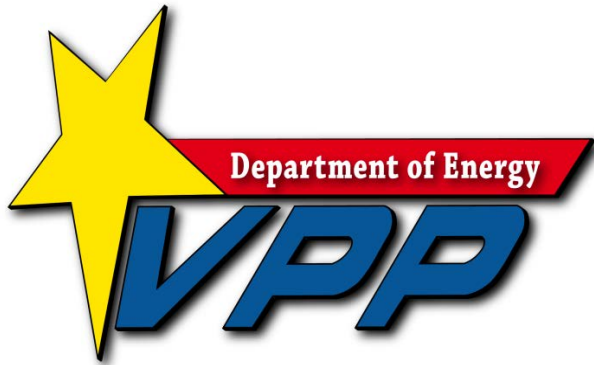
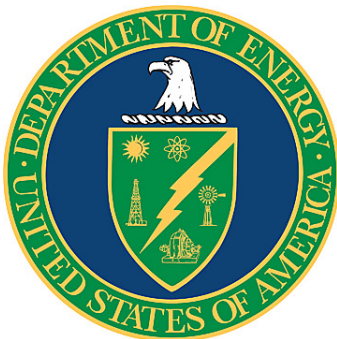




Security Walls, LLC

**Report from the Department of Energy
Voluntary Protection Program
Onsite Review
January 14-18, 2013**



U.S. Department of Energy
Office of Health, Safety and Security
Office of Health and Safety
Office of Worker Safety and Health Assistance
Washington, DC 20585

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 implementation by 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. 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.

The 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 available 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 Security Walls, LLC, near Carlsbad, New Mexico from January 14-18, 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 as a Star site.

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ABBREVIATIONS AND ACRONYMS

BLS	Bureau of Labor Statistics
CFR	Code of Federal Regulations
DART	Days Away, Restricted or Transferred
dB	Decibel
DOE	Department of Energy
HSS	Office of Health, Safety and Security
IH	Industrial Hygiene
IHS	Industrial Health Services
JHA	Job Hazard Analysis
LPN	Licensed Practical Nurse
M&O	Management and Operating
NAICS	North American Industry Classification System
NIJ	National Institute of Justice
NWP	Nuclear Waste Partnership, LLC
OSHA	Occupational Safety and Health Administration
PPE	Personal Protective Equipment
PA	Public Address
Security Walls	Security Walls, LLC
SME	Subject Matter Expert
SPO	Security Police Officer
Team	Office of Health, Safety and Security DOE-VPP Team
TRC	Total Recordable Case
VPP	Voluntary Protection Program
VPPPA	Voluntary Protection Programs Participants' Association
WIPP	Waste Isolation Pilot Project

EXECUTIVE SUMMARY

Security Walls, LLC (Security Walls), is a minority-owned company headquartered in Oak Ridge, Tennessee. Security Walls is a subcontractor to Nuclear Waste Partnership, LLC (NWP), the Management and Operations (M&O) contractor for the Waste Isolation Pilot Plant (WIPP). The Department of Energy (DOE) performed a transitional Voluntary Protection Program (VPP) evaluation in 2009 after Security Walls replaced Santa Fe Protective Services at the WIPP site in 2008. This is the first full review of Security Walls.

Continued recognition in DOE-VPP requires an onsite review by the Office of Health, Safety and Security (HSS) DOE-VPP team (Team) to determine whether the participant is performing at a level deserving DOE-VPP Star recognition. The Team conducted the onsite review of Security Walls at the WIPP site, January 14-18, 2013. The Team had contact with 27 of 28 employees, managers, and supervisors, either formally or during observation of field activities.

Security Walls, and its predecessor, have not had a reportable accident or injury in the past 5 years. Security Walls does not offer any incentives tied to accident or injury rates. A continued positive emphasis on safety through a variety of methods is helping Security Walls continue to prevent and avoid injuries.

