Santa Fe Protective Services Certification, Waste Isolation Pilot Plant

Report from the DOE
Voluntary Protection Program
Onsite Review
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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 (DOE-VPP) to encourage and recognize excellence in occupational safety and health protection. The DOE-VPP closely parallels the Occupational Safety and Health Administration (OSHA) Voluntary Protection Program (VPP), which was established by OSHA in 1982, and has demonstrated that cooperative action among government, industry, and labor can achieve excellence in worker health and safety.

DOE-VPP outlines areas where DOE contractors and subcontractors can comply with DOE Orders and OSHA standards while also "stretching for excellence." DOE-VPP emphasizes systematic and creative approaches involving cooperative efforts of everyone in the contractor or subcontractor workforce at DOE sites, including contractor managers and workers.

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, research and development operations, and various subcontractors and support organizations.

DOE contractors are not required to apply for participation in the DOE-VPP. In keeping with OSHA's VPP philosophy, participation is strictly voluntary. Additionally, participants may withdraw from the program at any time.

DOE-VPP consists of three programs, which are based on and similar to those in OSHA's VPP. These programs are Star, Merit, and Demonstration. The Star program is the core of DOE-VPP, and its achievement indicates truly outstanding protectors of employee safety and health. The Merit program is a steppingstone for contractors and subcontractors that have good safety and health programs but need time and DOE guidance to achieve Star status. The Demonstration program is expected to be used rarely; it exists to allow DOE to recognize achievements in unusual situations about which DOE needs to learn more before determining approval requirements for the Star program.

By approving an applicant for participation in DOE-VPP, DOE recognizes that the applicant is meeting, at a minimum, the basic elements of ongoing, systematic protection of employees at the site. The symbols of this recognition are DOE-provided certificates of approval and the right to fly the VPP flags (e.g., VPP Star flag for sites with Star status). The participant may also choose to use the DOE-VPP logo on letterhead or on award items for employee incentive programs. Further, each approved site will have a designated DOE staff person to handle information and assistance requests from DOE contractors, and DOE will work cooperatively with the contractors to resolve health and safety problems.

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ABBREVIATIONS AND ACRONYMS

AED	Automated External Defibrillator
AJHA	Automated Job Hazard Analysis
ALARA	As low as reasonably achievable
BLS	Bureau of Labor Statistics
BSPOT	Basic Security Police Officer Training
CBFO	Carlsbad Field Office
CPR	Cardiopulmonary Resuscitation
DART	Days Away, Restricted, or Transferred
DOE	U.S. Department of Energy
DOE-VPP	U.S. Department of Energy Voluntary Protection Program
GET	General Employee Training
GSA	General Services Administration
HSS	Office of Health, Safety and Security
IH	Industrial Hygienist
JHA	Job Hazard Analysis
M&O	Management and Operating
MSDS	Material Safety Data Sheet
NAICS	North American Industry Classification System
OPSEC	Operations Security
ORPS	Occurrence Reporting and Processing System
OSH	Occupational Safety and Health
OSHA	U.S. Department of Labor's Occupational Safety and Health Administration
OJT	On the Job Training
PPE	Personal Protective Equipment
SFPS	Santa Fe Protective Services
SO	Security Officer
SPO	Security Police Officer
TRC	Total Recordable Case
TRUPACT	Transuranic Package Transporter
VPP	Voluntary Protection Program
WIPP	Waste Isolation Pilot Plant
WTS	Washington TRU Solutions

EXECUTIVE SUMMARY

Santa Fe Protective Services (SFPS) is a small business subcontractor that provides security services to Washington TRU Solutions, Inc. (WTS) at the Waste Isolation Pilot Plant (WIPP) located in southern New Mexico near Carlsbad. Those services include armed Security Police Officers (SPO) and non-uniformed support personnel that control personnel access, process clearances and visit requests, manage counter-intelligence and operational security programs, and perform a variety of other security related functions. As the operating contractor, WTS is responsible for maintenance and repairs for security systems, as well as the site-wide industrial hygiene, safety, and radiological protection programs.

WTS is a current DOE-VPP Star participant and, as such, has been mentoring SFPS in VPP over the past two years. Consequently, SFPS has had the advantage of working within a VPP program, and was well positioned to apply for Star recognition. SFPS submitted their application in early 2007, and after review of the application by the Office of Worker Safety and Health (HS-12), the site visit was scheduled for August 13-18, 2007. The purpose of this report is to document the results of the Office of Health, Safety and Security (HSS) DOE-VPP Team (Team) review and provide the Chief Health, Safety and Security Officer with the necessary information to make the final decision regarding the DOE-VPP status of SFPS.

Based on interviews with SPOs, their Captains and Sargeants, SFPS managers and staff, as well as observation of patrols, inspection of worksites and facilities, and reviews of procedures and orders, the Team determined that SFPS has established an effective safety culture and is performing well in all tenets of DOE-VPP. Additionally, the accident, injury, and illness rates for the project are well below their industry averages. Consequently, the Team recommends that SFPS be awarded DOE-VPP Star status.

