

SECRETARY OF THE ARMY ENVIRONMENTAL AWARDS 2019

WISCONSIN ARMY NATIONAL GUARD ENVIRONMENTAL QUALITY, INDUSTRIAL INSTALLATION

The 7,700 soldiers of the Wisconsin Army National Guard (WIARNG) rely on the state's industrial installation to provide the highest quality maintenance and rehabilitation of the vehicles, aircraft, and equipment that drive training and readiness. The statewide industrial installation encompasses ten (10) Field Maintenance Shops (FMS), two (2) Army Aviation Support Facilities (AASF), a Combined Support Maintenance Shop (CSMS), and a Maneuver Area Training Equipment Site (MATES). These facilities manage thousands of critical vehicles and equipment supporting 99 units throughout the state. To ensure that the WIARNG mission is never impeded or interrupted at these critical facilities, the Environmental Office has established a robust, proactive Environmental Quality (EQ) program dedicated to achieving gains in efficiency, compliance, and operational readiness.

Over the past two years, the WIARNG's EQ program has achieved several key program milestones for the industrial installation, fueling accomplishment of eMS objectives and broader sustainability goals. The EQ program implemented a long-term replacement plan to address aging fuel systems and underground storage tanks (USTs). Specifically, USTs that are approaching their 30-year manufacturer shelf life date have been identified for replacement with new USTs or above ground storage tanks (ASTs). In addition, all 15 fueling systems' aging tank monitoring panels are also being replaced with new monitoring systems linked into the Federal online network for more efficient management and real-time tracking. Six fueling system monitoring panels were upgraded in FY17, three replaced in FY18, and three more identified for FY19 with the remaining to be addressed in subsequent years. This summer, a wastewater discharge compliance study was initiated for all facilities of the industrial installation. This study validated the WIARNG's compliance on wastewater handling. Last year, an air compliance assessment and air emissions inventory was undertaken for all industrial facilities to ensure compliance with air emissions regulations statewide, particularly relating to generators. The Environmental Office also conducted the first ever live, hands-on mobile refueler training for M-Day soldiers during this summer's Annual Training, and another training session was conducted during weekend drill.

The EQ program for the industrial installation is overseen by a comprehensive team from the Environmental Office, including an eMS and EPAS Manager, a Water Resources and Training Manager, a Hazardous Waste/Recycling/UST/AST Manager, Cultural and Natural Resource Manager, and Energy Manager. The EQ program has the full support of the rest of the Environmental Office and GIS component of the WIARNG to facilitate integration of environmental goals and compliance oversight. An extensive and expanding training program has also helped to ensure that EQ best practices and compliance accountability are thoroughly integrated in all the industrial installation shops.

The EQ program's effectiveness is further enhanced by the WIARNG's continuing involvement with the state's Wisconsin Department of Natural Resources (WDNR) Green Tier Program, an incentive program that recognizes a willingness to exceed regulatory requirements and maintain an active eMS program; the WIARNG was one of the first government agencies to join this program in 2009. Because of this participation, the EQ program has established a single point of contact within the WDNR to oversee all regulatory compliance; this contact assists in



Program Management



Technical Merit



Orientation to Mission



Transferability



Stakeholder Interaction



Program Impact

streamlining permitting and consultation, developing effective environmental plans, and resolving cleanup and site closure efforts. Essentially, the EQ program has a dedicated person with the WDNR with whom to work collaboratively and transparently.

To further enhance the installation's excellent compliance record--there have been no notices of violation at any of the industrial facilities since 2008--the EQ program continues to refine spill plans for the installation shops and update the Facility Spill Coordinator (FSC) Handbook and Unit Spill Coordinator (USC) Handbook as missions evolve. The FSC establishes duties and responsibilities for coordination, oversight, and execution of in-house spill cleanup operations and emergency response activities for spills beyond the capabilities of in-house operations. In addition, the EQ program has updated or revised Spill Prevention Control and Countermeasure (SPCC) Plans in-house for several facilities over the past two years at significant cost savings. Past contracting of these plans cost the WIARNG between \$3000 and \$5000; new plan development ran to \$10,000. The EQ program staff are all licensed and/or certified to complete site inspections, site evaluations, and assessments, all of which has allowed the WIARNG to bring nearly all of its SPCC Plan compliance operations in-house.



EPAS: The EPAS program for the industrial installation propels compliance, providing the EQ program the tracking and corrective tools to identify environmental shortfalls and provide immediate solutions. Each year, the EQ staff completes internal audits on at least 25% of the WIARNG's total facilities. For the industrial installation, all the FMS are audited on a three-year rotation, while the AASF 1, AASF 2, CSMS, and MATES are audited every other year. Site assistance visits are provided each year at the larger facilities to promote compliance in the interim period between audits. Every three years, an external audit is conducted to include the eMS and environmental compliance; the FY17 external audit documented zero findings at the CSMS, MATES, AASF-1, and two FMSs; the few minor findings that were identified at the other industrial facilities were resolved immediately following the inspection.

eMS: The eMS program keeps the industrial installation's environmental objectives squarely at the forefront of planning and operations. The EQ program has developed a clear framework of action-oriented goals for the WIARNG, each intended to minimize liability and risk of environmental impact while enhancing the WIARNG's organizational effectiveness. In FY17-18, the EQ program reevaluated the eMS objectives and targets, determining several to have been accomplished and several to be ongoing; Objectives 1 and 3 are applicable to the industrial installation:

Objective 1: Reducing energy consumption

Overall Strategy: Executive Order (EO) 13693 requires Federal agencies to reduce energy intensity by applying conservation measures into the design for new building construction.