Security Walls managers clearly support and demonstrate a strong commitment to excellence in safety and health. They are frequently in the workplace, highly visible, credible, and accessible to employees. With the support of NWP, Security Walls is committing the necessary resources to foster continued improvement. Security Walls managers recognize the continued need to push that commitment down through the management structure to each employee. They foster employee involvement in safety and health improvements through funding of employee safety activities and open lines of communication.

Employee involvement has led to a very positive, healthy, and safe work environment at Security Walls. Its safety record speaks for itself; without employee ownership with management support, they would not have been able to sustain such an outstanding safety record. Security Walls not only promotes employees' health and safety ideas at work, but also encourages safety at home and community involvement. Employees feel empowered to address safety issues through open communications at safety meetings, and are recognized for their contributions to health and safety at Security Walls.

Security Walls uses the Job Hazard Analysis process to address protective force hazards and develop controls. Subject matter experts (SME) are available through NWP to support the protective force contractor. NWP SMEs review the identification of hazards and controls through a collaborative effort that uses the strengths of both organizations. Workers demonstrate their awareness of hazards in their spaces. Security Walls continues to seek process improvements to improve hazards management associated with its work activities. The Team recommends that Security Walls continue to participate in DOE-VPP at the Star level.

TABLE 1

OPPORTUNITIES FOR IMPROVEMENT

Opportunity for Improvement	Page
Security Walls should strengthen its JHA process by documenting the analysis that derives the control set.	8
Security Walls should continue the evaluation of noise cancelling earmuffs and, if successful, recommend the use of this technology for all personnel during firing range activities, and share its results with other security contractors in DOE.	10
Security Walls and NWP should explore training opportunities for SPOs relating to safety walkdowns or assessments.	12

I. INTRODUCTION

Security Walls, LLC (Security Walls), is the subcontractor to Nuclear Waste Partnership, LLC (NWP), for safeguards and security operations at the Waste Isolation Pilot Plant (WIPP) near Carlsbad, New Mexico. The WIPP site is located approximately 30 miles east of Carlsbad. NWP recently assumed the prime Management and Operations (M&O) contract to operate the WIPP site. Security Walls was a subcontractor to NWP's predecessor and replaced Santa Fe Protective Services in 2008. The Department of Energy (DOE) Carlsbad Field Office provides oversight of WIPP site including the security function.

Santa Fe Protective Services achieved DOE Voluntary Protection Program (VPP) Star status in April of 2008; the Security Walls transition evaluation occurred in 2009. This assessment is the first triennial review since the 2009 transition evaluation.

Recognition in DOE-VPP requires a triennial onsite review by the Office of Health, Safety and Security (HSS) DOE-VPP team (Team). This review determines whether the participant's sustained performance is at a level commensurate with DOE-VPP Star status. The Team conducted the onsite review of Security Walls at the WIPP site from January 14-18, 2013. The Team evaluated Security Walls' safety programs against the provisions of DOE-VPP. During the site visit, the Team observed activities, evaluated relevant safety documents and procedures, and conducted interviews to assess the strength and effectiveness of Security Walls' health and safety programs.

Security Walls currently employs 28 staff members that include armed security police officers (SPOs), security support staff, and administrative support. The SPOs have signed a letter of intent with the United Government Security Officers of America but do not have a collective bargaining agreement yet. The Team had contact with 27 of 28 employees, managers, and supervisors, either formally or during observation of field activities. Hazards associated with Security Walls' security functions include potential radiological and chemical exposure associated with waste shipment activities, potential contact with venomous insects and reptiles, heat and cold stress, live fire range activities, and other standard industrial hazards. Activities observed included plan-of-the-day meetings, prejob briefings, office work, live fire range training, foot patrols, and vehicle patrols.