The standard for Star status is not perfection, but rather that, in addition to an excellent safety record, managers and workers are dedicated to and effectively pursuing excellence in safety performance. Consistent with that goal, some opportunities for improvement were identified by the Team. These opportunities reflect those areas where SFPS can further improve its performance. A formal corrective action plan is not required to address these opportunities, but SFPS is expected to consider and address them in their next annual status report.

I. INTRODUCTION

The DOE-VPP onsite review of SFPS at the WIPP was conducted from August 12-18, 2007. SFPS is a subcontractor to WTS, the management and operating contractor for WIPP. The DOE Carlsbad Field Office (CBFO) provides direction to and oversight of WTS and SFPS.

The WIPP site, located approximately 35 miles east of Carlsbad, New Mexico, is the nations' primary repository for defense-generated transuranic (TRU) waste and TRU mixed waste. The repository is located in a geologically stable salt formation, 2150 feet below the surface. Surface operations involve receipt, inspection, and transport, and final placement of contact and remote handled waste drums packed and certified throughout the DOE complex.

SFPS provides the security services for the site. Security services include both armed SPOs and unarmed security services. SPOs and Security Officers (SO) are responsible for operating the access gates, including personnel badging and inspection, foot and vehicle patrols, security escort services for special waste receipt, video and alarm system surveillance, and support for the onsite Fire Brigade. Unarmed security services include badging and personnel access, clearance processing, counter-intelligence programs, operational security, classified matter protection and control, foreign national visits and assignments, K-9 coordination, lock and key programs, and security procedure maintenance and development. SFPS currently employs 33 people (26 uniformed and 7 non-uniformed). The SFPS employees are not represented by any organized union.

Hazards associated with SFPS activities included potential radiological contamination, chemical exposure associated with cleaning weapons, firearms, thermal stress and dehydration, noise, heavy equipment, and other standard industrial hazards associated with waste handling and disposal. SFPS personnel are also exposed to the range of mining hazards associated with underground work, including underground heavy equipment, dust, and high voltage electrical utilities.

Recognition in the DOE-VPP requires an onsite review by the Office of Health, Safety and Security (HSS) DOE-VPP Team to determine whether the applicant is performing at a level deserving DOE-VPP recognition. The Team evaluated SFPS' safety programs against the provisions of the DOE-VPP. During the site visit, the Team observed security activities, evaluated relevant safety documents and procedures, and conducted interviews to assess the strength and effectiveness of SFPS' health and safety programs. Due to the small size of SFPS, the Team interviewed nearly all the employees, managers, and supervisors, either formally or during observation of field activities. Work observed included foot and vehicle security patrols, K-9 training and inspections, weapon issues, loading, and unloading, vehicle inspections, personnel access, vehicle maintenance. Due to operational restrictions at WIPP during the inspection period, the Team was unable to observe underground operations. There were no underground security operations during the inspection.

II. INJURY INCIDENCE / LOST WORKDAYS CASE RATE

The Team conducted a review of the OSHA 300 logs. The tables below summarize the OSHA reportable data for SFPS employees as reported by SFPS.

SANTA FE PROTECTIVE SERVICES
INJURY INCIDENCE / LOST WORKDAYS CASE RATE

Injury Incidence / Lost Workdays Case Rate (SFPS)					
Calendar Year	Hours Worked	Total Recordable Cases (TRC)	TRC Rate	Days Away, Restricted, or Transferred (DART) Cases	DART Case Rate
2004	56,054	1	3.57	0	0.00
2005	59,310	0	0.00	0	0.00
2006	62,489	0	0.00	0	0.00
Three Years	177853	1	1.12	0	0.00
Bureau of Labor Statistics (BLS-2005) average for NAICS Code # 561212 (Security Services)			3.4		1.7

Total Recordable Case Incidence Rate for SFPS: 1.12
Lost or Restricted Workday Case Incidence Rate: 0

Conclusion

The injury rates for SFPS are well below the averages for the comparable industry and meet the criteria for participation in the DOE-VPP at the Star level. SFPS had one case in 2007 that resulted in a work restriction. Due to the small size of the organization, this may have a significant impact on the 2007 rates. The three-year average is used for VPP certification as a better indicator of long term performance, and SFPS three-year averages are well below the comparable industry averages.

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 the 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 clearly communicated policies and goals, clear definition and appropriate assignment of responsibility and authority, adequate resources, and accountability for both managers and workers. Finally, managers must be visible, accessible, and credible to employees.

SFPS has worked very closely with WTS to pursue DOE-VPP Star status. WTS has been a DOE-VPP Star since 1994. Consequently, WTS has been instrumental in helping SFPS recognize the value of VPP, and ensuring that VPP is recognized not just as another "program of the week," but as a true value-added method of improving safety, gaining public trust, and accomplishing the WIPP mission safely and efficiently.

