

# ISO Excellence in Pennsylvania

The Quaker State garners ISO registration.

By Jim Struzzi

In 2005, the Pennsylvania Department of Transportation's (PennDOT) Clarion County Maintenance Organization was recognized for environmental excellence at all five of its stockpile locations by the Salt Institute ([www.saltinstitute.org](http://www.saltinstitute.org)). Clarion County won four of only ten Excellence in Storage awards given in the nation. Clarion won for its stockpile locations in Knox, Callensburg, New Bethlehem, and Tylersburg. The county's main stockpile location in Shippenville won the award in 2004 and this year, won a "continuing excellence" award from the Salt Institute.

While the Clarion County organization has ample reason to be proud of its accomplishment, the awards come as a result of a conscious effort by PennDOT to become environmental stewards and adhere to International Organization for Standardization (ISO) 14001:2004 registration criteria. ISO 14001:2004 standards covering environmental management are intended to provide organizations with the elements necessary for an effective Environmental Management System (EMS) that can be integrated with other management requirements to support environmental protection and the prevention of pollution in balance with socio-economic needs.

## A Long Journey

The Commonwealth of Pennsylvania is known for its breathtaking landscapes and outdoor activities like hunting and fishing. In 1998, Pennsylvania adopted the Governor's Green Plan, an executive order that called for state agencies to improve their environmental performance. PennDOT's leadership further reinforced this order when the organization committed to develop and imple-

ment a program to improve environmental performance.

In spring 2001, District 10, through a cooperative effort with the American Federation of State, County and Municipal Employees (AFSCME), began a journey to become the first Department of Transportation agency in the United States to receive ISO 14001 Registration. Serving as the ISO pilot organization for PennDOT, District 10 set a goal to achieve registration by December 2002. The district sought registration for its Strategic Environmental Management Program (SEMP) in maintenance, specifically in the areas of winter maintenance, stock-



pile management (the proper storage of salt under a roof on an impervious pad to prevent leeching into soil, surface waters, and groundwater), and erosion and sedimentation control.

District 10 is located in Western Pennsylvania and includes Armstrong, Butler, Clarion, Indiana, and Jefferson counties. Residents of the area value a quality of life that benefits from outdoor recreational activities. Many state routes in the district are close to trout streams, game lands, and other environmentally

sensitive outdoor areas.

"Quality of life and environmental stewardship are important to our customers and we must strive diligently to preserve and protect those aspects of the region we hold dear," said Richard H. Hogg, P.E., District Executive.

The district's journey for ISO registration began with the creation of a leadership team to drive the effort. Once the district team was formed, each maintenance office in District 10's five counties formed their own implementation team to ensure a consistent message was conveyed at all levels throughout the organization.

"ISO 14001 Registration confirms that an organization has developed and implemented an EMS that supports environmental protection and the prevention of pollution in balance with socioeconomic needs and is fully interwoven within the fabric of the organization's core business activities," said Richard T. Pavic, an Environmental Planner and coordinator of District 10's ISO efforts.

## Integrating a Culture of Quality

While the official journey to earn registration began in 2001, the actual work had started many years before. Recognizing its responsibility as an environmental steward, over the previous decade the district had been systematically implementing environmental controls into its maintenance operations. This meant, for example, creating formal processes to monitor material usage and utilizing strict guidelines for erosion and sedimentation controls. The basis for ISO registration is the ability to demonstrate documented formal processes that all employees willingly adhere to in their everyday work activities. In short, every employee must

believe in the shared environmental vision of the organization.

According to Pavic, registration requires documented, visible evidence that policies, procedures, and processes are strictly followed in all aspects of operations. In District 10's case, this pertains to winter materials, stockpile management, and erosion and sedimentation controls.

"In order to obtain and maintain ISO 14001 Registration, an organization must develop and implement detailed processes related to the performance and management of activities that have the potential of negatively impacting the environment," Pavic said. "Secondly, to ensure that the processes are implemented consistently, the organization must commit to conducting audits in the form of internal quality assurance/quality control evaluations and internal surveillance audits that focus on whether the EMS is functioning accordingly or requires the implementation of corrective and preventive action plans to correct deficiencies within the system."

