

Fiscal Year 2004 Secretary of Defense Environmental Awards Nomination

ENVIRONMENTAL QUALITY

TOBYHANNA ARMY DEPOT



Sustain the Mission. Secure the Future.



INTRODUCTION

Tobyhanna Army Depot (TYAD) is the largest, full-service electronics maintenance facility in the Department of Defense (DoD). Its mission, as a major element of the US Army Communications-Electronics Life Cycle Management Command, is comprehensive repair, overhaul and fabrication, and support of command, control, computers, communications, intelligence, surveillance and reconnaissance (C4ISR) systems. The Depot sustains all branches of the Armed Forces, maintaining critical US Air Force “go-to-war” ground communications-electronics systems, US Marine Corps microwave communications systems, and Air Force and US Navy tactical missile guidance and control systems. TYAD ensures that war fighters have critical systems and support to succeed in the Global War on Terror.

Located in Monroe County, Pa., in the Poconos resort region, the 1,296-acre Depot is bounded by state parks and game lands, and houses a 161-acre wetlands preserve and the headwaters of Hummler Run, a high quality-cold water fishing stream. No federally listed threatened or endangered species reside on the Depot, although the Natural Resources Program supports stewardship for seven state-listed rare species such as the osprey.

Memories of past environmental impacts from the anthracite coal mining era make these natural resources precious to the local community, which has transitioned to a tourism-based economy. As the region’s leading industrial center and employer, the Depot makes an annual economic impact of more than \$1 billion. It houses 27 tenant organizations, employs nearly 4,300 workers from 10 counties and serves as home to 200 military personnel and family members.

BACKGROUND

TYAD’s full integration of environmental stewardship with mission operations has helped to ensure its success as a recognized DoD leader in automated test equipment, systems integration and downsizing of electronics systems.

From FY 2003 to FY 2004, the Environmental Management Division (EMD) faced the challenge



▲ The Blue Force Tracking System, shown above, helps the war fighter to pinpoint the vehicle’s location and improve situational awareness. TYAD personnel fabricate BFT installation kits and have integrated the systems into thousands of Army vehicles.

of accommodating a 40 percent increase in the maintenance (overhaul and repair) of C4ISR systems. The increase required the addition of a third shift and more than 1,100 additional workers. Given this challenge, as well as the Depot’s reliance on business revenues as a Working Capital Fund installation, TYAD’s EMD realized that full environmental compliance is essential to maintaining top-level operational capacity. It met the challenge head on, and despite the sudden and dramatic increase, achieved or surpassed requirements, receiving no violations for Title V air emissions, National Pollutant Discharge Elimination System (NPDES) waste/storm water discharges, drinking water or Resource Conservation Recovery Act (RCRA) hazardous waste (HW) limits.

The EMD’s consistently smart staffing choices, strong community partnerships and effective strategic planning and agreements all contribute to an overall management approach that positioned TYAD to effectively adapt to the increase in operations.

Staffing

The EMD operates within the Directorate of Industrial Risk Management, which reports to the Commander. The division’s 15 employees provide expertise in pollution prevention (P2), hazardous materials (HM) management, recycling, air quality, water quality and management of natural/cultural

resources. Staff work together, to not only meet, but excel in stewardship practices. This commitment has created a tradition of excellence and has won TYAD 31 environmental awards since 1992, including a Closing the Circle (Environmental Preferability) Award, National Association for Environmental Professionals' Environmental Excellence Award, Energy Efficiency Building Award, Pocono Chamber of Commerce "Save Our Planet" Award and the Governor's Award for Environmental Excellence.