Interviews and discussions with the SFPS senior management team clearly indicated a deep involvement and dedication to safety. Managers have an open-door policy that is practiced daily through regular interactions with workers. The small size of the organization fosters a strong sense of family among the workforce. Further, managers have taken actions that demonstrate to the workers their belief in safety as a core value.

SFPS has a safety policy that establishes "it is not only an obligation but a requirement that the principal focus of every employee is on safety at all times." This policy is published in the SFPS DOE-VPP Employee Handbook which is issued to every employee.

The policy is implemented through the WIPP Security Department Safety Management and Implementation Plan. The plan defines responsibilities for the Safety Coordinator, Security Captains, and employees in general, regardless of position, grade, or status. The plan is then implemented through a number of WIPP Security Safety Implementation Procedures.

Adequate resources are provided for educating and training employees, as well as providing incentives to employees for good safety performance. Managers have recently held two safety competitions that fostered better awareness of safe work practices, as well as encouraged workers to self-identify unsafe behaviors or practices, and make constructive suggestions to improve safety. SFPS spends significant resources providing uniformed security personnel with appropriate safety equipment essential to completing their security mission. SFPS estimates they spend an average of $4200 per new employee, exclusive of training costs. Additionally, as a result of the management commitment to achieving DOE-VPP Star status, numerous safety equipment upgrades were identified and implemented.

Other resources committed to DOE-VPP implementation include approximately $3600 per year for other employee incentive awards. These awards include gift certificates for items from the

site cafeteria, reward items selected from a catalog, first aid kits, and "Leatherman" tools. Some of these awards were paid for out of non-reimbursable corporate funds, indicating the commitment of SFPS corporate managers to the pursuit of DOE-VPP Star status. SFPS has also budgeted $6,000 for travel expenses to participate in regional VPP conferences.

A recent challenge to SFPS managers has been the decision to upgrade the security posture at the site to include an armed Security Police Officer presence. The additional training and qualification requirements for the workers presented a potential challenge to the safety record. Upgrades in physical fitness standards and testing were addressed by providing officers the opportunity to exercise during their shift. Before being allowed to use the exercise equipment, each employee is required to undergo an evaluation for their fitness, and then provided with recommendations for the type of exercise program to pursue. The exercise equipment is provided by WTS, but SFPS employees are only permitted to use the equipment that has been specifically inspected and accepted by SFPS supervision. Additionally, each employee was provided a copy of the "Physical Training Program Manual." This manual was developed to provide guidance to officers to help them participate in a safe and effective physical training program. The manual establishes requirements for the employee to participate in a physical fitness program while on duty. Requirements include site medical review and approval, supervisory review, documentation of participation, and management review and tracking of any injuries that occur.

The only recordable injury that has occurred in the past three years did occur during "intermediate force" training. The injury resulted when the instructor turned his ankle on the mat during training, resulting in a hairline fracture in his ankle. SFPS performed a hazard review for this training, and implemented several controls to avoid accident or injury. Controls included progressive training to learn the motions, use of improved floor mats, and finally the use of "mat shoes" to address potential slipping while working on the mats. SFPS conducted a detailed investigation of the injury. The investigation concluded that the mat shoes had been effective in preventing slips or falls during training, but the additional traction provided caused the ankle injury. As a result, the use of mat shoes was immediately discontinued.

One indication of management and leadership effectiveness is the recent decision by employees to discontinue efforts to pursue representation by organized labor. SFPS managers were supportive of workers initial vote to form a union. SFPS managers entered negotiations with labor representatives, but after several months of negotiation, the labor union determined that they could not provide better benefits than those already provided by SFPS. Workers subsequently voted to discontinue unionization.

SFPS continues to face a number of management challenges. They are currently working with WTS to ensure SFPS establishes and maintains an adequate security posture, and that WTS and DOE understand and accept any residual risks. SFPS is continuing to train new SPOs as necessary to establish the desired security presence. The current work-force size also places pressure on SFPS management to ensure the non-uniformed security programs are adequately staffed. In the post 9/11 world, the relationship between safety and security has been recognized, and SFPS managers are acutely aware that "you can't be safe if you're not secure." Consequently, SFPS is using VPP to promote and ensure excellence in security as well as safety.

Conclusion

SFPS managers have demonstrated excellent leadership in the pursuit of a safe and secure work environment. They have effectively balanced priorities between safety and security within the bounds of their contract to ensure workers are able to safely perform their security mission. They have provided leadership, resources, and visible support to workers in the safe performance of their mission.

IV. EMPLOYEE INVOLVEMENT

Employees at all levels must be involved in the structure and operation of the safety and health program 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.

