Fluor Hanford
Safeguards and Security

Report from the DOE
Voluntary Protection Program
Onsite Review
February 26 – March 6, 2008

U.S. Department of Energy
Office of Health, Safety and Security
Office of Health and Safety
Office of Worker Safety and Health Assistance
Washington, D.C. 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 their creation by OSHA in 1982, and DOE in 1994, VPP programs have demonstrated that cooperative action among government, industry, and labor can achieve excellence in worker safety and health. As part of a major DOE reorganization, the Office of Health, Safety and Security assumed responsibility for DOE-VPP in October 2006.

DOE-VPP outlines areas where DOE contractors and subcontractors can surpass mere compliance with DOE orders and OSHA standards. The program encourages the creative "stretch for excellence" through systematic approaches involving everyone in the contractor or subcontractor workforce at DOE sites. DOE-VPP emphasizes creative solutions through cooperative efforts by managers, employees, and DOE.

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

DOE contractors are not required to apply for participation in DOE-VPP. In keeping with the 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 contractors and subcontractors that have good safety and health programs, but need time and DOE guidance to achieve true 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 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. DOE will provide the opportunity for contractors to work cooperatively with the agency to resolve health and safety problems. Each approved site will have a designated DOE staff person to handle information and assistance requests from DOE contractors.

This report summarizes the team's findings from the evaluation of Safeguards and Security (SAS) project activities at the Hanford Site during the period of February 26-March 6, 2008, and provides the Chief Health, Safety and Security Officer with the necessary information to make the final decision regarding SAS' continued participation in DOE-VPP as a Star site.

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ABBREVIATIONS AND ACRONYMS

AED	Automated External Defibrillator
AJHA	Automated Job Hazard Analysis
AL	Action Level
B&K	Bruel & Kjaer
BU	Bargaining Unit
CBRN	Chemical, Biological, Radiological, and Nuclear
CIH	Certified Industrial Hygienist
CO	Carbon Monoxide
DOE	U.S. Department of Energy
DSC	Drop Safety Catch
EJTA	Employee Job Task Analysis
ES&H	Environmental, Safety, and Health
EVOC	Emergency Vehicle Operations Course
EZAC	Employee Zero Accident Council
FH	Fluor Hanford
HGU	Hanford Guards Union
HPI	Human Performance Improvement
HSS	Office of Health, Safety and Security
IH	Industrial Hygiene
ITEM	Integrated Training Electronic Matrix
JCS	Job Control System
MSDS	Material Safety Data Sheet
MSL	Marine Sciences Laboratory
NIOSH	National Institute for Occupational Safety and Health
NTC	National Training Center
OSHA	Occupational Safety and Health Administration
PPE	Personal Protective Equipment
PTH	Day & Zimmerman Protection Technology Hanford
PZAC	President's Zero Accident Council
SAS	Safeguards and Security
SIP	Safety Improvement Plan
SPO	Security Police Officer
TS	Technical Security
VPP	Voluntary Protection Program

EXECUTIVE SUMMARY

The Fluor Hanford Safeguards and Security (SAS) mission is to ensure appropriate levels of protection for project activities at Hanford Site facilities against unauthorized access, theft, or diversion of special nuclear material; acts of sabotage or espionage; theft or loss to classified matter; theft or loss of government property; and other hostile acts that may cause unacceptable impacts on national security, or on the health and safety of employees, the public, or the environment. A special response team was established in 1984. In 2006 SAS created the Tactical Response Team as part of an elite force. Fluor Hanford (FH) assumed the safeguards and security function at the Hanford Site in September 2005 from Day & Zimmerman, Protection Technology Hanford (PTH). PTH originally achieved U.S. Department of Energy (DOE) Voluntary Protection Program (VPP) Star status in 2001and was recertified as a DOE-VPP Star site in 2004. The project was due for a recertification visit in 2007, but that visit was delayed until 2008.

Continuation of Star status in the DOE-VPP program requires an onsite review by the DOE Office of Health, Safety and Security DOE-VPP team (Team) every 3 years. The Team conducted its review during February 26-March 6, 2008, to determine whether SAS continues to perform at a level deserving DOE-VPP Star recognition. The review included facilities in Richland, Washington, and at the Hanford Site. The purpose of this report is to document the results of the Team review and provide the Chief Health, Safety and Security Officer with the necessary information to make the final decision about SAS' DOE-VPP status.