Strategic Planning

TYAD is committed to attaining success through strategic, long-term planning to guide its environmental programs. It has a mature Environmental Management System (EMS) and recently surpassed Army EMS goals, becoming ISO 14001 certified in November 2003 through a third party audit by Orion Registrar, Inc. The audit demonstrated that TYAD has a fully implemented EMS that meets the highest international standards. Additionally, 23 plans help strategically manage and govern the EMD, the most significant of which include its 2003 Spill Response Plan; 2003 Pollution Prevention Plan; 2005 Recycling Plan; 2004 Hazardous Waste Management Plan; and 2001 Cultural Resources Management Plan. The TYAD EMS and these associated plans help ensure

"The entire Tobyhanna Army Depot community is committed to sustaining an outstanding environmental program that ranks with the best in the Defense Department and the private sector — meeting or exceeding all requirements and standards for environmental compliance. This effort makes us more efficient and effective in our mission performance; supports our obligation and commitment to be proper stewards of resources; and is simply the right thing to do. ISO 14001 and our Environmental Management System give us the framework for every employee and community member to contribute, and they underscore our organizational commitment to continuous improvement, which will ultimately bring us to the goal of environmental sustainability in all of our operations."

- COL Tracy Ellis, Commander

full compliance with all applicable Army, state, federal and local environmental regulations.

Partnerships

The program has developed diverse stakeholder partnerships within the Depot community, throughout Pennsylvania and across the country. TYAD became the first federal facility to enter the voluntary US Environmental Protection Agency (USEPA) National Waste Minimization Partnership; and is a charter member of the Pennsylvania Environmental Partnership of military installations, USEPA Region III and Pennsylvania Department of Environmental Protection (PADEP). It is involved in the local Restoration Advisory Board, the Hazardous Material Management System (HMMS) DoD Program Management Team, the Northeastern Pennsylvania Pollution Prevention Roundtable, the Monroe County Solid Waste Advisory Committee and the Pocono Mountains Chamber of Commerce Environmental Committee. TYAD's participation in internal boards, committees and forums include the Depot's Risk Management Committee, Hazardous Material Management Committee, ISO 14001 Directorate Representatives and Home Team Meetings.

Agreements

Under a 1991 Federal Facilities Agreement, the installation resolved 62 of 65 environmental areas of concern. A final Record of Environmental Decision (ROD) was issued in September 2000, requiring long term groundwater monitoring at three sites and concurrent USEPA/PADEP and Army review of the ROD every five years. The Depot received its first review in September 2002, which showed that natural attenuation is effectively lowering contamination levels. The 1994 clean up cost estimate was \$33 million – actual expenditures were kept to \$16 million – and in 2001, TYAD became the first site in USEPA Region III to be partially de-listed from the National Priorities List.

PROGRAM SUMMARY

As a command priority, TYAD's environmental program has a clear goal: To sustain the Depot's mission while upholding the four key objectives of its environmental policy—prevent pollution, minimize impacts, ensure environmental compliance and continuous improvement. TYAD solidified

its commitment to environmental excellence, taking an already strong and mature program to the next level. The accomplishments highlighted below demonstrate how the Depot has effectively managed its significant environmental aspects to achieve environmental objectives and long-term mission sustainability.

ACCOMPLISHMENTS

At TYAD, a workforce culture infused with ownership of environmental stewardship responsibilities ensures that little happens without consideration of the four tenets of the Depot's environmental policy. The Depot environmental program is well integrated with facilities planning, safety management, quality control and mission sustainment—ensuring the best possible environmental outcome from new processes. This coordinated approach helped TYAD become ISO 9000 certified for its quality management processes in February 2003 and the first DoD Occupational Safety and Health Administration (OSHA) Voluntary Protection Star Site in September 2000.

Implementing an Environmental Management System

In 2003, TYAD further demonstrated through a third-party audit how its integrated environmental program improved business efficiencies through P2, compliance, minimization and continuous improvement. As a result, the Depot, including its 25 Forward Repair Activities worldwide, became one of the first Army and DoD installations to be ISO 14001 certified. This certification positions the Depot for increased teaming and competitiveness in the international marketplace, helping to ensure success with private industry customers.

Environmental Management System

Implementation Highlights: All TYAD employees receive ISO 14001 awareness training. The following details implementation activities.

