MISSOURI ARMY NATIONAL GUARD
SECRETARY OF THE ARMY ENVIRONMENTAL AWARDS FY14
ENVIRONMENTAL QUALITY—INDUSTRIAL INSTALLATION

Introduction & Background

The Missouri Army National Guard (MOARNG) Environmental Quality program is responsible for environmental quality on an industrial installation that encompasses 19 unique facilities, including 14 Field Maintenance Shops (FMS), 3 Area Aviation Support Facilities (AASF), a Combined Support Maintenance Shop (CSMS), and an Aviation Classification Repair Activity Depot (AVCRAD). Taken together, these industrial facilities provide all equipment and vehicle maintenance not only for the MOARNG, but also, through the AVCRAD, regional support for aviation equipment across 14 mid-western states as well as field training for thousands of MOARNG and other state Guard troops each year. Over the past two years, the MOARNG environmental quality staff has continued its enhancement of the eMS program through technology and training. The Environmental Quality (EQ) program has also achieved important milestones for the industrial installation. During the last external EPAS audit by the National Guard Bureau, the EQ program's industrial installations received high marks for environmental compliance and stewardship, including zero finding at the CSMS and positive findings at the AVCRAD. The EQ program also conducts its own internal EPAS assessments at 100 percent of the industrial installation facilities each year, far above and beyond the mandated 25 percent review. With a consistent presence in the MOARNG's industrial facility and continuous support to shop personnel, the EQ program has fully integrated award-winning environmental stewardship into operations at every level.

Pictured above is the MOARNG EQ Staff with the 2013 National Guard Bureau Environmental Stewardship Award. This award is given to the state with the best overall environmental program in 54 states and territories. The MOARNG EQ staff also won this award for environmental performance in 2011.

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The EQ program is overseen by the MOARNG's environmental office, with further support from the Environmental Quality Control Committee (EQCC). EQ staff members work with unit environmental coordinators at each site and facility to ensure compliance and continual improvement. Environmental coordinators are required to attend a two-day initial training course and annual refreshers thereafter. The environmental staff provides training in numerous statewide locations to approximately 375 to 400 environmental coordinators and support staff each year. The EQ program staff consists of individual subject matter experts, with specialties in: hazardous and solid waste management, clean air management, clean water management, recycling, compliance,

NEPA, eMS, EPAS auditing, spill prevention and response, and training. In addition to their daily duties, these subject matter experts also assist the eMS program manager in setting objectives and targets in their respective fields, and facilitate the strategies to achieve them. The EQCC is extremely responsive to any issues briefed by the EQ program; this year, based on EQ staff recommendations, the MOARNG was able to expedite the closing of a non-essential bulk fuel tank at an FMS. The closing of this fuel tank eliminated the need for a spill prevention, control and countermeasure plan and reduced environmental liability. EQ staff members also sit on the Safety, Energy, and Real Property committees to ensure that EQ and broader environmental goals are addressed by these directorates. The EQ program staff coordinates extensively with the Facilities Management Office to support facility design and proposed project development, with assisting with design, permitting, and clearances.

The EQ program oversees the MOARNG's industrial installation Spill Prevention, Control, and Countermeasures (SPCC) plans; all are currently being revised to reflect current best practices. The hazardous waste management plan, noise pollution plan, and green procurement plan are all current for the installation with revisions completed on the pollution prevention plan as well this year. All other environmental plans are up-to-date, and are reviewed and updated regularly. Adhering to these plans and management best practices has directly supported the MOARNG's compliance record.

Environmental Office staff attends quarterly Air, Hazardous Waste, and Water Program Advisory Forum meetings which are conducted by the Missouri Department of Natural Resources (MDNR). Cooperation with the MDNR, United States Environmental Protection Agency (EPA), and other regulatory agencies, along with a robust system for internal auditing and process improvement, allows the industrial installation to maintain and exceed compliance standards. Furthermore, the EQ staff's geographical information systems (GIS) program allows the Environmental Office to provide MOARNG soldiers with essential training maps and associated environmental information regarding the location of fuel points, oil-water separators, storm water outfalls, and wetlands along with expectations for management and protection of these elements. The EQ program's communication and support in soldiers' day-to-day operations enhances their ability to meet the MOARNG training and readiness missions.

Fostering strong working relationships with MDNR has also allowed the EQ program to streamline management and reduce environmental compliance costs for the installation. In coordination with the regulator, the EQ program negotiated a statewide Clean Water Act land disturbance permit that eliminates the need for individual land disturbance permits in the course of ordinary operations. This change saves the MOARNG between $3000 and $5000 each year.

