

VHA GREEN ENVIRONMENTAL MANAGEMENT SYSTEM AND GOVERNING ENVIRONMENTAL POLICY

1. REASON FOR ISSUE: This Veterans Health Administration (VHA) directive establishes policy for VHA's Green Environmental Management System (GEMS) program and environmental compliance and conformance practices for VHA. Previous directives on Pollution Prevention, Emergency Planning and Community Right-to-Know Act (EPCRA) and Mercury Reduction are now incorporated in this directive.

2. SUMMARY OF MAJOR CHANGES: This directive combines VHA Directive 7706, Management of Mercury in Veterans Health Administration Facilities, dated January 7, 2016; VHA Directive 7707, VHA Green support Environmental Management System (GEMS) and Governing Environmental Policy Statement, dated December 29, 2015; VHA Directive 7708, Pollution Prevention (P2) Program, dated December 18, 2015; and VHA Directive 7709, Emergency Planning and Right-to-Know Program, dated July 29, 2015.

3. RELATED ISSUES: VA Directive 0055, VA Energy and Water Management Program, dated December 10, 2014; VA Directive 0056, VA Sustainable Buildings Program, dated October 11, 2012; VA Directive 0057, VA Environmental Management Program, dated January 15, 2010; VA Directive 0058, VA Green Purchasing Program, dated July 19, 2013; VA Directive 0059, VA Chemicals Management and Pollution Prevention, dated May 25, 2012; VA Directive 0062, Environmental Compliance Management, dated January 10, 2012; VA Directive 0063, Waste Prevention and Recycling Program, dated October 17, 2011; VA Directive 0064, VA Environmental Management Systems, dated January 10, 2012; VA Directive 0067, VA National Environmental Policy Act Implementation, dated June 21, 2013; VA Directive 0637, VA Vehicle Fleet Management Program, dated May 10, 2013; VA Handbook 0064, VA Environmental Management Systems, dated January 10, 2012; VHA Directive 1850.02(1), Pest Management Operations, dated April 6, 2017; VHA Directive 1850.06, Waste Management Program, dated May 19, 2017; VHA Directive 7701 Comprehensive Occupational Safety and Health Program, dated May 5, 2017; and VA Acquisition Regulations (VAAR) 823.

4. RESPONSIBLE OFFICE: The Assistant Under Secretary for Health for Support (19) is responsible for the content of this directive. Questions may be directed to the Director, Occupational Safety and Health Office (19HEF) at VHAOccSafetyandHealthAction@va.gov.

5. RESCISSIONS: VHA Directive 7706, Management of Mercury in Veterans Health Administration Facilities, dated January 7, 2016; VHA Directive 7707, VHA Green Environmental Management System (GEMS) and Governing Environmental Policy Statement, dated December 29, 2015; VHA Directive 7708, Pollution Prevention (P2)

April 1, 2021

VHA DIRECTIVE 7707

Program, dated December 18, 2015; and VHA Directive 7709, Emergency Planning and Right-to-Know Program, dated July 29, 2015, are rescinded.

6. RECERTIFICATION: This VHA directive is due to be recertified on or before the last working day of April 2026. This VHA directive will continue to serve as national VHA policy until it is recertified or rescinded.

**BY DIRECTION OF THE OFFICE OF THE
UNDER SECRETARY FOR HEALTH:**

/s/ Deborah E. Kramer
Acting Assistant Under Secretary for Health
for Support

NOTE: *All references herein to Department of Veterans Affairs (VA) and VHA documents incorporate by reference subsequent VA and VHA documents on the same or similar subject matter.*

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VHA GREEN ENVIRONMENTAL MANAGEMENT SYSTEM AND GOVERNING ENVIRONMENTAL POLICY

1. PURPOSE

This Veterans Health Administration (VHA) directive establishes VHA environmental policy. It also establishes VHA Green Environmental Management System (GEMS) and Governing Environmental Program as VHA's primary approach for addressing environmental performance in a manner that meets the requirements of Federal, State and local environmental statutes and regulations; applicable Executive Orders; and Department of Veterans Affairs (VA) and VHA directives. This directive incorporates previous directives on the GEMS Program and Environmental Compliance, Pollution Prevention, Emergency Planning and Community Right-to-Know Act (EPCRA) and Mercury Reduction. **AUTHORITY:** 38 U.S.C § 7301(b); 42 U.S.C. § 4332.