Based upon discussions and interviews with over 180 workers, supervisors, and managers, as well as extensive observation of field activities, inspection of worksites and facilities within the project scope, and review of records, the Team determined that SAS has maintained a strong safety culture. Managers are totally committed to creating and maintaining a safe working environment, and employees at all levels throughout the company are well trained and actively involved in their own safety and that of their co-workers and the public. Hazard analysis is thorough and hazard prevention and control efforts have been comprehensive and highly effective. A significant challenge persists with respect to the perception that the safety program is driven by the managers, rather than being a cooperative effort with the workers. This perception was expressed across the workforce, but most notably in the Hanford Patrol organization. The Team concluded that this perception resulted in large part from communication barriers between project managers and bargaining unit employees. However, the Project Director has taken positive steps to address this issue, and efforts are ongoing to build and sustain the trust and partnership required of managers and employees for maintaining the culture of safety excellence.

SAS managers and employees exhibit a desire to continuously improve upon and preserve the strong safety culture that exists at the Hanford Site. Accordingly, and having observed firsthand that SAS continues to fully meet all VPP tenet requirements, the Team recommends that SAS retain its DOE-VPP Star rating.

Consistent with the standard for Star status that managers and workers are dedicated to and effectively pursuing excellence in safety performance, the Team identified a number of opportunities for improvement. Listed in Table 1, these opportunities for improvement require

no formal corrective action plan, but should be considered and addressed by SAS in conjunction with its ongoing efforts for continuous improvement.

TABLE I
OPPORTUNITIES FOR IMPROVEMENT

Opportunity for Improvement	Page
In conjunction with ongoing efforts to eliminate communications barriers, SAS managers should look for ways to better empower employees so that an equal partnership and ownership of the safety program are built and sustained.	6
SAS should track verbally communicated safety issues in the Environmental, Safety and Health (ES&H) Issues database and prioritize them by safety significance.	7
SAS leaders and Hanford Guards Union should continue to look for opportunities to encourage and improve communications between managers and the Patrol, and strive to eliminate the perception that an "us versus them" mentality prevails.	7
SAS should provide more opportunities for employee involvement in other site assessments and attendance at safety and health conferences.	8
FH SAS should identify options for reducing turnaround time for industrial hygiene monitoring samples.	12
SAS should create a complete inventory of office machine toners and cartridges and add the respective material safety data sheet (MSDS) to the online MSDS collection. Determine whether any employees have significant work exposure to these products and confirm their hazard communication training.	13
SAS should work with other FH projects to implement a work prioritization and corrective action scheme that provides for proper risk assessment and timely completion and correction of safety deficiencies.	17
FH SAS should look for ways to promote interactive participation by trainees in pretraining/exercise safety briefings.	20

I. Introduction

The U.S. Department of Energy (DOE) Voluntary Protection Program (VPP) onsite review of Fluor Hanford Safeguards and Security (SAS) was conducted from February 26-March 6, 2008, at the Hanford Site in Richland, Washington. The Star level recognition was initially awarded to the site in 2001, when Day & Zimmerman, Protection Technology Hanford (PTH) was the safeguards and security contractor. The DOE-VPP office conducted the first onsite recertification review of PTH from June 24-29, 2004. The review assessed the nature and substance of the continuous improvement of the VPP program since the initial Star certification, and PTH was recertified as a participating DOE-VPP Star site. In accordance with DOE-VPP requirements, the tri-annual recertification review was due in 2007, but it was rescheduled for February-March 2008.

Fluor Hanford (FH) assumed the safeguards and security contract at the Hanford Site from PTH in September 2005. Including the 304 person Hanford Patrol, the project consists of a total of 414 managers, supervisors, exempt, nonexempt, and bargaining unit (BU) personnel. The mission of SAS at Hanford is to maintain a standardized program for all Project Hanford Management contractors relating to safeguards and security functions and to physically protect special nuclear material, classified material, government property, and the personnel located within the confines of the Hanford Site.

Continuation in DOE-VPP requires an onsite review every 3 years by the Office of Health, Safety and Security (HSS) DOE-VPP team (Team) to determine whether the applicant continues to perform at a level deserving VPP recognition. The Team, consisting of safety professionals with VPP experience and expertise from DOE Headquarters and other DOE sites, evaluated SAS' safety programs against the provisions of DOE-VPP. To ensure an appropriate balance between safety and security concerns, the Team included two members with a security background. During the site visit, the Team observed extensive work activities, evaluated relevant safety documents and procedures, and conducted interviews to assess the strength and effectiveness of SAS' health and safety programs.