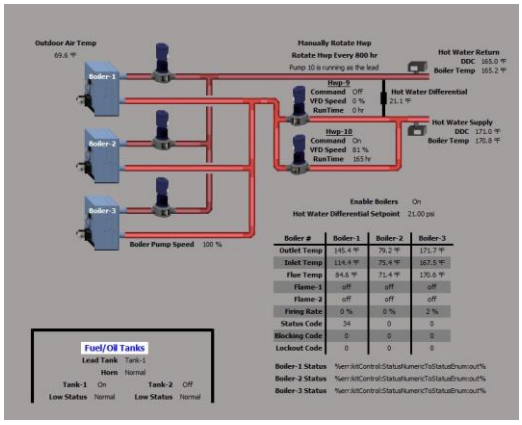
The EQ program also drove the acquisition of a new paint minimizer system for the CSMS and AVCRAD based on careful cost comparison with contracting wash and paint management services with Safety Kleen, a MOARNG vendor. The required cost for new equipment and products amounted to approximately $15000, with equipment expenses of $12600 and around $2400 in annual material costs. The annual contract with Safety Kleen, however, totals approximately $8000; bringing these operations in-house has a payback period of less than two years. Over a ten-year period, the savings of acquiring the paint minimizer system is nearly $19,000. A cost-benefit analysis of the

installation's other recent equipment acquisition, an aerosol can puncturing device, demonstrated a three-year cost savings of approximately $5500.

Over the past two years, the EQ program for the installation has emphasized better management and operations through eMS and EPAS, with a continued focus on elimination of waste streams and improved material management.

EPAS: The EQ program's commitment to internal inspections and support, with all industrial facilities evaluated each year, contributes to the installation's exemplary compliance performance. Regular inspections and associated support has also allowed the EQ staff to develop collaborative and cooperative relationships with the industrial facilities' staffs. Positive EPAS findings from the external assessment include:

- Exemplary eMS Program (44 of 46 findings positive)
- Exemplary Cultural Resources Management Program
- Exemplary Natural Resources Management Program Implementation at Camp Clark and Crowder
- No deficiencies at CSMS (ISTS)
- Exemplary Hazardous Material Management at AVCRAD



Pictured above is a screenshot from the MOARNG Energy Manager's building control system. The MOARNG energy manager utilizes this system along with advanced metering controls to track energy usage at facilities statewide. Through use of these systems and MOARNG maintenance facilities going to four ten-hour work days per week, MOARNG Industrial Installations used 10% less energy in 2013 than 2012; energy reduction is an eMS objective.

eMS: A continued commitment to the MOARNG eMS program and its integration into all operations also contributed to the EQ program's EPAS success. Through the external EPAS audit, the eMS program received the highest marks (tie) ever assessed by NGB 44 of 46 findings positive. The EQ program staff work diligently to communicate eMS goals and provide training support in all shops and facilities. Staff have developed a specialized shop manual with environmental processes according to operational needs for the industrial sites. A dedicated eMS SharePoint portal was also established for all facility environmental coordinators. The site, which was an eMS goal itself, serves as a central repository for all training materials, compliance forms, environmental reports, and more, with site-specific data links and documentation tracking functions. All staff with an EQ responsibility can access the site and use it to seamlessly communicate and coordinate with other facilities, environmental staff, and compliance staff. All training packages are also maintained on the site to provide easy access and documentation of training certificates. The eMS portal is a comprehensive

tool for overall management, allowing the EQ program to easily identify facilities that need environmental support, training, or correction.

Currently, the eMS objectives and targets focus on reducing energy use on the industrial installation. The EQ program has supported the adoption of a 4-day, 10-hour workweek for the MOARNG facilities, which has achieved a 10 percent decrease in energy use at industrial facilities. The industrial installation is also being retrofitted with more energy-efficient lighting systems, converting fluorescent systems to LED with advanced metering controls.

Pollution Prevention, Recycling, Waste Management, and Waste Reduction: Any scrap metal, including wheel weights, tires, and batteries collected in operations at the FMS and CSMS shops are centrally collected at the USPFO warehouse. Scrap metal is then picked-up by DLA Disposition Services and recycled. New guidance last year on brass resale has been implemented to speed up the process of collection and sale. In 2013, around 260,000 pounds of scrap metal, 80,000 pounds of tires, and 80 pounds of toner cartridges were recycled; similar numbers are anticipated for FY14. The installation also recycles metal-encased filters as scrap, diverting around 6000 pounds of oil filters each year. This year, the installation purchased an aerosol can puncturing device for the AVCRAD and CSMS, allowing for internal recycling of that waste stream rather than vendor contracting. The AVCRAD has also implemented a pharmacy program, another positive finding for the MOARNG's external EPAS inspection, which has reduced unnecessary disposal and redundant ordering of materials. Rather than each section maintaining independent inventories requiring separate management and processing, the AVCRAD pharmacy provides for material sharing and compilation of ordering needs. A paint minimizer was also acquired for the AVCRAD and CSMS to reduce paint waste as much as possible without sacrificing operational capacity.

