



**ENVIRONMENTAL MANAGEMENT
SYSTEM (EMS) MANUAL**

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EMS DEFINITIONS

Continual Improvement – Recurring process of enhancing the environmental management system in order to achieve improvements in overall environmental performance consistent with the department’s environmental management system policy.

Corrective Action – Action taken in response to a detected nonconformity in order to resolve the nonconformity.

Document – A document contains information about a specific program and may include plans, manuals, procedures, forms and training programs. Documents reflect the current status of the program.

Environmental Aspect Tracking Matrix (Risk Matrix) – This is the document that identifies the Environmental Aspects and Impacts and determines the associated risk. This document also contains information on the legal requirements, operational controls, and any monitoring associated with the identified aspects.

Environmental Management System (EMS) – A system to identify, evaluate, improve and review an organization’s environmental impacts and overall environmental performance and operating efficiency.

EMS Team – The EMS Team is made up of DEQ staff from around the department and oversees the implementation and management of DEQ’s EMS. The EMS Team is designated by the Leadership Team.

EMS Regional Team – The EMS Regional Teams are made up of regional office staff and they assist with implementation of DEQ’s EMS in the field. One representative from each EMS Regional Team is on the EMS Team.

EMS Manual – The DEQ EMS Manual describes the DEQ EMS procedures for all major program elements. The EMS Manual is maintained by the EMS Team in conjunction with the Office of Pollution Prevention.

Environmental Aspect – Element of an organization’s activities, products, or services that can interact with the environment.

Environmental Impact – Any change to the environment, whether adverse or beneficial, wholly or partially resulting from an organization’s environmental aspects.

Environmental Objective – Overall environmental goal arising from the environmental policies that an organization sets for itself to improve the organization’s environmental performance.

Environmental Performance – Measureable results achieved through the EMS, related to control of aspects, based on environmental policy, procedures, objectives and targets.

Environmental Target – A specific performance requirement, quantified where possible, that an organization sets to accomplish an environmental objective. A target may accomplish part of an objective or may address the entire objective.

Leadership Team - The DEQ Leadership Team (LT) consists of the Director, Deputy Director, Division Directors and Regional Directors; the LT develops and implements strategic initiatives to advance the goals of the Department.

Leadership Team Designee – Member of the Leadership Team that acts as the interface between the EMS Team Leader and the Leadership Team

Major Non-Conformance – A failure resulting from the absence or breakdown of the EMS program or a number of minor non-conformances that together represent a breakdown of the system.

Minor Non-Conformance – A failure of a minor element of the EMS program that does not result in the overall failure of the system or major part of the system. The EMS Program can still be determined to be in conformance with the presence of a minor non-conformance as long as the non-conformance is being addressed.

Operational Control – Engineering, physical, or administrative controls that are applied to activities, products, and services to minimize the occurrence of adverse impacts associated with the significant environmental aspects and to prevent deviations from the agency environmental management system policy or from legal and other requirements.

Preventive Action – Action taken in response to a potential nonconformity in order to prevent the nonconformity.

Record – A record is any recorded information that documents a transaction or activity by or with any public officer, agency or employee of an agency. Regardless of physical form or characteristic, the recorded information is a public record if it is produced, collected, received or retained in pursuance of law or in connection with the transaction of public business.

Significant Aspect – Aspects of an organization’s activities that can have significant environmental risk, or are determined by the EMS Team or Leadership Team to take precedence for action.

Standard Operating Procedure (SOP) – A set of written instructions that document a routine or repetitive activity used by an organization in the establishment and/or management of a successful management system.

1. INTRODUCTION & PURPOSE

The Virginia Department of Environmental Quality (DEQ) has committed to managing its environmental impacts using an Environmental Management System (EMS) based on ISO 14001 and the Virginia Environmental Excellence Program (VEEP). The purpose of this manual is to provide direction and guidance for the maintenance of DEQ's EMS and to establish and document DEQ's EMS procedures.

2. SCOPE

The DEQ EMS is an organizational level EMS that manages environmental impacts across DEQ. The EMS program covers activities that take place at all DEQ leased and owned properties that may impart environment impacts. The EMS program is responsible for establishing DEQ policies and goals with respect to those concerns. The EMS is designed to improve DEQ's environmental performance as an agency.

