



Operating Procedure

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Amended	Operating Level Department
Supersedes Operating Procedure 302.2 (9/1/14)	
Authority COV §53.1-10	
Subject CONTROL OF HAZARDOUS MATERIALS	
ACA/PREA Standards 4-4215; 4-ACRS-1C-17, 4-ACRS-1C-18; 2-CO-3B-01; 1-CTA-3B-06	
Incarcerated Offender Access Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Public Access Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Attachments Yes <input checked="" type="checkbox"/> #4 No <input type="checkbox"/>
Office of Primary Responsibility Environmental Services Unit	

I. PURPOSE

This operating procedure provides protocols for Department of Corrections units in the control, storage, safe handling, and proper use of all flammable, toxic, and corrosive materials.

II. COMPLIANCE

This operating procedure applies to all units operated by the Department of Corrections (DOC). Practices and procedures shall comply with applicable State and Federal laws and regulations, Board of Corrections policies and regulations, ACA standards, PREA standards, and DOC directives and operating procedures.

III. DEFINITIONS

Chemical Storage Area - Any area in which a chemical is stored

Combustible Liquid - A substance with a flash point at or above 100 degrees Fahrenheit (37.8 degrees Centigrade); classified by flash point as a Class II or Class III liquid

Corrosive Material - A substance that can destroy or eat away by chemical reaction (for example, lye, caustic soda, sulfuric acid)

Flammable Liquid - A substance with a flash point below 100 degrees Fahrenheit (37.8 degrees Centigrade); classified by flash point as a Class I liquid

Flash Point - The minimum temperature at which a liquid will give off sufficient vapors to form an ignitable mixture with the air near the surface of the liquid (or in the vessel used)

Global Harmonization System of Classification and Labeling of Chemicals (GHS) - A system for standardizing and harmonizing the classification and labeling of chemicals)

Hazard Communication Standard (HCS) - A system established by OSHA requiring employers to provide employees information about hazardous substances in the workplace through Material Safety Data Sheets and Safety Data Sheets (MSDS/SDS)

Hazardous Materials and Substances - Substances classified as harmful to the environment or to human health, and whose disposal is governed by federal, state, and local laws and regulations

Institutional Safety Specialist(ISS) - The individual whose full time duties are to coordinate, monitor, and evaluate the facility's safety functions and advise management on recommended action to enhance safety programs. The institutional safety specialist will serve as a member of the facility executive team and shall report to the Warden or Assistant Warden.

Inventory Log System - A system that reflects the chemicals being stored in the designated area, but does not include a running total of each chemical, and is not as detailed as a perpetual inventory. The log should indicate the number of containers of each chemical, and which ones are "in-use."

Label - Written, printed, or graphic material displayed on or affixed to a chemical container

Material Safety Data Sheet (MSDS) - A document required by government regulation for all hazardous

chemical substances produced and/or sold in the United States; each MSDS sheet shall be in English and shall contain the following information: the identity used on the label, physical and chemical characteristics (vapor pressure, flash point, and so forth), physical and health hazards, primary routes of entry, exposure limits, precautions for safe handling and use, control measures, emergency and first aid procedures, and the chemical manufacturer's name, address, and telephone number.

NFPA - The National Fire Protection Association

NFPA Flammability Hazard (Red) - This degree of hazard is measured by using the flash point assigned to the product as specified on the material safety data sheet. (0, will not burn; 1, above 200°F; 2, above 100°F and below 200°F; 3, below 100°F; 4, below 73°F)

NFPA Health Hazard (Blue) - The likelihood of a material to cause, either directly or indirectly, temporary or permanent injury or incapacitation due to an acute exposure by contact, inhalation, or ingestion. (0, normal material; 1, slightly hazardous; 2, moderately hazardous; 3, extreme danger; 4, deadly)

NFPA Instability Hazard (Yellow) - The violent chemical reaction associated with the introduction of water, chemicals could also polymerize, decompose or condense, become self-reactive, or otherwise undergo a violent chemical change under conditions of shock, pressure, or temperature. (0, stable; 1, unstable if heated; 2, violent chemical change; 3, shock and heat detonate; 4, may detonate)

NFPA Specific Hazard (White) - Other properties of the material that cause special problems or require special fire-fighting techniques (ACID=acid, ALK=alkali, COR=corrosive, OXY=oxidizer, P=polymerization, Y=radioactive).