II. INJURY INCIDENCE/LOST WORKDAYS CASE RATE

Injury Incidence/Lost Workdays Case Rate Security Walls Employees					
Calendar Year	Hours Worked	Total Recordable Cases (TRC)	TRC Incidence Rate	DART* Cases	DART* Case Rate
2010	65,678	0	0	0	0
2011	60,407	0	0	0	0
2012	62,746	0	0	0	0
3-Year Total	188,831	0	0	0	0
Bureau of Labor Statistics (BLS-2011) average for NAICS** Code #561612 Security Guards and Patrol Services			1.7		0.8

* Days Away, Restricted or Transferred

** North American Industry Classification System

TRC Incidence Rate, including service contractors: 0.0

DART Case Rate, including service contractors: 0.0

Conclusion

Accident and injury rates for Security Walls and its predecessor contractor for the past 5 years remain at zero. The Team's review of the accident and injury logs demonstrated a willingness by personnel to report all injuries. In 2012, the Health and Safety organization received three first aid cases. Security Walls does not offer any incentives tied to accident or injury rates, but does focus on actions that will raise worker awareness and help prevent accidents and injuries. The positive emphasis on safety and worker involvement is helping Security Walls continue to prevent and avoid injuries. As such, the accident injury rates clearly meet 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 (5) managers must be visible, accessible, and credible to employees.

The Security Walls Protective Force Manager clearly supports the quest for excellence in safety and health activities at the WIPP site. He is responsible for all Security Walls activities and reports to the NWP Security Manager. The Protective Force Manager's support manifests itself through a well-understood open-door policy that encourages SPOs and staff members to engage managers directly on personal, professional, or improvement issues. The Protective Force Manager's responsibilities include developing and supporting the company's safety and health goals and integrating those plans into the prime contractor's safety and health initiatives. Management commitment to implement these initiatives includes funding provided by the owner for some incentives, and attendance at Voluntary Protection Programs Participants' Association (VPPPA) National conferences. The Protective Force Manager and the VPP coordinator communicate with the workforce through e-mails and 100 percent participation at safety meetings. Even though the majority of personnel are shift workers, every shift gets to participate in the quarterly safety meeting by scheduling multiple meetings to involve all workers.

Security Walls managers are continuously present in the workspaces. All workers interviewed commented on the open-door policy and the availability of managers during day-to-day activities. In addition, workers readily raise issues without fear of retribution.

The paramilitary structure of the organization provides clear lines of authority from the shift worker up to the management team. The Protective Force Manager implements the company's safety and health goals through his direct reports down to the security officers. Interviews indicate that workers and managers work together to solve issues and both hold each other accountable. Based on interviews with administrative staff and SPOs, managers are providing updates and maintaining an effective feedback loop.

The visibility of the Protective Force Manager was outstanding. When asked, SPOs unanimously answered without hesitation that the Protective Force Manager was present "all the time." An example of his presence included assisting in range activities and qualifications. SPOs were particularly appreciative of his experience and expertise in helping them improve their shooting skills. As previously mentioned, the Protective Force Manager's open-door policy encourages workers to take the opportunity to involve him in any issues regardless of the situation. Likewise, he said part of his job was to filter and protect his people from distractions and to communicate honestly any decisions that might affect them or their families.

Conclusion

Security Walls managers clearly demonstrate a strong commitment to excellence in safety and health, and recognize safety and health as a foundation for continuing improvement. They are consistently visible and accessible to the security forces. The Protective Force Manager commits necessary resources to foster continued improvement and worker involvement. The Protective Force Manager and his direct reports implement the company safety and health goals through the management structure to the SPOs. The communication link from the SPOs back to senior managers is just as strong due to the mutual respect and managerial presence in the workplace. Security Walls clearly demonstrates the attributes and expectations of Management Leadership 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 programs and in decisions that affect employee health and safety. Employee participation is in addition to the individual right to notify appropriate managers of hazardous conditions and practices. Field observations and interviews indicate that Security Walls workers remain committed to their personal safety, as well as the safety of the coworkers, plant visitors, and their community.

