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ENVIRONMENTAL *Management Systems*

Developing an environmental management system (EMS) may seem like it's adding another layer of red tape or additional responsibilities to an already-busy workload, but it can actually make a job much easier.

"Companies are increasingly turning to environmental management systems to guide the allocation of resources, assignment of responsibilities, and ongoing evaluation of practices, procedures, and processes that a company needs to integrate environmental concerns into its daily businesses," says Kelli L. Deuth, business development manager for Trinity Consulting and a contributing author for the National Stone, Sand & Gravel Association's (NSSGA) EMS template.

In larger-scale aggregates operations, there are

often dedicated environmental managers or even an entire environmental department. However, with smaller companies, employees often wear many hats — with just one of the jobs being management of an environmental program or system. This means operating as efficiently and as leanly as possible is a priority.

"An EMS can provide a lot of benefits," Deuth says. "Many times, you use existing practices and procedures and write them into an EMS system by direct reference or with slight changes. A lot of times, people think an EMS is going to add more work, but the point is that, by having a system in place, it can be simpler and more effective to manage environmental compliance and even go beyond environmental compliance."

Putting together a cross-sectional team from the

Developing a system for environmental performance can make you both a good steward and give you a competitive edge.

by Tina Grady
Barbaccia, News &
Digital Editor

An Environmental Management System (EMS) is customizable to individual operations, making it the most effective and easily implemented, oftentimes by writing everyday operations into the program or just slightly altering them.



company to develop the EMS really helps, Death points out. “Someone may not realize that a procedure that is going to be written into an EMS is already being done by someone in another department in the company,” she says. “Being able to write this into the EMS is much more helpful than trying to develop something brand new. Instead of having papers all over the place, you now have an organized system, making it easier to quickly access data.”

Taking a big step

The key elements of an EMS are centered on the basic components of the EMS model (Plan-Do-Check-Act), Death says.

“The first step in planning for an EMS is determining why a company or organization is pursuing this type of system,” Death says. “You need to ask, ‘Is an EMS being developed to just comply with environmental regulations or is this something [an organization] wants to use to go above and beyond compliance-only and be a good citizen?’ Clearly defining the purpose and goals for the EMS will assist with getting a commitment to support an EMS from management and employees.”

Management commitment is a key to the successful development and implementation of an EMS because management defines the organization’s goals, allocates resources, and sets the tone

for change, Death explains. Once management is on board with the project, commitment to the EMS needs to be communicated to the organization and an implementation team with representatives from key functions such as sales, procurement, engineering, accounting, human resources, and production, she says.

“A cross-functional team will be able to comprehensively evaluate issues and existing processes, ensuring EMS procedures are practical and effective for everyone impacted by the resulting system,” Death says. “Employee involvement in the development process will enhance ownership and ease implementation of the system.”

Death suggests any company pursuing the development of an EMS should begin with a “gap analysis,” which takes an organization through all of its environmental systems to see what systems are already in place and where there may be holes.

If a company already has some specific environmental requirements, such as a visible emissions test procedure, there may already be a system in place to keep track of test results. This procedure would be evaluated to determine whether it is sufficient or needs to be changed and how this existing process can be worked into an overall EMS program.

“The gap analysis lets a company know where it stands among the confines of an environmental

Environmental Management System (EMS) Defined:

- Systematic approach to planning, controlling, measuring, and improving an organization’s environmental performance.
- Identifies the causes of environmental problems and outlines an approach to eliminate them.

management system and the ISO 14001 standards as it begins development of its system,” Deuth says. Each NSSGA module includes a basic outline of a system template and includes four sections, which lead an organization through setting up requirements for each specific topic and the benchmarks required, depending on the level of EMS that is being chosen.

“It gives a set-up and an example of how someone might approach development of that module template, but there are several different ways it could be implemented,” Deuth says. “Every facility is different and finds things of higher and lower importance.” For example, if neighbors often complain about dust, this area may be a higher concern for a facility where this occurs. “As part of the Aspects and Impacts module, facilities will evaluate and rank each risk area based on importance,” Deuth explains. How to benchmark and measure the success of compliance is a subjective system. “The template directs the user to decide how to measure objectives and targets developed for each aspect and impact,” she says. “It might be as simple as having someone go out and drive the property boundaries on a weekly basis to see if there are issues with dust outside of the property boundary and then logging it.”