The Team observed that employees are strongly involved in the SFPS safety and health program. Programs are in place to notify employees of new job hazards and procedural changes. After procedural changes have gone through a review process and employees have had the opportunity to provide feedback, information about procedural changes are then placed in the required reading book. Shift Captains, Captains, and SOs are all involved in the review process at varied levels. Captains review each procedure relating to the performance of officer duties and provide changes and feedback.

The Team received positive feedback from employees regarding their involvement in the safety and health program. Employees indicated they feel responsible for their safety and that of their co-workers, site workers and site visitors. The Team interviewed new hires and employees who have been onsite for as many as 24 years and all exhibited a very strong sense of safety and health ownership. All interviewed employees were aware of the many ways management engages them in the safety and health program. Employees are fully aware of the hazards and potential hazards associated with their jobs and are adequately trained to identify, report, and, in some cases, mitigate potential hazards and potentially hazardous conditions. Although no interviewees have had to implement their stop work authority, they all indicated that they would not hesitate to do so if warranted and they could do so without fear of reprisal from management. Employees are encouraged to recommend corrections; become involved with the Executive Safety Committee activities and are involved with training new co-workers in safe work practices. Employees are further engaged in the safety and health program by assisting in the development, revision, and validation of work procedures and modeling safe work practices that maintain safety as the priority. SFPS employees also participate in WIPP safety awareness activities including quarterly home safety campaigns and the annual WIPP safety fair. Employees actively participate in safety fair and training activities in conjunction with the Eddy County Sheriff's Department, New Mexico State Police, and Carlsbad Police Department. Employees are involved in the formal and informal reporting of hazards, have stop-work authority and provide input into systems and procedures for safety and health incentive programs.

A variety of communication efforts are also used to support employee involvement. Examples of these efforts include safety posters, health and safety bulletins, e-mail notices (e.g., minutes from safety meetings, suggested readings, and links to safety related websites), and the WIPP Site Pollution Prevention and Porcelain Press publications.

The Team observed shift change briefings between the day and night crew Captains. During the briefings, Captains discussed any safety related issues that may have been raised during the previous shift such as facility lighting, potential fire and tripping hazards. Captains then shared pertinent information with the rest of their crew members.

SFPS' Executive Safety Committee (the Committee) held its first meeting on February 21, 2006 and follows the WIPP Security Safety Implementation Procedures for safety meetings, briefings, and training. The Committee was established to ensure employees at all levels are engaged in the safety and health program and to support employee awareness of safety on and off the job. The Committee is responsible for preparing, reviewing, and determining the safety objectives and goals for the year. The Committee meets, at a minimum, on quarterly basis. Special Committee meetings are held to address any major safety concerns or upcoming special events. In addition, the Committee meets every six months to review procedures.

The Committee consists of the Security Manager, Operations Manager, Safety Coordinator, Armorer/Firearms instructor, Senior Staff Assistant-Document Management, and at least one SO from each crew. Attendance at the meetings varies but usually consists of a minimum of seven employees.

The Team identified three "Best Practices" for encouraging and continuing employee involvement. First, the "Safety Crew Competition Program" was established to maintain a high level of safety awareness among employees. Awards are given to the shift crews with the fewest injuries or first aid incidents and most visibly dedicated to safety of all co-workers. The criteria used to determine the winning team is based on safety improvement recommendations, adherence to procedures, participation in the VPP audit and VPP knowledge. Second, a "Safest Person Competition" is open to all employees and follows the same criteria established for the Safety Crew Competition. Third, safety recommendations/improvement awards are also presented to employees for suggestions that enhance worker safety. For example, in 2006, an employee was presented an award for suggesting that mirrors be installed in the security gate house to enable officers to see both entry and exit portals and thus to better control traffic and prevent accidents.

Conclusion

Employee Involvement is strongly rooted and demonstrated in all aspects of the safety and health program. SFPS workers are effective in addressing existing and new hazards. SFPS meets all of the requirements of the Employee Involvement tenet.

V. WORK SITE ANALYSIS

Management of safety and health 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 identify and analyze all hazards encountered during the course of work. The results of the analysis must be used in subsequent work planning efforts. Effective safety programs also integrate feedback from workers about additional hazards that are encountered, and a system to ensure those new or newly recognized hazards are properly addressed.

WTS supports SFPS by conducting baseline industrial hygiene surveys, comprehensive safety surveys, radiological surveys, and other technical professional services, including occupational medical support. The SFPS safety coordinator interfaces directly with the WTS safety staff. Surveys have been completed for all SFPS facilities and work areas. When SFPS transitioned from an unarmed to an armed protective force in 2006, SFPS established an agreement with the local sheriff's department to use that agency's live-fire weapons range for firearms training and qualifications. WTS industrial hygiene personnel conducted noise and lead monitoring to ensure SFPS officers are not exposed to unacceptable hazard levels. This monitoring aided SFPS in identifying the appropriate personal protective equipment (PPE) for use during these activities.