Pictured above is scrap metal crushed used oil, fuel, and antifreeze filters. Through draining, crushing and recycling metal encased filters as scrap, MOARNG is able to generate recycling revenue, while eliminating a possible hazardous waste stream. MOARNG recycles approximately 6,000 lbs of scrap filters annually.

The MOARNG industrial installation is a member of the Pilot Army Oil Analysis Pilot Program (AOAP) for sampling and testing vehicle and equipment oils. Data from the pilot program indicate that upon completion of the pilot program, the AOAP will have a strong chance to become official thereby reducing oil usage, handling, and disposal concerns, while minimizing the risk of spills during maintenance operations. The installation's also recycles about 15,000 gallons of used oil each year.

The EQ staff has also helped facilitate the transfer the ownership and accountability of an onsite electrical distribution system at Camp Clark. Through this

transfer the distribution system on post has been updated and control given over to the local power provider, thereby limiting the MOARNG's liability for maintaining the system and eliminating a maintenance and potential environmental issue for the MOARNG.

As described above, the MOARNG industrial installation is critical to the training and mission readiness of the MOARNG and the 14 states supported by the AVCRAD. All of the EQ initiatives undertaken over the past two years have enhanced soldier and staff safety, improved soldier awareness of environmental concerns, and saved resources and money that can be redirected into the MOARNG mission. The achievement of full eMS integration and a robust internal EPAS program have contributed to an installation-wide ethic of shared responsibility for environmental quality, stewardship, and sustainability while empowering all soldiers and staff with the training to be partners in EQ goals. The MOARNG leadership has set the example in prioritizing EQ activities, which in turn has promoted commitment to the program at every level.

In 2013, the EQ program was key to the construction of five MILCON projects investing nearly $20 million in the MOARNG installation, to include construction of a new FMS, completion of the 2012 AVCRAD expansion, a Regional Training Institute, and several new buildings and armory expansions. The EQ program staff was involved in the process from conception and design through construction completion to encourage adoption of sustainable features and ensure full compliance measures. The EQ program reviews every proposed action for construction and maintenance, completing all NEPA requirements with the FMO. The MOARNG SharePoint site has the capacity for tracking all documentation and plans as well as any guidelines that may be project-specific—at any given point in the process, the EQ program can identify project status, outstanding needs, and supporting materials.

Preserving internal environmental office continuity has been a key element of the MOARNG EQ program and the SharePoint site has been a critical tool for the mutual goals of responsive management and comprehensive record-keeping. This system, in conjunction with the extensive series of specialized training modules available online allows new staff to quickly get up to speed on all activities and avoids the loss of knowledge during the relatively rare event of staff turnover. Maintenance training is specific to the installation's facilities, and the EQ program oversees training not only environmental coordinators, but also around 150 maintenance personnel each year. These programs were developed in-house to incorporate customized materials. A two-day initial class is required for all personnel, followed by annual refreshers relevant to each shop function.

The installation staff is also committed to transferring its successes and lessons learned beyond the state. The EQ program invites other state Guards to visit the installation; representatives from the Colorado Army National Guard shadowed EQ staff to learn about techniques for eMS implementation and integration of the sharepoint system for eMS support.

While industrial installations provide little opportunity for public access, the EQ program has worked to promote public awareness, education and engagement. The MOARNG complies with the requirements of the Emergency Planning Community Right-to-Know Act (EPCRA) by reporting on all hazardous chemicals present above reportable thresholds on the installation to the Missouri Emergency Response Commission (MERC), local fire departments, and the Local Emergency Planning Community (LEPC).

Wherever possible, the EQ program will host school groups for field trips on the installation, often with a focus on environmental awareness and pollution prevention. Staff members also present at state conferences and host job fairs to encourage awareness of environmental careers with the MOARNG. The MOARNG and the EQ program are also committed to improving opportunities in higher education. A cooperative agreement with Lincoln University has been developed to allow college classes to use MOARNG training sites and facilities as field classrooms. The EQ program additionally provides two paid internships for university students from Lincoln University in Jefferson City. The interns are trained in environmental management and environmental compliance.

To further support public engagement, the EQ program staff participates in a number of environmental partnerships, teams, and working groups. As previously noted, the program staff takes part in the MDNR Air Program Advisory Forum, Hazardous Waste Forum and Clean Water Forum. These meetings bring together regulatory stakeholders, military entities, and local industries and businesses to work cooperatively on environmental quality projects and compliance concerns. EQ staff also participates in the Missouri Interagency Recycling Committee. Through this outreach, the MOARNG has been able to enhance the public's awareness of stewardship on the installation and preserve its reputation for excellent environmental management with its neighbors and communities.