3. AGENCY MISSION & VISION

DEQ protects and enhances Virginia's environment and promotes the health and well being of the citizens of the Commonwealth. As a result of actions taken by DEQ to achieve our regulatory missions and implementing the visions of our various environmental programs, Virginians will continue to enjoy cleaner water available for all uses, improved air quality that supports communities and ecosystems, and the productive reuse of contaminated land.

4. AGENCY POLICY STATEMENT NO. 5-2014: AGENCY ENVIRONMENTAL MANAGEMENT SYSTEM

Agency Policy Statement No. 5-2014 (Policy) is the foundation document of the EMS states DEQ's commitment to environmental stewardship and compliance, pollution prevention, training, communication, and continuous improvement. The Policy shall be communicated to all employees, contractors of DEQ, and the public. The Policy is available on [internal](#) and [external](#) DEQ websites and should be reviewed and updated when necessary to reflect commitment by current management.

5. ROLES & RESPONSIBILITIES

5.1. DEQ Leadership Team

The DEQ Leadership Team (LT) is responsible for assigning representatives to the EMS Team, which will include individuals from diverse program areas within

DEQ, as well as representatives from the Regional EMS Teams. The LT shall also designate a member of the LT to support the EMS Team. This designee will be the management point of contact for the EMS Team Leader and is also responsible for participating in the annual EMS Management Review and approving internal audits and annual VEEP reports.

5.2. EMS Team

The EMS Team will meet at least quarterly and is responsible for the development, implementation and management of DEQ's EMS program, to include providing direction and guidance to Regional EMS Teams. The EMS Team will maintain the EMS website on DEQnet as well as the EMS Manual and all associated templates and programs. The EMS Team will assist Regional EMS Teams in the EMS process.

The EMS Team Leader will coordinate all EMS Team meetings and oversee implementation of the EMS throughout DEQ. The EMS Team Leader will be the primary point of contact between the EMS Team and the LT's designee on EMS related communications. The EMS Team Leader is also responsible for designating EMS Team members to serve in the roles of Meeting Minute Taker and Document Control Officer.

5.3. Office of Pollution Prevention

The DEQ Office of Pollution Prevention (P2) is responsible for development and implementation of the EMS. The EMS Team Leader will be a member of the P2 staff with expertise in the field of EMSs. The manager of the P2 Office will report to the DEQ Director of Administration on the progress of the EMS.

5.4. Regional EMS Teams

Regional EMS Teams will implement environmental programs specific to their facility operations but also contribute to the DEQ EMS as a whole. Regional Teams serve as the primary delegates for communicating responsibilities, assigned tasks, and policies under the EMS, as well as managing environmental risks at the Regional Offices and other facilities maintained by DEQ.

A. Responsibilities:

- i. The Regional Director is responsible for seeking volunteers or appointing Team members from various program areas within the regional office and providing guidance and direction for the Regional Team, based on the Team's recommendations, taskings established by the LT, or required by other programs to which DEQ subscribes.

- ii. The Regional Team Leader is responsible for leading the Team, ensuring participation by DEQ staff at the local facility, and communicating to the Team and the Regional Director matters related to the EMS that require such notification.
- iii. The Regional Team is responsible for establishing and directly participating in regional EMS programs and promoting DEQ's EMS throughout their facility to the extent practicable.

B. Process:

- i. The Regional Team and the Regional Team Leader will be recruited by the Regional Director, and should be a cross-functional team that includes members that fairly represent DEQ operations across the facility.
- ii. The Regional Team will determine who will be responsible for recording meeting minutes and who will manage Regional EMS documentation on the facility's team page on DEQnet and Regional Offices' web pages.
- iii. Each Regional Team shall determine the frequency of their meetings, not to be less than twice a calendar year.

5.5. DEQ Employees

DEQ employees and on-site contractors are responsible for completing annual EMS Training, adhering to the Policy, and following EMS policies, practices and procedures. Employees or on-site contractors that encounter or influence operational controls and other environmental processes in the course of their job must be aware of their roles and responsibilities in the particular operational control or process.

6. ENVIRONMENTAL ASPECTS

An environmental aspect is an element of DEQ's activities that can negatively or positively affect the environment. An environmental impact is the actual effect on the environment because of an aspect of DEQ's operations. To mitigate DEQ's impact to the environment, the EMS Team must identify, evaluate, and prioritize the department's environmental aspects and impacts.