SFPS personnel conduct several self inspections on a daily basis, including supervisors inspecting personnel during shift change. On-coming shift personnel must review the required-reading book for changes and/or updates to policies, plans, procedures, and security orders. On-coming personnel also receive verbal briefings from the off-going shift. Required reading and briefings include safety issues/concerns occurring during the previous shift.

SFPS personnel also conduct equipment inspections of critical items on a daily basis. These items include radios, binoculars, night visions scopes, metal detectors and security vehicles. Issues/concerns are documented and reported to security management for resolution.

Although SFPS personnel work within the scope of the WIPP industrial safety program, SFPS also performs hazard analyses of equipment, facilities, and procedures unique to the SFPS scope of work. A primary example is the planning and execution of force-on-force training exercises to ensure protective force personnel can adequately perform their duties during a security emergency. Detailed training plans are developed and safety requirements are well integrated into the planning process.

The Team reviewed all the Job Hazard Analyses (JHA) that SFPS has developed. These JHAs covered the range of work and hazards encountered by officers in their training and performance of duty. Based on these reviews, the SFPS process for performing hazard analysis is not yet fully mature. Many of the hazards are minor in nature and are adequately addressed by standard good work practices and employee knowledge. However, in a few cases, the hazard analyses do not contain information that is relevant to establishing the correct set of controls. For example, the JHAs related to safe range operations during training did not reference the surveys performed by WTS for lead and noise described previously. The JHAs for weapon cleaning refer to use of solvents but do not specify what solvents are being used. The solvents were reviewed by WTS

before they were allowed on site, but specific controls were not clearly identified and translated into procedures and training. The JHA referred to the Material Safety Data Sheet (MSDS) for the solvent. The Team reviewed the MSDS which requires chemical resistant gloves. In practice, officers were using Nitrile gloves while cleaning weapons. The Nitrile gloves had not been evaluated by Industrial Hygienist (IH) to determine if they provided equivalent chemical resistance, and if they were sufficiently effective for immersion in the solvent.

Opportunity for Improvement: SFPS should develop and implement more specific procedures for developing JHAs, and/or explicitly adopt the WTS Hazard Analysis Procedure. Additionally, SFPS should pursue training for personnel performing and reviewing JHAs.

During the inspection, the Team raised a question about the potential acoustics effect from a weapons discharge port located in the armory. Specifically, given the room's small dimensions and the acoustics the room demonstrated, a question was raised about whether a gun discharge into the gun port would result in noise exceeding the OSHA limits for acute hearing limits. The armorer contacted the WTS IH who immediately responded to his request and agreed to research the matter.

Opportunity for Improvement: WTS should complete their research of the potential hearing/noise issue in the armory and SFPS should implement any resulting recommendations.

SFPS employees have several avenues available for reporting safety issues and concerns. Primary mechanisms include the Landlord Inspection Checklist, the Safety Communications Form and the Officer Safety Checklist. Employees may also report issues/concerns directly to their immediate supervisor or utilize management's open-door policy. A random review of completed forms confirmed that personnel use the process to report safety concerns.

SFPS has experienced only one recordable occupational injury since 2004. The most recent injury, which occurred in 2007, was thoroughly investigated, analyzed, and documented in accordance with DOE Order 225.1, *Accident Investigations*. A Corrective Action Plan was developed and corrective actions were implemented to preclude recurrence. SFPS has not experienced any motor vehicle accidents.

SFPS closely monitors safety performance data at the WIPP and coordinates safety issues/concerns with WTS safety personnel. Incidents are addressed at several levels within the organization and at the site the level.

Conclusion

Based on employee/management interviews and discussions, reviews of policies, plans, procedures, security orders, hazard/risk assessment reports, facility inspection reports, occupational injury and illness investigative files, and direct observations of work activities, it is clear that SFPS has a thorough understanding of the hazards associated with their work. SFPS

needs to ensure that detailed hazard identification and analysis information is systematically captured within their JHAs.

VI. HAZARD PREVENTION AND CONTROL

Once hazards have been identified and analyzed, they must be eliminated (substitution or changing work methods) or addressed by the implementation of effective controls (engineered controls, administrative controls, and/or PPE). Equipment maintenance, PPE, 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, and followed by everyone in the workplace, to prevent mishaps or control their frequency and/or severity.

Professional safety expertise at SFPS is provided by the WTS program staff. The WTS staff includes but is not limited to the following technically experienced and certified personnel:

- Occupational Health Nurse Specialists;
- Certified Industrial Hygienists;
- Certified Safety Professionals; and
- Occupational Safety and Health professionals.

The security department benefits from the full use of the available resources provided by WTS. In addition, SFPS requires a full medical evaluation be conducted annually and provides for a fitness screening with a certified Health Physiologist for each of the officers.

