Wastren-EnergX Mission Support, LLC
Portsmouth Facility Support Services

Report from the Department of Energy
Voluntary Protection Program
Onsite Review
March 11-14, 2013

U.S. Department of Energy
Office of Health, Safety and Security
Office of Health and Safety
Office of Worker Safety and Health Assistance
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Foreword

The Department of Energy (DOE) recognizes that true excellence can be encouraged and guided but not standardized. For this reason, on January 26, 1994, the Department initiated the DOE Voluntary Protection Program (VPP) to encourage and recognize excellence in occupational safety and health protection. This program closely parallels the Occupational Safety and Health Administration (OSHA) VPP. Since its creation by OSHA in 1982, and DOE in 1994, VPP has demonstrated that cooperative action among Government, industry, and labor can achieve excellence in worker safety and health. The Office of Health, Safety and Security (HSS) assumed responsibility for DOE-VPP in October 2006. Assessments are now more performance-based and are enhancing the viability of the program. Furthermore, HSS is expanding complex-wide contractor participation and coordinating DOE-VPP efforts with other Department functions and initiatives, such as Enforcement, Oversight, and the Integrated Safety Management System.

DOE-VPP outlines areas where DOE contractors and subcontractors can surpass compliance with DOE orders and OSHA standards. The program encourages a "stretch for excellence" through systematic approaches, which emphasize creative solutions through cooperative efforts by managers, employees, and DOE.

Requirements for DOE-VPP participation are based on comprehensive management systems with employees actively involved in assessing, preventing, and controlling the potential health and safety hazards at their sites. DOE-VPP is designed to apply to all contractors in the DOE complex and encompasses production facilities, laboratories, and various subcontractors and support organizations.

DOE contractors are not required to apply for participation in DOE-VPP. In keeping with OSHA and DOE-VPP philosophy, *participation is strictly voluntary*. Additionally, any participant may withdraw from the program at any time. DOE-VPP consists of three programs with names and functions similar to those in OSHA's VPP: Star, Merit, and Demonstration. The Star program is the core of DOE-VPP. This program is aimed at truly outstanding protectors of employee safety and health. The Merit program is a steppingstone for participants that have good safety and health programs, but need time and DOE guidance to achieve true Star status. The Demonstration program, expected to be used rarely, allows DOE to recognize achievements in unusual situations about which DOE needs to learn more before determining approval requirements for the Merit or Star program.

By approving an applicant for participation in DOE-VPP, DOE recognizes that the applicant exceeds the basic elements of ongoing, systematic protection of employees at the site. The symbols of this recognition provided by DOE are certificates of approval and the right to use flags showing the program in which the site is participating. The participant may also choose to use the DOE-VPP logo on letterhead or on award items for employee incentive programs.

This report summarizes the results from the evaluation of Wastren-EnergX Mission Support, LLC, at Portsmouth, Ohio, during the period of March 11-14, 2013, and provides the Chief Health, Safety and Security Officer with the necessary information to make the final decision regarding its continued participation in DOE-VPP.

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ABBREVIATIONS AND ACRONYMS

ABC	Above and Beyond Compliance
AHA	Activity Hazard Analysis
BLS	Bureau of Labor Statistics
CFR	Code of Federal Regulations
CBT	Computer-Based Training
CEM	Certified Emergency Manager
CPR	Cardio Pulmonary Resuscitation
DART	Days Away, Restricted or Transferred
DOE	Department of Energy
ES&H	Environment, Safety and Health
FBP	Fluor-Babcock &Wilcox Portsmouth LLC
FSS	Facility Support Services
FSSF	Facility Support Services Form
GET	General Employee Training
GPS	Global Positioning System
HSS	Office of Health, Safety and Security
IH	Industrial Hygiene
ISMS	Integrated Safety Management System
JPM	Job Performance Measure
LEARN	Local Education Administration Requirements Network
LMBC	Legacy Management Business Center
NAICS	North American Industry Classification System
NCS	Nuclear Criticality Safety
NFPA	National Fire Protection Agency
OMP	Occupational Medical Provider
OSHA	Occupational Safety and Health Administration
PTHR	Pre-Task Hazard Review
PPE	Personal Protective Equipment
PORTS	Portsmouth Gaseous Diffusion Plant
PPPO	Portsmouth Paducah Project Office
QA	Quality Assurance
SGE	Special Government Employee
SME	Subject Matter Expert
SOMC	Southern Ohio Medical Center
Stoller	Stoller Legacy Management
STS	Safety-Trained Supervisor
Team	Office of Health, Safety and Security DOE-VPP Assessment Team
TOPS	Triangle of Prevention Site
TPMC	Theta Pro2Serve Management Company, LLC
TRC	Total Recordable Case
USEC	United States Enrichment Corporation
USW	United Steel Workers
VPP	Voluntary Protection Program
WAI	Wastren Advantage, Inc.
WEMS	Wastren-EnergX Mission Support, LLC
WIN	Worker Involvement Network

EXECUTIVE SUMMARY

The Portsmouth Gaseous Diffusion Plant (PORTS), located in Piketon, Ohio, began construction in 1952 and completed construction in 1956, as a source for highly enriched uranium materials for defense and commercial power needs. The Department of Energy (DOE) leased production areas of the plant to United States Enrichment Corporation (USEC) in 1994. In 2011, USEC returned all the leased portions of the gaseous diffusion plant to DOE, but retained the American Centrifuge Plant.

Wastren-EnergX Mission Support, LLC (WEMS) replaced Theta Pro2Serve Management Company, LLC (TPMC) as the infrastructure contractor at the Piketon site in March 2010. The vast majority of the WEMS workforce transferred from the previous contractor. The extent of change under the new contract did not warrant a transitional review and DOE transferred the Star status from TPMC (awarded in 2009) to WEMS. Continued participation in DOE Voluntary Protection Program (VPP) requires an onsite review approximately every 3 years by the Office of Health, Safety and Security DOE-VPP Team (Team). This report provides the results of that onsite assessment conducted March 11-14, 2013.

WEMS has only experienced one recordable injury in the past 3 years, a marked improvement from the prior years. All personnel felt very comfortable reporting minor injuries, and WEMS did not tie any incentives to injury rates.

WEMS successfully transitioned the safety and health program from the previous contractor, and continued to build on a solid foundation of management leadership and commitment. WEMS effectively manages resources to achieve contract objectives and ensures a safe and healthy workplace. Managers recognize and value employee participation in all aspects of the safety and health program. Managers are visible, accessible, and credible to workers.

WEMS employees are actively engaged in taking charge of their own safety and seeking improvements. WEMS employees are involved, motivated, and display a sense of ownership for their safety, as well as the safety of their coworkers. Employees express interest and support for VPP and are well versed in its attributes and tenets. Employees participate in a number of activities such as walkdowns, accident/incident training, hazard mapping, safety committees, Activity Hazard Analysis and work plan development, and assist the VPP Steering committee with safety events.

WEMS continues to demonstrate an effective process to ensure proper identification and analysis of hazards in the workplace. The Team expects a newly implemented hazard mapping process will provide significant improvement to the already effective WEMS worksite analysis process if WEMS is successful in integrating all identified hazards into the system. However, WEMS still has not developed a process to effectively document and capture its hazard analysis.