Target: Reduce energy intensity annually by 2.5% relative to FY15 leading to 25% by the end of 2025. ➤ Target is ongoing.

Objective: Reduce WIARNG lead hazards

Overall Strategy: Increase WIARNG lead hazard education and clean-up.

Target 1: Test 100% of armories (63) with former indoor firing ranges for lead. ➤ Target met FY17.

Target 2: Provide lead hazard training to 100% of all WIARNG soldiers. ➤ Target met FY17.

Objective: Expand and improve training for mobile fueling personnel

Overall Strategy: A review of spill risk throughout WIARNG identified the mobile fueler position as one that inherently involves a greater risk for spill occurrences than practically any other position within the organization. With this in mind, it was determined that additional hands-on spill training, customized for the mobile fueling personnel, was necessary.

Target: Provide customized hands-on training for 75% of the mobile fueling units in FY17. ➤ Trained 30% by FY18, on track to meet target FY19

The WIARNG's EQ program is the only Army National Guard organization that utilizes internal USPFO auditors to review the eMS program annually; EQ staff are certified eMS auditors as well, having completed the ISO level certification class. In addition, the USPFO internal auditors have attended the same 40-HR ISO certification course for conducting eMS audits. USPFO auditors provide independent, external auditing to include all budgets, records, and documentation. The EQ program no longer requires outside contractors to complete this function as the USPFO is considered an external auditor both by NGB and the WDNR Green Tier Program.



Waste Reduction Efforts: While not a formal objective for the eMS, the EQ program is consistently targeting waste reduction, waste diversion, and recycling on the industrial installation. The EQ program continues to reduce hazardous waste management. This year, the installation decommissioned a large grit-blasting bay area at the CSMS. With the elimination of this waste stream, the CSMS will be down-graded from a small quantity generator to a very small quantity generator. At the MATES, paint stripping operations are completed in a closed-loop, water-based system, which allows it, as well as the CSMS now, to be classified as a very small quantity generator despite their throughput. The EQ staff have helped the industrial facilities to improve their inventory practices to avoid redundant ordering or unintentional expiration of products.

The EQ program has identified in-state vendors to achieve ever increasing waste diversion rates. The WIARNG contracts with Veolia ES Technical Solutions to pick up and dispose of hazardous waste from the industrial facilities. Veolia offers a unique service, whereby hazardous waste chemicals that meet flammability characteristics are fuel blended and burned for energy recovery in cement kilns. In FY17, the industrial installation recaptured and fuel blended 1,053 pounds of hazardous waste.

The industrial shops also use a vendor to extract oils from used absorbents using a closed-loop technology. The recycled oil is reclaimed, and the absorbents are returned to the shop for use in new pad products. Used oil is also recaptured from used oil filters, with the metal recycled as scrap and remaining oil burned for energy recovery. Another vendor has begun recycling antifreeze for the WIARNG industrial installation using a closed-loop distillation process. The recycled antifreeze is reconstituted according to Army specifications at either 99% pure or 60/40 concentration. The cost of the recycled antifreeze is significantly cheaper than ordering new

material, and the pick-up of used antifreeze is offered at no charge. Due to deployments, recycled antifreeze volumes were lower than usual, around 10,700 gallons diverted from the waste stream; purchased recycled antifreeze amounted to around 900 gallons at a total cost of only \$3641. In a typical year, however, these volumes are roughly double.

The industrial installation has extensive recycling programs in place for more conventional universal waste streams as well. In FY17, the installation recycled:

Material	Volume (lbs)	Material	Volume (lbs)
Batteries	21,305	Lightbulbs	2,965
Antifreeze	10,710	Oil Filters	3,500
Absorbents	13,600	Used Oil	88,613
Used Grease	600	Electronic Waste	15,197

Metals, tires, cardboard, used toner, and other items are also tracked for recycling within the broader WIARNG operations. The industrial facilities have special permission from the DNR to regulate LED military vehicle headlights as electronic waste.

Water and Air Resource Protection: In addition to the compliance studies completed for air and water over FY17-18, the EQ program has implemented a project to replace or upgrade UST as they approach the end of their 30-year lifecycle. Aging tank monitoring panels are being replaced with Franklin Fueling Systems TS-550evo and connecting to the Federal network for more efficient online management. Six fueling systems were upgraded in FY17, three upgraded in FY18, and three upgrades/tank replacements planned in FY19 to include the addition of a StormCeptor to intercept potential fuel spills. From a central network, the EQ program can now access all fueling systems within the industrial installation, run all regulatory checks required, oversee status, and automate any required processing. The automation components enhance and simplify oversight.