The Team interviewed approximately 40 percent of the workforce either formally or during work observations. Interviews included uniformed, nonuniformed, supervisory, and management personnel. The Team had the opportunity to observe a variety of field activities, including weekly Toolbox and Safety meetings, daily plan-of-the-day meetings and patrol lineups, weapons issue and turn-in, pre-job/exercise walkdowns, pre-job/exercise safety briefings, post-job debriefs, automated job hazard analysis (AJHA) development, and preventive maintenance. The Team also observed preparation for and conduct of tactical training and exercises. Safety hazards encountered during SAS work include those associated with paramilitary training and storage of weapons and explosives, vehicle and traffic operations, and the industrial hazards associated with maintenance activities. Environmental hazards, such as high winds, heat or cold stress due to extreme weather conditions, and poisonous snakes and insects also make up a significant portion of the risk exposure. While these are the predominant hazards, workers may also encounter radiological hazards at the Hanford Site.

II. Injury Incidence/Lost Workdays Case Rate

The Team conducted a review of the Occupational Safety and Health Administration (OSHA) 300 logs. The table below summarizes the OSHA reportable data for SAS employees as reported by SAS.

Fluor Hanford Safeguards and Security
INJURY INCIDENCE / LOST WORKDAYS CASE RATE

Injury Incidence/Lost Workdays Case Rate (SAS)					
Calendar Year	Hours Worked	Total Recordable Cases	Total Recordable Case Incidence Rate	DART* Cases	DART* Case Rate
2005	724,588	5	1.38	3	.83
2006	743,796	7	1.88	6	1.61
2007	867,168	6	1.38	3	0.69
3-Year Total	2,335,552	18	1.54	12	1.03
Bureau of Labor Statistics (BLS-2005) average for NAICS Code # 56216			3.4		1.7
Injury Incidence/Lost Workdays Case Rate (SAS Subcontractors)					
Calendar Year	Hours Worked	Total Recordable Cases	Total Recordable Case Incidence Rate	DART* Cases	DART* Case Rate
2005	6,180	0	0.00	0	0.00
2006	4,522	0	0.00	0	0.00
2007	2,316	0	0.00	0	0.00
3-Year Total	13,018	0	0.00	0	0.00
Bureau of Labor Statistics (BLS-2005) average for NAICS Code # 56216			3.4		1.7

* Days Away, Restricted or Transferred

Total Recordable Case Incidence Rate including subcontractors: 1.53
Lost or Restricted Workday Case Incidence Rate including subcontractors: 1.02

Conclusion

SAS injury rates are below the averages for the comparable industry and meet the criteria for participation in DOE-VPP at the Star level. The subcontractor 3-year average accident total recordable case rate and DART rate are below the comparable industry averages, and also meet the criteria.

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 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.

There is a strong safety culture at SAS. During numerous discussions, interviews, and field activity observation, the Team noted the intense commitment on the part of managers, supervisors, and workers alike to improve on their safety performance. This was evident across the organization. The strength of managers' commitment was a theme that resounded from the seasoned members of the workforce to the newest employees. Managers are visible in the workplace and have established a strong safety recognition/incentives program to encourage maximum participation in the safety program. The safety recognition program, which encourages employees to recognize employees performing safe acts, is outlined in procedure SAS-7309, "Safety Awareness and Recognition Program."

Senior SAS leaders have identified communications barriers as the most significant vulnerability in an otherwise safe working environment. These barriers are most notable within the Hanford Patrol organization where, despite having recently negotiated a new collective bargaining agreement, there are perceptions among the BU personnel that an environment of managers versus the worker persists. Moreover, while workers across the board stated that safety at the project was paramount, many also stated that the safety program was being driven by managers, not by the workers. The SAS Director has taken aggressive action to address the communication issues in his project and has the support of senior FH leaders. The results of an ongoing communication consultant's efforts to educate both managers and employees in the benefits and methods of effective communications for an organization to be successful indicate good progress to date. The SAS Director also began holding regular Improving Communications Meetings with the Chief, Deputy Chief, FH Industrial Relations Manager, FH Workforce Services Specialist, Hanford Guards Union (HGU) President, HGU Business Agent, and the HGU safety representative to discuss issues and concerns raised by Patrol. These meetings were originally conducted on a weekly basis. In a positive sign that communications are improving, the frequency of the meetings was recently changed from weekly to monthly. Avenues of communication are open, and senior leaders are committed to building and sustaining the trust and manager/employee partnership required for a culture of safety excellence.

Senior leaders have taken other steps to enhance the effectiveness of the organization and improve upon the safety culture. For example, the human performance improvement (HPI) initiative is being implemented across the SAS organization. Feedback from employees and managers alike has been overwhelmingly positive. Training is ongoing, and HPI precepts are being incorporated into work management and event analysis processes.

Two safety councils meet monthly: a Patrol Safety Council for both A/B and C/D shifts, and the Employee Zero Accident Council (EZAC). The Team reviewed council meeting minutes and attended one of the Patrol Safety Council's monthly meetings. There is strong manager representation and participation on each of the councils. The councils take aggressive action on safety issues, and are responsible for developing, promulgating, and tracking the respective Safety Improvement Plan (SIP).