2. BACKGROUND

VHA's primary mission is to deliver quality health care to the Nation's Veterans. In accomplishing this mission, VHA is committed to operating in compliance with applicable environmental regulations and Executive Orders to protect and improve the environment. Implementation of GEMS will ensure VA medical facilities take the necessary actions to integrate sound environmental compliance with this directive and Federal (e.g., 40 Code of Federal Regulations (C.F.R.), as applicable), State and local environmental statutes and regulations and sustainability practices across VHA organizations, activities and services. To ensure that VA medical facilities comply with environmental laws, the Assistant Under Secretary for Health for Support funds at least one Full Time Equivalent Employee (FTEE) at each Veterans Integrated Services Network (VISN) and VA medical facility. When implemented as part of the overall management system, GEMS provide a set of processes and practices that:

- a. Identify and address the impacts that a VA medical facility has on the environment.
- b. Ensure compliance with applicable environmental requirements and manage environmental regulatory responsibilities in a proactive manner.
- c. Determine opportunities for continual improvement with a focus on pollution prevention principles and enhancing the image of VHA with internal and external parties.
- d. Integrate GEMS with organizational structure, responsibilities, VA medical facility planning activities, work practices and processes, organizational goals, operations and resource allocation.

3. DEFINITIONS

a. **Environmental Aspects.** Environmental aspects are elements of an administration or VA medical facility's activities, products or services that interact, or

may interact, with the environment.

b. **Environmental Impact.** Environmental impact is any change (complete or partial) to the environment, whether adverse or beneficial, resulting from an administration's or staff office's functional mission or activities.

c. **Environmental Management System.** An environmental management system (EMS) is a set of processes and practices that enable an organization to increase its operating efficiency, continually improve its overall environmental performance and better manage and reduce its environmental impacts, including those environmental aspects related to energy and transportation functions. GEMS implementation must reflect the EMS guidance found in the VHA GEMS Guidebook available at: <http://vaww.hefp.va.gov/guidebooks/green-environmental-management-system-gems-guidebook>. **NOTE:** *This is an internal VA website that is not available to the public.* EMS follows the International Organization for Standardization (ISO) 14001 principles.

d. **Environmentally Preferable.** Environmentally preferable refers to products or services that have a lesser or reduced effect on human health and the environment when compared with competing products or services that serve the same purpose. This comparison may consider raw materials acquisition, product, manufacturing, packaging, distribution, reuse, operation, maintenance or disposal of the product or service.

e. **Green Environmental Management System.** In VHA, GEMS is synonymous with Environmental Management System.

f. **Hazardous Waste.** For purposes of this directive, hazardous waste is waste with properties that make it dangerous or capable of having a harmful effect on human health or the environment. Hazardous waste is generated from many sources, ranging from industrial manufacturing process wastes to batteries and may come in many forms, including liquids, solids, gases and sludges. The Environmental Protection Agency (EPA) provides criteria for items that may be hazardous waste on the following website: <https://www.epa.gov/hw/criteria-definition-solid-waste-and-solid-and-hazardous-waste-exclusions>.

g. **Pollution Prevention.** Pollution prevention is "source reduction" as defined in the Pollution Prevention Act of 1990 (42 U.S.C. § 13102), and other practices that reduce or eliminate the creation of pollutants through:

(1) Increased efficiency in the use of raw materials, energy, water or other resources.

(2) The protection of natural resources by conservation.

h. **Significant Environmental Aspects.** Significant environmental aspects are those which are identified in order for an organization to focus on activities, products or services which pose the greatest potential, both positive and negative, regarding environmental protection.

4. POLICY

It is VHA policy that VA medical facilities must maintain a GEMS program operated in a manner that ensures compliance with applicable environmental legal obligations; increases the efficiency of energy, water and other resource usage; reduces regulated air emissions; utilizes pollution prevention principles; and incorporates environmentally preferable practices for the design, construction and operation of buildings. **NOTE:** *Applicable environmental legal obligations include all Federal, State and local environmental statutes and regulations and other environmental requirements described in applicable VA and VHA directives and Executive Orders.*

5. RESPONSIBILITIES

a. **Under Secretary for Health.** The Under Secretary for Health is responsible for ensuring overall VHA compliance with this directive.

b. **Assistant Under Secretary for Health for Support.** The Assistant Under Secretary for Health for Support is responsible for establishing policy and providing guidance and oversight as necessary to ensure the timely and successful implementation of this directive.

c. **Deputy to the Assistant Under Secretary for Health for Support.** The Deputy to the Assistant Under Secretary for Health for Support is responsible for:

(1) Overseeing VHA GEMS and Governing Environmental Program.

(2) Periodically assessing VHA GEMS and Governing Environmental Program for continued need, currency and effectiveness.

