

US EPA ARCHIVE DOCUMENT



Environmental Management Systems:
Systematically Improving
your **Performance**

US EPA ARCHIVE DOCUMENT

EMIS

Construction Industry

Framing a Sustainable Future in the Construction Industry

The background of the page features a high-contrast, low-angle photograph of a construction site. The image shows the dark, silhouetted steel framework of a building under construction against a bright, hazy sky. Two workers are visible: one on the left, standing on a platform or scaffolding, and another on the right, sitting on a horizontal beam and gesturing with their hand. The overall aesthetic is industrial and modern.

Looking for a proven, efficient way to grow your bottom line while improving your environmental performance? An Environmental Management System (EMS) may be right for you.

All construction professionals are facing environmental challenges. Increasingly complex environmental laws, escalating compliance costs, and the financial impact of a violation can affect your company's growth and profitability. These challenges, as well as rising public demand for environmental stewardship, are leading companies to consider new ways to enhance their competitiveness.

Some construction companies—large and small—have found that an EMS is one way to remain competitive. They are systematically managing their environmental operations, which is as good economically as it is ecologically.

Construction companies worldwide are realizing the many benefits of implementing an EMS:

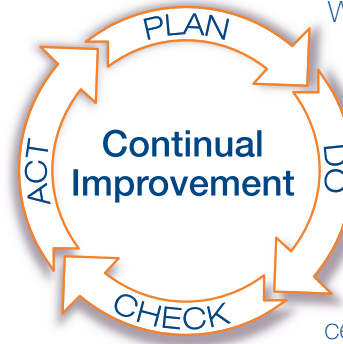
- Lower costs
- Improved environmental compliance
- Increased competitiveness and market opportunities
- Enhanced internal and external communication
- A positive corporate image

Environmental Management System (EMS) Fundamentals

An EMS provides a roadmap for:

- *Saving money* by conserving resources, reducing pollution and clean-up costs, and avoiding enforcement action;
- *Making money* by improving competitiveness and reaping new “green” opportunities; and
- *Protecting your market* by demonstrating your commitment to the environment and communicating your environmental programs and accomplishments.

An EMS integrates environmental decision making into a company's day-to-day operations. Like the Quality Management Systems used by many construction companies, an EMS's systematic approach allows companies to be more efficient, more competitive, and better able to meet new challenges.



While each EMS is unique, most follow the Plan-Do-Check-Act model. A **Plan-Do-Check-Act approach** establishes a framework to examine the environmental aspects of your operations, then develop, implement, monitor, review, and revise action plans and procedures to continually improve all operations that impact the environment.

Some companies may already have components of an EMS in place, such as written and unwritten procedures, best management practices, and environmental training programs. Your company also may consider integrating health and safety, quality assurance, maintenance, and other facets of your business into this one system.

FUNDAMENTAL ONE:

Identify Opportunities to Reduce Costs

Construction companies with an EMS have reaped significant cost savings that can be credited to:

- More efficient use of time and materials;
- Reduced waste and associated disposal costs;
- Reduced pollution incidents and clean-up costs;
- Fewer complaints and less risk of liability for environmental noncompliance;
- Reduced work stoppages; and
- Lower insurance rates.

These savings allow contractors to make other investments—such as equipment upgrades or specialized workforce training—to increase their profitability and competitiveness. Upfront costs of an EMS can quickly be recovered by identifying money-saving opportunities to prevent pollution and improve operations.

With an EMS comes predictable environmental performance. This can help you avoid violations, fines, and work stoppages that damage your public image and your ability to stay profitable. Companies may even reduce their insurance premiums as a result of safer work environments and fewer injuries.

“As we continue to develop our EMS we already have discovered savings by recycling fill material. We expect to save 10 to 15 percent annually simply by reusing fill material when possible.”

*—Joe Myers, **Keystone Structural Concrete, Ltd.***



FUNDAMENTAL TWO:

Lay a Foundation for Improved Compliance

Complex legal requirements compel the construction industry to consider formalized systems to reduce liabilities and manage risks.

An EMS's systematic approach will help you identify, analyze, and respond to your environmental responsibilities. It also will help you keep track of emerging environmental issues as your construction project moves from pre-construction planning to on-site implementation.

Construction companies with an EMS agree that they have greater assurance about achieving and maintaining legal compliance.

“Our biggest environmental challenge is staying in check with federal and state regulations. Our EMS helps us address the challenge by keeping our superintendents and project engineers all on the same page and by preventing issues and problems from falling through the cracks.”

—*Jim Prentice*, **Hawaiian Dredging Construction Company**

“Through fines, enforcement actions, and bad press, contractors are learning that decentralized, haphazard approaches can create problems, waste resources, and impact future business opportunities. An EMS helps ensure a more consistent and cost-effective environmental compliance program on a site-to-site basis.”

