved only when necessary; for example, when the building's system(s) are unable to provide acceptable conditions. When approved, they will meet all of the above requirements plus the following:
 - (1) safety shut-off features for overheating and tip over protection;
 - (2) exposed glowing elements are prohibited;
 - (3) may not burn fossil fuels or alcohol; and/or

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(4) may not exceed 1500 watt rating.

2. Restricted Electrical Devices

a. The use of the following restricted electrical devices is prohibited within Department owned and leased facilities unless approved as outlined in Subsection E. below:

- (1) toasters;
- (2) toaster ovens;
- (3) coffee makers;
- (4) space heaters;
- (5) popcorn makers;
- (6) microwave ovens;
- (7) heating pads;
- (8) hair dryers;
- (9) **clothing irons**;
- (10) curling irons;
- (11) refrigerators;
- (12) grills; and
- (13) other similar devices.

b. Permanent Waivers

- (1) A waiver has been granted to SCI Cambridge Springs, SCI Muncy, Quehanna MBC, Elizabethtown Training Academy and Community Corrections Centers for hair dryers, **clothing irons** and curling irons.
- (2) A waiver has been granted to the Food Services Division for devices necessary to carry out the operations of this area at all facility locations.

3. Personal Use Electrical Devices

The use of the following personal electrical devices is prohibited in all Department owned and leased facilities unless approved as outlined in **Subsection E. below**:

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- a. fans;
- b. radios;
- c. lamps;
- d. clocks; and
- e. other similar devices.

4. Limits

- a. Every effort shall be made to limit the number of approved electrical devices. All electrical devices, with the exception of those that must run continuously, shall be turned off when not in use.
- b. Toasters, toaster ovens, coffee makers, popcorn makers, microwave ovens, and all other similar appliances **must be located only in common areas where such areas are available.**
- c. Coffee makers must be equipped with automatic shut-off devices and must be placed on a non-combustible surface.

E. Approval of Electrical Devices

All employees are required to obtain permission for all restricted electrical devices and/or personal use electrical devices outlined below:

1. Restricted Devices

- a. The requesting staff member shall submit a completed copy of a **Restricted Electrical Device Approval Form (Attachment 20-A)** to their immediate supervisor.
- b. The supervisor shall review the request, provide an approval or disapproval recommendation for each item requested and forward to the CISM or Safety Division for Central Office staff;
- c. Final approval shall be made by the DSFM or the Director of the Bureau of Operations for Central Office requests;
- d. The final document containing the DSFM/Director's signature shall be returned to the CISM for all facility requests and/or returned to the Safety Division for Central Office requests. A copy of the completed document will remain on file with the CISM/Safety Division, with a final copy forwarded to the requestor;
- e. The requesting staff shall maintain a copy of the completed approval form and may be required to periodically produce the approval document during the inspection process.

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- f. The DSFM shall have the final approval for restricted electrical device approval request in the facilities; and
- g. The Bureau of Operations Director shall have the final approval for restricted electrical device approval requests for Central Office.

2. Personal Use Electrical Devices

- a. The requesting staff member shall submit a completed copy of a **Personal Use Electrical Device Approval Form (Attachment 20-B)** to their immediate supervisor.
- b. The immediate supervisor can approve the items listed in **Subsection D.3. above**. Upon approval, a copy of the approved form must be maintained with the requestor.
- c. The requesting staff shall maintain a copy of the completed form and may be required to periodically produce the approved form during the inspection process.
- d. Immediate supervisors shall approve/disapprove electrical device requests identified in **Subsection D.3. above** for their respective department/division.

F. Compliance Program

1. Directors/Department Heads shall:

- a. ensure staff in their department have completed approval request forms for each electrical device listed in **Subsection D. above**; and
- b. ensure employees receive training in energy conservation practices.

2. Director of Operations/Facility Maintenance Manager shall:

- a. ensure that in the event of continuous electrical disruptions, the areas in question are reviewed to determine if necessary actions up to and including discontinuing the usage of previously approved devices will be taken; and
- b. ensure that every Department-owned device is maintained in accordance with the manufacturer's specifications as outlined in **Section 13** of Department policy **10.2.1**.

3. Managers/Supervisors shall:

- a. inspect work areas for compliance;
- b. visually check electrical devices that have been approved to ensure safe operation;
- c. report any defective or unauthorized electrical devices to Department Head; and

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d. provide one opportunity for employees to remove unauthorized devices.

4. Employees shall:

- a. not use restricted electrical devices and/or personal use electrical devices as defined in **Subsection D. above** unless approved in writing by the appropriate authority and accompanied by the completed approval form; and
- b. report electrical device defects such as overheating, frayed electrical cords, etc. to their supervisor.

Section 22 – Accident Investigations

A. General

These procedures are established to provide a safe work environment for Department employees by reducing the losses with workplace injuries through the identification and correction of workplace hazards.¹

B. Staff Responsibility

1. The Chief of the Safety and Environmental Protection Division shall be responsible for the following:
 - a. oversee the development and monitoring of accident investigation procedures;
 - b. serve as the liaison between the Safety and Environmental Protection Division and Office of Chief Counsel; and
 - c. ensure that accident investigation training is provided as outlined in **Subsection F. below.**
2. The Facility Manager shall be responsible for the following:
 - a. the overall implementation of this procedures manual;
 - b. ensure that all accidents and near misses are investigated in a timely manner, and follow-up investigations are completed by the Facility Safety Manager;
 - c. ensure that all serious injuries, including but not limited to, death or dismemberment, shall be reported to the Safety and Environmental Protection Division within 24 hours of occurrence. This is in addition to an Extraordinary Occurrence Report (EOR) in accordance with Department policy 6.3.1, “**Facility Security,**” **Section 17;** and
 - d. ***ensure that all documentation: Accident/Injury Investigation Report (Attachment 22-A), Accident/Injury Witness Statement(s) (Attachment 22-B), Accident/Injury Investigation Follow-Up Report (Attachment 22-C), and Interview questions are sent via email to the CR, DOC Accident Investigation Reporting address within 48 hours of the reported injury.***
3. The Facility Safety Manager shall be responsible for all accidents and near misses, to include the following:
 - a. ensure all accidents/incidents are reported to the Deputy Superintendent for Facility Management (DSFM) in a timely manner. Accidents with potential litigation

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implications shall be forwarded immediately to the Safety and Environmental Protection Division;

- b. provide information as it relates to this procedures manual during new employee orientation to include:
 - (1) employee responsibilities related to accident/incident investigation; and
 - (2) an explanation of the differences between completing the **Accident/Injury Investigation Report** and reporting Workmen's Compensation claims in SAP or ESS.
- c. conduct and document an initial investigation as outlined below:
 - (1) review the initial accident report completed by the first line supervisor;
 - (2) recreate the accident scene if necessary;
 - (3) interview the accident victim;
 - (4) interview all witnesses;
 - (5) review recommendations provided by supervisors;
 - (6) assist Department Head if requested; and
 - (7) provide the DSFM with the final document that includes recommendations for potential reduction of reoccurrence.
- d. ensure that a follow-up investigation is conducted in accordance with **Subsection D. below** to determine the cause(s) of the accident and provide recommendations to prevent a reoccurrence.
- e. The Facility Safety Manager shall verify there are no video recordings available (in absence of video recordings in the initial investigation packet). In the event video recordings are available, ***the obtained video will be saved to the facility's V-Drive.***

4. Department Heads

- a. The Department Head/designee, with the assistance of the Facility Safety Manager, if required, will investigate all accidents that may have or could potentially lead to serious injuries if left unattended in any area under his/her jurisdiction.
- b. The Department Head will compile a list of his/her recommendations to eliminate or reduce potential incident reoccurrences and forward to the Facility Safety Manager for review. The Facility Safety Manager will review the recommendations and assist in implementation if necessary.