(3) Coordinating with the Assistant Under Secretary for Health for Operations, VISN Directors and VA medical facility Directors to ensure all necessary action is taken and funding is obtained to address environmental performance in a manner that meets the requirements of Federal, State and local environmental statutes and regulations; applicable Executive Orders; and VA and VHA directives.

d. **Assistant Under Secretary for Health for Operations.** The Assistant Under Secretary for Health for Operations is responsible for:

(1) Communicating the contents of this directive to each of the VISNs.

(2) Assisting VISN Directors to resolve implementation and compliance challenges in all VA medical facilities within that VISN.

(3) Providing oversight of VISNs to ensure compliance with this directive and its effectiveness.

e. **VHA Consolidated Mail Outpatient Pharmacy Associate Deputy Chief Consultant.** The VHA Consolidated Mail Outpatient Pharmacy (CMOP) Associate

Deputy Chief Consultant is responsible for:

- (1) Developing, implementing and managing GEMS at CMOP facilities.
- (2) Ensuring that CMOP complies with applicable Federal, State and local environmental regulations, Executive Orders, VA and VHA policies.
- (3) Providing information and reports related to GEMS and environmental programs to the Assistant Under Secretary for Health for Operations for the Office of Occupational Safety and Health (OSH) upon request.

f. **Director, Enterprise Support Service.** The Director of the Enterprise Support Service (ESS) is responsible for:

- (1) Publishing and updating the VHA GEMS Guidebook, available at: <http://vaww.hefp.va.gov/guidebooks/green-environmental-management-system-gems-guidebook>. **NOTE:** *This is an internal VA website that is not available to the public.*
- (2) Providing the annual Environmental Management Survey (sometimes referred to as the VHA GEMS survey) to VISNs and VA medical facilities to measure the progress of GEMS conformance to regulatory and Executive Order requirements and ensure continual improvement of VHA environmental programs.
- (3) Supporting the technical career field (TCF) intern program.
- (4) Providing VHA web-based environmental management and compliance audit tools and information services to aid in GEMS implementation.
- (5) Appointing an ESS representative to serve on the VA Environmental Task Force and other committees, as requested by the Office of OSH.

g. **Director, Occupational Safety and Health Office.** The Director, OSH is responsible for:

- (1) Supporting the implementation and oversight of this directive across VHA.
- (2) Ensuring funding is provided to support GEMS staff and environmental projects at the VISN and VA medical facility level.
- (3) Advising VA and VHA senior officials on matters involving GEMS and environmental program management.
- (4) Appointing a VHA GEMS Program Manager, VISN GEMS Program Manager and VA medical facility GEMS Program Manager to represent VHA on the VA Environmental Management Task Force and other VA/VHA environmental committees to support GEMS.
- (5) Determining the frequency of third-party external environmental compliance

audits of all VA medical facilities in the VISN based on a risk assessment completed every 2 years.

h. **VHA Green Environmental Management System Program Managers.** The VHA GEMS Program Managers encompass a policy and oversight function and an operations function. The VHA GEMS Program Managers are responsible for:

- (1) Managing VHA GEMS and environmental programs at a national level.
- (2) Acting as the technical advisors for national GEMS and environmental programs.
- (3) Developing national environmental policy and program guidance for use by VISNs, VA medical facilities and other VHA organizations to manage their GEMS Program.
- (4) Developing and implementing national goals and strategic plans for the GEMS program.
- (5) Obtaining GEMS and environmental program management data and information as needed from VISNs and VA medical facilities.
- (6) Managing the collection of environmental management and compliance audit results in the nationally designated auditing application.
- (7) Acting as VHA liaisons to EPA, Federal Environmental Executive, Council of Environmental Quality, VA Senior Sustainability Officer and other Federal agencies, as appropriate, State and local government entities regarding related environmental issues.
- (8) Acting as a VHA point of contact for other VA and VHA organizations on matters related to environmental program management.
- (9) Developing GEMS and environmental management training for national application in conjunction with VISNs, VA medical facilities, Employee Education System and others (see paragraph 6).
- (10) Maintaining effective communication with VISNs and VA medical facilities to share best environmental practices to meet regulatory requirements and implement strategic goals.
- (11) Providing VISN Directors a risk assessment, completed every 2 years, of their VA medical facilities to determine the scheduling frequency of third-party environmental compliance audits from 3 to 5 years.

i. **Veterans Integrated Services Network Director.** Each VISN Director is responsible for:

- (1) Ensuring that all VA medical facilities within the VISN comply with this directive

and informing leadership when barriers to compliance are identified.

(2) Ensuring that adequate resources are provided for the implementation of this directive within the VA medical facilities of their jurisdiction.

(3) Appointing a full-time VISN GEMS Program Manager and ensuring the provision of at least one full-time GEMS Program Manager at each VA medical facility as required by VA Directive 0057, VA Environmental Management Program, dated January 15, 2010.