—*Jeffrey S. Longworth, Esq.*, **Barnes & Thornburg LLP**



Increase Your Market Advantage

The movement in the marketplace toward environmentally sensitive products and services, paired with the growth of “green” construction, provides an incentive for companies to implement an EMS. The Leadership in Energy and Environmental Design® (LEED) Green Building Rating System has emerged as one nationally accepted standard for green buildings. An EMS can benefit you in your business with the federal government and other environmentally sensitive customers. Some industries, such as automobile manufacturers, are beginning to demand an EMS of their suppliers and builders. It may not be long before the same requirements develop within other industries that have a need for construction services. All federal agencies, for example, will implement an EMS at all appropriate facilities by the end of 2005.

“As a steward of our nation’s resources—both financial and natural—we have a duty to the taxpayers to ensure our projects make the best use of those resources, with a particular focus on both quality and environmental consciousness. An Environmental Management System will lead us, and our partners, down this path.”

—Glenn S. (Sam) Hunter, Jr.,
Assistant Commissioner, Applied Science,
GSA Public Buildings Service

“An EMS can help you improve compliance and environmental performance on a project. Transportation projects completed in an environmentally responsible manner will increase the level of trust and confidence of regulatory agencies. It is in a contractor’s best interest to ensure compliance is met as it affects future opportunities. At PENNDOT, for example, we include environmental performance in the contractor’s evaluation of work which, in turn, affects his ability to bid on projects.”

—Amar Bhajandas, District Executive,
**Pennsylvania Department of Transportation
(PENNDOT)**

“We are seeing a growing percentage of our work in the Southeast going for LEED certification. Many of the elements of EMS marry nicely with LEED credits, which results in our workforce being familiar with the approaches of green construction.”

—Susie Spivey-Tillson, **Skanska USA Building Inc.**

FUNDAMENTAL FOUR:

Build Environmental Teamwork

Effective communication of your environmental program is crucial to improving your performance. Workers' participation in EMS implementation teams gives them an empowering role in decision making. Construction companies that take pride in their EMS accomplishments often boast that they have more informed, involved, and supportive employees who implement their assigned parts of the EMS and suggest improvements.

Frequent and forthright communications with your workforce demonstrates commitment to environmentally sensitive products, equipment, and construction processes that employees will take pride in. It also can boost employee morale and elevate employee retention rates.

“Our EMS implementation has assisted our team of management personnel and employees in the identification of significant environmental issues and risks. This process allows for the timely development of appropriate management systems involving work activities, materials, and products handling that effectively minimize personnel and environmental risks and impacts while maintaining a high compliance record.”

—Leonard Boteilbo, **Ames Construction, Inc.**



FUNDAMENTAL FIVE:

Raise the Environmental Profile of Your Business

In addition to improved performance, profitability, and competitiveness, companies with an EMS enjoy better relations with communities and regulators. Overall company image is bolstered. By sharing information about your environmental track record with your community, customers, and government representatives, you can build credibility and trust. Your company can build a positive relationship with regulators by taking advantage of state and national programs, such as the U.S. Environmental Protection Agency's National Environmental Performance Track, which offers incentives to its participants such as low-priority inspection status, regulatory flexibility, and national recognition.

“Performance Track offers regulatory flexibility as a benefit to its members. We continue to expand the membership incentives for all interested sectors, including the construction sector, which faces environmental challenges that often differ from manufacturing and other industrial facilities.”

—Dan Fiorino, Director,

**EPA National Environmental
Performance Track Program**



Get Started with Your Environmental Management System

Now that you've learned how an EMS can reduce costs, enhance your construction operations, and sharpen your company's image, here are steps you can take to get started.

Start Small and Build Momentum

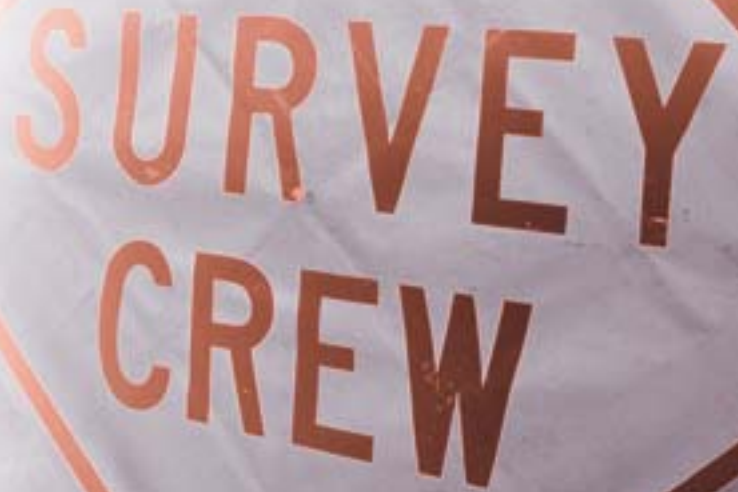
An EMS is based on common sense and intuitive business decisions. Learn from the tools listed below, then start by taking small, doable steps and build momentum from there. To be effective, you'll need upfront involvement from senior management, front-line workers, and supervisors throughout your company. Keep the big picture in mind, but define reasonable expectations. Set goals and time frames in line with your expectations, then monitor progress, making corrections where necessary. Capitalize on any elements of an EMS your company may already have in place to advance to the next level in environmental management.