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5. Supervisors shall ensure their direct staff are familiar with the following procedures:
 - a. notification of the Shift Commander and ensuring immediate assistance to injured staff or inmates by seeking medical attention;
 - b. once medical attention is administered, begin documentation process by recording the following information:
 - (1) date and time of injury;
 - (2) date and time of notification to Control and Medical;
 - (3) name(s) of immediate responder(s); and
 - (4) all immediate actions taken by staff and inmates.
 - c. notification of the Facility Safety Manager in the event an accident occurs regardless of outcome; and
 - d. completion of the **Accident/Injury Investigation Report**, collection of **Accident/Injury Witness Statements** and the proper method of completing Worker Compensation claim forms.
6. The employee involved in the accident will:
 - a. inform his/her supervisor of an accident or near miss immediately;
 - b. seek medical attention if necessary;
 - c. complete associated documents, if capable; and
 - d. cooperate with investigation to determine root cause factors and develop recommendations for corrective actions.

C. Accident Investigations²

1. All accidents and near misses shall be investigated. This is necessary to develop an accurate trends and analysis data reporting system.
2. All accidents shall be investigated within 12 hours of the occurrence by supervisory staff. Any supervisory staff can conduct the initial investigation. Failure to properly investigate accidents, concealing facts related to the accident, or failing to obtain all available facts in an accident interferes with the ongoing process of accident prevention.

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3. The supervisor must complete **all** sections of the **Accident/Injury Investigation Report**. This form is to be used as a guideline to gather information and conduct the investigation.
4. **When the injured employee/inmate reports to medical for an injury assessment, the following shall take place:**
 - a. **photographs shall be taken of the injured employee/inmate and the affected injury. Pictures need to be taken as to protect employee/inmate privacy. If the picture is of a personal nature, the appropriate medical/security staff (gender specific) will be used to take the photo;**
 - b. **photographs of the injury shall not interfere with the employee/inmate receiving medical treatment. If an employee/inmate refuses to be photographed, it shall be documented; and**
 - c. **all pictures of injured employees will be immediately submitted to the investigative supervisor who will start a chain of custody, and be submitted with all other documentation.**
5. **For all lost time, medical only and incident only reported injuries, a supervisor shall conduct an interview with the injured employee/inmate utilizing simple investigative questions. For example: who, what, when, where, why, and how may be utilized. The injured employee/inmate shall review the submitted answers for accuracy and sign the report. If the employee or inmate refuses to sign, then a notation will be made by the interviewer that he/she refused to sign. All questions will be typed on a sheet of paper and submitted to the Safety Manager with the Accident/Injury Investigation Report and the Accident/Injury Witness Statement(s).**
6. Within two hours of the accident occurrence, **Accident/Injury Witness Statement(s)** must be completed by the **injured employee/all witnesses** and submitted to the **Investigating Supervisor**. The completed package shall be submitted to the Facility Safety Manager **by the supervisor** within 24 hours and a copy maintained for the supervisor's records.
7. Accidents become increasingly difficult to remember and document with the passage of time, so it is important that a thorough accident investigation be initiated at the scene as soon after the accident as safely possible.
8. The person who is conducting the initial investigation will:
 - a. go to the scene of the accident promptly to document the details of the surroundings by taking photographs and/or making sketches;
 - b. save or preserve any/all physical evidence that may be used for future litigation proceedings by securing the site and restricting unauthorized staff from entering;

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- c. maintain a log of all staff that enter the scene to include: name, date, time, and reason for entrance;
 - d. promptly retrieve any video footage recorded in the area of the incident to ensure it is properly saved and stored. The video footage should include all camera views and cover the complete length of the incident. If there is a question as to the time of the incident, video retrieval should include, at a minimum, the 60 minutes before and after the reported time of the incident. If the incident involves an injury to an employee and there are no witnesses, video should be retrieved from the beginning of the shift through and including when the employee leaves the facility;
 - e. establish a chain of custody immediately, or as soon as possible, for each piece of physical evidence that was involved in the accident. It is critical that this chain be established in the event of future litigation proceedings. Evidence will be collected and documented in accordance with Department policy **6.3.1, “Facility Security,” Section 14**. This includes the use of **a DC-436, Receipt for Property Form**;
 - f. stress obtaining facts rather than placing blame or responsibility;
 - g. interview all individuals as soon as possible after the accident. In the event there is a lost time injury, it may be necessary to interview the individual(s) either in the hospital or at a private residence. Any off-site interview should be conducted in the presence of designated Human Resources staff. The interviews should be conducted individually and include who, what, when, where, why, and how;
 - h. repeat the employee or witness’s version of the event and allow him/her to make any corrections or additions. Ensure that the employee or witness signs the statement after ensuring accuracy and credibility;
 - i. when possible, correct any unsafe conditions or acts immediately. If immediate correction is not possible, report the situation to the appropriate level of management;
 - j. submit the original **Accident/Injury Investigation Report** to the Facility Safety Manager within 24 hours of the date of injury or notification by the staff or inmate; and
 - k. inform the Facility Safety Manager of any additional information or related facts in writing as the investigation progresses.
9. Situations that qualify as a near miss are in the eyes of the reporter. If an employee is involved in or witnessed an event believed to be a near miss, he/she is to complete an **Accident/Injury Investigation Report** and submit it to the Facility Safety Manager.

D. Accident/Injury Investigation Follow-Up Report

- 1. The need to conduct a follow-up investigation may vary and will depend upon the circumstances and severity of the accident or injury. The purpose of the investigation is to

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determine the cause and possible corrective actions that can reduce or eliminate the possibility of a recurrence.

2. If the Facility Safety Manager determines that a follow-up investigation is necessary, he/she will complete the **Accident/Injury Investigation Follow-Up Report** and ensure the following procedures are followed:
 - a. review and sign the initial report;
 - b. develop a time table for implementation of corrective actions and monitor the schedule;
 - c. study the information gathered to determine the possible causes or factors that contributed to the accident;
 - d. inform the Workers' Compensation Coordinator of any additional information or related facts as the claim progresses; and
 - e. communicate information regarding identified hazards, new procedures, or other corrective actions so all staff and inmates may benefit from the experience and findings through the Safety Committee and any other avenues deemed appropriate by the Facility Safety Manager or DSFM.