The district began its effort by forming several committees under the direction of the SEMP leadership team and TLI Systems, Inc. ([www.tlisystems.com](http://www.tlisystems.com)), a consulting firm that assisted in ISO registration. Recognizing the need to communicate the organization's goal to employees at all levels, the team implemented the following measures to create awareness and shared responsibility: the creation of a SEMP manual, specific SEMP goals and roles indicated on employee performance reviews, and the formation of a subcommittee designated to communicate SEMP throughout the organization including every maintenance facility in the 3,529-sq mi district. The leadership team conducted systematic SEMP training and posters were displayed in facilities around the district.

This unified message helped to create SEMP ownership with employees and instilled the basic principles of ISO registration. The district also created a system to police itself by selecting internal auditors to monitor SEMP processes.

## Benefits of Success

In the fall 2002, the third party review of District 10's SEMP effort to

obtain ISO registration began. The organization's environmental processes underwent extensive scrutiny to verify validity, consistency, and full implementation across the district. Then, on December 31, 2002, PennDOT Engineering District 10 met its goal by becoming the first Department of Transportation agency in the United States to receive the International Organization for Standardization (ISO) 14001 Registration. Registration represents a commitment of continual improvement to PennDOT's customers.

Pavic explains: "ISO 14001 Registration represents confirmation that PennDOT District 10's Maintenance Unit has developed and implemented an EMS within its core business plan that strives to minimize unavoidable environmental impacts associated with maintaining a safe and efficient transportation system."

One of the goals associated with implementing an ISO 14001 Registered Environmental Management System is acknowledgement on the part of federal and state agencies, such as the EPA and the Pennsylvania Department of Environmental Protection, in the form of an expedited permitting process.

"By demonstrating environmental stewardship through better management of our environmental responsibilities and demonstrated compliance with applicable federal and state laws and regulations, District 10 is hoping for the development of environmental interagency agreements related to environmental clearance activities," Pavic said. "The interagency agreements would grant PennDOT authority to approve specific environmental permits in-house related to the performance of maintenance activities associated with maintaining our existing roadway system."

This streamlined permitting process could save Pennsylvania taxpayer dollars by allowing PennDOT to reduce the preliminary steps necessary to conduct maintenance activities. Since 2002, many examples of this have been demonstrated.

For District 10, it means every effort is taken to protect the environment and preserve vital resources. To maintain registration, continuous improvement


in these areas must be demonstrated. This strict adherence to sound environmental practices enabled Clarion County to earn these prestigious awards.

"We are very happy our Clarion County maintenance organization has set an example in environmental stewardship," said Hogg. "More importantly, this award represents the benefits these practices have on the quality of life for area residents. We understand the importance of the natural environment to our customers and we take every effort to ensure it is protected."

The award recognizes high standards of environmental consciousness and effective management of winter materials storage. Proper storage, according to the award criteria, includes environmental considerations in location, design, and operation of all facilities that store salt and also community and employee safety, good housekeeping practices, and provisions to store sufficient salt to meet winter's snow and ice emergency needs without re-supply problems. Environmental considerations include:

- Management of application rates of salt to roadways to ensure that only enough salt is applied to maintain a safe flow of traffic.
- Advanced application of technology utilizing computerized salt spreaders to discharge set amounts of material per lane mile.
- Annual calibration of spreaders.

The Excellence in Storage Award is part of the Salt Institute's Sensible Salting Program—an educational program for salt customers on how to store and apply salt in an environmentally sound manner. Over the award competition's 17 years, just 107 excellent programs have been recognized.

"Your program—both the excellent physical facilities and your policies and commitment to the environmentally conscious operations—is a model for your neighbors in your community and throughout the snow belt regions of the world," wrote Richard Hanneman, Salt Institute President, in a letter to Clarion County. 

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