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Standard Guide for Environmental Compliance Performance Assessment¹

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INTRODUCTION

This guide provides a framework for the development of an environmental compliance assessment program. It integrates environmental compliance, environmental risk classification and business risk management for use in decision-making. It provides a flexible, technically defensible framework to prioritize environmental compliance and associated pollution prevention, with a wide applicability to a range of facilities and environmental pathways. The facilities that may find an environmental compliance performance assessment program useful and appropriate are domestic establishments that perform work for consumers, business, government and other organizations. These include public and commercial establishments, but they generally exclude individual households. This guide may not be appropriate where a primary manufacturing facility has already implemented a site-specific environmental management system (EMS). This guide could be used as a tool in conjunction with an EMS, to evaluate compliance and pollution prevention.

1. Scope

1.1 Overview—This guide is an organized collection of information and series of options for industry, regulators, auditors, consultants and the public, intended to measure compliance with environmental performance standards against established benchmarks. It focuses on compliance with air, water, waste prevention, waste management, and toxic reduction standards for facilities in the United States. While the guide does not recommend a specific course of action, it establishes a tiered framework of essential components, beginning with those standards where a deviation presents the greatest potential public health, environmental, and business risks. In each identified pathway, at each tier or step of analysis, the guide outlines ways to identify compliance options and reduce pollution in iterative steps. The goal in using the guide is to lower environmental, public health and business risks from Tiers 1 and 2 to Tiers 3 and 4, by evaluating the performance standards described in this guide. While this guide provides a simplified framework of explicit steps for users, a qualified professional should conduct detailed, site-specific risk analysis. This guide may act as a starting point for organizations with limited experience in systematic environmental assessment. As facilities develop their specific plan

framework, they will find that risk is weighted by more than just a few parameters. For each facility risk is the complex interaction among location, size, history, surrounding community and ecological zones.

1.2 Differences Among Standards—This guide focuses on compliance with environmental performance standards in the United States. As such it includes a unique, risk-based method to analyze specific groups of legal requirements, as well as risk reduction techniques, sometimes called “pollution prevention.”

1.2.1 Use of this guide provides a system to evaluate the relative priority of compliance and pollution prevention activities. Unlike environmental management systems, it provides a framework to triage critical issues, based on consideration of actual risk of harm to public health and the environment.

1.2.2 Environmental regulatory requirements in the United States are administered primarily by the United States Environmental Protection Agency (USEPA) and the parallel State and Local Agencies with similar regulatory authority. Certain other Federal regulatory agencies and State and local counterparts may also have legal requirements relating to environmental performance standards. Examples include the Departments of Transportation (DOT) and Agriculture (USDA) and the Occupational Safety and Health Administration (OSHA). Similar to the ISO 14001:2015 standard, this guide uses the major groups of environmental regulatory standards in the United States for air and water quality, waste management, release prevention, and toxic materials use reduction, in order to organize the compliance analysis framework.

1.2.3 This guide derives general information about regulatory requirements from common elements of Federal, State and

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local programs, including statutes, regulations, guidance and policies. Since agencies may have overlapping authorities and different emphasis for particular issues such as waste management, the user should consult the applicable program for detailed interpretation of specific requirements in a particular jurisdiction.

1.2.4 Pollution prevention generally refers to source reduction as a preferred option as opposed to other less preferable alternatives, such as, re-use, recycling, treatment, or disposal/release. ISO 14001:2015 Clause 8.1 requires that “consistent with a life cycle perspective”, the organization shall take a number of actions as a part of operational controls and planning activities including establishing controls, determining its environmental requirements for procurement, communicating its relevant environmental requirements as well as considering the need to provide information about potential significant environmental impacts, inter alia. Further, ISO 14001:2015 Clause 9.1.2 explicitly requires that “...organization shall establish, implement, and maintain the process(es) needed to evaluate fulfillment of its compliance obligations...” This guide compliments and supports actions required under ISO 14001:2015 by establishing a well-documented process for environmental compliance performance assessment.

1.2.5 Pollution prevention is a specific term used in United States environmental compliance management programs. The term usually refers to source reduction actions. Unlike the term “prevention of pollution,” which is used in certain international environmental management standards, pollution prevention does not generally include end-of-pipe or top-of-stack control actions.

1.3 *Limitations of this Guide*—Given the variability of the different types of facilities that may wish to use this guide, and the existence of State and Local regulations that may impose requirements greater than those required by USEPA, it is not possible to address all the relevant standards that might apply to a particular facility. This guide uses generalized language and examples to guide the user. If it is not clear to the user how to apply standards to their specific circumstances, it is recommended that users seek assistance from qualified professionals. An Environmental Regulatory Compliance Audit, such as Practice E2107, may assist a facility with areas of non-compliance and potential liabilities. This can be a starting point for development of facility specific environmental compliance management programs.

1.4 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

2. Referenced Documents

2.1 ASTM Standards:²

E1526 Practice for Evaluating the Performance of Release Detection Systems for Underground Storage Tank Systems (Withdrawn 2002)³

E1609 Guide for Development and Implementation of a Pollution Prevention Program (Withdrawn 2010)³

E1990 Guide for Performing Evaluations of Underground Storage Tank Systems for Operational Conformance with 40 CFR, Part 280 Regulations

E2107 Practice for Environmental Regulatory Compliance Audits

E2681 Guide for Environmental Management of Underground Storage Tank Systems Storing Regulated Substances

F1127 Guide for Containment of Hazardous Material Spills by Emergency Response Personnel

2.2 *International Standard:*

ISO 14001:2015 Environmental Management Systems—Specification with Guidance for Use⁴

3. Terminology

3.1 Definitions:

3.1.1 *accumulation, v*—short term containment of a hazardous waste in the control of the person who generated such waste in a manner which does not constitute disposal, which is in containers at or near the point of generation in the process, and which otherwise complies with Federal Regulations.

3.1.2 *air, n*—the natural, gaseous environmental medium contained in the troposphere that is shared in common and used for several purposes including breathing, cooling, combustion and as a sink for pollutants. The quality of this pathway is regulated through restrictions on emissions, controls and monitoring. Many programs require best or maximum available control technologies to restrict air emissions.

3.1.3 *approval, n*—any required license, permit, certificate, formal determination, registration, plan review, variance, exemption or other authorization. Regulatory agencies typically require such authorization to address releases, discharges, or disposal of material and certain business practices and activities.

3.1.4 *beneficial uses of water, n*—extraction or in place use of water for domestic purposes (for example, drinking, bathing, boating or fishing), or commercial, agricultural, or industrial purposes which will not harm public health or the environment.

3.1.5 *best management practices (BMPs), n*—schedules of activities, prohibitions of practices, maintenance procedures, and other management practices that prevent or reduce the pollution of water. They include treatment goals, operating procedures, and practices to control plant site runoff, spillage, or leaks, of sludge, waste disposal, or drainage from raw material storage.

3.1.6 *CARB, n*—the California Air Resources Board is an organization that creates some state air quality standards, such

² For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

³ The last approved version of this historical standard is referenced on www.astm.org.

⁴ Available from American National Standards Institute (ANSI), 25 W. 43rd St., 4th Floor, New York, NY 10036, <http://www.ansi.org>.