E. Record Retention

1. The Facility Safety Manager shall maintain records on all accident investigations for a minimum of seven years. If there is a determination that any accident has legal ramifications for the facility or potential for Department wide ramifications, all associated documents shall be maintained indefinitely.
2. The records shall include, but are not limited to, the following:
 - a. **Accident/Injury Investigation Report;**
 - b. **Accident/Injury Witness Statement(s);**
 - c. **Accident/Injury Investigation Follow-Up Report;**
 - d. ***all investigative interview documents;***
 - e. photographs, diagrams, drawings, or other exhibits;
 - f. copies of notes and communications;
 - g. copies of recommendations and corrective actions; and
 - h. Workman's Compensation related documents.

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3. All notes, communications, and other records related to accident investigations will be organized and maintained in a clear and professional manner since these records may be subject to further administrative, legal, and/or judicial review.

F. Training

1. All supervisors will receive training on accident investigation procedures in accordance with the training schedule.
2. Re-training shall occur locally on an as-needed basis as determined by the Safety and Environmental Protection Division.

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Abatement - Procedures to control fiber release from asbestos containing materials. Includes removal, encapsulation, enclosures, engineering controls, repair, demolition, and renovation activities.

Absolute Pressure - Pressure based on a zero reference point, the perfect vacuum; measured from this reference, the standard atmospheric pressure at sea level is 14.7 psig (an absolute pressure of 101 kPa). Absolute pressure is commonly denoted as psig.

Accepted Engineering Practices - Those requirements that are compatible with the standard of practice required by a registered professional engineer.

Affected Employee - An employee whose job requires him/her to operate or use a machine or equipment on which servicing or maintenance is being performed under lockout or tagout, or whose job requires him/her to work in an area where such servicing or maintenance is being performed.

Aggressive Sampling - The use of forced air equipment to circulate the air artificially so that fibers remain airborne during sampling.

Air Monitoring - The process of measuring for a known contaminant with a known volume of air collected during a specific period.

Airline Respirator - An atmosphere-supplying respirator in which the respirable gas is not designed to be carried by the wearer (formerly called supplied air respirators).

Airlock - A system for permitting entrance and exit with minimum air movement between a contaminated area and an uncontaminated area typically consisting of two curtained doorways, separated by a distance of at least three feet. A person then passes through the first doorway into the airlock, allowing the doorway sheeting to overlap, and closing off the opening before proceeding through the second doorway. Therefore, flow-through contamination is prevented.

Approved Sound Level Meter - Meters manufactured in accordance with American National Standards Institute (ANSI) S1.41 (R1976) specifications.

Aromatic Hydrocarbons (Benzene, Toluene, Xylene) - **Benzene**: A colorless, flammable, volatile liquid with a pleasant aromatic odor. Chronic poisoning may occur after breathing comparatively small amounts over a period of time. The first signs of poisoning are exhilaration, followed by sleepiness, dizziness, vomiting, trembling, hallucinations, delirium and unconsciousness. **Toluene**: A solvent mixture that resembles benzene in many chemical and physical properties. **Xylene**: A solvent mixture that resembles benzene in many chemical and physical properties.

Asbestos - The asbestiform varieties of serpentine (chrysotile), reibeckite (crocidolite), cummingtonite-grunerite (amosite), anthrophyllite, actinolite and tremolite.

Asbestos Containing Material (ACM) - Material composed of asbestos of any type and in any amount, either alone or mixed with other fibrous or non-fibrous materials.

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Asbestos Containing Waste Material - Asbestos containing material or asbestos contaminated objects requiring disposal.

Asbestos Enclosure - The construction of an airtight, impermeable, permanent barrier around asbestos containing material to control the release of asbestos fibers into the air.

Assigned Protection Factors (APF) - The minimum expected workplace level of respiratory protection provided by a properly functioning respirator.

ASTM - American Society of Testing and Materials.

Atomic Absorption Spectroscopy (AAS) (Wet Chemistry) - The analysis of paint chip samples (bulk samples) that identifies the amount of lead contained by weight (either by parts per million or by percentage of total).

Attendant - An individual stationed outside the confined space that monitors the entrance inside the confined space. There must be at least one Attendant for each permit required confined space. Attendants must meet Department training requirements to perform this job.

Authority Having Jurisdiction - The "Authority Having Jurisdiction" is the organization, office, or individual responsible for "approving" equipment, installation, or procedure.

Authorized Employee - A person who locks or implements a lockout system procedure on machine or equipment to perform the service or maintenance on that machine or equipment.

Barrier - The plasticized material which physically separates an abatement work area from other sections of a building. The purpose of a barrier is to separate air flow in a structure and should not be confused with enclosure materials protecting surfaces of a work area.

Bell-bottom Pier Hole - A type of shaft or footing excavation, the bottom of which is made larger than the cross section above to form a belled shape.

Benching (Benching System) - A method of protecting individuals from cave-ins by excavating the sides of an excavation to form one or a series of horizontal levels or steps, usually with vertical or near vertical surfaces between levels.

Blanking/Blinding - The absolute closure of a pipe, line or duct by fastening across its bore a solid plate or "cap" which completely covers the bore, extends at least to the outer edge of the flange where it is attached, and is capable of withstanding the maximum upstream pressure.

Blood Borne Pathogen - Micro-organisms that are present in human blood and can cause disease in humans. These pathogens include, but are not limited to, hepatitis B virus (HBV) and human immunodeficiency virus (HIV).

Blood Lead Level (BLL) - Blood Lead Level, measured in micrograms of lead per deciliter of blood.

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Body Fluid - Fluids the body produces, i.e., semen, blood, vaginal secretions, breast milk, cerebrospinal (brain and spinal cord), synovial (joint, bursa, tendon), pleural (lungs, chest), peritoneal (abdominal, pelvic), pericardial (heart), and amniotic (fetus) fluids, body tissues, feces, nasal secretions, sputum, sweat, tears, urine, saliva in dental procedures, and vomitus.

Bulk Sample - The collection of material from each homogeneous area to be analyzed by polarized light microscopy to identify if the materials collected contain asbestos. Sampling rates should be as follows: 1,000 square feet or less, three samples; 1,000 square feet to 5,000 square feet, five samples; Greater than 5,000 square feet, seven samples.

Bureau of Community Corrections Safety Committee - A committee composed of a representative from each region of Community Corrections and the Central Office Bureau of Community Corrections. Its purpose is to review all fire, safety, and sanitation reports submitted by Community Correction Centers and contract facilities and to make recommendations to the Director of the Bureau of Community Corrections and the Chief of Safety and Environmental Protection. The committee will meet quarterly with a report of the minutes submitted to the Chief of Safety and Environmental Protection, the Director of the Bureau of Community Corrections, and each Regional Director.

Carbon Monoxide (CO) - A colorless, odorless gas generated by the combustion of common fuels with an insufficient supply of air or where combustion is incomplete. It is often released by accident or improper maintenance or adjustment of burners or flues in confined spaces and by internal combustion engines. Called the "silent killer," Carbon Monoxide poisoning may occur suddenly.

Caustic Materials - Substances that can destroy or eat away by chemical reaction.