(4) Ensuring that annual VISN External GEMS Audits (VEGA) are conducted at VA medical facilities in accordance with the GEMS Guidebook and any supplemental requirements issued by the Office of OSH.

(5) Developing and implementing performance standards and position description statements related to environmental program management for designated VISN managers and VA medical facility Directors.

(6) Ensuring that third-party external environmental compliance audits of all VA medical facilities in the VISN are conducted every 3 to 5 years. The audit frequency will be determined by the Director, OSH based on a risk assessment completed every 2 years. This includes:

(a) Participating in third-party environmental compliance audits.

(b) Ensuring that each VA medical facility GEMS Program Manager participates in a third-party environmental compliance audit at a different VA medical facility, within the VISN, during a scheduled audit.

(7) Providing information and reports related to GEMS and environmental programs, upon request, to the Assistant Under Secretary for Health for Operations and the Director, OSH.

(8) Reporting all Federal, State and local regulatory agency inspections and formal notices at VISN VA medical facilities utilizing the Issue Brief tracker system and in "Primary Category" place "Site Visits Conducted by Oversight Bodies".

j. Veterans Integrated Services Network Green Environmental Management System Program Manager. Each VISN GEMS Program Manager is responsible for:

(1) Monitoring GEMS development and implementation for the VISN's facilities.

(2) Conducting an annual VEGA for each VISN's VA medical facility.

(3) Participating in third-party environmental compliance audits.

(4) Overseeing the collection of environmental management and compliance audit results in the nationally designated tool and track to abatement/completion.

(5) Reviewing data submitted for VA/VHA environmental data calls and surveys, including the Environmental Management Survey, for accuracy.

(6) Providing guidance, oversight and consultation to VISN VA medical facility GEMS Program Managers and ensuring environmental compliance and conformance with the ISO 14001 framework per the GEMS Guidebook available at: <http://vaww.hefp.va.gov/guidebooks/green-environmental-management-system-gems-guidebook>. **NOTE:** *This is an internal VA website that is not available to the public.*

(7) Acting as VISN liaison to the regional EPA office, Federal Environmental Executive, Council of Environmental Quality, VA Senior Sustainability Officer and other Federal, State and local government entities regarding environmental management systems and related environmental compliance issues.

k. **VA Medical Facility Director.** Each VA medical facility Director is responsible for:

(1) Implementing and maintaining a VA medical facility GEMS program that conforms to Executive Orders, VA and VHA environmental policies, ISO 14001 principles reflected in the GEMS Guidebook and applicable Federal, State and local environmental legal obligations.

(2) Developing an Environmental Vision Statement to document management commitment to protecting the environment and keep on record for potential review by environmental regulatory agencies. **NOTE:** *The VA medical facility Environmental Vision Statement is sometimes referred to as an environmental policy statement but is not VHA policy and should be understood as a vision statement of environmental expectations. A template can be found in the GEMS Guidebook, available at <http://vaww.hefp.va.gov/guidebooks/green-environmental-management-system-gems-guidebook>. This is an internal VA website that is not available to the public.*

(3) Including GEMS and other environmental program requirements, as appropriate, in Standard Operating Procedures (SOPs), work practices, equipment, construction, procurement, applicable and appropriate position descriptions and other processes.

(4) Selecting and appointing a Facility Sustainability Officer from their Senior Leadership, per VA Directive 0055, VA Energy and Water Management Program, dated December 10, 2014, as the champion for environmental sustainability programs within their organization.

(5) Selecting and appointing at least one GEMS Program Manager (FTEE) for the VA medical facility.

(6) Ensuring that the requirements listed under GEMS Program Manager are accomplished.

(7) Ensuring that the VA medical facility completes sustainable award applications, where applicable. **NOTE:** *For an example, see the EPA Green Gov Award.*

(8) Ensuring regulatory compliance deficiencies are resolved on a risk priority basis.

(9) Incorporating VA medical facility management activities including, for example: environmentally and economically beneficial landscaping, environmentally preferable products and life-cycle costing.

(10) At least annually, evaluating the VA medical facility's Pollution Prevention performance and developing implementation goals for the next year. Areas that can be evaluated include:

(a) Acquisition and procurement processes to purchase environmentally preferable products.

(b) Implementation of pollution prevention into all aspects of VA medical facility operations, with emphasis on those elements that involve toxic or hazardous substances.

(c) Implementing source reduction measures including, but not limited to the substitution of materials that are less hazardous and toxic to the maximum extent feasible.

(d) Mercury Control and Reduction Plan (see paragraph 1 in Appendix A).