WEMS continues to demonstrate a good hierarchy of controls, including several good examples of engineered controls. However, WEMS should address potential ergonomic issues in the new document storage facility.

WEMS has an effective training program. The program continues to evolve to include shared training between WEMS, Fluor-Babcock &Wilcox Portsmouth LLC, and the United Steel Workers. The program ensures managers, supervisors, and employees know and understand the

policies, rules, and procedures established to prevent exposure to hazards. Training for health and safety ensures that employees understand their responsibilities, recognize hazards they may encounter, and are capable of acting in accordance with managers' expectations and approved procedures. WEMS should consider improvements to the required reading and the delinquent training notification processes.

In summary, WEMS demonstrates an effective safety program that involves all personnel. Managers effectively lead the company ensuring the variety of challenges, including increases in workscope and limited budget, do not compromise the safety and health of the workforce. Workers and managers have effective relationships based on mutual trust and respect. Managers recognize and reward employees' ideas and suggestions, and act quickly to resolve any concerns. WEMS effectively addressed most of the opportunities for improvement identified in the 2009 assessment. WEMS effectively demonstrates excellence and continued improvement in each of the DOE-VPP tenets. The Team recommends that WEMS continue participating in DOE-VPP at the Star level.

TABLE 1
OPPORTUNITIES FOR IMPROVEMENT

Opportunity for Improvement	Page
WEMS should consider including an assessment of findings, observations, and recommendations from the previous annual assessment in its current annual assessment, use those inputs to establish sub goals within its safety and health program, and increase the VPP and WIN committees' involvement in the annual assessment process.	**5**
WEMS should find effective means to rotate WIN committee membership.	**7**
WEMS should enhance its process for documenting hazard analysis in its work control process.	**10**
WEMS should consider including lines of inquiry for self-assessments that evaluate the workers' knowledge and understanding of specific hazards.	**11**
WEMS should consider integrating the information in the existing hazard baseline and the newly developed Hazard Elimination Program in order to ensure all identified hazards and the associated analysis are located and retrievable from one system.	**11**
WEMS should perform a hazard analysis for the maintenance shop welding station that includes the type, frequency, and duration of activities, as well as the materials used, and use that analysis to identify and implement appropriate controls to protect workers from hazardous exposures during welding and grinding.	**12**
WEMS should consider integrating IH sampling data into the newly implemented hazard mapping system floor plans to facilitate the timely availability of that information.	**12**
WEMS should work with Stoller to share lessons learned and develop an ergonomic plan that addresses the ergonomic issues faced by the WEMS' vault workers.	**15**
WEMS should reevaluate the extent of required reading and ensure employees learn and retain the desired information from required reading.	**18**
WEMS should consider modifying the LEARN software to automate notification of employees and their supervisors about delinquent training and continue notification frequently until the work restriction is in effect.	**19**

I. INTRODUCTION

The Portsmouth Gaseous Diffusion Plant (PORTS), located in Piketon, Ohio, began construction in 1952 and completed construction in 1956 as a source for highly enriched uranium materials for defense and commercial power needs. The first process materials were introduced beginning in 1954. In October 1992, the Energy Policy Act created the United States Enrichment Corporation (USEC) and transferred responsibility for production and sales of enriched uranium from the Department of Energy (DOE) to the newly formed corporation. Under that arrangement, DOE leased production areas of the plant to USEC, while retaining responsibility for environmental restoration and waste management areas of the plant. In 2001, USEC terminated production operations at Portsmouth although it continued to lease the process buildings while removing remaining process materials. In 2011, USEC returned all the leased portions of the gaseous diffusion plant to DOE, but retained the American Centrifuge Plant.

Wastren-EnergX Mission Support, LLC (WEMS) replaced Theta Pro2Serve Management Company, LLC (TPMC) as the infrastructure contractor at the Piketon site in March 2010. The Portsmouth Paducah Project Office (PPPO) recommended that the extent of change did not warrant an onsite review to transition the DOE Voluntary Protection Program (VPP) Star to WEMS because the new contractor retained most of the TPMC workforce and procedures, and both WEMS and the United Steel Workers (USW) Local submitted written commitments regarding DOE-VPP. The Office of Health, Safety and Security (HSS) reviewed and agreed with that recommendation and transferred the Star status from TPMC (awarded in 2009) to WEMS.

WEMS responsibilities include: (1) corrective and preventive maintenance of DOE nonleased facilities and grounds; (2) janitorial, computing, and telecommunications; (3) capital asset management/fleet management; (4) technical and engineering support; (5) records and document control; and (6) site security (including Cyber Security). Under the contract, WEMS manages the infrastructure scope primarily through self-performance with a portion of its scope accomplished through subcontracts mainly with the parent companies. WEMS maintains office spaces located in the X-1000 and X-720 buildings, and shop and warehouse space in the X-700, X-720, X-735A, and X-744 N, P, and Q buildings.

The vast majority of the WEMS workforce transferred from the previous contractor. As of this assessment, WEMS employed approximately 180 employees and subcontractors. Approximately one-third of the company's employees are bargaining unit personnel represented by USW International Local 1-689. Work activities include: (1) mobile equipment repair; (2) building maintenance; (3) janitorial support; (4) office renovations; (5) utility repair; (6) grounds maintenance; (7) general shop activities; and (8) office work. The principal hazards are general industry, ergonomic, electrical, and fire.

Per DOE-VPP requirements, continued participation in DOE-VPP requires an onsite review approximately every 3 years by the HSS DOE-VPP Team (Team). During this onsite review, the Team observed all forms of work, walked down and inspected all areas of the plant managed by WEMS, and had substantive contact with many of the employees, supervisors, and managers. This report provides the results of that onsite assessment conducted March 11-14, 2013.

II. INJURY INCIDENCE/LOST WORKDAYS CASE RATE

Injury Incidence/Lost Workdays Case Rate (WEMS)					
Calendar Year	Hours Worked	Total Recordable Cases (TRC)	TRC Incidence Rate	DART* Cases	DART* Case Rate
2010	213699	0	0.00	0	0.00
2011	275598	0	0.00	0	0.00
2012	301,290	1	0.66	0	0.00
3-Year Total	790,587	1	0.25	0	0.00
Bureau of Labor Statistics (BLS-2011) average for NAICS** Code #5612 Facility Support Services			3.7		1.9
Injury Incidence/Lost Workdays Case Rate (subcontractors)					
Calendar Year	Hours Worked	TRC	TRC Incidence Rate	DART* Cases	DART* Case Rate
2010	29,314	0	0.00	0	0.00
2011	17,448	0	0.00	0	0.00
2012	17,575	0	0.00	0	0.00
3-Year Total	64,337	0	0.00	0	0.00
BLS-2011 average for NAICS** Code #5612 Facility Support Services			3.7		1.9

* Days Away, Restricted or Transferred
** North American Industry Classification System

TRC Incidence Rate (WEMS and subcontractors): **0.23**
DART Case Rate (WEMS and subcontractors): **0.0**

Discussion

WEMS has only experienced one recordable injury in the past 3 years. This is a marked improvement from the 2009 assessment when the previous contractor had a 3-year average TRC rate of 1.34 and a DART case rate of 0.8. Reviews of accident and injury logs, policies, processes, and procedures as well as employee interviews did not identify any incentives or pressure to suppress reporting of injuries. All personnel felt very comfortable reporting minor injuries (first aids or near-misses). WEMS did not offer any incentives tied to TRC or DART case rates. WEMS accident and injury rates meet or exceed the expectations for continued participation in DOE-VPP.