- Shop employees reviewed products, services and day-to-day activities to realize their effect on the environment and to determine the environmental aspects of those processes. To address results of the review, TYAD established six Objective and Target Teams consisting of environmental managers, engineers, shop workers and ISO coordinators for each of the Depot's 17

directorates. Focus areas include: contractor compliance; emissions reduction; water quality protection; reduction of HW generation; and reduction of industrial wastewater pollutants.

- Continuous improvement is emphasized through programs like the Lean Initiative that reviews processes and develops plans to improve flow and timeliness. As part of this initiative, should a shop employee identify a needed environmental improvement, a special team is formed to find and implement a solution within a week. This has helped to create an open dialogue between shop employees, environmental and quality managers and administrators.
- A Corrective Action Procedure is used to monitor deficiencies, identify their causes and track corrective actions. This information is shared with all concerned shops to prevent the repetition of the same deficiencies in other areas.
- An ongoing awareness campaign refreshes employees' knowledge and provides updates on the ISO 14001 process through bulletins, newspaper articles, posters and a Depot-wide television network. An environmental Intranet site provides easy access to all regulations, procedures, documents, points of contact and forms. A card distributed to employees, contractors and visitors lists key aspects of the environmental policy and reminders about recycling, energy conservation and HM safety.

The TYAD EMS management review process is supported by a policy instituted by the Commander establishing a commitment to continuous improvement and environmental compliance that reflects the core elements of the ISO 14001 standard. A Risk Management Committee, made up of top management and the Depot commander, reviews the EMS process quarterly. A core group of ISO 14001 coordinators from throughout the Depot is trained to conduct internal audits that oversee EMS implementation and maintenance. Members have authority within their directorates to oversee compliance with the ISO 14001 standard. TYAD passed an annual surveillance audit in August 2004, maintaining their certification. TYAD credits the passing grade to their vigorous checks and balances incorporated into the Depot-wide EMS.

Creating a Cleaner Environment

TYAD has an extensive P2 and waste reduction program in all media areas and maintains numerous permits to accomplish its mission while surpassing environmental compliance requirements. Major sources of HW, air emissions and wastewater are painting, plating and sandblasting operations. Two computerized tracking and monitoring systems help the Depot meet its P2 goals. The first is the Facility Environmental Management and Monitoring System, which monitors and remotely manages operations involving drinking water, sewage treatment, industrial wastewater treatment, air emissions and storage of HM and HW. For example, the system can detect open doors, leaks and other conditions that pose a risk. The second is the HMMS, which tracks and monitors the life cycle of more than 5,000 HMs. A Hazardous Materials Review Board approves new purchases, seeks less harmful HMs and maintains authorized user lists for each order dispensed by the Depot's 11 HM pharmacies.

Overall, TYAD has implemented 70 source/use reduction projects since 1985. Despite its 40 percent production increase, TYAD held HW generation to a 22 percent increase and reduced wastewater nitrogen levels by seven percent in FY 2004. In CY 2003, TYAD decreased air emissions by 23 percent (23.35 tons).

Pollution Prevention and Waste Reduction Efforts at the Industrial Operations Facility (IOF): The Depot's new IOF came on line in September 2004. Planning for the new IOF included efforts to replace older metal plating, painting and sand blasting shops, involving all aspects of environmental and quality control. EMD worked with facilities, engineering and quality management to incorporate P2 into design and equipment acquisition decisions. Improvements include monitored air scrubbers, water chillers and a new industrial wastewater treatment plant that conserves resources, greatly curtails HW and substantially reduces discharges to the sewage treatment plant. Based on first quarter operations, water reuse processes at the new IOF will save 2.1 million gallons (\$15,000/month) and an anticipated \$32,500 in annual HW costs. The metal plating shop changes alone could reduce

recurring waste streams from an average of 12,182 pounds/quarter to around 1,000 pounds/quarter.