Employees at all levels of Security Walls have open communications with their managers that promote a safe and healthy work environment. This open dialogue allows employees to bring safety and health concerns to their supervisors and managers freely, leading to a joint effort in resolving the concern. Employees interviewed throughout Security Walls regard this open communication as an effective means of resolving their concerns. Employees interviewed by the Team understood and exercised their right to stop work and question others about work practices without fear of reprisal.

Interviews with all crews indicated overall employee satisfaction with the company leadership and support. Due to the small size of the protective force, supervisors are frequently required to prioritize activities based on available resources when illness or required training occurs. However, all personnel interviewed recognized that additional resources would always be made available by management, if necessary, to cover absences.

Security Walls continues to send representatives to both the regional and national VPPPA conferences. Attendees include representatives from staff, SPOs, and management. Conference attendees appreciate the opportunity to participate at the regional and national level. Their positive conference experiences are an indication of the commitment to DOE-VPP. Conversations with the VPP coordinator indicated that the corporate office in Oak Ridge, Tennessee, was interested in sponsoring as many Security Walls participants as possible to send to the 2013 VPPPA Conference since it is being held in Nashville, Tennessee.

Security Walls has a Safety Committee that meets quarterly, involves all employees, and uses its VPP coordinator to manage and schedule safety meetings so that all employees have the opportunity to participate. The Protective Force Manager and NWP managers frequently participate in Security Walls safety meetings, engaging employees one-on-one with questions or suggestions. The VPP coordinator sends an e-mail to all employees capturing the items discussed after the meeting. Employees interviewed believed the meetings were an informative forum for sharing safety information and allowed them an opportunity to raise all concerns including their safety and health concerns. None of the employees interviewed felt inhibited at the meetings when articulating concerns about safety and health. Employees expressed that Security Walls expeditiously addressed any safety and health issues raised.

Security Walls has multiple employee recognition programs. The majority of employees interviewed were enthusiastic to participate and compete in safety and health-themed activities. The last activity awarded points for individual safety activities that employees accumulated. The company encouraged employees to produce posters, participate in various safety walkdowns, make suggestions for safety improvements, or produce safety videos. The company provided video cameras for employees to create safety-themed videos at work or at home. The employees produced 54 safety videos for this competition. Prizes for the top three contestants were an

electronic tablet, a MP3 player, and a set of high-end headphones. Security Walls also uses spot awards to recognize personnel for contributions to the safety culture. Security Walls is working to continue expanding awareness and use of available reward and recognition processes. The next activity for employees began in January and is a team competition centered on health and wellness with gift cards and a pizza party for the winning crew. Based on the Team interviews, all the recognition programs evaluated were effective in stimulating the employees' active involvement in the programs and promoting positive employee involvement.

Security Walls has implemented several improvement projects in the past few years. Although not large expenditures, they involved improving the facilities at the Eddy County Sheriff's firing range. Security Walls shares the facility with the Sheriff for firearms training. Employees were involved with the selection of a tower and the public address (PA) system to maximize visibility of the range during live fire training and immediately alert trainees or instructors of an unsafe condition. The previous tower was very unstable, presented a safety issue, and was not equipped with a PA system. The firing range sits in a depression with a berm behind the target area and an uncontrolled area beyond the berm. The tower permits an observer to see people venturing into the area behind the berm during firearms training. Security Walls also cleaned the firing range of plants and debris, and brought in gravel to level and improve different firing positions.

Security Walls SPOs participated in a study comparing the performance of chemical agent protective gas masks for tactical response conducted by the Environment, Safety, and Health support group at Sandia National Laboratories. This study evaluated various protective masks under field conditions. Sandia procured currently available gas masks from suppliers and asked SPOs from different sites, including Security Walls, to test the masks in Albuquerque, New Mexico. Testing focused on mask use in tactical response situations that included chemical or biological agents. The mask evaluation incorporated testing criteria that were both subjective and objective. All the SPOs involved in the testing were experienced special response team members, Office of Secure Transportation federal agents, or instructors. All participants brought their own tactical equipment from their sites to gauge how the different masks would adapt to their use. The SPOs who actually wore the masks for each test did a subjective rating of the masks. The SPOs used scoring sheets to rate each mask on a scale of 1 to 5 in each of the categories. The areas rated by the operators included, but were not limited to, ease of donning and doffing, ease of communication, ease of breathing, and ease of employing the rifle. Based on the results of the Sandia study, Security Walls invited two vendors to the site to demonstrate a variety of the highest rated gas masks in the study to the security personnel for their evaluation. Security Walls then procured new masks based on the security personnel's recommendations.