III. MANAGEMENT LEADERSHIP

Management leadership is a key element of obtaining and sustaining an effective safety culture. The contractor must demonstrate senior level management commitment to occupational safety and health in general, and to meeting the requirements of DOE-VPP. Management systems for comprehensive planning must address health and safety requirements and initiatives. As with any other management system, authority and responsibility for employee health and safety must be integrated with the management system of the organization and must involve employees at all levels of the organization. Elements of that management system must include: (1) clearly communicated policies and goals; (2) clear definition and appropriate assignment of responsibility and authority; (3) adequate resources; (4) accountability for both managers and workers; and finally, (5) managers must be visible, accessible, and credible to employees.

In 2009, the Team found the previous contractor, TPMC, had clearly established excellence in safety as a management priority and committed the necessary resources to achieve it. It had created an environment of open communication and trust, and proactively worked with the USW Local 1-689 to provide opportunities for employees to raise safety concerns, make safety improvement suggestions, and become involved in establishing safety-related goals and objectives. TPMC factored safety and health standards and requirements into the work planning and contracting processes.

When WEMS won the contract in 2010, it immediately recognized the strengths of the existing safety and health program, and requested to transfer the existing DOE-VPP status under the provisions of the DOE-VPP program documents. The new senior management team, the transferred workforce, and the collective bargaining agent (USW Local 1-689), all agreed that the new contract maintained the necessary commitments to continue within DOE-VPP. Discussions among WEMS, the applicable DOE line managers, and HSS determined that the changes from TPMC to WEMS had minimal impact on the safety and health program, and that a separate assessment was not required.

WEMS has delivered on its commitment to maintain a strong health and safety program focused on continuous improvement and excellence. WEMS managers are visible, accessible, and credible to workers, exhibiting a strong and meaningful presence in work areas. Both managers and workers alike, cited numerous examples of manager presence in the work areas contributing to effective communication of issues and concerns, and timely corrective actions. The senior manager for WEMS, the Project Manager, is a former process operator at PORTS, and has a long history of work at the site. As such, he and the rest of his management team are attentive to worker needs and issues. Managers conduct regular observations. The Project Manager performs weekly walkdowns, and frequently invites both the local DOE personnel and the union safety representative to accompany him. Managers have an open-door policy, and workers openly seek managers when issues arise.

WEMS has a clear and succinct safety policy. Facility Support Services (FSS) Policy FSS-52701, *Safety Policy*, states WEMS' commitment to a workplace free from recognized hazards, an expectation that no schedule or milestone is worth placing employees at risk, and recognizes the importance of both managers and workers in managing workplace hazards. An appropriate system of procedures implements this policy and establishes roles, responsibilities, and requirements for the safety and health program.

WEMS provides an excellent level of resources for worker reward and recognition efforts. Those resources are specifically budgeted annually to provide additional training, conference attendance, and encourage employee participation in safety initiatives. WEMS tries to send four people each year to the Voluntary Protection Programs Participants' Association conferences, and sends many workers to a local safety conference held each year in Columbus, Ohio. WEMS adequately funds an employee recognition program called Above and Beyond Compliance (ABC) (see Employee Involvement for additional details) as an effective tool to encourage workers to submit ideas, identify issues, and perform inspections and assessments. WEMS does not tie any incentives to accident or injury rates, and none of the rewards create disincentives to reporting accidents or injuries.

In addition to an active reward and recognition program, WEMS has a progressive discipline policy that establishes expectations for supervisors and managers when employee performance does not meet expectations. The procedure incorporates a nonexhaustive list of behaviors for which the company might invoke discipline. The list includes: being inattentive to duty, failing to report an on-the-job injury, operating vehicles onsite in an unsafe manner, fighting, engaging in horseplay, acting in a manner that endangers the safety of oneself or others, or willful violation of safety rules. There were no complaints from employees regarding implementation of the discipline policy, which has been rarely, if ever, used.

WEMS actively encourages workers to participate in mentoring and community outreach efforts. In particular, WEMS has established strong mentoring relationships with other DOE-VPP participants. WEMS formally mentors Swift and Staley, the infrastructure support contractor at the Paducah Gaseous Diffusion Plant, a current DOE-VPP Merit participant. WEMS also had an active mentoring arrangement with Stoller Legacy Management, which successfully achieved DOE-VPP Star status in 2012. WEMS works closely with the other contractors present at the Portsmouth site. The DOE Portsmouth site office recently started conducting a monthly Environment, Safety and Health (ES&H) managers' meeting where key safety and health personnel can discuss shared site issues, coordinate efforts, and eliminate conflicts. WEMS actively participates in these meetings.

By contract, PPPO prevents WEMS from operating its own industrial hygiene (IH) program. Fluor-Babcock &Wilcox Portsmouth LLC (FBP) maintains and owns all IH equipment used onsite, and the contract requires WEMS to obtain IH services from FBP. WEMS has two qualified industrial hygienists on staff in the safety organization. Wastren Advantage, Inc. (WAI), one of the parent organizations for WEMS, has a subcontract to provide IH support to FBP. Consequently, in many cases the WEMS industrial hygienist simply charges his/her time to a different charge code working for WAI, using equipment provided by FBP. Although this arrangement increases costs to the government and increases the time and coordination required for WEMS to perform the same task under its contract, it has not prevented WEMS from obtaining the necessary support or perform sampling when required.

WEMS conducts an annual assessment of its safety and health program that incorporates the criteria for DOE-VPP. A member of the Quality Assurance (QA) staff conducts detailed assessments against each tenet, and documents the results. The annual report includes the detailed assessment by DOE-VPP tenet as an appendix. Those detailed assessments include findings, observations, and recommendations. The overall assessment report does not specifically address the findings, observations, and recommendations from the current detailed assessments, or from previous annual assessments. The goals discussed in the annual report are

limited to the Performance Objectives, Measures, and Criteria used by PPPO to rate the annual contract performance. The annual assessment does not reflect any assessment activity by the workforce, or worker input into goals and issues. WEMS should consider including an assessment of findings, observations, and recommendations from the previous annual assessment in its current annual assessment, and use those inputs to establish sub goals within its safety and health program. WEMS should also consider finding means to include both the VPP and Worker Involvement Network (WIN) committees into the annual assessment process.

Opportunity for Improvement: WEMS should consider including an assessment of findings, observations, and recommendations from the previous annual assessment in its current annual assessment, use those inputs to establish sub goals within its safety and health program, and increase the VPP and WIN committees' involvement in the annual assessment process.

Conclusion

WEMS has successfully transitioned the safety and health program from the previous contractor, and continued to build on a solid foundation of management leadership and commitment. WEMS effectively manages resources to achieve contract objectives and ensure a safe and healthy workplace. Managers recognize and value employee participation in all aspects of the safety and health program. Managers are visible, accessible, and credible to workers. WEMS fully meets the Management Leadership expectations for continued participation in DOE-VPP at the Star level.