Cave-in - The separation of a mass of soil or rock material from the side of an excavation or the loss of soil from under a trench shield or support system, and its sudden movement into the excavation, either by falling or sliding, in sufficient quantity so that it could entrap, bury, or otherwise injure and immobilize a person.

Center for Disease Control and Prevention (CDC) - A Federal health agency that is a branch of the U.S. Department of Health and Human Services. The CDC provides national health and safety guidelines and statistical data on diseases.

Certified Respirator - A respirator that is evaluated and listed as permissible by the National Institute for Occupational Safety and Health (NIOSH), the Mine Safety and Health Administration (MSHA), or the Bureau of Mines (BM).

CGA - The Compressed Gas Association.

Chain-Of-Custody Record - A manifest or record that documents all persons/firms involved with the transportation of or final disposition of asbestos containing samples or materials. Class 1B: Shall include those having flash points below 73°F (22.8°C) and having a boiling point at or above 100°F (37.8°C). Example: gasoline. Class 1C: Shall include those having flash points at or above 73°F (22.8°C) and having a flash point below 100°F (37.8°C). Examples: coal tar, light oil.

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Class I Flammable Liquids - shall be subdivided as follows: Class I A shall include those having flash points below 73° Fahrenheit (22.8° Centigrade) and having a boiling point below 100° Fahrenheit (37.8° Centigrade). Example: ethyl ether. Class I B shall include those having flash points below 73° Fahrenheit (22.8° Centigrade) and having a boiling point at or above 100° Fahrenheit (37.8° Centigrade). Example: gasoline. Class I C shall include those having flash points at or above 73° Fahrenheit (22.8° Centigrade) and having a flash point below 100° Fahrenheit (37.8° Centigrade). Example: coal tar, light oil.

Clean Room - An uncontaminated area or room that is a part of the worker decontamination enclosure system with provisions for storage of workers' street clothes and clean protective equipment.

Clean Soil - Soil containing less than one part per million (ppm) PCB by weight.

Combustible - Capable of being burned.

Combustible Liquid - Combustible Liquids shall be subdivided as follows: Class II Liquids shall include those having flash points at or above 100° Fahrenheit (37.8° Centigrade) and below 140° Fahrenheit (60° Centigrade). Example: kerosene. Class III A Liquids shall include those having flash point at or above 140° Fahrenheit (60° Centigrade) and below 200° Fahrenheit (93° Centigrade). Example: number two fuel oil. Class III B Liquids shall include those having flash points at or above 200° Fahrenheit (93° Centigrade). Example: crude oil.

Compressed Gas (Non-liquefied) - A gas other than in solution that, in its packaging under charged pressure, is entirely gaseous at 68°F (20°C).

Confined Space - Confined space is a space that is large enough and so configured that an employee can bodily enter and perform assigned work; has limited or restricted means for entry or exit (i.e., tanks, vessels, silos, storage bins, hoppers, vaults, and pits are spaces that may have limited means of entry), and is not designed for continuous employee occupancy.

Contagious/Communicable Disease - An illness that is caused by a specific infectious agent (i.e. virus, bacteria, fungus) that can be transmitted by blood and body fluids from an infected person to a susceptible person.

Continuous Gas Detection System - A gas detection system where the instrument is maintained in continuous operation and the interval between sampling of any point does not exceed 30 minutes.

Cryogenic Liquid - Liquids having a boiling point lower than -150°F (-101°C) at 14.7 psig (an absolute pressure of 101 kPa).

Decibel (dB) - A unit of measure used to express sound power level by an approved sound level meter on the "A" scale at slow response.

Decontaminated - The use of physical or chemical means to remove, inactivate, or destroy blood borne pathogens on a surface or item to the point where they are no longer capable of

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transmitting infectious particles and the surface or item is rendered safe for handling, use or disposal.

Decontamination Area - A series of connected rooms, separate from the work area and from each other by air locks, for the decontamination of workers and equipment.

De-Energized - A process of ensuring an electrical energized component or system is placed in a safe mode, removed of energy.

Demolition - The wrecking or taking out of any load-supporting structural member of a building together with any related handling operations.

Department - The Pennsylvania Department of Corrections.

Department Head - The head of an individual department within a facility.

DOH - The Pennsylvania Department of Health.

Double Block or Bleed - The closure of a line, duct, or pipe by locking and tagging a drain or vent that is open to the atmosphere in the line between two locked-closed valves.

Double Wash/Rinse - The double wash/rinse procedural performance standards is a minimum requirement to cleanse solid surface (both pervious and impervious) two times with an appropriate solvent or other material in which PCBs are at least five percent soluble by weight. A volume of PCB free fluid sufficient to cover the contaminated surface completely must be used in each wash/rinse. The wash/rinse requirement does not mean the mere spreading of solvent or other fluid over the surface, nor does the requirement mean a once over wipe with a soaked cloth. Precautions must be taken to contain any runoff resulting from the cleaning and to dispose properly of waste generated during the cleansing. Solvents such as Hexane, laboratory grade, meet this requirement.

Dry Removal - The removal of ACM without the use of a wetting agent to reduce the amount of fibers released into the air. This procedure is not allowed without prior written approval by the Safety and Environmental Protection Division and the U.S. Environmental Protection Agency.

Dust Sample - A method of collecting one square foot of settled dust on any surface to determine asbestos content. This shall be performed by utilizing an open face cassette and high volume pump to collect the sample for analysis.

Electrical Safety Program - Work practices and procedures for persons who work on, near, or with electric circuits and equipment in the workplace.

Emergency - Any occurrence, including any failure of hazard control, monitoring equipment, or internal or external event(s), to the confined space that could endanger an Entrant.

Employee Right-To-Know Medical Record - A record concerning the health status of an employee, resulting from exposure to a hazardous substance, which is maintained in the Medical Office. The medical record may include, but is not limited to the following: medical and

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employment questionnaires and histories (job description and occupational exposure); results of medical examinations (pre-employment, pre-assignment, periodic or episodic) and laboratory tests (x-rays and biological monitoring); medical opinions, diagnoses, progress notes and recommendations; descriptions of treatments and prescriptions; and employee medical complaints.

Employer Exposure Record - A record containing any of the following kinds of information concerning employee exposure to toxic substances or harmful physical agents: Environmental (work place) monitoring or measuring, including personal, area, grab, wipe or other form of sampling, as well as related collection and analytical methodologies, calculations and other background data relevant to interpretation of the results obtained. Biological monitoring results which directly assess the absorption of a substance or agent by body systems (level of a chemical in the blood, urine, breath, hair, fingernails, etc.), but not including results that assess the biological effect of a substance or agent.

Encapsulant - A liquid material which can be applied to asbestos containing material to control the possible release of asbestos fibers from the material either by creating a membrane over the surface (bridging encapsulant) or by penetrating into the material and binding its components together (penetrating encapsulant).

Encapsulation - The application of an encapsulant to asbestos containing material to control the release of asbestos fibers into the air.

Energized - Connected to an energy source, containing residual or stored energy.