Conclusion

Employee involvement has led to a positive, healthy, and safe work environment at Security Walls. Security Walls not only promotes employees' health and safety ideas at work, but also at home. Managers continue to empower their employees through their open communications at the safety meetings, and continue to recognize employees that contribute to the health and safety culture at Security Walls. Security Walls continues to meet the expectations for Employee Involvement in DOE-VPP at the Star level.

V. WORKSITE ANALYSIS

Management of health and safety programs must begin with a thorough understanding of all hazards that may 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.

Security Walls has identified the hazards associated with protective force activities at the WIPP site including those associated with live fire exercises at the Eddy County firing range, heat and cold stresses, physical fitness training, vehicle patrols, foot patrols, firearms cleaning, potential exposure to radioactive and chemical waste processes, and other industrial hazards. The NWP safety department provides professional safety support to Security Walls for industrial hygiene (IH) and radiation protection. NWP support covers chemical, noise, and radiation monitoring for SPOs.

Security Walls documented the general safety policy and program in PFO-001, *Protective Force Safety Requirements*. This documents and defines the responsibilities and expectations for all employees. It also includes specific functions delegated to the safety committee that includes, but is not limited to, ensuring implementation of the intent and commitments of the *Protective Force Safety Requirements*.

Security Walls developed an awareness campaign on the effects of sleep deprivation related to security shift work based on a National Institute of Justice (NIJ) sleep deprivation study. Using the analysis and recommendations from the study, Security Walls structured its security personnel shift rotations on the recommended NIJ circadian rhythms to minimize the detrimental effects associated with shift work.

Commensurate with the implementation of a successful Integrated Safety Management System and VPP Star status, Security Walls developed Job Hazard Analysis (JHA) documents to address the hazards and develop the controls to eliminate or mitigate the potential for employee injuries. JHAs address major work activities performed by the SPOs. Some work activities are more complex and further divided into individual situations or conditions. For example, one major activity description is 'live fire range'. It has 28 associated situations and controls for each situation. Other situations include general first aid for minor injuries such as cuts or scrapes; heat related illness/injuries and the associated symptoms of heat stroke, exhaustion, and heat cramps; and weather phenomena such as lightning, and its effect on range activities. This logical progression documents a well-thought-out approach for each major activity and its associated situations encountered by protective forces. To strengthen JHA documents, Security Walls should add another column that discusses how individual controls are determined. For example, the armory uses a solvent to clean firearms. The solvent's Material Safety Data Sheet requires 15 minutes of eye flushing if the solvent enters the eye. The JHA did not include the need for the 15-minute eye flush as part of the control selection criteria, so personnel were not sure if the provided eyewash station could meet this requirement. Subsequent research by site personnel

demonstrated the station was rated by the manufacturer to provide a 15-minute flush. Security Walls should strengthen its JHA process by documenting the analysis that derives the control set.

Opportunity for Improvement: Security Walls should strengthen its JHA process by documenting the analysis that derives the control set.

To ensure safety performance and help develop goals for future consideration, Security Walls developed a 2013 protective force implementation plan to ensure Security Walls effectively implements NWP safety and health expectations. The Team observed the close communication between Security Walls and NWP safety organizations that ensures mutual success for both parties. The Team interviewed several safety professionals (industrial hygienist, certified safety professional, and the radiation protection manager) at NWP and they validated the Team's observation on communication.