IV. EMPLOYEE INVOLVEMENT

Employees at all levels must continue to be involved in the structure and operation of the safety and health program and in decisions that affect employee health and safety. Employee involvement is a major pillar of a strong safety culture. Employee participation is in addition to the individual right to notify appropriate managers of hazardous conditions and practices. Managers and employees must work together to establish an environment of trust where employees understand that their participation adds value, is crucial, and welcome. Managers must be proactive in recognizing, encouraging, facilitating, and rewarding workers for their participation and contributions. Both employees and managers must communicate effectively and collaboratively participate in open forums to discuss continuing improvements, recognize and resolve issues, and learn from their experiences.

The Team found employee ownership was strongly rooted across the WEMS organization. Managers and employees were working together to keep lines of communication open, identify and promote safety and health responsibilities, goals and expectations, and identify potentially hazardous conditions. Employees are involved, motivated, and display a sense of ownership for their safety, as well as the safety of their coworker.

A key building block for employee involvement at WEMS is the WIN committee. The committee charter, Policy FSS-5270, supports employee representation to promote and continuously improve workplace safety. Per the charter, the committee promotes Integrated Safety Management System (ISMS), employee safety interest, and safety inspection participation. It serves as the vehicle to raise safety concerns to management; as the point of contact for employees to raise concerns; supports committee initiatives, such as safety fairs; investigates minor accidents and incidents under the guidance of a safety professional; and provides feedback for continuous improvement.

The WIN committee charter documents the responsibilities of the Project Manager, the line manager, committee chairperson, co-chair, committee members, and the secretary. The charter states that the chairman is a member of the management team and appointed by the Project Manager. The charter also documents the committee protocol for approval of the charter, amendments, meeting minutes, and subcommittee actions. It also establishes monthly meetings. The committee can hold special meetings if necessary. The committee members or their designee may vote on issues and the chairman may only vote if there is a tie. The committee captures dissenting opinions in the meeting minutes as required by the charter.

The Team attended the WIN committee meeting during this assessment. The current chair of the committee is the facility manager and the co-chair is the USW safety representative. The ES&H Manager, Environmental Manager, and the Senior Safety Engineer also attended. The conduct of the committee meeting was formal and professional. The committee addressed old business and status of previously identified issues. The committee then addressed new issues that resulted from safety walkdowns, anonymous input from the safety suggestion box, employee suggestions to supervisors, and employee input to WIN committee members. There was a positive atmosphere during the entire meeting with open communication and participation. Members demonstrated a sincere commitment to safety and volunteered to take responsibility for championing newly identified safety issues. The WIN committee has four boxes placed throughout the WEMS work areas where workers can submit safety issues. Since its inception,

the WIN committee has closed out approximately 85 safety issues. A summary sheet posted next to each of the boxes provides the status of current issues and corrective actions.

Many of the workers interviewed supported the process and believed their input resulted in real change. Some examples of effective change included repairs to pedestrian crosswalks in the parking lots, and the installation of bumper blocks at the X-1000 loading dock. The Team asked employees if they would like to be part of the committee. Most said yes, but since they were short-handed, they did not think they could attend the monthly meetings.

WEMS has a separate committee specifically focused on DOE-VPP. Policy FSS-52706 establishes the VPP Steering Committee charter. The purpose of the VPP Steering Committee is to prepare WEMS for VPP recognition and maintain program status thereafter. The committee is responsible for coordinating and conducting educational sessions, promotional events, and ensuring implementation of the five tenets of DOE-VPP. The VPP Steering Committee is comprised of managers, staff personnel, and hourly workers. With the exception of the chair and co-chair, membership is voluntary. The charter is silent on the selection of the chairperson, but the USW safety representative is required to be the co-chair. The VPP Steering Committee meets monthly to discuss mentoring, improvement areas, subcommittee reports, and administrative areas. Although the VPP Steering Committee did not meet during this assessment, employees recognized the committee's efforts in the workplace.

Both committees are active, but committee membership has been relatively static, with little or no membership rotation. The WIN charter specifies that committee membership will rotate every 6 months on a phased schedule. Some WIN committee members have served for 3 years. The VPP Steering Committee charter is silent on membership duration and is essentially an open-ended voluntary commitment. WEMS has not revised either charter since August 2010 when WEMS fully assumed the contract. WEMS should find effective means to rotate WIN committee membership.

Opportunity for Improvement: WEMS should find effective means to rotate WIN committee membership.

Employee Involvement was evident to the Team in several Worksite Analysis efforts (see Worksite Analysis). Workers interviewed by the Team indicated that WEMS expects them to participate in the development of Activity Hazard Analyses (AHA), prejob walkdowns, and the development of workplans. Many of the workers interviewed had also participated in the hazard mapping, monthly walkdowns, and supported VPP events sponsored by WEMS. WEMS employees perform a monthly safety walkdown comprised of hourly and nonhourly workers. The Team walked with and observed the March walkdown during this assessment. Workers corrected some identified items immediately. Other items were elevated to the supervisor of a particular area. The observers immediately communicate any significant safety or compliance items to the ES&H Manager, who enters the issues into a corrective action tracking system. There were no significant safety or compliance findings identified during the March walkdown. WEMS trained six hourly employees on accident/incident investigations. This also includes near-misses or first-aid events. WEMS managers or USW safety representatives can request an investigation. Although WEMS is not a USW Triangle of Prevention Site (TOPS), WEMS recognizes the value of different programs available across the safety arena and utilizes several TOPS initiatives, which include hourly employees trained to investigate accidents and incidents.

As noted in the Management Leadership section, WEMS has an employee recognition program called ABC. The VPP Steering Committee sponsors and administers the ABC program. ABC awards "safety bucks" to employees that actively engage in safety activities onsite or for participating in safety training or conference activities. The safety bucks recognize employees for safety activities performed above and beyond their normal duties and expectations. For example, community involvement or participating in a safety course earns 50 safety bucks; presenting a safety topic at an All Hands Meeting earns 25 safety bucks; and submitting a safety-related photo earns 10 safety bucks. WEMS provides a catalog of items that the employees can purchase with their safety bucks. The items in the catalog range from jackets, gift cards, flashlights, and first-aid kits. Several employees interviewed by the Team had earned several hundred safety bucks, and had specific goals for items they wished to purchase that would improve safety either at home or in their workspace.

Conclusion

WEMS employees are actively engaged in taking charge of their own safety and seeking improvements. WEMS employees are involved, motivated, and display a sense of ownership for their safety, as well as the safety of their coworkers. Employees express interest and support for VPP and are well-versed in its attributes and tenets. Employees participate in many activities and assist the VPP Steering Committee with safety events. WEMS clearly meets the Employee Involvement expectation for a Star site.

V. WORKSITE ANALYSIS

Management of health and safety programs must begin with a thorough understanding of all hazards that might be encountered during the course of work and the ability to recognize and correct new hazards. There must be a systematic approach to identifying and analyzing all hazards encountered during the course of work, and the results of the analysis must be used in subsequent work planning efforts. Effective safety programs also integrate feedback from workers regarding additional hazards that are encountered and include a system to ensure that new or newly recognized hazards are properly addressed. Successful worksite analysis also involves implementing preventive and/or mitigating measures during work planning to anticipate and minimize the impact of such hazards.