Energy Isolating Device - A mechanical device that physically prevents the transmission or release of energy. Examples include a manually operated electrical circuit breaker, disconnect switch, manually operated switch by which the conductors of a circuit can be disconnected from all ungrounded supply connectors and no pole can be operated independently, slide gate, slip blind, line valve, block, and any similar device used to block or isolate energy. The term does not include a push button, selector switch or other control circuit type device.

Energy Source - Any source of electrical, mechanical, hydraulic, pneumatic, chemical, thermal or other energy.

Engineering Controls - Techniques, procedures or mechanical devices which perform the function of controlling the release of asbestos fibers.

Entrant - An individual authorized by the Department to enter a confined space.

Entry - The act by which an Entrant intentionally passes through an opening into a confined space. The Entrant has entered as soon as any part of his/her body breaks the plane of an opening into the space.

Evacuation (Fire) Drills - The orderly movement of individuals from a facility to a safe, pre-designated area away from the site where all individuals can be identified.

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Excavation - Any manmade cut, cavity, trench or depression in an earth surface formed by earth removal.

Excursion Limit - .1 asbestos fibers per cubic centimeter for 30 minutes.

Exposure - A situation arising from a work place operation where any person who is physically handling a hazardous substance may ingest, inhale, absorb through the skin or eyes or otherwise come into contact with the hazardous substance, beyond acceptable exposure limits.

Exposure Incident - A specific eye, mouth, other mucous membrane, non-intact skin, or parenteral contact with blood or other potentially infectious materials that results from performance of duties.

Facility - The use of the term "facility" and "facilities" refers to all State Correctional Facilities, State Regional Correctional Facilities, the Motivational Boot Camp, Community Corrections Centers, the Training Academy and the Central Office Complex as a group and/or individually.

Facility Contract Administrator - The specific person appointed by the institution's/facility's Facility Manager who coordinates and assumes responsibilities related to Asbestos Medical Monitoring Program.

Facility Furnishings - Refers to items such as draperies, curtains, furniture, mattresses, bedding, upholstered and cushioned furniture, wastebaskets, decorations and other materials that can burn.

Facility Manager - The Superintendent of a Facility or Regional Correctional Facility, Commander of a Motivational Boot Camp, Director of a Community Corrections Center, Director of the Training Academy, or the Chief of the Safety and Environmental Protection Division of Central Office.

Final Use Container - The container used during the application of a product (i.e., spray bottle, bucket, etc.).

Fire Area - The floor area enclosed and bounded by firewalls, fire separation assemblies or exterior walls of a building to restrict the spread of fire.

Fire Emergency Response Team (FERT) - A group of individuals who are trained to perform rescue and fire suppression activities.

Fire Protection System - All systems designed to be activated if a fire starts in the facility or designated to assist in the evaluation of the property. This includes but is not limited to: fire extinguishers, smoke detectors, sprinkler systems, emergency lighting systems, exit signs, etc. Any equipment or combination of equipment used in the prevention, detection, notification, and suppression of fires.

Fire, Safety, Sanitation Officer - A CCC employee who oversees the entire Fire, Safety, and Sanitation Program within a CCC.

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Fit Check - A test conducted by the wearer to determine if the respirator is properly seated to the face. This is performed every time the respirator is donned.

Fit Test - The use of a challenge agent to evaluate the fit of a respirator on an individual.

Flammable Gas - A gas that is flammable in a mixture of 13 percent or less (by volume) air, or the flammable range with air is wider than 12 percent regardless of the lower limit, at atmospheric temperature and pressure.

Flammable Liquid - A liquid having a flash point below 100°F (37.8°C) and having a vapor pressure not exceeding 40 pounds per square inch (absolute) (2,068 mm hg) at 100°F (37.8°C) shall be known as a "Class 1 Liquid."¹ Class 1A: Shall include those having flash points below 73°F (22.8°C) and having a boiling point below 100°F (37.8°C). Example: ethyl ether.²

Flammable Solid - Readily combustible solid, self-reactive material or wetted explosives are considered flammable solids. Some examples are: Wetted explosive - explosive wetted with sufficient water, alcohol, or plasticizers to suppress explosive properties. Self-reactive material - material that is liable to undergo, at normal or elevated temperatures, a strong exothermal decomposition caused by excessively high transport temperatures or by contamination. Readily combustible solid - solid that may cause a fire through friction and any metal powder that can ignite.

Flash Point - The minimum temperature at which a liquid gives off vapor, in sufficient concentration to form an ignitable mixture with air, near the surface of the liquid within the vessel as specified by appropriate test procedure and apparatus.

Friable Asbestos - ACM which, when dry, can be crumbled to dust under hand pressure.

Glove Bag Technique - A method with limited applications for removing small amounts of asbestos containing material from HVAC ducts, short piping runs, valves, joints, elbows, and other non-planar surfaces in a non-contained (plasticized) work area. The glove bag assembly is a manufactured or fabricated device consisting of a glove bag (typically constructed of six millimeter transparent polyethylene or polyvinylchloride plastic), two inward projecting long sleeves, an internal tool pouch, and an attached, labeled receptacle for asbestos waste. The glove bag is constructed and installed in such a manner that it surrounds the object or material to be removed and contains all asbestos fibers released during the process. All workers who are permitted to use the glove bag technique must be certified, trained and skilled in this method.

Hazard - Any existing or potential conditions in the workplace that, by itself or by interacting with other variables, has the potential to result in death, injury, property damage, or other loss.

Hazard Rating - The numerical rating of the health, flammability, and self-reactivity hazards of the material, including its reaction with water.

¹ 3-4203

² 3-4203

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Hazardous Atmosphere³ - An atmosphere that exposes personnel to a risk of death, incapacitation, injury or acute illness from one or more of the following causes: an atmospheric oxygen concentration below 19.5 percent or above 23.5 percent; a flammable gas or vapor over 10 percent of its Lower Explosive Limit (L.E.L.); an atmospheric concentration of any toxic contaminant above the OSHA Permissible Exposure Limit (P.E.L.); an airborne combustible dust at a concentration that obscures vision at a distance of five feet or less; and any Immediately Dangerous to Life or Health (IDLH) atmosphere that poses an immediate threat to life, may result in irreversible or immediate severe health effects, may result in eye damage/irritation or other conditions which could impair escape. While airborne dust or particle concentrations may be easy to spot with the naked eye, oxygen deficiency or enrichment conditions, as well as hazardous concentrations of vapors or gases must be detected with reliable instrumentation. Oxygen Deficiency Normal ambient air contains an oxygen concentration of 20.8 percent by volume. When the oxygen level in the confined space drops below 19.5 percent of the total atmosphere, the area is considered oxygen deficient. In oxygen deficient atmospheres, life-supporting oxygen may be displaced by other gases, such as carbon monoxide, which results in an atmosphere that can be dangerous or fatal when inhaled. Oxygen deficiency may also be caused by rust, corrosion, fermentation or other forms of oxidation that consume oxygen. As materials decompose, oxygen is drawn from the atmosphere to fuel the oxidation process. The impact of oxygen deficiency can be gradual or sudden depending upon the overall oxygen concentration, the activity levels of the Entrant in the confined space and the concentration levels of other gases in the atmosphere. Typically, decreasing levels of atmospheric oxygen cause the following symptoms:

| PERCENT OF OXYGEN | PHYSIOLOGICAL EFFECT |
|-------------------|---|
| 19.5 - 16 | No visible effect. |
| 16 - 12 | Increased breathing rate. Accelerated heartbeat. Impaired attention, thinking and coordination. |
| 14 - 10 | Faulty judgment and poor muscular coordination. Muscular exertion causing rapid fatigue. Intermittent respiration. |
| 10 - 6 | Nausea, vomiting. Inability to perform vigorous movement or loss of the ability to move. Unconsciousness followed by death. |
| Below 6 | Difficulty breathing. Convulsive movements. Death in minutes. |

Hazardous Material Identification System (HMIS) - A widely accepted system developed by the National Paint and Coatings Association (NCPA) that identifies and communicates the hazardous properties of products.