Security Walls complies with the NWP radiation safety program. For example, the security entry and exit for personnel to WIPP has radiation detectors in place to detect any radioactive material carried by personnel when entering or exiting the site. A Security Walls employee that recently received medical isotopes notified the NWP radiation protection professionals because her entry might have caused a radiation alarm in the personnel entry point. The Team was at the entry point when that individual entered and the detectors set off the alarms. The individual coordinated with the NWP radiation protection organization prior to returning to work. Consequently, the SPOs were aware of the potential to alarm the detectors prior to the individual's arrival.

NWP provides the health and safety tracking and trending for all personnel at the WIPP site. WP12-SA3130, *Occupational Injuries, Illnesses, and Close Calls*, provides tracking and trending procedural requirements for NWP. NWP also manages accidents, injuries, and illnesses via WP15-MD3102, *Event Investigation*. Security Walls performs root cause analysis on events within the contractual constraints of its security activities.

Conclusion

Security Walls continues to identify and analyze hazards within the protective force environment at the WIPP site. Workers demonstrated their awareness of hazards in their spaces, and were actively engaged in controlling those hazards. Security Walls continues to search for ways to improve its safety program. Security Walls continues to meet the expectations for Worksite Analysis in DOE-VPP at the Star level.

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, Personal Protective Equipment (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 and procedures must also be followed by everyone in the workplace to prevent, control the frequency of, and reduce the severity of, mishaps.

Security Walls in conjunction with NWP, effectively uses all elements of the hierarchical approach to hazard controls. Security Walls is bringing online a simulator that will eliminate some of the live fire training exercises (see Training). Where elimination is not possible, Security Walls attempts to substitute a different product that is less hazardous. The armorers changed their gun cleaning fluid to a less hazardous product that will reduce exposures to certain solvents. The last choice for protection is PPE, which Security Walls selects through its JHA process in conjunction with an NWP safety professional.

Areas requiring specialized knowledge or training relating specifically to protective force activities are the responsibility of and delegated to Security Walls. For example, the firing range activities, intermediate force training, or SPO Team Competition practices are activities that require hazard analysis, significant controls, and specialized knowledge of the task performed to ensure adequate worker protection. NWP provides the technical expertise required for the full implementation of title 10 Code of Federal Regulations (CFR), part 851, *Worker Safety and Health Program* (10 CFR 851), requirements as well as expertise in IH, safety performance assurance, and technical guidance. The Protective Force Safety Coordinator uses the resources available from NWP, such as the industrial safety program, which requires a written assessment of the worksite or task and approval prior to starting work to comply with 10 CFR 851. NWP provides other professional safety expertise to Security Walls. The NWP staff includes, but is not limited to, occupational health nurse specialists, certified industrial hygienists, certified safety professionals, occupational safety and health professionals, and ergonomic professionals. The security department benefits from the full use of the available resources provided by NWP.

NWP provides IH support to Security Walls to help analyze hazards and recommend appropriate controls. During Team interviews, the two organizations demonstrated excellent communications and a strong relationship when selecting adequate PPE. PFO-026, *Protective Force Heat Stress Program, revision 7*, is a detailed heat stress program developed with the assistance of the NWP industrial hygienist. Another example involved noise monitoring of firing range activities. The monitoring revealed impulse noise levels greater than 160 decibel (dB) during live fire activities. NWP performed many personal noise dosimetry tests on the security personnel and the dosimetry measured at the employee's chest indicated noise levels of approximately 100 dB. The typical recommendation for the 160 dB noise levels would include double hearing protection, however repeated noise dosimetry tests conducted by IH on the firing range indicated only single hearing protection is required. In addition, it is essential that the employees on the firing range be able to clearly hear and understand the Range Master's instructions and alerts. Based on the dosimetry results and discussions with IH, Security Walls personnel agreed that only single hearing protection would be necessary to ensure safe operations at the range.

In an effort to ensure the best protection, three Security Walls personnel have been testing and evaluating the use of noise canceling headsets that greatly reduce the impulse noise of the gunfire but do not limit understanding of the human voice frequencies. Security Walls is continuing to evaluate this technology to improve safe operations at the firing range.