Organizational Unit - A DOC unit, such as a correctional facility, regional office, probation and parole office, Virginia Correctional Enterprises (VCE), Academy for Staff Development, Corrections Construction Unit, Agribusiness Unit, or other separate operational unit and individual headquarters unit (i.e. Human Resources, Offender Management, Internal Audit).

OSHA - The Occupational Safety & Health Administration

Perpetual Inventory - An inventory that reflects an accurate, running total of hazardous chemicals; this inventory notes any addition to and/or removal from the designated stock. The inventory should indicate that each container is accounted for, and the amount in the in-use container is noted. Perpetual inventories only apply to RESTRICTED chemicals stored INSIDE the secure perimeter. These chemicals are also subject to a Hazardous Materials Exemption form.

Personal Protective Equipment (PPE) - Equipment intended to be worn by an individual to create a barrier against workplace hazards

Pollution Prevention - The use of materials, processes, or practices that reduce or eliminate the creation of pollutants or wastes at the source, to minimize the pollution that is discharged to air, water, or land

Restricted Material - Materials shall be rated as *Restricted* based on NFPA/HMIS/GHS ratings or other information provided in the MSDS/SDS such as:

- Health Hazard - Rating of 2 or higher
- Flammability (Combustible) - Rating of 2 or higher; Flashpoint less than 200° F
- Reactivity - Rating of 2 or higher
- Special Notes - all aerosol containers shall be rated as *Restricted*.
- Any material labeled with one or more GHS pictograms

Safety Data Sheet (SDS) - A document required by government regulation for hazardous chemical substances produced and/or sold in the United States. Each SDS sheet shall be in English and shall contain the following information: the identity used on the label, physical and chemical characteristics (vapor, pressure flash point, and so forth), physical and health hazards, primary routes of entry for human exposure, exposure limits, precautions for safe handling and use, control measures, emergency and first aid procedures, and the chemical manufacturer's name, address, and telephone number.

Secondary Container - A portable container into which chemicals are transferred for use

Toxic Material - A substance that through chemical reaction or mixture can produce possible injury or harm to the body by entry through the skin, digestive tract, or respiratory tract. The toxicity is dependent on the quantity absorbed and the rate, method, and the site of absorption and the concentration of the chemical.

Unit Safety Coordinator (USC) - The individual who has been designated by the Organizational Unit Head to coordinate the organizational unit's safety functions as a collateral duty; generally, such positions occur at DOC field units, Community Corrections facilities, P&P Offices, and administrative offices where there are no full time, classified safety positions.

VDOLI - The Virginia Department of Labor and Industry

VFPC - Virginia Fire Prevention Code

IV. PROCEDURE

A. Control

1. This operating procedure governs the control, storage, and use of all flammable, toxic, and caustic materials. (4-4215; 4-ACRS-1C-17; 2-CO-3B-01; 1-CTA-3B-06) Probation and Parole District Offices and administrative offices not located at DOC facilities must be operated safely, but the inventory requirements and restrictions on aerosol cans do not apply.
2. Each organizational unit that handles or uses any chemicals, other than general purpose cleaning supplies, shall designate an employee to serve as Institutional Safety Specialist or Unit Safety Coordinator to oversee and manage the control of hazardous materials for the unit. The term Institutional Safety Specialist/ Unit Safety Coordinator (ISS/USC) will be used throughout this operating procedure to refer to the designated employee.
3. The Institutional Safety Specialist/Unit Safety Coordinator (ISS/USC) shall maintain a current comprehensive listing of all chemicals used at the unit. (see [Chemical Listing](#) 302_F4 for a sample) Information to be listed includes:
 - a. Manufacturer, product name
 - b. Hazard rating (NFPA or GHS Pictogram)
 - c. Restricted/Non-Restricted determination
 - d. Usage areas
4. The ISS/USC shall maintain a file of current Material Safety Data Sheets (MSDS) or Safety Data Sheets (SDS) for each chemical used in the unit.
 - a. The ISS/USC shall update facility MSDS/SDS as revisions become available.
 - b. The ISS/USC shall ensure that the most current MSDS/SDS is being used.
 - c. The ISS/USC shall maintain a separate archival folder of obsolete MSDS/SDS.
 - d. The ISS/USC shall ensure that all MSDS/SDS sheets and books throughout the facility are reviewed annually and documented as such.
5. All requests for purchases of chemicals shall be routed through the ISS/USC for evaluation before purchase. Evaluations should be based on the following criteria:
 - a. All food service chemicals, general purpose cleaners, general purpose pesticides, and laundry chemicals (other than VCE industrial laundry operations) shall be listed on the DOC *Approved Chemicals List* (see Attachment 1) and no substitutions shall be made without the approval of the Regional Environmental Specialist.
 - b. Chemical approvals for products used, but not stored, inside the secure perimeter shall not be selected by the ISS/USC to circumvent the DOC *Approved Chemicals List* (see Attachment 1).
 - c. There is a current MSDS/SDS available.