For noise complaints, benchmarks could include setting an acceptable level and then going out in the facility with a noise monitor and logging each complaint received. “You could establish a way for neighbors to let you know when noise is a problem, or you could also come up with some creative way to monitor noise,” Deuth says. “The beauty of the system is that it’s customizable and allows you to make your own decision based on what is appropriate for your particular company or facility.”

Making it your own

When developing the EMS templates and instruction documents for NSSGA, Trinity worked with a group of the association’s members to develop modules and instructions that were relevant to producer operations. The template was created to provide NSSGA members with a written framework that can be used in sections or in its entirety to develop a voluntary EMS program, Deuth says. Although the template is based on an



Sustainable solutions incorporate social, economic, and environmental considerations. When developing an EMS, all of these factors must be considered.

Environmental Protection Agency (EPA) model and on the internationally recognized ISO 14001 environmental management systems, she says, the template is in the form of modules to allow producers to choose individual modules and adapt them to best fit their company’s needs and stated environmental goals and principles.

“The templates can be used by themselves or in combination with other procedures and systems that facilities may already have in place,” Deuth says. “It can be manipulated to correspond to company needs or used as a reference for a company that wants to develop their own format of an EMS.”

The template is a tool that companies can use to develop and implement an EMS, Deuth says. However, there are several implementation options and 14 modules that may be used. The original NSSGA EMS template contained 13 modules, but it was updated in 2005 to conform to the updated ISO 14001 standards to include an additional compliance module. “If a facility does not have many procedures in place, [it] may decide to use all of the modules in the template to make a complete EMS,” Deuth says. “If all of the EMS elements are not needed, a facility may use only a few modules from the template. They may use the modules to fill gaps in an environmental system that is already in place.”

Modules may also be combined or separated depending on the needs of the company. Addition-

ally, the template, which was originally developed in 2003, can be used as a starting point to meet ISO 14001 standards. The NSSGA EMS template was comprised of the following 14 key elements, based on the Plan-Do-Check-Act model:

- Gap Analysis;
- Environmental Policy;
- Environmental Aspects;
- Legal and Other Requirements;
- Objectives and Targets;
- Structure and Responsibility;
- Training, Awareness, and Competence;
- Communication;
- EMS Documentation;
- Document and Record Control;
- Operational Control and Monitoring;
- Emergency Preparedness and Response, EMS Audit, and Management Review; and
- Compliance Evaluation.

The template contains a module in Word document format so it can be customized, along with a set of detailed instructions for each of the 14 key elements. The instructions describe what is required for each template procedure and give example approaches, Death says. Each module corresponds to one or more of the EMS requirements in the ISO 14001 standard so that the template can be used as an aid toward ISO 14001 certification. A modular format allows organizations to choose an implementation path that fits its current needs with potential implementation options such as selecting a few modules to begin an EMS; choosing modules to fill gaps in the current EMS; developing an EMS using all 14 modules; and using the NSSGA template as a starting point to meeting the ISO 14001 Standard.

“Each module provides an instruction document that includes example approaches to develop the EMS,” Death says. “However, it is up to the facility to determine what benchmarks they will utilize within their own program.”

A company that implemented an EMS during a four-year period (during which its production increased by 20 percent) showed a 38-percent decrease in waste, a 28-percent decrease in recycled waste, and a 9-percent decrease in electricity usage, according to the former Blue Circle Industries.

“Environmental Management Systems can aid the aggregate industry by improving environmental

programs that are already in place and improving environmental performance at facilities that lack a developed environmental program,” Death says. “Facilities that implement an EMS may see benefits such as improved environmental performance, improved compliance, reduced liability, reduced wastes, improved employee awareness of environmental responsibilities, an improved public image, and a competitive advantage. Facilities with an EMS may also qualify for recognition and incentive programs or, ultimately, get their program certified as ISO 14001 compliant.”

Death adds that the best way to develop an EMS is to put one together “that you are actually going to follow. Some people develop all the systems and documents, and then it sits in a book on a shelf. You need to have management and employee buy-in involved in the process. You can’t just rest on the shoulders of one person to develop it all. There needs to be input from everybody.” **AM**

Editor’s note: For a PDF of Trinity Consultants’ “NSSGA EMS Template: Case Studies in Implementation,” go to www.aggman.com/environmental-management-system-template-for-nssga/.

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