The Team performed a subjective test of the effectiveness of the various hearing protection methods utilized by Security Walls during a live fire training session during this review. The Team members used three different types of hearing protection to evaluate which provided the most effective hearing protection but also allowed for the clearest communication. The three types of hearing protection evaluated included the Howard Leights active noise cancelling earmuffs, the AE Soft passive noise canceling earmuffs, and the standard soft foam disposable hearing protection. The Howard Leights use an active noise canceling technology that electronically cancelled out the impulse noises above 85dB while seeming to improve the clarity of normal communication. The AE Soft earmuffs utilized a calibrated valve configuration that passively filters impulse noises. As the impulse pressure wave hits the “valve”, it closes to reduce the impulse noise at the ear. These headphones were somewhat effective but they also muffled normal communication. In addition, the noise cancelling was not as effective as the Howard Leights. The soft foam disposable earplugs were the least effective. It reduced the impulse pressure wave well enough to lower exposure to the user; however, it also muffled voice communication, and if not seated properly, fell out in some cases.

The instructors at the firing range are utilizing the Howard Leights noise canceling earmuffs as part of the noise exposure evaluation previously mentioned. The noise canceling earmuffs allow for normal communication while providing effective noise protection during live fire activities. Security Walls should continue the evaluation and, if successful, recommend the use of this technology for all personnel during firing range activities, and share its results with other security contractors in DOE.

Opportunity for Improvement: Security Walls should continue the evaluation of noise cancelling earmuffs and, if successful, recommend the use of this technology for all personnel during firing range activities, and share its results with other security contractors in DOE.

NWP also provides ergonomic expertise to Security Walls personnel upon request. An ergonomic issue specific to the Security Walls personnel involves the appropriate selection of office chairs for personnel required to wear the gun belts during daily activities. NWP has identified two ergonomic chairs that have been very effective in addressing this concern. Security Walls personnel requisition the selected chair through the security operations group within NWP for approval and purchase. The Team’s discussions with employees concluded that while this process takes some time, NWP typically approves the requisition.

In the past year, the NWP IH department was reduced from three IH personnel to one. NWP has not recruited additional IH personnel, however it added an IH technician to support the remaining IH professional. Interviews with the IH personnel indicated that they believe they have appropriate resources to manage their workload with this arrangement. Security Walls did not believe this reduction would affect IH support for Security Walls.

NWP also supports the Security Walls occupational medicine program. Security Walls personnel are encouraged to participate in the NWP wellness programs and use the onsite

medical staff for first aid incidents. NWP maintains a registered nurse, a Licensed Practical Nurse (LPN), and trained emergency medical technicians full-time onsite. The Registered Nurse and the LPN are trained in advanced cardiac care. Security Walls uses Industrial Health Services (IHS) located in Carlsbad, New Mexico, for its occupational medical monitoring. IHS provides services in support of physicals, occupational medicine screening, and injury illness determinations.

The site emergency management program is the responsibility of NWP. Security Walls personnel participate in all site drills. In addition, the NWP emergency management group typically involves Security Walls personnel on the drill teams to ensure Security Walls personnel's input on most drills. Security Walls must also perform its own force-on-force exercises per its security requirements. Security Walls maintains a schedule for the performance of the force-on-force drills as required. No emergency management drills were conducted during the Team review.

In the 2009 review, the Team identified that the General Services Administration schedule did not effectively address the maintenance needs of the security vehicles. To resolve this issue, the Carlsbad Field Office granted Security Walls the authority to purchase its own security vehicles under the contract. Now Security Walls maintains its vehicles to the manufacturer's recommended maintenance schedule through a local dealership, which has been very effective.