(11) Coordinating with the Network Contracting Office (NCO) to ensure that environmentally preferred purchasing provisions have been evaluated in VA medical facility contracts per the VA Acquisition Regulations (VAAR) and Federal Acquisition Regulations (FAR).

(12) Establishing a multi-disciplinary GEMS Committee. **NOTE:** *For additional information on GEMS committee responsibilities, see paragraph 5.1. below.*

(13) Reporting all Federal, State and local regulatory agency inspections to the VISN utilizing the Issue Brief tracker system.

(14) Ensuring guidance and SOPs are developed to implement mercury reduction in VA medical facility and research operations to reduce mercury containing materials to as low as operationally achievable within the constraints of safe and effective patient care. Mercury reduction information can be found at the following link. http://vaww.hefp.va.gov/search?search_api_fulltext=mercury. **NOTE:** *This is an internal VA website that is not available to the public.* Also see Appendix A.

(15) Ensuring that permits for environmental requirements are obtained, maintained and managed.

(16) Ensuring a process is in place to assess all construction and other projects in the planning stage for environmental regulatory requirements and National Environmental Policy Act (NEPA) (see 38 C.F.R. Part 26).

(17) Signing an annual report developed by the Chair, VA medical facility GEMS Committee (see paragraph 5.l (3)).

(18) Reviewing data submitted for VA/VHA environmental data calls and surveys, including the Environmental Management Survey, for accuracy.

l. Chair, VA Medical Facility Green Environmental Management System Committee. The VA medical facility GEMS Committee is required to be chaired by the VA medical facility Associate Director or equivalent, with recommended representation from the following areas: VA medical facility GEMS Program Manager, Engineering/Facilities Management, EMS, Pharmacy, Research and Clinical Laboratories, Nursing, Recycling Coordinator, Food and Nutrition, Logistics, Ethics, Energy Engineer and Safety/Industrial Hygiene. The Chair, VA medical facility GEMS Committee is responsible for:

(1) Convening the committee, at least quarterly.

(2) Setting annual goals for continual improvement of environmental performance.

(3) Developing an annual report to describe the objectives and accomplishments of the GEMS Program that is signed by the VA medical facility Director. Reports should be maintained and ready for inspection by the Office of OSH. A sample report format can be found on the GEMS SharePoint site, available at:

<https://vaww.vashare.vha.va.gov/sites/CEOSH/ESH/ENV/SitePages/Home.aspx>.

NOTE: This is an internal VA website that is not available to the public.

(4) Reviewing non-compliance findings from local environmental inspections, as reported from the VA medical facility GEMS Program Manager, to identify corrective actions and track completion.

m. VA Medical Facility Green Environmental Management System Program Manager. The VA medical facility GEMS Program Manager is responsible for:

(1) Implementing and at least annually reviewing VA medical facility GEMS requirements in accordance with the principles of ISO 14001, Federal, State and local environmental statutory law, Executive Orders, VA and VHA policies, and this directive.

(2) Possessing the technical and program management knowledge and experience needed to understand and provide knowledgeable guidance on EPA regulatory requirements, and VHA directives for the VA medical facility, as specified by VA Directive 0057.

(3) Reviewing data submitted for VA/VHA environmental data calls and surveys, including the Environmental Management Survey, for accuracy.

(4) Setting annual objectives and targets that address the identified significant environmental aspects in order to pursue continual improvement of environmental performance.

(5) Developing an Environmental Management Plan for each target and significant environmental aspect. A sample Environmental Management Plan can be found in the GEMS Guidebook, available at <http://vaww.hefp.va.gov/guidebooks/green-environmental-management-system-gems-guidebook>. **NOTE:** *This is an internal VA website that is not available to the public.*

(6) Establishing operational controls for the significant environmental aspects, including evaluating and updating SOPs, checklists and other control documents and activities for all environmentally regulated activities to ensure that operational controls are effective and documented. GEMS Resources are located at <http://vaww.hefp.va.gov/gems>. **NOTE:** *This is an internal VA website that is not available to the public.*

(7) Developing an environmental training plan for staff so they are competent to perform operational controls related to the environmental aspects and impacts of their job. See paragraph 6.

(8) Working with various departments and VA medical facility leadership to correct environmental findings and ensure that the VA medical facility's programs satisfactorily address environmental compliance, operational controls and procedures.

(9) Ensuring a local environmental inspection program is in place to inspect all regulated activities at least annually or as required to maintain compliance. This program must include a process to keep the GEMS Committee informed of non-compliance findings from these inspections.

(10) Acting as the VA medical facility liaison to the local or regional EPA office, and other Federal, State and local government environmental entities.

(11) Cooperating and assisting with the VEGA and developing an action plan to correct VEGA findings in the designated agency electronic system.