The wastewater discharge compliance study at the seven maintenance shops initiated this year includes research on the discharge limits for each municipal wastewater treatment plant, review of existing wastewater characterization data, and evaluation of sampling protocols to maintain local and State ordinance compliance. Wastewater samples will



WIARNG Fueling System Upgrade project. Picture depicting upgraded above ground storage tank with new dispenser and leak detection along with system connected to WIARNG Federal network for remote access. Below, new fueling system tank monitoring panel.



be collected for appropriate characterization analysis parameters, and determine compliance. Drain locations and drainage systems are being mapped at all industrial installation facilities for incorporation into a GIS platform; labeling drains as to discharge location and function (e.g., sanitary or storm) is another component of this project. Additionally, the Water Resources Manager participates in a Green Tier Clear Waters Initiative Charter that works to reduce the overall sediment delivery to Dane County's lakes and streams beyond current state and local requirements.

eMS Objective Training: This year, the EQ program achieved significant progress toward one of its eMS objectives by implementing hands-on mobile refueler training to M-Day soldiers during Annual Training with an additional session presented during weekend drill, with hands-on and live classroom components. The hands-on portion was conducted jointly with top aviation fuelers in the state and with environmental staff to demonstrate spill control response. Environmental and safety were thus integrated in an event incorporating actual equipment and fueling systems to be used in the field.



Providing new training like mobile refueling is a clear link between the EQ program and the WIARNG mission, but every element of the EQ program is designed to support mission and readiness. The commitment to compliance and sustainability guarantee the sustainability of the WIARNG's industrial installation operations without interruption, and the EQ program's excellence is reflected in the WIARNG's continued membership in the state's Green Tier Program. Participation in this program is premised on excellence in environmental management. The EQ staff have assisted over the past two years with several compliance/cleanup actions, including closing out a groundwater investigation project involving active chemical injection to treat contaminated soils. Complete closure was achieved in May 2018, and offsite impacts were eliminated to avoid any restrictions on adjacent properties. EQ staff have also assisted on several Phase I Environmental Assessments (EA) in support of the WIARNG's proposed restructuring of its facility footprint. Rather than hiring an outside contractor, the NEPA process for private land acquisition is completed in-house, which also allows the EQ program to maintain consistent work quality.



Waupun remediation project now closed. Above, an ATV GeoProbe injecting chemical ORC into soil borings on neighboring WIARNG property at Waupun. Site became contaminated from fuel oil leak on WIARNG property.

Aside from the new training launched as an eMS objective, the EQ program has prioritized training as a key element in sustaining programmatic gains and compliance as an ethic for all industrial sites. The in-house training program offers annual sessions on Emergency Responder Operations Level training for personnel who are appointed as a Facility Spill Coordinator (FSC) or assistant FSC (Unit Spill Coordinators (USC) at armories) or to serve on a facility Spill Response Team (SRT). The EQ program completed revisions to the custom online refresher training program,



creating a smooth and more efficient platform that is compatible for all users. In an effort to not only ultimately save resources but to increase participation and effectiveness, the EQ program has also developed an interactive spill training “game.” The Training material has been placed on the WIARNG website, where it is accessed by all State and Federal personnel that require operations level spill refresher training on an annual basis, and it will continue to be refined based on feedback. This approach to training is one that could be adopted by other states looking for a more innovative format to engage with soldiers and staff. Shop trainings for environmental practices are linked into Federal safety classes as well. The Environmental office maintains a robust

GKO/SharePoint site for environmental programs and houses each facility’s environmental binder in an online format.



The EQ Program’s collaboration with DNR through the Green Tier Program is one of the most valuable stakeholder relationships the WIARNG could possibly have. With a dedicated point of contact to support compliance and streamline compliance processes, this relationship thoroughly protects the industrial installation’s operations. This engagement also helps to support the internal processes in which the industrial facilities and the EQ program engage, particularly achievement of eMS goals and EPAS excellence.

EQ program staff take part in the State of Wisconsin Hazardous Waste

Above, mobile fueler and M-Day soldiers setting up for downloading fuel into underground storage tank fueling system. Launching this training was a significant eMS goal.



Training Committee, which is composed of Hazardous Waste Managers representing each State of Wisconsin agencies to include DNR, Department of Agriculture Trade and Consumer Protection, Department of Transportation, University of Wisconsin, local municipalities, and Department of Corrections. This committee meets and discusses new law changes, issues affecting the State and agencies related to hazardous waste/environmental regulations, and implementation of annual Statewide hazardous waste awareness training provided to all State of Wisconsin employees. By having EQ staff interact with this group, awareness of the WIARNG’s military activities, programs, and active eMS/Green Tier Program is enhanced. In turn, the Environmental office can learn from the experience and expertise of other Wisconsin regulatory agencies, fostering strong relationships with those organizations.

In addition to that committee, EQ and Environmental staff attends DNR/DoD Partnership meetings that are hosted by Army Regional Environmental and Energy Office each year, providing the WIARNG with an opportunity to interact with environmental agencies and other Federal military agencies with an emphasis on military operations and objectives.