Security Walls demonstrated several improvements to hazard controls. One improvement includes the acquisition of improved gunshot trauma kits located in the armory, the Security Monitoring Room, and at the firing range. The trauma kits now include a much-improved blood-clotting treatment in comparison to the previous product. The new product works within 30 seconds without the burning and pain associated with the previous product. Security Walls has also added improved tourniquets in the trauma kit that allow for one-handed application by personnel.

Conclusion

Security Walls continues to pursue and invest in improvements that strengthen its hazard controls hierarchy. The Emergency Management and the Occupational Medicine programs have been adapted and improved to better support Security Walls employees. Security Walls continues to satisfy the requirements for Hazard Prevention and Control in DOE-VPP at the Star level.

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 managers' expectations and approved procedures.

Security Walls training consists of classroom, computer-based, and field performance-based activities. Some of the training is mandatory to meet security force requirements set forth by DOE. Examples include physical fitness or marksmanship. Other training consists of site-specific, hazard-specific, or safety topics pertinent to the job function. Recent training includes lessons learned from recent traffic accidents and increased traffic on nearby highways. Insect and reptile awareness training occurs in the springtime when they are emerging from winter. Heat stress training for extreme temperatures in the summer is another significant training topic. The Team interviewed SPOs and asked if their training was adequate or if there were opportunities they would like to see improved. All the interviewees were satisfied with the current system and employees voiced no complaints.

The Team reviewed training records for 2012 and all training was complete except for one individual who required medical approval before physical training. There were no classroom or computer-based training activities observed during the Team's visit. The Team observed live fire training at the Eddy County firing range during this assessment. The prejob briefing included a thorough discussion of the hazard controls and basic firearm safety reminders. The Team observed the Lead Instructor and the Protective Force Manager provide SPOs with individual instruction to improve their shooting skills. At no time did the Team observe any unsafe practices. After the live fire training, the Protective Force Manager and the Lead Instructor provided feedback to the group on the improvements they observed.

Security Walls recently procured the Meggitt Training Systems' FATS L7 Next Generation Virtual Training System to improve security personnel target identification and marksmanship training. The FATS L7 Next Generation Virtual Training System is a portable, virtual live fire training system that provides multiple scenarios to test security personnel's response and situational awareness. This system reduces potential hazards from live fire training and removes the trainee from potential firearm malfunctions, noise exposure, or potential exposure to lead.

The Protective Force Manager and the Safety Coordinator have not previously considered providing additional training or instruction to SPOs on safety issues. Topics to consider might include excess combustible storage, exits blocked, safety equipment missing, tripping hazards, hornet nests, breaker panels blocked, or missing signage. Since Security Walls employees routinely patrol the site on foot or in vehicles, they have a unique opportunity to identify safety issues before they become a hazard, if properly trained.

Opportunity for Improvement: Security Walls and NWP should explore training opportunities for SPOs relating to safety walkdowns or assessments.

Conclusion

Security Walls training meets or exceeds employees' expectations with no reported inadequacies in either training class content or the method of delivery. Training completion records show 100 percent completion. The Team observed individualized training and the Team did not observe any unsafe acts. The instructors clearly conveyed the necessary safety information to the trainees prior to the training evolution. Security Walls meets DOE-VPP expectations of a Star site for Safety and Health Training.

VIII. CONCLUSIONS

Since the last recertification, Security Walls has energized its employees and created an employee-owned, management-supported, partnership that embodies the attributes of a DOE-VPP Star site. Employee involvement and manager commitment were strongly evident throughout the organization. These efforts contribute to an outstanding safety record and avoidance of injuries. Security Walls identifies hazards and ensures controls are in place. Employees are aware of the hazards and employ appropriate measures to avoid injuries in accordance with Security Walls' and NWP's site requirements and training. Security Walls demonstrated that it is actively seeking improvements in injury avoidance by testing new and improved hazard prevention equipment and techniques. Security Walls is improving its training facilities to make them safer and maximize the return on training time. The Team recommends that Security Walls continue to participate in DOE-VPP at the Star level.

APPENDIX A

Onsite VPP Assessment Team Roster

Management

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