(12) Immediately notifying the VISN GEMS Program Manager of inspections conducted by EPA, State and local environmental inspection agencies, and when required notifying an environmental regulatory agency due to a spill/release or other incident.

(13) Serving as the subject matter expert of the VA medical facility GEMS Committee and directing the committee's activities in coordination with the VA medical facility Associate Director.

(14) Acting as the technical advisor for environmental requirements in VA medical facility contracts.

(15) Performing technical reviews of sustainable activities as reported from the VA medical facility Service Line Managers and Supervisors.

(16) Consulting VA medical facility Service Line Managers and Supervisors on all

generated waste streams to determine the hazard classification and disposal method.

(17) Participating in a third-party environmental compliance audit at a different VA medical facility, within the VISN, during a scheduled audit.

n. **VA Medical Facility Service Line Managers and Supervisors.** VA medical facility Service Line Managers and Supervisors are responsible for ensuring that, within their operation, they have locally developed procedures to ensure compliance with environmental attributes including:

(1) Minimizing chemical inventories in both quantity and level of hazard by limiting quantities to the minimum required to continue operations between supply cycles and using alternative (e.g., less toxic) products as available.

(2) Consulting with the VA medical facility GEMS Program Manager for all generated waste streams to determine the hazard classification and disposal method.

(3) Ensuring staff receive general, required and recommended training and maintain certification (see paragraph 6).

(4) Reporting sustainable activities as requested by the VA medical facility GEMS Program Manager. **NOTE:** *Sample environmental SOPs are available at <http://vaww.hefp.va.gov/gems> and <http://vaww.hefp.va.gov/guidebooks/green-environmental-management-system-gems-guidebook>. These are internal VA websites that are not available to the public.*

6. TRAINING

a. **General Training.** The VA medical facility GEMS Program Manager with Service Line Managers and Supervisors, or designees, must ensure a facility EMS and compliance training needs analysis is conducted and the appropriate training is developed for employees who have been assigned responsibilities for development and implementation of environmental programs.

(1) The GEMS Guidebook includes guidance on how to develop a training needs assessment and a sample is available at: <http://vaww.hefp.va.gov/guidebooks/green-environmental-management-system-gems-guidebook>. **NOTE:** *This is an internal VA website that is not available to the public.*

(2) Training and retraining frequency will be established by the VA medical facility in order to maintain competency, and as required by law. **NOTE:** *State laws vary so training plans need to be site specific.*

b. **Required Training.** VA medical facility staff performing activities with environmental compliance; Federal, State and local mandated training requirements; certifications; permits; or licensure must be trained when assigned those duties. Examples of these staff may include, but are not limited to Tank Operators, Water Treatment Operators, Asbestos Workers, Lead Paint Testers and employees who

package, handle or ship hazardous materials and hazardous waste. These training requirements can be found in the EPA, Department of Transportation and State and local regulations, and are identified by the VA medical facility GEMS Manager per paragraph 6.a.

c. **Recommended Training.** The following is a minimal list of recommended training:

(1) All GEMS staff are recommended to attend training on the data management system used to document audit findings and corrections. Training is periodically provided by the Office of OSH.

(2) The Office of OSH provides periodic training on GEMS related topics to ensure GEMS program managers maintain up-to-date knowledge on environmental requirements.

(3) The Office of OSH periodically provides a conference to include updates on regulatory compliance, sustainability opportunities, basic and advanced regulatory review for all GEMS Staff to attend. Training Resources for GEMS Managers are available at (restricted access)

<https://vaww.vashare.vha.va.gov/sites/CEOSH/ESH/ENV/SitePages/Home.aspx>.

NOTE: *This is an internal VA website that is not available to the public.*

(4) **VISN GEMS Program Manager.**

(a) Attend an ISO 14001 Lead Auditor training or equivalent course to provide a background in EMS to recognize non-conformance and assist in Management Program evaluation during VISN External GEMS Audits (VEGA). These courses are readily available by third parties.

(b) Attend the annual OSH VISN Conference.

(c) VA Medical Facilities. As part of the Career Development Program for GEMS, staff should consider Basic GEMS for VHA GEMS Program Managers, a series in TMS titled Basic GEMS then the topic. These courses cover many environmental aspects/topics and how VHA complies with regulatory requirements. See <http://vaww.hefp.va.gov/gems> for guidance. **NOTE:** *This is an internal VA website that is not available to the public.*

7. RECORDS MANAGEMENT

All records regardless of format (e.g., paper, electronic, electronic systems) created by this directive must be managed as required by the National Archives and Records Administration (NARA) approved records schedules found in VHA Records Control Schedule 10-1. Questions regarding any aspect of records management should be addressed to the appropriate Records Officer.