Personnel are informed of the site's safety and health rules through the General Employee Training (GET) and access safety briefings. New hires receive an employee handbook containing the safety and health rules and a safety briefing, and are escorted until they have satisfied the GET training. The GET training describes the site hazards and controls and the employees rights and responsibilities. Visitors are made aware of the safety and health rules through their initial security and safety briefing. Subcontractors are shown the safety and security briefing and are instructed by escorts on the safety and health rule requirements prior to being permitted site access.

All tasks performed at WIPP are analyzed for potential hazards. This identification of potential hazards is then incorporated into specific programs and procedures requirements designed to ensure personnel safety. PPE is used when it is impractical to eliminate hazards through engineering, substitution, administrative means, or for emergency responses. Site specific PPE requirements for SFPS staff include but are not limited to eye, foot, head, hearing, respiratory, and emergency response protection.

Proper PPE is selected based on the analyzed hazards and professional expertise input. In some cases, specified tasks require PPE to protect for unknown elements. Examples of this situation are bunker or fire gear utilized in structural fire-fighting applications and the use of ballistic vests for armed officers. In cases such as these, consideration is given to all probable applications of the PPE. DOE, OSHA, and other safety-related documents are reviewed to determine the specific requirements for the task.

Equipment meeting these qualifications is then evaluated with consideration to quality, available additional protection offered, cost, and officer feedback. Once an item has been selected, it is

field tested by officers to ensure it satisfies the needs of the protective force. Captains are tasked with ensuring that required PPE is provided and properly used. Captains are also tasked with inspecting PPE daily, along with the officer, to ensure it is in operable condition. Any PPE needing replacement is reported immediately, and a suitable replacement is issued in a timely manner. Captains must also ensure that all personnel required to wear PPE have been adequately trained in its use and limitations. The Team observed the security force shift changes as the officers' gear was visually inspected prior to shift start and the officers' weapons were loaded and unloaded utilizing the armory's gun port, under the established two man rule which requires a second individual to confirm each weapon was safely unloaded/ loaded.

Preventive maintenance for the WIPP facilities is provided for by WTS. WIPP effectively maintains facilities in accordance with applicable DOE directives and WTS policies and procedures. The WTS Maintenance Management Program has been developed, implemented, and documented to ensure that maintenance activities are effectively operated. Inspections are conducted to preserve or restore the availability, operability, and reliability of plant structures, systems, and components which are important to safe and reliable operations of the facility. Proper consideration is given to each program element's importance to safety, environmental compliance, reliability, safeguards and security, programmatic mission, and facility-specific requirements. In addition to the site's program for upkeep on general equipment and facilities used at the site, security tracks its own equipment. Officers are responsible for reporting any defect in their uniforms or equipment to their Captains. The Captain will then examine the item and determine appropriate course of action. If a security vehicle is inoperable or in need of repair, the oncoming shift is advised of the situation and appropriate action to remedy the problem is initiated. The oncoming shift will inspect both vehicles (i.e., tire condition and fluid checks) and note the condition of each before they start their shift. Prior to operating the vehicle, officers are responsible for performing a quick inspection to ensure the vehicle is operating correctly (e.g., no warning light on before shifting into drive, no faulty gages, and no flat tires).

The vehicle inspections are intended to assure the consistent operability of the security vehicles. The vehicles used by the security staff fall under the WTS Preventive Maintenance Program which is driven by the General Services Administration (GSA) guidelines. However, review of the SFPS vehicle repair logs revealed that many of the vehicle manufacturer recommended services have not been performed. Services not performed include transmission, front and rear differential, transfer case, brake, power steering, and coolant fluid changes. Discussions with the GSA representative revealed that regular vehicle oil changes are the only tracked item in the GSA schedule. It is GSA's expectation that operators are aware of any mechanical changes to the vehicle and then submit a request for repair at that time. The Team recommends that SFPS work with WTS, Carlsbad Field Office, and GSA to determine a more proactive preventive maintenance approach that might be more cost effective and ensure proper and safe operation of the vehicle under the potential extreme conditions encountered.

Opportunity for Improvement: SFPS should review their vehicle preventive maintenance program for their emergency response vehicles to ensure vehicle reliability under expected operating conditions.

SFPS operates under the WTS emergency procedures, which have been written to minimize facility or programmatic impacts during an emergency condition. The WTS program is based on hazards assessments. Assessments identify, analyze, and assess the risks to workers, public health and safety, and the consequences of postulated accidents. Based on the WIPP Hazards Assessment, emergency planning zones, emergency classes, protective actions, and emergency action levels have been assigned. Emergency planning is conducted in accordance with the findings. The Office of Emergency Management Oversight (HS-63) performed an assessment of the WTS Emergency Management program during the week following the Team review. While the issues were not specifically related to SFPS' performance, several issues were identified in the WTS Emergency Management Program that may effect SFPS' response. SFPS may need to work in conjunction with WTS to ensure those issues are adequately addressed and corrected.

Opportunity for Improvement: SFPS should work with WTS in developing corrective actions for the issues that directly effect the SFPS organization identified in the HS-63 Emergency Management Assessment of the WTS Emergency Management Program.