- d. The product is appropriate and labeled for the intended use.
 - e. This is the least hazardous product for this use.
 - f. Evaluation of the possible impact of the product on the wastewater treatment system, and/or solid waste disposal systems and waste streams
6. Purchase of chemical products not currently in use in the unit:
- a. The person desiring to order a new chemical product should obtain an MSDS/SDS prior to ordering the material.
 - b. The MSDS/SDS should be directed to the ISS/USC for review and approval prior to ordering.
 - c. If a material is determined by the ISS/USC as being hazardous (*Restricted*), a replacement material should be substituted if possible.
 - d. All requests for *Restricted* chemicals to be stored inside the secure perimeter must be approved by the ISS/USC, Unit Head, the Regional Environmental Specialist, and Regional Administrator prior to purchase.
7. At least annually, the control of *Restricted* materials should be reviewed to ensure continued compliance with all aspects of this operating procedure. Any deficiencies will be addressed with remedial action.

B. Storage/Safe Handling

1. All staff should be trained in the Hazardous Communications Standard, as set forth by OSHA, during annual in-service training or applicable training and as new hazardous materials (*Restricted*) are received.
 - a. Newly received hazardous materials (*Restricted*) training should take place as needed in the work area which will utilize the material.
 - b. The ISS/USC should be responsible to train staff and offenders in the proper use and safe handling of specific *Restricted* materials used in their work area. (4-ACRS-1C-18)
 - c. Appropriate personal protective equipment (see Operating Procedure 261.1, *Department Safety Functions*) shall be available on the work site and properly utilized.
2. The ISS/USC shall review the MSDS/SDS for all received products with chemicals to determine if the product should be categorized as *Restricted* or *Non-Restricted*. Materials shall be rated as *Restricted* based on NFPA/HMIS/GHS ratings or other information provided in the MSDS/SDS such as:
 - a. Health Hazard - Rating of 2 or higher
 - b. Flammability (Combustible) - Rating of 2 or higher; Flashpoint less than 200° F
 - c. Reactivity - Rating of 2 or higher
 - d. Special Notes - All aerosol containers shall be rated as *Restricted*.
 - e. Any material labeled with one or more GHS pictograms.
3. *Restricted* materials shall be stored outside the secure perimeter of a facility.
 - a. They should be stored in a locked and secure area.
 - b. Designated personnel shall be responsible for the proper receiving, inventorying, and issuance of all *Restricted* materials.
 - c. An inventory log system shall be maintained to indicate the current stock and the amount and to whom the product has been issued.
 - d. For purposes of chemical storage only, the Administration Building is considered inside the secure perimeter. Chemical agents, ammunition, munitions, and weapons cleaning/maintenance compounds may be stored in designated armories and security posts in accordance with Operating Procedure 430.1, *Armory Operation and Maintenance*. These chemicals do not require an approved *Exemption - Hazardous Materials Storage*.