8. REFERENCES

- a. 38 U.S.C. § 7301(b).
- b. 42 U.S.C. § 13102.
- c. 42 U.S.C. § 4332.
- d. 38 C.F.R. part 26.
- e. 40 C.F.R. Protection of Environment, as applicable.
- f. Federal Acquisition Regulations (FAR).
<https://www.acquisition.gov/browse/index/far>.
- g. VA Directive 0055, VA Energy and Water Management Program, dated December 10, 2014.
- h. VA Directive 0057, VA Environmental Management Program, dated January 15, 2010.
- i. VA Directive 0067, VA National Environmental Policy Act Implementation, dated June 21, 2013.
- j. VHA GEMS Guidebook, available at: <http://vaww.hefp.va.gov/guidebooks/green-environmental-management-system-gems-guidebook>. **NOTE:** *This is an internal VA website that is not available to the public.*
- k. Environmental Protection Agency (EPA) website. Basic Information about Mercury, available at <https://www.epa.gov/mercury/basic-information-about-mercury#:~:text=Health%20Effects%20Associated%20with%20Exposures%20to%20Mercury%20Mercury,systems%2C%20affecting%20their%20ability%20to%20think%20and%20learn>.
- l. Office of Acquisition and Logistics VAAR Part 823 Environment, Energy and Water Efficiency, Renewable Energy Technologies, Occupational Safety, and Drug-Free Workplace, available at: <https://www.va.gov/oal/library/vaar/vaar823.asp>.
- m. Office of Acquisition and Logistics VA Acquisition Manual (VAAM) Part 823 Environment, Energy and Water Efficiency, Renewable Energy Technologies, Occupational Safety, and Drug-Free Workplace, available at: <https://www.va.gov/oal/docs/library/vaam/vaamM823.pdf>.

APPENDIX A

MERCURY CONTROL AND REDUCTION

1. BACKGROUND AND IMPLEMENTATION

a. This appendix is designed to answer some common questions about the mercury program, health impacts, mercury in Department of Veterans Affairs (VA) medical facilities, mercury exposure, when adequate mercury alternatives are unavailable, examples of mercury control and reduction, best management practices of mercury and benefits of mercury pollution prevention program.

b. As mentioned in the body of this directive, the VA medical facility Director is to ensure guidance and standard operating procedures are developed to implement mercury reduction in VA medical facility and research operations to reduce mercury containing materials to as low as operationally achievable within the constraints of safe and effective patient care.

c. The VA medical facility specific Mercury Control and Reduction Plan, must:

(1) Be developed by leadership to incorporate VA medical facility management and clinical operations where mercury is present.

(2) Be reviewed annually by the VA medical facility Director.

(3) Include a statement of management commitment to mercury control, reduction, and proper disposal.

(4) Incorporate mercury control, reduction and tracking into local work practices, procedures and specifications.

(5) Implement VA medical facility mercury replacement, control and reduction projects.

(6) Ensure that non-mercury alternatives are used during maintenance or end-of-service-life replacement of mercury-containing devices or equipment, unless required by patient care considerations.

(7) Ensure mercury elimination and reduction are considered during all phases of acquisition and procurement, as well as the operation of the VA medical facility management program.

(8) Promote employee training and awareness programs on mercury reduction and hazard recognition. See paragraph 6 (Training) in the directive.

(9) Ensure mercury-containing products are disposed in accordance with all applicable regulations.

2. HEALTH IMPACTS

a. All forms of mercury are toxic to humans, but the various forms of organic and inorganic mercury have different toxicity. Generally, organic forms are much more toxic than inorganic forms.

b. The organic forms of mercury are primarily neurotoxins. Therefore, exposure can damage the brain and nervous system. The developing brain of a fetus or child is especially vulnerable to organic mercury exposure. Inorganic forms of mercury primarily affect the kidney but are also neurotoxins.

c. Other organs and systems of the body can also be harmed by exposure to mercury. Recent studies suggest that exposure to mercury contaminants may also alter the immune response to pathogens, contribute to the development of cardiovascular disease and favor the growth of populations of multiple antibiotic resistant bacteria.

d. Occupational exposure to mercury may occur via three routes: inhalation, ingestion and absorption. The most likely routes of exposure are inhalation of inorganic mercury vapor after a spill, or during a manufacturing process, or through accidental ingestion of methyl mercury hand-to-mouth as a result of improper barrier protection protocol or cross-contamination.

3. MERCURY IN VA MEDICAL FACILITIES

a. Common medical uses of mercury or its compounds include:

(1) Thermometers.