The WIPP has round-the-clock response capability for medical, radiological, hazardous material, industrial, security, mine rescue, and natural disasters. SFPS is key to that capability as the officers provide security emergency response and also assist with medical, fire, Hazmat, and radiological response during emergencies. The officers are trained members of the Fire Brigade, and provide Emergency Response Team support. SFPS participates in the WTS emergency drills and exercises program.

SFPS radiation protection is provided through inclusion in the WTS radiation control program. The WIPP implements a Radiological Control Program in compliance with established (DOE) regulations, protection standards, limits, and requirements. The comprehensive Radiological Control Program is documented in site-specific WTS programs, plans, and procedure manuals. Management is committed to maintaining personnel radiation exposure to as low as reasonably achievable (ALARA) levels as outlined in the WIPP ALARA Manual. The WIPP ALARA approach is to manage radiation protection and exposure control (individual and collective, internal and external) to the workforce, general public, and environment. Procedures provide the necessary direction to maintain radiation exposures ALARA. The primary methods include physical engineering design features such as confinement and ventilation, administrative controls, procedural requirements, and PPE. PPE is required when engineering controls do not provide adequate protection to minimize the potential for radiation exposure. Operational activities provide planning and review of radiological work and integrate necessary measures and controls for these specific operations. Radiological work permits serve as the primary administrative control for planning and controlling radiological work activities.

Use of proper contamination control practices and good ALARA work practices reduce the spread of radioactive contamination and internal exposure through inhalation, absorption, ingestion, or injection. Contamination control is implemented by controlling radioactive materials at the source.

WIPP provides radiological support to SFPS ensuring personnel and work place monitoring are accomplished and protecting personnel from potential or confirmed radiological hazards.

Examples of monitoring include internal and external dosimetry, respiratory protection program, and training.

In addition to the radiological controls that already exist on site, specific orders are in place to instruct officers in proper conduct of operations when dealing with TRU waste and related radiological conditions. Procedures cover everything from receipt of Transuranic Package Transporter (TRUPACT) shipments to working in the Waste Handling bay during specified waste receipts. These procedures are based on the ALARA concept for minimizing exposure to officers and site personnel. Due to operational restrictions in place during this inspection, the Team did not have an opportunity to observe officers dealing with any TRU waste shipments during the site visit. All officers observed were properly wearing their dosimeters.

Medical services for SFPS personnel are provided through inclusion in the WTS Occupational Health Program. The program is described in the Occupational Health Program Plan. The Health Services staff integrates with Industrial Safety and Hygiene and Radiological Control to identify work-related or work site hazards and possible risks to employees, and to meet the requirements of a worker protection team. The support includes assisting with the mitigation of work site hazards as requested. The Occupational Health program is further integrated with the overall Site Emergency Plan. Health Services coordinates an advanced Cardiac Life Support Program including maintenance of appropriate certifications and coordination with Emergency Management for integration of duties and medical protocols.

Security personnel are tested regularly on pulmonary function, hearing conservation, wellness, and physical fitness by use of a health physiologist. Workouts are conducted in accordance with the Physical Training Plan and Manual. Officers receive first aid and Cardiopulmonary Resuscitation (CPR) training. Officers were also offered the opportunity to attend training on gun shot trauma kits. These kits were purchased for the use of the officers and reviewed by the Health Services staff to ensure they were appropriate for use in an emergency situation. Emergency Service Technicians and Security personnel are on site at all times. For any physical testing conducted, Emergency Services are notified and prepared to respond in case of an emergency.

Conclusion

SFPS effectively eliminates or controls the hazards to which workers may be exposed. Workers are aware of the required controls, and effectively use those controls to ensure their own safety. Work rules and expectations are clearly delineated and followed. The effectiveness of the controls is demonstrated in SFPS' low accident and injury rates.

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 personnel understand their responsibilities, recognize hazards they may encounter, and are capable of acting in accordance with management expectations and approved procedures.

Training is an essential component to the mission of SFPS. As a security force, their personnel are routinely exposed to hazardous conditions, and training is one of the tools they use to minimize the potential for incidents.

SFPS has a comprehensive safety and health training program, as demonstrated by employee interviews, document reviews, and field observations. The administration of the training program is in the process of improvement, which is a commendable effort that needs to continue.

Based on responses received during interviews, employees at all levels receive the General Employee Training on general safety and health issues related to the WIPP site. Furthermore, employees are required to update their training annually by completing a computer-based training program Additional safety and health related training varies greatly between the support staff and the protective force staff. Training for the support staff is position dependent and is usually identified by the staff member. Generally, the staff felt that their requests for training were well supported, although sometimes budget requirements did limit the training they could attend. During the site visit, the Team attended an orientation for two newly hired SPO staff given primarily by the General Manager and the Security Analyst/Safety Coordinator. The orientation addressed safety (particularly the SFPS approach to physical fitness workout policies for the protective force staff), the various methods on how to report safety concerns or other issues, VPP, Operations Security (OPSEC), and a review of the Employee Handbook.