4. Exemptions may be requested to store materials rated as *Restricted* inside the secured perimeter where the material is housed in a locked security cage or other secure area.
 - a. Each exemption must be specifically requested using the [Exemption - Hazardous Materials Storage 302_F2](#) or [Exemption - Hazardous Materials Storage \(GHS\) 302_F3](#) and approved by the Regional Environmental Specialist and the Regional Administrator.
 - b. Each approved exemption will expire 3 years from the approval date and a new [Exemption - Hazardous Materials Storage 302_F2](#) or [Exemption - Hazardous Materials Storage \(GHS\) 302_F3](#) must be submitted and approved for continued exemption.
 - c. The ISS/USC shall maintain the original [approved Exemption - Hazardous Materials Storage 302_F2](#) or [Exemption - Hazardous Materials Storage \(GHS\) 302_F3](#) and copies shall be maintained with the MSDS/SDS in the areas approved for exemption.
 - d. Upon receipt of an SDS without NFPA, HMIS, or GHS ratings, consult the Regional Environmental Specialist in regards to exemption qualifications and requirements.
5. Reasonable quantities (generally a week's supply) of *Non-Restricted* products with chemicals may be stored inside of a security perimeter, in designated areas.
 - a. Each storage area shall utilize an inventory log system. The Log should indicate the number of containers of each chemical, with one container marked as "in use".
 - b. Each *Non-Restricted* housekeeping chemical container and other chemicals available for use by offenders inside of the perimeter should be stored on a shadow board, cabinet, or cage in a locked area when not in use.
6. Each chemical storage area shall maintain the MSDS/SDS sheets for all chemicals being stored in that area or signage stating where the appropriate MSDS/SDS can be found.
7. When possible, all chemicals should be stored in their original container with the manufacturer's label intact.
 - a. When chemicals are removed from the original to a secondary container, it shall be labeled to identify the contents.
 - b. Each secondary container shall be clearly marked as to the content, flammability, toxicity, and stability or with approved GHS labeling using *Attachments 2, 3, or 4*.
8. Pesticides and herbicides must be secured and dispensed only to certified applicators or registered technicians. Proper clothing and personal protective equipment must be worn as necessary and appropriate.
9. Control of Flammable Materials
 - a. Any liquid or aerosol that is required to be labeled "Flammable" or "Combustible" under the Federal Hazardous Substances Labeling Act must be stored and used according to label recommendations in a way that does not endanger life or property.
 - b. Storage rooms and cabinets must be properly secured and supervised by an authorized staff member anytime they are in use.
 - c. All portable containers for flammable and combustible liquids other than the original shipping containers must be approved containers. Containers should bear legible labels identifying the contents with approved GHS labeling using *Attachments 2, 3 or 4*.
 - d. Only an authorized staff member can dispense flammable and combustible liquids. Under no circumstances can flammable or combustible liquids be used for cleaning unless labeled and specifically approved by the ISS/USC.
 - e. A DOC representative including Virginia Correctional Enterprises, trained in spill response, shall be present whenever a vendor offloads petroleum products into a storage tank owned or operated by the DOC.
 - f. Gasoline or similar flammables must be strictly controlled and maintained in the following manner:

- i. Gasoline storage tanks and pumps should be located outside a facility security perimeter. Pumps should be locked when not in use.
 - ii. Gasoline powered equipment should be filled outside of the security perimeter before being brought into the security perimeter.
 - (a) Such equipment should be directly supervised at all times.
 - (b) Gasoline storage containers should not be brought into the security perimeter. If gasoline storage containers must be brought inside the security perimeter, i.e. small engine repair classes, they must be taken back outside the security perimeter at the end of the workday.
 - iii. Gasoline powered equipment and accompanying gasoline supplies should be stored outside of the secure perimeter in a secure area when not in use.
 - iv. Gasoline should never be carried in any type container except an OSHA approved safety can.
 - g. Outside Storage of Gasoline Cans
 - i. The storage area shall be graded in a manner to divert possible spills away from buildings or other exposures or shall be surrounded by a curb at least 6 inches high.
 - (a) When curbs are used, provisions shall be made for draining of accumulations of ground or rain water or spills of flammable liquids.
 - (b) Drains shall terminate at a safe location and shall be accessible to operation under fire conditions.
 - ii. The storage area shall be protected against tampering or trespassers where necessary and shall be kept free of weeds, debris and other combustible material not necessary to the storage.
 - iii. Flammable and combustible liquids will be required to be stored in a listed flammable storage cabinet or an approved liquid storage cabinet.
 - iv. Suitable fire control devices, such as small hose or portable fire extinguishers, shall be available at locations where flammable liquids are stored.
 - v. At least one portable fire extinguisher having a rating of not less than 12-B units must be located not less than 10 feet, nor more than 25 feet, from any Category 1, 2, or 3 flammable liquid storage area located outside of a storage room but inside a building.
10. Storage of Oxygen/Acetylene tanks within the security perimeter:
 - a. [OSHA Regulation 1926.350 – Welding and Cutting](#), states that oxygen cylinders in storage shall be separated from fuel-gas cylinders or combustible materials (especially oil or grease) a minimum distance of 20 feet or by a noncombustible barrier at least 5 feet high having a fire resistance rating of at least one-half hour.
 - b. Inside of buildings, cylinders 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 specifically assigned places away from elevators, stairs, or gangways.
 - c. Assigned storage places shall be located where cylinders will not be knocked over or 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.
 11. When glues are needed for use inside the security compound, all attempts should be made to utilize a non-flammable/non-toxic type. When this is not possible, strict accountability is required to prevent offender abuse of these substances as intoxicants/inhalants.
 12. The Regional Environmental Specialist and Unit Head must approve any use of liquid household or commercial bleach in any DOC organizational unit. Storage inside a security perimeter must be approved on an [Exemption - Hazardous Materials Storage 302_F2](#) or [Exemption - Hazardous Materials Storage \(GHS\) 302_F3](#).
 13. Agribusiness
 - a. Farm pesticides shall be handled, stored, used, and disposed of in accordance with EPA, Virginia DEQ, and Virginia Department of Agriculture Office of Pesticide Services Regulations.
 - b. Dairy, milk plant, meat plant, and other such operations shall be allowed to use specific USDA approved materials as determined by the DOC Agribusiness Manager.