The 2009 VPP review concluded that WEMS had effective processes and procedures to ensure proper identification of hazards in the workplace. Workers were clearly aware of the hazards present in their workspaces. Housekeeping in shop areas in the 700 building was excellent.

WEMS plans and controls work per Procedure FSS-3300, *Integrated Work Control*. FSS-3300 provides instructions for initiating, planning, coordinating, performing, and closing out work activities. The procedure implements Procedure FSS/PORTS-55, *Integrated Safety Management System Plan*. Work planners use FSS-3300 in conjunction with Procedure FSS-3301, *Work Packages;* and Procedure FSS-2704, *Hazard Review*. FSS-3301 describes work package development in detail while FSS-2704 establishes a systematic review process to identify and analyze hazards with a graded approach to mitigating controls. WEMS requires a hazard review prior to the beginning of each task to identify potential hazards and establish controls according to FSS-3300. WEMS uses a graded approach based on the complexity of the planned work and the potential hazards to select the appropriate hazard review. For example, Pre-Task Hazard Reviews (PTHR) are not required for administrative type jobs or tasks where a Facility Support Services Form (FSSF) 2708, *Activity Hazard Analysis Form*, already exists. WEMS documents the hazard review for all work activities in a graded approach using FSSF-2707, *Pre-Task Hazard Review Form,* and FSSF-2708.

Pre-job walkdowns generally are required for all work, although the FSS Manager may grant exceptions for repetitive jobs, such as mowing, snow removal, custodial, etc. The Hazard Review Process procedure stipulates that the walkdown team shall have the necessary clearances, training, and Personal Protective Equipment (PPE) to enter affected facilities. Additionally, the walkdown should include the work control planner, Environment, Safety, Health and Quality representative, affected line managers, and a representative from each affected craft to fulfill ISMS requirements for worker involvement.

In response to the 2009 VPP review, WEMS placed additional emphasis on the "expectations and consistency in hazard evaluation and work package development through a work control implementation upgrade" to ensure a formal mechanism is in place to capture and document a thorough and consistent evaluation of the hazards. Initially, WEMS attempted to meet the expectations of the 2009 opportunity for improvement by adding an additional column to the AHA form. That column provided the work package developers a location to document the analysis supporting the selected hazard control in the AHA. WEMS piloted this modification on several AHAs. Unfortunately, in a few instances, some of the modified AHAs cited the incorrect analysis (i.e., specified the incorrect Occupational Safety and Health Administration (OSHA) paragraph and subsection for ladder safety). The DOE facility representative correctly identified

these errors during routine oversight reviews. In response to those findings, WEMS determined that the additional column was not improving the work control process and removed the fourth column. The safety manager believes that the current additional emphasis on improved hazard evaluation and the use of the AHA and PTHRs satisfies the expectations cited in the 2009 VPP review opportunity for improvement.

The Team's review of work packages and AHAs demonstrated an effective hazard identification and review process. The AHAs contain details identifying the hazards and recommending the appropriate controls. WEMS was particularly effective incorporating the National Fire Protection Agency (NFPA) 70E PPE guidelines for arc flash protection. Recognizing that DOE has slated the majority of facilities for Deactivation and Decommissioning, WEMS accepted the recommendations of the NFPA 70E arc flash protection table and required the appropriate PPE based on the NFPA 70E guidance rather than undertake the costly effort to calculate arc flash protection values for each electrical box.

While the current hazard identification and review process is effective, WEMS does not yet effectively document and capture the analysis. Specifically, the previously discussed pilot AHAs analyzed the hazard by citing the applicable OSHA regulations or standards. Rather than trying to capture a single analysis in multiple AHAs as the previous pilot did, WEMS might capture these requirements in a single hazard analysis document that links many of the standard activities it conducts to the OSHA requirements; i.e., scaffolding inspection requirements per OSHA title 29, Code of Federal Regulations (CFR), part 1926.451 (29 CFR 1926.451). This reference document would significantly help work package developers avoid the mistakes that occurred in the original pilot attempt while clearly capturing assumptions and limitations of the activity. Additionally, in the few cases where a calculated analysis is required (i.e., IH review of specific chemical use or welding activity controls for the maintenance shop), WEMS could summarize the documented analysis in the additional (fourth) column of the AHA with a reference pointing to the complete analysis. If the analysis applies more broadly, WEMS could include it in the reference document. The end result would be a single "living document" that captures the basis for any hazard control selection in the WEMS work control process, and serves as a reference for work package developers in future work planning. WEMS should enhance its process for documenting hazard analysis in its work control process.

Opportunity for Improvement: WEMS should enhance its process for documenting hazard analysis in its work control process.

WEMS has an effective assessment program that incorporates safety and health. Through the QA group and FSS-2606, *Inspection and Test Control*, WEMS scheduled and performed almost 200 assessments in 2012 with nearly half of those assessments directly related to safety and health. FSS-2606 establishes the requirements and responsibilities for performing, documenting, and reporting inspections and tests. The QA group works with the individual elements of the WEMS organizational units to establish and approve annual assessment plans for each group. In addition, the QA group provides mentoring assistance to organizational elements that may not have extensive self-assessment experience (e.g., maintenance and human resources). As part of that mentoring, the QA group assists in developing lines of inquiry and the overall assessment plan. QA also reviews the resulting assessment for overall effectiveness, enters any findings into a corrective action tracking system, and tracks findings to closure. This process effectively identifies issues and recommendations for continuous improvement.

WEMS is initiating a new assessment program designed to address office environment hazards using an employee-driven approach. Scheduled to begin in April 2013, the program uses a Web-based office safety inspection tool that employees use to evaluate each other's workspace. The process simply requires an employee to use the provided form to evaluate a coworker's office space. The form evaluates 24 different office safety criteria (i.e., power strips, loose cords, extension cords, storage on top of filing cabinets, etc.). The Team believes this approach will be effective because it focuses on employees identifying office environment hazards that are typically low priorities for oversight activities.

The Team did note one potential opportunity to improve upon the current assessment process. Specifically, the maintenance self-assessment of the janitorial services included only four lines of inquiry. While those lines of inquiry covered safe work practices for that activity, the lines of inquiry did not evaluate the workers' knowledge of the materials/chemicals they work with or knowledge of potential biological hazards. By including lines of inquiry that evaluate workers' knowledge of the hazards they work with every day, the self-assessment process could evaluate the workers' retention of training information, Material Safety Data Sheets comprehension, and possibly identify opportunities for substitution based on workers' experience. WEMS should consider including lines of inquiry for self-assessments that evaluate the workers' knowledge and understanding of specific hazards.

Opportunity for Improvement: WEMS should consider including lines of inquiry for self-assessments that evaluate the workers' knowledge and understanding of specific hazards.

In May 2012, WEMS initiated a new hazard elimination program using several techniques that identify and eliminate workplace hazards. One of the techniques is the Safety Hazard Mapping System developed by USW at the Tony Mazzocchi Center for Health, Safety and Environmental Education. A safety hazard map identifies the potential for injuries or near-misses in a work area. Workers use blank maps (floor plans) to walk through an area, evaluate hazards, and note the hazards location. Once identified, workers, supervisors, and managers can then consider strategies to mitigate or eliminate the hazard. Since initiating the program less than a year ago, WEMS has eliminated more than 75 percent of the hazards originally identified by the mapping program walkdowns. When WEMS cannot eliminate hazards, it mitigates the hazards as much as possible. For example, a roll of barbed wire is stored for future use in a caged area in the maintenance shop. The map shows the location. Until WEMS uses the barbed wire, the hazard map identifies the storage location to help workers avoid the hazard.