The training for the protective force staff is extensive and prescriptive. The training program as described by the training coordinator is based on the Training Approval Program, which was approved by the National Training Center on February 28, 2006. Training for the protective force staff is a combination of on the job training (OJT) and classroom training, and is based on requirements from ***10CFR 1046, DOE Manual 470.4-3***, and site specific requirements. The OJT starts with new hires as soon as they are finished with their orientation. The new staff member is given a WIPP OJT Check-Off Matrix to fill in. The three page matrix contains tasks that the staff will have to routinely perform, and requires the staff to locate where the task will be performed, fill in the appropriate blank on the form, and have the supervisor initial off on each task. Classroom training includes fire brigade training, respirator training, emergency and medical response training including first aid and CPR/Automated External Defibrillator (AED), ladder safety, hazardous waste response, and the Basic Security Police Officer Training (BSPOT). The BSPOT training is a site specific course that is based on the National Training Center curriculum but modified to fit the WIPP site needs. The classroom training is given by trained Captains, the Captain/Armorer, and the Training Coordinator. These instructors have all taken the Basic Instructor Training as provided by the National Training Center. Additional safety and health training is given by the Security Analyst/Safety Coordinator.

The training coordinator has developed a "Protective Force Sergeant Guide Book" which is a position specific training guide. This document is being used to guide a recently promoted sergeant through the training requirements for the new position. The guide contains the Sergeant OJT Check-Off matrix, security administration procedures, a copy of ***10 CFR 1046 Physical Protection of Security Interests Subpart B Protective Force Personnel,*** a copy of ***DOE Manual 470.4-3 Protective Force***, and the various shift operations forms that a sergeant would be expected to use during a routine shift. The training coordinator is planning on creating a similar type of guide for other positions such as the Shift Captains and SPOs.

The staff receives safety and health related updates on topics of interest from the WTS safety and health staff and the SFPS staff. These messages can be passed on either through shift change briefings or e-mail messages. The updates have included information on topics such as bird flu and hantavirus. When asked, the SO/SPOs all believed that they had adequate access to the computer to check e-mails to keep them up to date.

Training records are maintained by the training coordinator and are housed in binders that are kept in locked storage. Currently, the training coordinator maintains spreadsheets that show the protective force staff, when they are due for annual refresher training in the various courses, and when the training classes are scheduled. The spreadsheets are then distributed to the Captains so that they can ensure that the staff is available for the training at the appropriate times. This function must be coordinated with the crew shift assignments so that SFPS can maintain adequate coverage of their posts while meeting their training requirements.

Of the six training files reviewed, two contained OJT Matrix sheets that were completed by the SO/SPO, but did not have the supervisor's signature on approximately 5 percent of the items. This situation is not a safety concern, but indicates that attention to detail could be improved. When this was brought to the attention of the training coordinator, both of the documents were completed before the Team left WIPP.

The Safety Coordinator has learned how to apply the injury/illness reporting through coordination with the WTS safety and health staff. SFPS works closely with WTS to report their incidents or create Occurrence Reporting and Processing System (ORPS) reports.

The training coordinator is planning on implementing an electronic training management system as ***DOE Manual 470.4-3*** states can be used. This change should ease the record keeping burden, increase accuracy of records, reduce scheduling conflicts, and conform to the requirements of the DOE Paperwork Reduction Act.

Conclusion

Safety and Health Training methods are effective in addressing the hazards associated with providing security at the WIPP site. Managers, supervisors, and employees know and understand the policies, rules, and procedures established to prevent exposure to hazards. Training for health and safety effectively ensures that responsibilities are understood, that personnel recognize hazards they may encounter, and that they are capable of acting in accordance with management expectations and approved procedures.

VIII. Conclusions

SFPS has effectively implemented all the tenets of VPP. Their accident and injury statistics are low, and they have established a working partnership between managers, supervisors, and workers that significantly enhances their ability to maintain the security posture at WIPP. Managers, supervisors, and workers all work together to ensure hazards are identified, eliminated, or mitigated as necessary. Their proactive approach to safety has also had a positive effect on the local law enforcement community by identifying necessary improvements to training and range facilities. Although some opportunities for improvement were identified, SFPS is operating in a safe manner, and the Team is recommending that SFPS be awarded DOE-VPP Star status.

Appendix A

Onsite VPP Audit Team Roster

Management

Glenn S. Podonsky, *Chief Health, Safety and Security Officer*
Michael A. Kilpatrick, *Deputy Director for Operations*, Office of Health, Safety and Security
Dr. Pat Worthington, *Director*, Office of Worker Health and Safety
Bradley K. Davy, *Director*, Office of Worker Safety and Health Assistance

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