Hazardous Substance - Any chemical or mixture defined under **Section 3 of the Act (35 P.S. 7303)**. The term includes hazardous mixture. The term does not include substance naturally

³ 3-4203, 3-4401, 2-CO-3B-01, 1-ABC-5A-06

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existing and not created as a result of or in connection with, a manufacturing process such as animal manure and coal.

Hazardous Substance Survey Form (HSSF) - A form containing specific information on the hazardous substance stored or used in the work place. The specific information to be listed is stated in **Title 34, Labor and Industry, Part XIII Worker and Community Right-To-Know Act Regulations, Chapter 303, Preparation of Hazardous Substance and Environmental Hazard Survey Form.**

Heat Cramps - Heat related body disorder that causes sweating and painful spasms of heavily used muscles.

Heat Exhaustion - Heat related body disorder that causes dehydration and/or salt depletion with fatigue, nausea, clammy and pale skin.

Heat Stroke - The most severe heat related body disorder that causes hot dry skin, dizziness, loss of consciousness, coma, and possibly death.

HEPA Filter - A high efficiency particulate air filter capable of removing particles down to .3 microns in diameter with a 99.97 percent efficiency.

HEPA Vacuum - A vacuum system equipped with HEPA filtration.

High Concentration PCBs - The term means oils that contain 500 ppm or greater PCBs or those materials which the Environmental Protection Agency requires to be assumed to contain 500 ppm or greater PCBs in the absence of testing.

Hot Tap - A procedure used in maintenance and service activities that involve welding a piece of equipment or system that is under pressure in order to install connections or accessories. It is commonly used to replace or add a section of pipeline without the interruption of service for air, gas, water, steam and petrochemical distribution systems.

Hot Work Permits - The written authorization to perform operations that could provide a source of ignition such as riveting, welding, cutting, burning or heating.

Housekeeping - Formalized procedures designed to protect the public health by the formulation and application of a comprehensive cleaning program that shall effectively monitor and maintain proper conditions.

HVAC - Heating, ventilation and air conditioning system.

Hydrogen Cyanide or Hydrocyanic Acid (HCN) - An extremely rapid poison that interferes with the respiratory system of the body's cells and causes chemical asphyxia. Liquid Hydrogen Cyanide and Hydrocyanic Acid are eye and skin irritants.

Hydrogen Sulfide (H₂S) - A colorless gas that smells like rotten eggs, but the odor cannot be taken as a warning because sensitivity to smell disappears quickly after breathing only a small quantity of gas. It is often found in sewers or sewage treatment facilities and in petrochemical

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operations. In addition, Hydrogen Sulfide is flammable and explosive in high concentrations. Sudden poisoning may cause unconsciousness and respiratory arrest. In less sudden poisoning, symptoms are nausea, stomach distress, eye irritation, belching, coughing, headache or blistering of the lips.

Immediately Dangerous to Life and Health (IDLH) - Any condition that poses an immediate or delayed threat to life or that would cause irreversible adverse health effects. Any atmosphere that poses an immediate hazard to life or poses immediate irreversible debilitating effects on health.

Impervious Solid Surfaces - The term means solid surfaces which are nonporous and thus unlikely to absorb spilled PCBs within the short period of time required for cleanup of spills under this policy. Impervious solid surfaces include, but are not limited to metal, glass, aluminum siding and enameled or laminated surfaces.

IMQ (A OR B) - The Department of Corrections Initial Medical Questionnaire: "A" for Inmates or "B" for Employees and Others.

Incident - Any unplanned event that results in personal injury, damage to property/equipment/environment, or an event that has the potential to result in such consequences.

Incidental Exposure - A situation arising from a work place operation where any person who is not physically handling a hazardous substance may ingest, inhale, absorb through the skin or otherwise come into contact with the hazardous substance beyond acceptable exposure limits.

Incipient Fire - A fire that in its beginning stage can be controlled or extinguished using a portable fire extinguisher or Class II standpipe hose.

Independent Source - A person(s) who either by documented training or experience has demonstrated that they have the knowledge and ability to accurately operate an approved monitoring device and is not employed by or under the direct control or influence of the institution being inspected.

Inerting or Purging - Rendering the atmosphere of a confined space non-flammable, non-explosive or otherwise chemically non-reactive by displacing or diluting the original atmosphere with steam or gas that is non-reactive.

Isolation - The separation of a permit space from unwanted forms of energy that could be a serious hazard to permit space Entrants. Isolation is usually accomplished by blanking or blinding, removing or misaligning of pipes section or spool pieces, double blocking and bleeding, or lockout and/or tagout.

Labor and Industry (L & I) - The Pennsylvania Department of Labor and Industry.

Label - A sign, emblem, sticker, or marker affixed to or stenciled into a container listing the information required under **Section 6 of the Act (35 P.S. 7306)** and **Chapter 309** (relating to labeling and substances).

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Large PCB Capacitor - A capacitor containing more than three pounds of PCB fluid.

Limited-Combustible - As applied to a building construction material, a material, not complying with the definition of noncombustible material, that, in the form in which it is used, has a potential heat value not exceeding 3,500 BTU per pound (8,141 kJ/kg).

Line Breaking - The intentional opening of a pipe, line or duct that is, or has been, carrying flammable, corrosive or toxic material, inert gas, any fluid or gas at a pressure, temperature or volume capable of causing injury.

Liquefied Gas - A gas other than in solution that, in its packaging under charged pressure, exists as both a liquid and a gas at 68°F (20°C).

Local Exhaust - The use of HEPA filtration at the point of contamination (attachment to tools or ducts).

Lockdown/Sprayback - The process of applying a protective coating to a surface from which ACM has been removed.

Lockout - The placement of a lockout device on an energy isolating device, in accordance with an established procedure, ensuring that the energy isolating device and the equipment being controlled cannot be operated until the lockout device is removed.

Lockout Device - A device which utilizes a positive means, such as a lock (key or combination type), to hold an energy isolating device in the safe position and prevent the energization of a machine or equipment.