Safety hazard maps are currently located at the entrances to four maintenance work areas to remind or inform employees of the hazards in that area. As WEMs continues to develop and mature the Hazard Mapping Process it should consider integrating the information in the existing hazard baseline and the newly developed Hazard Elimination Program in order to ensure all identified hazards and the associated analysis are located and retrievable from one system.

Opportunity for Improvement: WEMS should consider integrating the information in the existing hazard baseline and the newly developed Hazard Elimination Program in order to ensure all identified hazards and the associated analysis are located and retrievable from one system.

The Team observed one case where an activity did not have an effective hazard analysis, leading to potentially inadequate controls to protect workers. The fixed welding station located in the WEMS maintenance shop did not have a hazard analysis, baseline exposure assessments, or IH sampling data that identified or analyzed workers' welding and grinding activities at the station. Managers and safety personnel justified the lack of analysis or sampling on an assumption that minimal welding activities occurred within the welding area. Interviews with the welder demonstrated that more frequent welding activities were occurring than assumed by managers and safety personnel. Workers also stated they performed grinding of galvanized materials at the welding station. WEMS did not provide or require any engineered or portable local ventilation systems for the fixed welding station, or provide limits on types of welding workers could perform. The welder stated he relied upon natural ventilation by opening the shop door and the fixed welding station gate to provide airflow when welding or grinding. WEMS should perform a hazard analysis for the maintenance shop welding station that includes the type, frequency, and duration of activities, as well as the materials used, and use that analysis to identify and implement appropriate controls to protect workers from hazardous exposures during welding and grinding.

Opportunity for Improvement: WEMS should perform a hazard analysis for the maintenance shop welding station that includes the type, frequency, and duration of activities, as well as the materials used, and use that analysis to identify and implement appropriate controls to protect workers from hazardous exposures during welding and grinding.

As discussed in the 2009 VPP report, WEMS does not maintain an automated IH database that would facilitate recovery of past sampling data. WEMS did not pursue the opportunity for improvement from the 2009 report because PPPO did not include responsibility for operating an IH program in the WEMS contract (see Management Leadership). WEMS continues to retain all sampling results in hard copy format for use in work planning or for historical purposes, but relies on FBP for computer-based storage and retrieval of IH data. Discussions with WEMS personnel indicated the data is difficult to retrieve from the FBP database. In order to effectively retrieve the results of all IH sampling data, WEMS should consider integrating IH sampling data into the newly implemented hazard mapping system floor plans.

Opportunity for Improvement: WEMS should consider integrating IH sampling data into the newly implemented hazard mapping system floor plans to facilitate the timely availability of that information.

QA tracks and trends information gathered from all aspects of WEMS' operations, including safety walkdowns, safety meetings, first-aid cases, Operating Experience/Lessons Learned data and nonconformances. However, due to its impressive safety record, very little data is available to trend injuries or even first-aid cases. The Quality Manager is actively pursuing new methods to trend leading indicators in the absence of injuries and illnesses. The Quality Manager could track and trend several indicators related to existing safety and health efforts. For example, WEMS could use the percentage of space mapped in the hazard mapping system, number of workers participating in the various aspects of the ABC program, number of office evaluations conducted in a given period, or other measures of safety program improvements as effective leading indicators.

WEMS investigates accidents and incidents in accordance with Procedure FSS 2723, *Accident/Incident Reporting and Record Keeping*. FSS 2723 establishes requirements for the notification, investigation, and reporting of work-related accidents, injuries, illnesses, and near-miss incidents, including property damage and motor vehicle accidents involving government vehicles. The investigation team produces a written report that is available to all employees and, where required, corrective actions and the tracking to completion of action items within the corrective action tracking system. The procedure also requires all employees to report injuries and illnesses to DOE according to DOE Order 231.A, Chg. 1, *Environment, Safety and Health Reporting*, and DOE Manual 231.1-1A, Chg. 2, *Environment, Safety and Health Reporting*, and utilizing the DOE Computerized Accident/Injury Reporting System (CAIRS).

Conclusion

WEMS continues to demonstrate an effective process to ensure proper identification and analysis of hazards in the workplace. The development of the new hazard mapping process could provide significant improvement to the already effective WEMS worksite analysis process if WEMS is successful in integrating all identified hazards into the system. WEMS still has not developed a process to effectively document and capture its hazard analysis. With one exception, the WEMS baseline process is well maintained and effective. WEMS satisfies the necessary elements for Worksite Analysis as a VPP Star participant.

VI. HAZARD PREVENTION AND CONTROL

Once hazards have been identified and analyzed, they must be eliminated (by substitution or changing work methods) or addressed by the implementation of effective controls (engineered controls, administrative controls, or PPE). Equipment maintenance processes to ensure compliance with requirements and emergency preparedness must also be implemented where necessary. Safety rules and work procedures must be developed, communicated, and understood by supervisors and employees. These rules/procedures must also be followed by everyone in the workplace to prevent mishaps or control their frequency/severity. Where hazards cannot be eliminated, they are mitigated through the appropriate use of controls in a hierarchical approach, first engineered controls, then administrative controls, and/or use of PPE.

Hazard elimination is the primary method WEMS employs to limit employee exposure to hazards. If elimination of hazards is not feasible, engineering controls is the next option. Administrative limits are instituted to manage hazards when elimination and engineering controls are not possible. As a final option, PPE is required for the job being performed. Typical PPE used by WEMS employees include safety shoes, arc flash and electrical protective clothing, hearing protection, face shields, safety eyewear, hardhats, and gloves.

WEMS uses several effective engineered controls. For example, the grounds maintenance crews used Vintrac® riding lawn mowers designed with a low center of gravity to allow for safe operation on slopes. The Vintrac® mowers also incorporate a simple attachment system that allows for easy installation of multiple attachments without tools. The carpenters' equipment in the maintenance shop are directly wired into the electrical system, rather than using plugs. Workers attach portable sawdust collectors to the carpenters' equipment to reduce airborne dust (potential flammability and slip hazard) in the work area.

In 2011, DOE tasked WEMS with additional grounds maintenance that doubled the areas they were responsible for with no increase in personnel. This was a significant workload increase for the WEMS grounds crews. The new areas present hazards for the crews due to the high vegetation that hides other hazards during mowing activities, such as well heads, tree stumps, and fallen trees. These hazards require operators to walkdown new areas to try to identify hazard locations prior to mowing. WEMS identified a commercially available Global Positioning System (GPS) tracking system that allows operators to mark locations of hazards (such as well heads or stumps) and provides operators with real-time warnings of obscured objects. WEMS is evaluating available GPS systems and plans to begin using a system this season. If successful, WEMS will apply the technology for snowplowing operations as well.