“We believe an EMS is the best way to manage the myriad environmental regulations we face. The systems approach also allows us to manage all of our waste streams, and that's good for the bottom line and the environment. It's difficult for a company not to benefit from an EMS.”

—Bob Lanbam, Williams Brothers Construction Company

Take Advantage of Assistance and Tools Tailored to the Construction Industry

The Associated General Contractors of America (AGC) is working with EPA's Sector Strategies Program and National Environmental Performance Track to help the construction industry embrace EMSs. Contact AGC's Environmental Services Department to take advantage of the training resources, expertise, and support available through this partnership. You also can work with AGC to ensure that your voice is heard in discussions about environmental programs. To begin developing your own customized EMS, visit AGC's Web site at www.agc.org/e-store (Item No. 3212) for an EMS implementation guide created specifically for the construction industry. You also can find many resources related to EMS development and implementation, as well as a list of Technical Assistance Providers near you, on EPA's EMS Web site at www.epa.gov/ems. Other organizations, such as state environmental agencies and universities, also offer EMS expertise.



SURVEY
CREW

AGC Companies that Can Attest to the Value of an EMS



Alberici Constructors
AN ALBERICI ENTERPRISE

Alberici Group
St. Louis, MO
www.alberici.com



Keystone Structural Concrete, Ltd.
Houston, TX
www.keystoneconcrete.com



Ames Construction, Inc.
West Valley City, UT
www.amesco.com

SKANSKA

Skanska USA Building Inc.
Parsippany, NJ
www.skanskausa.com



Hawaiian Dredging Construction Company
Honolulu, HI
www.hdcc.com



Williams Brothers Construction Company
Houston, TX

In preparing its EMS implementation guide (*Constructing an EMS: Guidelines and Templates for Contractors*), AGC had the invaluable assistance of its Environmental Management System Task Force:

Chair

Robert Lanham, *Williams Brothers Construction Co., Houston, Texas*

Members (listed alphabetically)

Joseph Barbeau, *Lockton Companies, Farmington, Connecticut* • **Charles Bird**, *Centex Construction Co., Fairfax, Virginia* • **Leonard Boteilho**, *Ames Construction, Inc., West Valley City, Utah* • **Patrick Clark**, *Staker & Parson Companies, Ogden, Utah* • **Diana Eichfeld**, *XL Environmental, Inc., Exton, Pennsylvania* • **David Hanson**, *Walbridge Aldinger, Detroit, Michigan* • **David Korman**, *Skanska USA Building Inc., Parsippany, New Jersey* • **Jeffery Lange**, *Kitchell Contractors, Inc., Phoenix, Arizona* • **Joseph Myers**, *Keystone Structural Concrete, Ltd., Houston, Texas* • **Kimberly Ann Pexton**, *Assoc. AIA, James G. Davis Construction Corp., McLean, Virginia* • **James Prentice**, *Hawaiian Dredging Construction Company, Honolulu, Hawaii* • **Ron Rogge**, *Alberici Group, St. Louis, Missouri* • **Mystère Sapia**, *Granite Construction, Inc., Watsonville, California* • **James Snyder**, *Skanska USA Civil, Tidewater Skanska, Virginia Beach, Virginia*

Discover what other leading construction companies across the country are finding—

An **EMS** is a
**Good Business
Tool**

“Three things can put a construction company out of business: poor quality, environmental violations, and a disregard for worker safety. These three factors are easily addressed by adopting an Environmental Management System’s approach to work, which I think makes it a necessary business practice.”

—*Ron Rogge*, **Alberici Group**



SectorStrategies

Insight • Innovation • Results

EPA's Sector Strategies Program is a cooperative working relationship among government, trade groups, and other stakeholders to reduce pollution and ease the burden of regulation. For more information, visit www.epa.gov/sectors or www.agc.org/sectorstrategies.



September 2004

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