Recycling Program: In FY 2004 alone, the Depot recycled 40.6 percent (2.6 million pounds) of waste, surpassing the Army recycle goal of 40 percent.

Recycled materials included steel, aluminum, cardboard, office paper, newspapers, magazines, plastics, cans, fluorescent light tubes and batteries. Recycling centers exist throughout the Depot (in the cafeteria and every office), and employees avidly use them. The EMD and Risk Management Committee oversee the program, weekly inspections and follow ups occur to reinforce policies, and recycling markets for industrial by-products are consistently monitored. In FY 2004, recycling efforts avoided \$61,137 in disposal costs, a 37 percent increase over the previous year.



▲ Pollution prevention at TYAD has drastically reduced waste from industrial shop activities such as painting for C4ISR maintenance.

Ensuring Environmental Compliance

The EMD performs more than 20 environmental inspections per month using checklists specialized to all media areas and actively partners with USEPA and PADEP in compliance and restoration programs. For example, EMD worked closely with regulators to become one of the first to complete an unexploded

“Tobyhanna is on the national edge of [the MMRP] program. Over the years, we have developed a very effective team approach, making projects more timely and cost effective.”
 - John Mellow, PADEP regional project manager

ordinance survey for the Military Munitions Response Program. The success of TYAD's collaborative approach was reflected in its 2002 Environmental Compliance Assessment (performed by Army Materiel Command Installation and Activity Services) with no findings.

National Environmental Protection Act (NEPA):

A streamlined process ensures that all projects falling under NEPA receive a thorough environmental review within seven to 14 days. EMD processed 109 NEPA records of environmental consideration in FY 2003 and 108 in FY 2004. Staff evaluate each project for 35 functional areas, including air quality, cultural resources, energy conservation, water quality, P2, lead, asbestos, erosion control and pest management. The NEPA officer also reviews project contracts prior to issue. Once a review is issued, EMD ensures compliance through regular follow up inspections and corrective actions. To streamline NEPA-required Environmental Assessments (EA), EMD is preparing a five-year Master Plan EA in coordination with the US Army Corps of Engineers.

“Tobyhanna Army Depot’s environmental programs represent the very best efforts by very concerned employees that make them a model for Monroe County, and indeed the entire Northeastern Region of Pennsylvania. The fact that so many folks all reflect so great an amount of caring for their work environment is a tribute to not only themselves, but to their leadership. There has never been a successful environmental program anywhere without substantial commitment and involvement from management at all levels.”

- Dean D.W. DeLong, executive director, Monroe County Municipal Waste Management Authority

The plan documents the environmental and socioeconomic effects associated with 15 proposed construction or renovation projects identified by public works and engineering. Estimated cost savings of preparing a Master Plan EA versus separate EAs for each project is approximately \$488,000.

Reaching Out to the Community

EMD participates in many outreach programs that reinforce its well-developed and positive relationships with the surrounding community. Each year, EMD provides environmental education to over 3,500 depot employees at the Depot’s Earth Day event and to approximately 5,000 area residents at its open house, which features exhibits such as a spill response decontamination demonstration, displays and tours. EMD staff also participate in a multitude of national, state and local committees such as the

Local Emergency Planning Committee and Monroe County Office of Emergency Services, working closely with local and state officials on emergency response plans and annual response drills for HM spills, weapons of mass destruction and mass casualty events.



▲ EMD staff demonstrate spill response equipment to children during the Depot’s Armed Forces Salute and Take Your Children to Work Day in June 2004.

CONCLUSION

TYAD’s industrial mission presents environmental aspects and challenges similar to those any industrial plant would face. TYAD meets these challenges to excel as a leader in environmental quality and compliance through a mature EMS that is as integral to the fabrication of communications and electronics devices as the parts used to build them. It also employs processes to monitor activities that generate HW, air emissions and industrial wastewater. Finally, TYAD has also successfully created and nurtured a workforce culture that promotes and integrates environmental stewardship responsibilities into its mission to support the nation’s war fighters each and every day.