During the 2009 VPP review, the Team recommended the safety organization should reevaluate the postings in the shop areas for consistency. Signs required hearing protection within 4 feet of the machinery. WEMS was even less specific regarding safety glasses. In response, WEMS posted new signs that describe the actual noise levels for each piece of equipment and clearly indicated the required hearing protection for use based on duration of exposure. The shop also continues to use painted walkways to identify "safe areas" where safety glasses are not required.

The housekeeping in the maintenance shops continues to be excellent. The Facility Manager continues to promote good housekeeping through weekly assessments that score the condition of each area and using the resulting scores in a monthly competition that recognizes the winners on

the facility status board and through the recognition program. Interviews indicated the workers enjoyed the competition and look forward to the "bragging rights" that came with winning.

WEMS recently installed a new, secured documents vault for site storage of records. The previous vault had significant issues with contaminated documents and other health concerns for employees working in the vault. Interviews with employees indicated the new vault is a significant improvement over the previous workspace and many were pleased to have the new facility. The employees' daily tasks in the vault include the receiving and inventory of delivered documents. After inventory, WEMS boxes and stores the documents for later reference or retrieval until WEMS can destroy or ship them to a long-term repository. Typical deliveries may include up to 40 boxes of records, weighing approximately 25 pounds each. The workers inventory the materials on a 30-foot long storage rack system. When working on larger shipments, the workers frequently use the concrete floor when additional workspace is required to perform the sorting and inventory. As a result, the workers repeatedly stoop, bend, and lift, which may become an ergonomic concern if the current approach is not evaluated and improved. Additionally, WEMS should evaluate the overall workflow for this process and identify a more efficient approach that eliminates the use of the floor as a work surface for inventorying and sorting records.

WEMS performed mentoring activities with the Stoller Legacy Management (Stoller) organization for the past few years. Stoller is the operating contractor for the DOE Legacy Management Business Center (LMBC), located in Morgantown, West Virginia. The LMBC contains a 31,000 square-foot warehouse within the facility that contains up to 150,000 cubic feet of unclassified records from the Cold War nuclear legacy that workers access via a state-of-the-art recordkeeping system. Stoller made a significant effort to incorporate ergonomic improvements throughout the recordkeeping process, a process similar to the work WEMS performs. WEMS should work with Stoller to share lessons learned and develop an ergonomic plan that addresses the ergonomic issues faced by WEMS vault workers.

Opportunity for Improvement: WEMS should work with Stoller to share lessons learned and develop an ergonomic plan that addresses the ergonomic issues faced by the WEMS' vault workers.

Several WEMS procedures do not effectively incorporate the process to request, perform, and retain IH samples as required by the WEMS contract (see Management Leadership). Because the WEMS contract excludes an IH program, WEMS cancelled its IH program procedure that provided details for all aspects of the IH program for WEMS activities. In addition, the current procedures (such as Hazard Review and Integrated Work Control) do not define the appropriate authorities and responsibilities to implement the IH program. WEMS should ensure its procedures adequately cover the associated authorities related to IH. If FBP procedures describe the responsibilities, WEMS should include that information in the appropriate WEMS procedures.

Similar to IH support, the WEMS contract requires WEMS to obtain all PPE from FBP. WEMS maintains a PPE program procedure that establishes the requirements for selecting, using, and maintaining PPE. Team walkdowns and interviews demonstrated that routine PPE was readily available to the workers. In cooperation with FBP, WEMS maintains an online catalog of available PPE that workers can use to identify available PPE, including specialized PPE, such as

respiratory protection or fall protection equipment. Interviews with workers indicated that while WEMS employees rarely use such PPE, it is available when necessary.

WEMS uses both preventive and corrective maintenance to optimize costs and minimize risks. WEMS uses a commercial maintenance management software system called SOMAX® to schedule, track, and control maintenance activities based on contract and regulatory requirements, manufacturers' recommendations, equipment performance specifications, systematic analysis of preventive maintenance, As Low As Reasonably Achievable (ALARA) considerations, and engineering recommendations.

The WEMS Occupational Medical Program provides a comprehensive occupational health service for all its employees. Services include emergency care, medical evaluations, wellness programs, and in some cases health education. WEMS established a contract with Southern Ohio Medical Center (SOMC) to be its Occupational Medical Provider (OMP). Any site medical emergencies fall under the authority of the FBP emergency responders who can transport injured employees to the emergency room at SOMC. As the OMP for WEMS, SOMC maintains medical facilities in Waverly and Portsmouth, Ohio, for nonemergency care and occupational medical evaluations. Interviews with WEMS staff indicated the Occupational Medicine Doctor maintains a strong interpersonal relationship with WEMS employees and visits the site at least twice a year. In addition, personnel from SOMC have attended WEMS All Hands Meetings and wellness fairs to provide information and interact with WEMS employees.

The 2009 VPP review recommended WEMS develop a specific employee job task analyses form to identify medical requirements, including potential for beryllium, asbestos, and lead exposures for workers based on their work duties and potential exposures. In response, WEMS developed the WEMS Functional Job Description form. WEMS supervisors use the form to describe the employees' duties and potential exposures. SOMC then uses the form to determine any necessary medical monitoring.

FBP is responsible for managing and controlling the emergency responses at the Portsmouth Site. USEC American Centrifuge Plant owns the Portsmouth Site Emergency Plan. The Nuclear Regulatory Commission approves and regulates the plan, which FBP implements. While WEMS operates under the umbrella of the FBP emergency response plan, WEMS is contractually responsible for compliance with DOE Order 151.1C, *Comprehensive Emergency Management System*. In order to maintain that compliance, WEMS has an International Association of Emergency Managers' Certified Emergency Manager (CEM) that coordinates with FBP to ensure that WEMS satisfies all aspects of DOE Order 151.1C. The WEMS CEM also coordinates with the WEMS Facility Manager to ensure WEMS performs all necessary drill activities at building X1000 per DOE Order 151.1C. Interviews with the CEM indicated that WEMS meets its responsibilities under DOE Order 151.1C and the site emergency plan. WEMS trains employees to know the location of WEMS rally points across the site for evacuations and how to contact their direct supervisor in the event of a shelter-in-place event. The WEMS CEM is in the process of evaluating the recent Office of Safety and Emergency Management Evaluations report on emergency management at the Paducah Gaseous Diffusion Plant to determine if the FBP emergency management program shares any similar weaknesses. WEMS did not perform any drill activities during the Team review.

Conclusion

WEMS continues to demonstrate a good hierarchy of controls, including several good examples of engineered controls. The innovative approach using the GPS locating system to identify known hazards during mowing operations and the detailed machine shop postings represent excellent examples of good hazard controls. PPE is readily available to the workers and the Occupational Medical Program provides comprehensive services. WEMS should address potential ergonomic issues in the new document storage facility. WEMS effectively addressed the opportunities for improvement identified in the 2009 DOE-VPP report. It continues to seek additional improvements and meets the Hazard Prevention and Control expectations for a DOE-VPP Star participant.

VII. SAFETY AND HEALTH TRAINING

Managers, supervisors, and employees must know and understand the policies, rules, and procedures established to prevent exposure to hazards. Training for health and safety must ensure that responsibilities are understood, personnel recognize hazards they may encounter, and they are capable of acting in accordance with management expectations and approved procedures.

The WEMS workforce consists mostly of mature workers with a long work history at PORTS. Their safety and health awareness comes from many years of training and experience. The WEMS training program supplements this experience with relevant classes and practical hands-on training.