6.1. Aspect Determination

Aspects of DEQ's activities, products and services, within the defined scope of the EMS, will be determined by the EMS Team at its first meeting and documented in the Environmental Aspect Tracking Matrix (Risk Matrix). All identified aspects will be further evaluated using a risk management approach, using the probability of the aspect occurring with probable impacts to the environment and the severity of the expected impact. The ultimate risk will be

calculated based on the probability and the severity of the impact. The EMS Team will then determine those significant aspects and associated impacts based on the rankings in the Risk Matrix as well as the level of control or influence that DEQ has over those aspects.

6.2. Aspect Review

Environmental aspects should be reviewed annually by the EMS Team to reevaluate and reprioritize the existing aspects, as necessary. At the same time, the Risk Matrix should be updated to reflect DEQ's progress in addressing existing aspects and reducing those environmental risks, and determining if new aspects are present for inclusion into the Risk Matrix.

7. LEGAL & OTHER REQUIREMENTS

7.1. Identification of External Regulations, Guidance or Policies

7.1.1. DEQ's legislative team tracks all state legislative actions that could impact DEQ's programs or operations, including state legislation impacting our EMS.

7.1.2. The Regional Director or their designee, or Manager of DEQ General Services shall work with the building's owners or on-site managers to assure identification of and compliance with local ordinances that may be applicable to those locations and Central Office.

7.1.3. DEQ's legal and other requirements, including those requirements established in Executive Orders, shall be recorded in the Legal Requirements Matrix and must be reviewed annually by the EMS Team in order to determine if updates are necessary and to evaluate compliance with those requirements. Corrective actions to address non-compliance with Federal, state, or local environmental regulations must be implemented, as appropriate.

7.2. Identification of DEQ Regulations, Guidance or Policies

DEQ staff developing regulations, guidance or policies will include a direction to assess the draft regulation, guidance or administrative policy to determine whether it changes the agency's impact on the environment. If so, it will be forwarded to the agency's EMS Team Leader when finalized.

7.3. Environmental Aspects with Legal Requirements

Environmental Aspects that have a legal regulatory requirement should be addressed with an operational control. Any aspect with a legal regulatory

requirement, without operational controls in place, should be listed as a significant aspect and be addressed as soon as practicable with suitable and appropriate operational controls, to prevent DEQ from noncompliance with those requirements. Aspects that have “other” requirements, such as executive orders, that are not regulatory do not have to be addressed in the same manner.

8. OBJECTIVES & TARGETS & ENVIRONMENTAL MANAGEMENT PLANS

After the environmental impacts of the facility have been evaluated and significant aspects identified, the EMS Team must set appropriate goals that will reduce DEQ’s negative impact to the environment and establish plans to implement those goals.

8.1. Objectives and Targets

- 8.1.1. The Objective is the overall environmental goal that the EMS Team sets to accomplish over a period of time, and the Target is the detailed performance requirement, or the specific measure to address an impact. The EMS Team will develop Objectives and Targets (O&Ts), taking into consideration the Policy, significant aspects listed on the Risk Matrix, regulatory requirements, budget, and other operational and business requirements.
- 8.1.2. When developing an O&T, the existing conditions should be documented by identifying the baseline for the targeted aspect. If the baseline is unknown or not measurable, the team should document this on the O&T worksheet.
- 8.1.3. The O&Ts should be plainly numbered for ease of identification and documentation. The O&T should be numbered to include the letters OT, the calendar year, and the number of the O&T for that year. For example, the first O&T for 2014 would be numbered OT-14-01.
- 8.1.4. The EMS team shall determine which significant aspects can reasonably be addressed at one time and set the pace for accomplishing the O&Ts. At least one O&T should be initiated each year, accompanied by an anticipated completion date, if known.
- 8.1.5. As significant aspects are sufficiently addressed by the O&Ts and their ranking on the Risk Matrix improves, the aspects shall be regularly re-prioritized to determine which new aspects to address. Some aspects may require more than one O&T to sufficiently reduce the environmental impact, therefore multiple O&Ts may be necessary before the significance of any one aspect can be decreased and their final rating on the Risk Matrix improved.

8.2. Environmental Management Plans

An Environmental Management Plan (EMP) is part of the O&T process that allows for the step-by-step planning that DEQ will implement in order to accomplish the O&T. The EMP shall include designation of responsibility for achieving the O&T as well as the time frame by which it is to be achieved.

9. TRAINING, AWARENESS & COMPETENCE

Employees and on-site contractors at each facility and Central Office must be aware of the EMS program at those locations. Employees and contractors with specific requirements associated with DEQ's EMS must be trained on their responsibilities.