(2) Sphygmomanometers (blood pressure monitors).

(3) Esophageal dilators (also called 'bougie tubes').

(4) Cantor tubes and Miller-Abbott tubes (used to clear intestinal obstructions).

(5) Feeding tubes.

(6) Dental amalgam.

(7) Laboratory Chemicals (fixatives, stains, reagents, preservatives).

(8) Medical batteries containing mercury.

(9) Pharmaceuticals (vaccines, insulin).

(10) Calibration thermometers used in Laboratory and Pathology Service and Research Laboratories.

b. Mercury may also be encountered in the following non-medical settings or

applications:

(1) Cleaning solutions with caustic soda or chlorine (may be contaminated with mercury during the production process).

(2) Batteries containing mercury.

(3) Fluorescent lamps and high-intensity mercury lamps. **NOTE:** *The purchase or utilization of "Hands Free" infection control devices that generate ultraviolet light (UV) that utilize low level mercury content fluorescent lamps is permitted and the mercury content of the lamps shall not be considered as a negative factor in the selection process.*

(4) Bulb-crushing operations (used to reduce waste volume).

(5) Non-electronic thermostats.

(6) Pressure gauges.

(7) Some electrical switches used for lights and appliances.

(8) Laboratory glassware cleaners used in clinical and research laboratories.

(9) Combustion of fossil fuels and incineration of medical wastes.

4. MERCURY EXPOSURE

There is minimal risk of mercury exposure during normal use of products that are handled correctly. However, problems may occur if the mercury in a product is exposed to air, or if a product is not properly discarded in a manner to keep mercury out of the environment. Concerns about the health impacts of mercury are leading to mercury pollution prevention programs at the Federal, State and local levels. The highest priority of any pollution prevention program is source reduction, which means avoiding the use of mercury and mercury containing products where practical.

5. WHEN ADEQUATE MERCURY ALTERNATIVES ARE UNAVAILABLE

When adequate mercury alternatives are not available and mercury must be used, it may be possible to recycle mercury in order to prevent release into the environment. Recycling is the second tier of mercury pollution prevention. Disposal of mercury that is irreversibly contaminated should be the last resort.

6. EXAMPLES OF MERCURY CONTROL AND REDUCTION

Some excellent examples of mercury control and reduction include the following:

a. Replace mercury sphygmomanometers (blood pressure monitors) with aneroid/electronic sphygmomanometers.

- b. Replace mercury thermometers with non-mercury thermometers.
- c. Replace mercury intestinal and esophageal dilators and feeding tubes with alternatives using water, saline or tungsten.
- d. Use low-mercury fluorescent lights and recycle used fluorescent lighting. Replace mercury-containing fluorescent lights with light-emitting diode (LED) lamps.
- e. Use mercury-free batteries or rechargeable products.
- f. Replace mercury thermostats, pressure gauges, barometers, switches and other building or VA medical facility equipment with mercury-free alternatives.
- g. Replace mercury fixatives and preservatives with mercury-free alternatives.
- h. Use mercury-free bleach and cleaning chemicals.
- i. Set up a program for appropriate collection of used amalgam and install amalgam separators in sinks and drains in the dental clinic.

7. BEST MANAGEMENT PRACTICES OF MERCURY

Best practices for the management of mercury within VA medical facilities include but are not limited to:

- a. Train employees who work with mercury containing materials on the hazards, proper use, handling, disposal and use of alternatives. **NOTE:** See the Environmental Protection Agency (EPA) website for more information at: <https://www.epa.gov/mercury/basic-information-about-mercury#:~:text=Health%20Effects%20Associated%20with%20Exposures%20to%20Mercury%20Mercury,systems%2C%20affecting%20their%20ability%20to%20think%20and%20learn.>
- b. Recycling of mercury-containing products when they can no longer be used.
- c. Pre-planning for mercury spill response and cleanup, including external vendors; emergency contacts; and Federal/State reportable quantities and reporting requirements.
- d. Occupational exposure monitoring for personnel at elevated risk.
- e. Require suppliers to certify the mercury content on the medication or medical product before purchase.
- f. Document mercury-containing products with no alternative product available; periodically re-evaluate to determine if suitable substitutes have been developed.

8. BENEFITS OF MERCURY POLLUTION PREVENTION PROGRAMS

Pollution prevention programs protect human health by reducing occupational exposures and release of mercury to the air, water and land. They reduce costs associated with the use of mercury, including:

- a. Disposal or recycling.
- b. Collection and storage prior to disposal.
- c. Paperwork for tracking hazardous waste disposal.
- d. Training and equipment for spill response.
- e. Training for hospital employees who handle mercury-containing products, and liability for environmental contamination or worker exposure.