C. Dispensing/ Inventory Controls

1. For *Restricted* chemicals, a perpetual inventory shall be maintained in the storage area of the chemical, when it is stored inside the secure perimeter.
2. For non-restricted and restricted chemicals, an inventory control system shall be in place in each location where the chemical is stored.
3. All materials requiring dilution shall be properly diluted before issue to offenders. Offenders shall not be allowed unsupervised access to chemical concentrates.
4. Diluted products with a hazardous rating (0) or (1) for health, flammability and reactivity, using the guidelines from the MSDS/SDS, do not meet the definition of toxic material.
 - a. Issue logs for these substances are not required but all containers must be labeled.
 - b. MSDS/SDS sheets must be maintained on these substances and readily available.
 - c. An inventory of these products shall be maintained in the primary storage area for general control purposes but is not required at the usable area.
5. Materials shall only be dispensed in labeled and approved containers that properly identify the contents. No drinking type containers shall be used.
6. Materials shall not be issued to any person that is not properly trained in their use.
7. Offenders will not be issued or allowed unsupervised access to hazardous materials.



D. Proper Use

1. Materials shall be used only for their intended purpose and in accordance the manufacturer's label instructions. Mixing of products is prohibited unless directed by the manufacturer.
2. A hazard communication program shall be incorporated in the general staff training curriculum and a specific training program for all offenders using a particular substance should be instituted in either work or training activities.
3. All appropriate personal protective equipment shall be available in the work area and properly utilized.
4. *Restricted* materials shall not be left unsupervised and unsecured.
5. Chemicals should be promptly returned to the secure storage area after use.
6. Whenever any employee, visitor, or offender is exposed to a hazardous material in a potentially dangerous manner, steps will be taken, as appropriate, to protect the person's health.
7. All spills shall be reported to the Regional Environmental Specialist.
 - a. The facility or unit is responsible to report incidents to the appropriate regulatory agencies.
 - b. The facility or unit is responsible for the proper remediation and disposal of any contaminant resulting from the spill or release of the material according to local, state, and federal regulations, with the assistance of the Regional Environmental Specialist (if needed).
8. Periodically, employees are required to perform hazardous non-routine tasks.
 - a. Some examples of these tasks are:
 - i. Confined Space Entry
 - ii. Tank Cleaning
 - iii. Sand Filter Cleaning (Wastewater Plant)
 - iv. Painting Reactor Vessels
 - b. Prior to starting work on such projects, each affected employee will be given information by their direct supervisor during a pre-job safety briefing about hazardous materials that may be

encountered. This information will include specific hazards, protective and safety measures to follow, and steps the facility is using to reduce the hazards.

9. In areas where chemicals are transferred through pipes, all facility and unit pipes must be labeled in accordance with ANSI standard 13.1. Prior to starting work in areas containing such pipes, the employee shall contact the Building and Grounds Superintendent and the Institutional Safety Specialist for information concerning:
 - a. Chemical in Pipes
 - b. Potential Hazards
 - c. Handling Precautions

V. REFERENCES

Operating Procedure 261.1, *Department Safety Functions*
Virginia Fire Prevention Code, Section 5704.3.4.4
OSHA Regulation 29 CFR 1910.106 Flammable Liquids
[OSHA Regulation 1926.350 – Welding and Cutting](#)

VI. FORM CITATIONS

[Exemption - Hazardous Materials Storage](#) 302_F2
[Exemption - Hazardous Materials Storage \(GHS\)](#) 302_F3
[Chemical Listing](#) 302_F4

VII. REVIEW DATE

The office of primary responsibility shall review this operating procedure annually and re-write it no later than three years after the effective date.

Signature Copy on File

11/1/17

A. David Robinson, Chief of Corrections Operations

Date