9.1. Awareness Training

All DEQ employees shall receive general EMS awareness training annually through DEQ's Knowledge Center. At a minimum, training shall cover the signed Agency Policy, significant aspects and how they are being addressed, relevant O&Ts in place or being implemented, major roles and responsibilities of staff and contractors under the EMS, and communication of environmental concerns within DEQ. Each regional office, including Central Office, shall also make an effort to provide facility-specific training on their recycling programs and other environmental efforts in order to encourage employee participation, to the extent possible. Training shall be reviewed annually to ensure that it is up to date and relevant.

9.2. Significant Impact Training

The EMS Team and DEQ's Training Manager shall identify, prioritize, and implement training needs for DEQ staff and contractors whose work could cause a significant adverse impact on the environment. Training needs shall be reviewed annually to ensure that all training is up to date and new training needs have been identified.

9.3. Visitor and Short-Term Contractor Training

The P2 Office, in conjunction with the Office of Training, will develop an EMS Overview that can be used by Central Office and Regional Offices to provide information to visitors and short-term contractors on DEQ's EMS. Central Office and the Regional Offices may also include site-specific EMS information as necessary. Effort should be made by each office to ensure that all visitors and contractors are informed of the EMS and any applicable operational controls.

9.4. Training Records

Individual staff training records are maintained by the DEQ Knowledge Center, in accordance with Virginia's record retention policy for state agencies.

10. COMMUNICATION

In line with its Policy, DEQ will communicate relevant information about major areas of EMS activities to all levels and functions within DEQ. DEQ shall ensure that the Policy is openly communicated to the public and other entities with which we have relationships.

10.1. Internal Communication

The EMS Team and Regional Team Representatives are responsible for communicating and promoting EMS information to DEQ employees, on-site contractors, or others that could influence DEQ's environmental aspects, including facility owners and on-site facility managers, if different.

10.2. External Communication

Any employee receiving a communication about the EMS or DEQ's environmental performance from an external party shall first confer with the EMS Team Leader and, as necessary, Public Information & Outreach Office for a decision on a DEQ response. The Public Affairs Coordinator shall make all such formal responses on behalf of DEQ, or delegate the response to a member of the EMS Team. The EMS Team shall maintain records of all incoming environmental communications for which a formal response on behalf of DEQ is provided by that office.

10.3. Outreach

As appropriate, the DEQ EMS Team shall initiate community outreach efforts, consistent with the Policy. The EMS Team shall establish outreach objectives and targets in order to fulfill these efforts, and develop presentations as appropriate and in collaboration with the Office of Public Information & Outreach.

10.4. External Website

DEQ will maintain information on its external website about the Policy and the DEQ EMS in order to encourage environmental stewardship and foster improved environmental collaboration with stakeholders. The EMS Team Leader, in collaboration with the Office of Public Information & Outreach, shall be responsible for establishing and maintaining this information.

11. EMS DOCUMENTATION, DOCUMENT CONTROL & RECORDS

The DEQ EMS shall be adequately documented to record the history of the program from inception, summarize its current status, and project future goals and direction of this program. EMS documentation consists of the documents and records that establish the structure of the EMS, and document the continued improvement of the program.

11.1. Documentation

An EMS document contains information about a specific program and may include plans, manuals, procedures, forms, and training programs. EMS documents reflect the current status of the program. All DEQ EMS documentation is controlled and made available for viewing or retrieval from the DEQnet.

Maintenance of the EMS Manual and all other EMS related documentation is the responsibility of the P2 Office in conjunction with the EMS Team.

11.2. Document Control

The EMS Team Document Control Officer is responsible for maintaining DEQ's EMS program documentation and all records on DEQnet. All documents must be legible, plainly labeled and easily located and current to the extent practicable. Revisions of EMS documents shall be approved prior to filing, recorded, and include, at a minimum, the document approval authority and the date of the last review for sufficiency.

11.3. Record-Keeping

DEQ will maintain the following EMS records: the previous Agency Policy, EMS Team meeting minutes; EMS-related training records, internal and external communications pertaining to the EMS, management review documents, self-inspection checklists and reports, and other relevant EMS records. EMS records shall be maintained for a minimum of 4 years unless otherwise specified by the Library of Virginia.