Low Concentration PCBs - Oils tested and found to contain less than 500 ppm but more than 50 ppm PCBs or those PCB containing materials which the Environmental Protection Agency requires to be assumed to be at concentrations below 500 ppm (i.e., untested mineral oil dielectric fluid).

Material Safety Data Sheet (MSDS) - A written document prepared by a manufacturer, supplier or importer in conformity with **Section 4 of the Act (35 P.S. 7304)**.

Negative Pressure Respirator - A respirator in which the air pressure inside the respiratory inlet covering is negative during inhalation with respect to the ambient air pressure outside the respirator.

Negative Pressure Ventilation System - A portable exhaust system equipped with HEPA filtration and capable of maintaining a constant inward flow.

Nesting - A method of securing cylinders upright in a tight mass using a contiguous three-point contact system whereby all cylinders in a group have a minimum of three contact points with other cylinders or a solid support structure, i.e., wall, railing.

NFPA - The National Fire Protection Association.

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Nonflammable Gas - A gas that does not meet the definition of a flammable gas.

Non-Permit Required Confined Space - An area that does not contain or, with respect to atmospheric hazards, have the potential to contain any hazard capable of causing death or serious physical harm.

Non-Restricted Access Areas - A non-restricted access area is any area other than restricted access, outdoor electrical substations, and other restricted access locations. In addition to residential/commercial areas, these areas include unrestricted access rural areas (areas of low-density development and population where access is uncontrolled by either manmade barriers or naturally occurring barriers such as rough terrain, mountains or cliffs).

Normal Production Operations - The utilization of a machine or equipment to perform its intended production function.

On-Site Supervisory Personnel - A staff member, who at minimum, has received training to the Attendant level and is responsible for the direct supervision of the entry into a confined space. Duties shall include a review of the entry procedures for that space, setup, monitoring, completion of permits and certifications, forwarding of documentation, and that all work is completed in accordance with the provisions of this procedures manual.

Oxidizing Gas - A gas that can support and accelerate combustion of other materials.

Oxygen Enrichment - When the oxygen concentration rises above 23.5 percent by volume, the atmosphere is considered oxygen enriched and is proven to become unstable. Because of the higher oxygen level, the likelihood and severity of a flash fire or explosion is significantly increased.

PCB Capacitor - A capacitor containing more than 50 ppm PCB.

Permissible Exposure Levels (PEL) - Exposure to lead levels at concentrations no greater than 50 micrograms per cubic meter of air (50 mcg/m³) averaged over an eight-hour period.

Permit-Required Confined Space - An area that contains, or has a known potential to contain, a hazardous atmosphere, and/or an area that contains material with the potential for engulfment, and/or or an area with an internal configuration such that an entrant could be trapped or asphyxiated by inwardly converging walls or a floor which slopes and tapers to a smaller cross section, and/or an area that contains any other recognized serious safety or health hazard.

Perpetual Inventory - An inventory that is continuous; one that is maintained and recorded every time a product moves in or out of a storage location.

Personal Protective Equipment - Specialized clothing or equipment worn for the protection against a hazard. General work clothes (e.g., uniforms, pants, shirts or blouses) are not intended to function as protection against a hazard and are not considered personal protective equipment.

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Phase Contrast Microscopy (PCM) - A method of analysis using a light microscope to find the concentration of airborne fibers. Does not distinguish among asbestos and other fibers.

Picocuries Per Liter (pCi/l) - 2.2 Disintegration per minute of radioactive material per liter of air.

Plan-of-Action - A detailed written statement of tasks to be performed in order to achieve compliance with a standard found in non-compliance at the time of an inspection.

PMQ (A or B) - The Department of Corrections Periodic Medical Questionnaire: "A" for Inmates or "B" for Employees and Others.

Polychlorinated Biphenyls (PCBs) - Any chemical substance united to the biphenyl molecule that has been chlorinated to varying degrees or any combination of substances that contain such substances.

Pre-Metered System - A system in which the product/concentrate is automatically mixed with water in the appropriate ratio as determined by the manufacturer.

Project Log - A daily written record of conditions, activities, and events relating to an asbestos project.

Protective System - A method of protecting staff/inmates from cave-ins, of material that could fall or roll from an excavation face into an excavation, or from the collapse of adjacent structures. Protective systems include support systems, sloping and benching systems, shield systems, and other systems that provide the necessary protection.

Putrescible Waste - Trash or waste, which will rot, decompose or decay.

Pyrophoric Gas - A gas that will spontaneously ignite in air at or below 130°F (54.4°C).

Qualified Person – A staff member who by training or experience has the knowledge and ability to perform the training requirements outlined in this procedures manual.

Qualitative Fit Test - A pass/fail fit test that relies on the subjects' sensory response to detect the challenge agent.

Radon - The radioactive noble gas Radon 222, and its short-lived lead radionuclides, which are products of Radon 222 decay, including Polonium-218, Lead-214, Bismuth-214, and Polonium-214. Radon is a naturally occurring, colorless, odorless, radioactive gas produced by the normal decay of uranium. Radon can be found in soil and various rocks containing uranium, granite, and shale.

Radon Certified Firm (RCF) - A company holding current certification by the Department of Environmental Protection to practice testing, mitigation, consulting, laboratory analysis, and/or equipment manufacture for radon related services.

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Radon Certified Individual (RCI) - An individual holding current certification by the Department of Environmental Protection to practice testing, mitigation, consulting, laboratory analysis and/or equipment manufacture for radon related services.

Radon Mitigation - To repair/alter a building or its design for the purpose of reducing the concentration of radon in the indoor atmosphere.

Radon Test - The act of evaluating a structure's air, soil, and water for the presence of radon by taking air, soil, and water samples or the act of diagnosing the cause of radon contamination within a building.

Regulated Waste - Liquid or semi-liquid blood or other potentially infectious materials; contaminated items that would release blood or other potentially infectious materials in a liquid or semi-liquid state if compressed; items that are caked with dried blood or other potentially infectious materials and are capable of releasing these materials during handling; contaminated sharps; and pathological and microbiological wastes containing blood or other potentially infectious materials.

Renovation & Remodeling Activities - Activities whose primary intent is not to permanently eliminate or reduce lead-based paint hazards, but instead to repair, restore, or remodel a given structure.

Residential/Commercial Areas - Residential/commercial areas are those areas where people live or reside, or where people work in other than manufacturing or farming industries. Residential areas include housing and the property on which housing is located as well as playgrounds, roadways, sidewalks, parks and other similar areas within a residential community. Commercial areas are typically accessible to both members of the public and employees and include public assembly properties, facility properties, stores, office buildings and transportation centers.

Retrieval Line - A line or rope secured at one end to the worker by a full body harness or wristlets and with its other end secured to either a lifting (or other retrieval) device or to an anchor point located outside the entry portal to the confined space.

Route of Egress - Continuous and unobstructed ways of exit travel from any point in a building or structure.

Safety Can - An approved metal container, of not more than five (5) gallon (18.9 liters) capacity, having a spring-closing lid and spout cover and so designed that it will safely relieve internal pressure when subjected to fire exposure.⁴

Sampling Log - A daily written record of any air sample relating to asbestos abatement projects or bulk sample as it pertains to site assessment.