Procedure FSS/PORTS-61400, *Training Program*, articulates training principles and program implementation. A motivated staff implements the program using a dedicated training room, classroom training courses, computer-based training (CBT), and job performance measure (JPM) training. The staff includes a manager, two full-time instructors, and a database manager. A third instructor, who works in FSS, supports the training program by performing JPM training that includes all mobile equipment. A fourth instructor, also in FSS, provides JPM training on lawn mowing equipment only.

WEMS has training agreements with FBP and USW. Under those agreements, each organization provides specific training, and each group accepts the training from the other groups. For example, WEMS provides the general employee training (GET) for all personnel working at the site. WEMS records GET training on the site access card that allows employees access into the site. If GET training expires on the card, the employee cannot access the site, so WEMS issues new site access cards daily for FBP, DOE, or WEMS employees and subcontractors as they complete training. More than 2,000 employees carry the card. WEMS also provides radiation worker training, and WEMS employees receive its version of nuclear criticality safety (NCS) training. FBP provides respiratory protection training and its version of NCS. The USW provides the Hazardous Waste Operations and Emergency Response (HAZWOPER) training. The site access card lists these five training courses using color codes and labels so all employees and supervisors can easily determine if an employee is trained and qualified.

Employee training and reading requirements are established for all employees in the training software program, called Local Education Administration Requirements Network (LEARN). Supervisors coordinate with human resources personnel to identify training requirements for newly hired personnel. Approximately 55 percent of training is CBT-based (excluding JPM). Workers complete JPM training at the facility where the equipment is stored. WEMS also provides employees a required reading list as a part of training that can be extensive. As an example, a service worker's training consists of 59 CBT/classroom/JPM courses and 47 required readings. Once a document is read, the employee checks a completion block in LEARN. WEMS does not verify the effectiveness of required reading or retention of the information. WEMS should reevaluate the extent of required reading and ensure employees learn and retain the desired information from required reading.

Opportunity for Improvement: WEMS should reevaluate the extent of required reading and ensure employees learn and retain the desired information from required reading.

Once an employee completes the initial required training, LEARN automatically tracks the person's annual requirements. LEARN notifies both the employee and supervisor via e-mail at 90, 60 and 30 days prior to the expiration of an annual training requirement. Additionally, the database manager manually queries LEARN for all employees whose training will be, or is, delinquent. The database manager notifies both the individual and the individual's supervisor by another e-mail, and the training manager briefs the training status at a weekly staff meeting. When an employee's training certification has expired, WEMS requires the supervisor to restrict the employee's duties. The employee and supervisor sign a form stating that the employee is restricted from performing work that involves the delinquent training, and the signed form is sent to the LEARN database manager, who records the employee's work restriction in LEARN. Once training is completed, LEARN automatically releases the employee from restriction.

From a recent annual self-assessment report, 10 out of 15 employees with delinquent training had not yet received the required work restriction. Similarly, the Team identified some employees with delinquent training that were not yet restricted, although WEMS immediately put restrictions in place. There are 52 employees currently on some form of work restriction for training requirements. Some employees are not available for training because they are on extended leave of absence. Other work restrictions revolve around not being able to train with broken equipment and others involve needing to complete refresher training on policy programs. The Team did not observe any workers performing activities that they were restricted from, and current work restrictions did not cause any undue burden on the workforce, but the number of missing work restrictions identified by self-assessments and the Team indicates the current method of implementing work restrictions is not fully effective. WEMS should consider modifying the LEARN software to automate notification of employees and their supervisors about delinquent training and continue notification frequently until the work restriction is in effect.

Opportunity for Improvement: WEMS should consider modifying the LEARN software to automate notification of employees and their supervisors about delinquent training and continue notification frequently until the work restriction is in effect.

The WEMS training staff continually strives to improve its program. Recently, WEMS created a dedicated training area in the 1000 Building. The new training room accommodates realistic training scenarios, such as hands-on radiation monitoring and Cardio Pulmonary Resuscitation (CPR) classes. The new room also provides storage for equipment, such as the training mannequins for the CPR class and a full body radiation monitor. This arrangement saves time setting up classes since trainers do not have to reserve conference rooms and move equipment and props around the site, allowing them to spend more time training and answering employee questions. For example, during this assessment, an employee facing a work restriction approached a trainer for help. The trainer had time to do one-on-one training while keeping his original schedule.

Instructors actively pursue additional training offerings for WEMS and the site. For example, one instructor maintains his first-aid and CPR certification because he has a high interest in the subject. WEMS offers this training to all site personnel even though it is not a part of the required training. WEMS recently sent two instructors to receive training by an outside consultant as trainers for low-voltage electrical safety and arc flash hazards so they can, in turn, provide this training to site workers. In the past, WEMS hired contractors to provide this course to electrical workers. WEMS managers decided they could provide better service at a lower cost

by offering this training in-house. If an employee's training is about to expire, or has expired, the employee can now be easily retrained without having to stop the project or hire a contractor to instruct the training.

Instructors are knowledgeable and seek to improve courses. For example, during a Radiation Worker II course observed by the Team, the instructor solicited comments to compare the training with normal work practices. When discrepancies are identified, the trainer notifies the appropriate subject matter experts (SME) to ensure the training is accurate. For instance, students raised several questions about the presentation of information on forms. The forms were recently changed and the course is using the new forms. Many of the employees did not like the new format and offered changes that the instructor said he would forward to the SME.

In 2009, the Team recommended TPMC consider adding the Safety-Trained Supervisor (STS) and Special Government Employee (SGE) certifications to its catalog of voluntary training programs as a means to foster greater worker knowledge and participation in safety excellence. Since then, WEMS allowed a staff member to complete OSHA SGE training. This 3-year term of service allows the person to supplement OSHA VPP assessment teams and gives industry and government an opportunity to work together and share views and ideas. In addition, two supervisors are pursuing certification as STS. They are reviewing materials to prepare for the exam sometime in 2013.

Conclusion

WEMS has an effective training program. The program continues to evolve to include shared training between WEMS, FBP, and USW. The program ensures managers, supervisors, and employees know and understand the policies, rules, and procedures established to prevent exposure to hazards. Training for health and safety ensures that employees understand their responsibilities, recognize hazards they may encounter, and are capable of acting in accordance with manager's expectations and approved procedures. WEMS should consider improvements to the required reading and the delinquent training notification processes. WEMS continues to meet DOE-VPP Star participant expectations for Safety and Health Training.

VIII. CONCLUSIONS

WEMS demonstrates an effective safety program that involves all personnel. Managers effectively lead the company ensuring the variety of challenges, including increases in work scope and limited budget, do not compromise the safety and health of the workforce. Workers and managers have effective relationships based on mutual trust and respect. Managers value and reward employees' ideas and suggestions and act quickly to resolve any concerns. WEMS effectively addressed most of the opportunities for improvement identified in the 2009 assessment, although work remains to ensure it documents and captures hazard analyses in a retrievable form. WEMS effectively demonstrates excellence and continued improvement in each of the DOE-VPP tenets. Therefore, the Team recommends that WEMS continue participating in DOE-VPP at the Star level.

Appendix A

Onsite VPP Audit Team Roster

Management

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