12. OPERATIONAL CONTROLS & EMERGENCY RESPONSE

Many times an environmental aspect's impact can be reduced or eliminated when an operational control (OC) is implemented to address the aspect. OCs can be a physical control such as a lock or automatic light sensor, or it can be a written control such as signage or standard operating procedures. An aspect may have more than one OC.

12.1. Activities and Operations

The EMS Team will identify OCs that are in place during the initial aspect risk evaluation. DEQ should aim to have OCs in place for all significant aspects in order to reduce the potential of adverse impacts occurring. When addressing an aspect that has the potential for an environmental emergency, the OC must address emergency prevention and response. OCs must be documented and reviewed annually and revised as necessary to ensure effectiveness.

12.2. Goods and Services Used

The EMS Team will review annually those goods and services involved with DEQ's operations. Potentially significant environmental impacts resulting from the goods and services provided are to be discussed with the providers and DEQ will encourage the reduction of environmental impacts.

12.3. Emergency Preparedness and Response

The EMS Team and DEQ's Safety Team or Safety Officer will develop and continuously improve the Agency's emergency preparedness and response plans. Emergency plans under this EMS will identify potential emergency situations that can have an adverse impact on the environment, and determine how they will be addressed. Periodic tests of the plans will occur as deemed appropriate by the LT.

12.4. Employee Participation

Employees and on-site contractors that encounter or influence operational controls and other environmental processes in the course of their job must be aware of their role in the particular OC or process.

13. MONITORING & MEASUREMENT & EVALUATION OF COMPLIANCE

Many environmental program elements that are implemented under the EMS must be monitored in some manner to ensure they remain efficient and effective, and are sometimes measured to evaluate their specific effectiveness.

13.1. Monitoring and Measurement of Impacts and Operations

The Regional Teams will report annually to the EMS Team Leader on waste management, water and energy conservation, as well as any additional activities determined by the EMS Team based on significant aspect determinations and O&Ts. If an EMS program element is shown to be ineffective, the EMS Team shall take steps to address the performance of that program. This may require that

the Regional Team involved develop a new or revised O&T to readdress the aspect(s).

13.2. Monitoring Compliance with Legal and Other Requirements

The EMS Team shall be responsible for evaluating compliance with all relevant environmental laws and regulations and arranging for environmental regulatory compliance audits from outside control entities, as appropriate.

14. EMS AUDITS

EMS programs must be audited periodically to ensure efficiency, effectiveness, and consistency with the established EMS procedures and to ensure that EMS program elements are fully functional. Internal audits, or self-inspections, shall be conducted annually by the EMS Team or their designated representatives to evaluate the status of the program. EMS audit reports shall be submitted to the appointed LT designee as part of the Annual Management Review. At a frequency to be determined by the LT, DEQ's EMS will undergo an external audit.

15. NONCONFORMANCE & CORRECTIVE OR PREVENTIVE ACTION

15.1. General

The EMS Team shall review all instances of nonconformance with the EMS and take appropriate corrective or preventive action. Nonconformance reviews shall identify the root causes of actual or potential nonconformities. Incidents of nonconformance shall be documented and a corrective or preventive action plan developed to address the nonconformance. The LT designee, shall approve all corrective or preventive action plans. All records of implemented plans will be kept on DEQnet in accordance with record retention requirements.

15.2. Site-Specific Nonconformance

If an EMS nonconformance is identified at regional offices or central office, then the appropriate EMS Regional Team will review the nonconformance and develop the corrective or preventive action plan which will then be approved by the Regional Director for use at that office. All records of implemented plans will be kept at the Regional Office/Central Office, and on DEQnet in accordance with record retention requirements.

16. MANAGEMENT REVIEW

Commitment to the EMS Program by the LT is crucial for the success of the program. The LT provides guidance, staffing, financial support, and direction to the EMS Team and sets the overall goals and objectives for the program consistent with the EMS. The Management Review serves as the tool for the EMS Team to communicate the status of the EMS program and seek guidance. At a minimum, the Management Review shall occur annually and be documented to include all relevant observations, conclusions and recommendations.

The Management Review should consist of the following, as appropriate;

- A. Results of internal audits and evaluations of compliance;
- B. Communications from interested parties, including complaints;
- C. The environmental performance of the department;
- D. The extent to which the Objectives and Targets have been met;
- E. Status of corrective and preventive actions;
- F. Follow-up actions from previous Management Reviews;
- G. Changing circumstances, including developments in legal and other requirements related to the department's environmental aspects; and
- H. Recommendations for improvement.