Sanitation - Environmental health issues which address everyday public health responsibilities within the facility.

⁴ 3-4202

Sanitation and Housekeeping Program - A comprehensive program designed to monitor sanitation and housekeeping issues and ensure the maintenance of proper levels of cleanliness and safety in the physical plant and environmental conditions of the facility.

SCF - One cubic foot of gas at 70°F (-21°C) and 14.7 psig (an absolute pressure of 101 kPa).

Self-Contained Breathing Apparatus (SCBA) - An atmosphere-supplying respirator in which the respirable gas source is designed to be carried by wearer.

Shield (Shield System) - A structure that is able to withstand the forces imposed on it by a cave-in and thereby protects the person(s) within the structure. Shields can be permanent structures or can be designed to be portable and moved along as work progresses. Additionally, a shield can be pre-manufactured or job-built. Shields used in trenches are usually referred to as "Trench Boxes" or "Trench Shields."

Shoring (Shoring System) - A structure such as a metal hydraulic, mechanical or timber shoring system that supports the sides of an excavation and which is designed to prevent cave-ins.

Sloping (Sloping System) - A method of protecting individuals from cave-ins by excavating to form sides of an excavation that are inclined away from the excavation so as to prevent cave-ins. The angle of incline required may vary due to such factors as soil type, environmental conditions of exposure, and application surcharge loads.

Small PCB Capacitor - A capacitor containing less than three pounds of PCB fluid.

Smoke Control - Controlling the smoke by means of forced or natural ventilation.

Soil - All vegetation, soil, and other ground media, including but not limited to sand, grass, gravel and oyster shell. It does not include concrete and asphalt.

Sound - Airborne sound refers to rapid variations in air, i.e., the alternate increases and decreases in normal atmospheric pressure.

Spill - Both intentional/unintentional spills, leaks, and other uncontrolled discharges where the release results in any quantity of PCBs running off or about to run off the external surface of the equipment or other PCB source. Contamination results from those releases. Where a spill of untested mineral oil occurs, the oil is presumed to contain greater than 50 ppm but less than 500 ppm PCBs.

Spill Area - This term means the area of soil on which visible traces of the spill can be observed plus a buffer zone one foot beyond the visible traces. Any surface or object (i.e., concrete sidewalk or automobile) within the visible trace areas, or on which visible spilled materials are observed, is included in the spill area. This area represents the minimum area assumed to be contaminated by PCB's in the absence of pre-cleanup sampling data and is the minimum area that must be cleaned.

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Spill Boundaries - The actual area of contamination as determined by post-cleanup verification sampling or by pre-cleanup sampling to determine actual spill boundaries.

Stable Rock - Natural solid mineral material that can be excavated with vertical sides and will remain intact while exposed. Unstable rock is considered stable when the rock material on the side or sides of the excavation is secured against caving-in or movement by rock bolts or by another protective system that has been designed by a registered professional engineer.

Standard Wipe Test - For spills of PCBs on solid surfaces, this procedure requires cleanup to numerical surface standards and sampling by a standard wipe test to verify that the numerical standards have been met. This definition constitutes the minimum requirements for an appropriate wipe testing protocol.

Sulfur Dioxide (SO₂) - The combustion of sulfur or compounds containing sulfur produces this pungent, irritating gas. Severe exposures may result from loading or unloading tank cars, rupturing or leaking of cylinders or lines, and fumigation aboard ships.

Superfund Amendments and Reauthorization Act of 1986 (SARA TITLE II) - To provide emergency planning, emergency release notification, Worker and Community Right-To-Know reporting requirements, and toxic chemical release reporting by law.

Tagout Device - A prominent warning device, such as a tag and a means of attachment, which can be securely fastened to an energy isolating device in accordance with an established procedure indicating that the energy isolating device and the equipment being controlled may not be operated until the tagout device is removed.

Tight-Fitting Face Piece - A respiratory inlet covering that is designed to form a complete seal with the face. A half-face piece covers the nose and mouth; a full-face piece covers the nose, mouth, and eyes.

Toxic Gas - A gas having a Health Hazard Rating 3 or 4.

Toxic Materials - Substances that through chemical reaction or mixture can produce possible injury or harm to the body by entering through the skin, digestive tract, or respiratory tract.⁵

Trench (Trench Excavation) - A narrow excavation, in relation to its length, made below the surface of the ground. In general, the depth is greater than the width, with the depth being four (4) feet or greater.

Tri-Sodium Phosphate (TSP) - A phosphate containing detergent used in the cleaning of lead dust from surfaces. This cleaning is an attempt to obtain clearance levels concluding lead-based paint activities.

True Emergency - Medical terminology identifying a medical condition that cannot be reversed without medical intervention by a doctor or hospital.

⁵ 3-4203

**15.1.1, Safety Procedures Manual
Glossary of Terms**

Unimpervious Solid Surfaces Solid surfaces are porous and are more likely to absorb spilled PCB' prior to completion of the cleanup requirements prescribed by this procedures manual. Unimpervious solid surfaces include, but are not limited to wood, concrete, asphalt and plaster board.

Universal Precautions - An approach to infection control using such things as personal protection equipment and cleaning procedures. According to the concept of Universal Precautions, all human blood and certain human body fluids are treated as if known to be infectious for HIV, HBV, and other blood borne pathogens.

Valve Outlet Caps and Plugs - Removable caps and plugs that form a gas tight seal on valve outlets of certain gases and, in some cases, provide valve thread protection.

Valve Protection Device - A device attached to the neck ring or body of the cylinder to protect the cylinder valve from being struck or damaged from impact resulting from a fall or an object striking the cylinder.

Vector Control - Control of any variety of pests and pathogens through the control and/or elimination of insects, rodents, birds, other small mammals, and related environmental conditions.

Wet Cleaning - The process of eliminating asbestos contamination from structural surfaces and objects by using cloths, mops or other cleaning utensils, which have been dampened with water and afterwards thoroughly decontaminated or disposed as asbestos, contaminated waste.

Wipe Sampling - A surface lead dust sampling method encompassing a total surface of 144 square inches. Upon completion of lead-based paint activities, wipe samples shall not exceed a maximum allowable clearance level of 100 micrograms per square foot (mcg/ft.²).

Work Place - Any building work area or contiguous group of buildings or work areas at one geographical location composing a plant site in this Commonwealth used by the employer on a permanent or temporary basis to conduct business.

Worker And Community Right-to-Know (Right-to-Know or R2K Law) - Requires by law that the employers provide information on hazardous substance to their employees, the public, and the emergency service organizations (fire, police, and health).

Working Level (WL) - Any combination of short-lived radon daughter products in one (1) liter of air that will result in the emission of 130,000 MeV of potential alpha energy (1 WL = 200 pCi/l).
Working Level Month (WLM) - The cumulative exposure equivalent to exposure at one (1) working level for a working month of 170 hours.

XRF Analyzer - A machine that uses x-ray fluorescence (XRF) to test for the presence and content of lead in paint/surfaces.

ZPP - Zinc Protoporphyrin.