Managers, supervisors, and employees are knowledgeable of and held accountable for meeting their assigned environmental, safety, and health (ES&H) responsibilities. A documented performance system is in place for exempt personnel, which identifies specific ES&H performance criteria. Although BU employees do not have an annual performance review, they are held accountable through the discipline process. New-hire probationary patrolmen are provided weekly performance evaluations while they attend the Patrol Training Academy. Interviews confirmed that all employees know that they are accountable for their own actions, are expected to perform work in a safe manner, and have the responsibility and right to stop work when unsafe conditions exist.

SAS implements and uses company-level FH procedures in conjunction with complementary internal SAS procedures to promulgate and execute the elements of the ES&H program. The Safety and Health Manual is available via the Project Hanford Management System *Docs online* link and contains the written safety and health program, including VPP tenets. The internal SAS procedure SAS-5874, "Environment, Safety, & Health Program," identifies critical elements of the ES&H program and is available to all employees on the SAS Safety Central Web site. The Web site is maintained by the SAS ES&H organization and includes the SAS ES&H database. Safety issues are entered and tracked to completion in this database.

The SAS ES&H organization was expanded following the last VPP recertification review, and planning and budgeting for safety and health is part of the overall long-term management planning. The commitment of necessary resources for ES&H is documented and addresses staffing, space, equipment, training, and promotions. Current safety staffing includes HGU safety reps for both day and swing Patrol shifts, Monday through Friday. There were numerous examples of safety improvements that were required and funded despite not having been previously identified or budgeted. Employees were unanimous in their opinion that managers would do whatever it took to resolve safety issues and make improvements regardless of cost. They did, however, indicate that the followthrough on identified hazards or safety issues is slowed when outside organizations (e.g., facility maintenance, road maintenance, or another facility) are involved.

Responsibilities for all aspects of the safety and health program are assigned and communicated so that all managers, supervisors, and employees know what is expected of them. Safety and health responsibilities are identified, documented, and available for employees and managers in procedure SAS-5874, Item 3.4.

There are documented programs for orienting and holding accountable all persons operating in contractor-controlled spaces, including subcontractor employees, vendors, consultants, students, and visiting scientists. Site orientation occurs during new-hire orientation, which includes the Hanford General Employee Training computer-based course. Contractors and vendors also receive site orientation during their badging process.

Workers contracted by SAS are observed and directed to follow safety guidelines within SAS. The FH contracting process includes a statement of work template that details ES&H requirements. Subcontractors competing for work are evaluated for their past safety performance. The statement of work lists the requirements for the subcontractor to follow ES&H policies. Contracts specify oversight and enforcement of ES&H programs, provide for prompt correction of hazards, and specify penalties for willful or repeated noncompliance. The subcontractor is responsible for demonstrating that these contract provisions have been carried out. Records of the hours worked and the injuries and illnesses by subcontractor employees are kept.

Multiple means are available for communication and notification of safety-related issues. These include the Hanford President's Zero Accident Council (PZAC) minutes, EZAC minutes, Hanford Patrol Safety Council minutes, the Vital Porcelain Press, HGU safety reps, and SAS Safety Central. Employees are also made aware of safety tips through weekly Toolbox meetings, daily plan-of-the-day meetings, and e-mail.

A system for evaluating the success of the ES&H program in meeting the goal and objectives is in place. The system provides for an annual assessment and written report, including recommendations for improvements and timely followup. The evaluation assesses the effectiveness of each applicable VPP element and subelement. Interviews and work observations confirmed the results outlined in the most recent self-assessment.

Conclusion

The commitment of top-level managers to occupational safety and health is clearly evident to all at SAS. Recognizing organizational weakness and taking aggressive action to tear down communication barriers are reflective of the continuous improvement mindset expected of a VPP Star site. Having observed this firsthand, the Team assesses that FH SAS continues to meet the criteria of the Management Leadership tenet.

IV. Employee Involvement

Employees at all levels must continue to be involved in the structure and operation of the safety and health program and in decisions that affect employee health and safety. Employee participation is in addition to the individual right to notify appropriate managers of hazardous conditions and practices.

At SAS, there is a strong safety culture. During interviews of SAS personnel at all levels, the Team observed that across the board, employees were very knowledgeable about their responsibilities and rights with regard to safety. Employees all stated that they were aware of their stop-work authority and responsibility and would not hesitate to exercise it for unsafe conditions. Employees also stated that SAS was a very safe place to work, and there were plenty of opportunities for involvement in the safety program. However, several employees, particularly in Hanford Patrol, while comfortable with the overall safety posture, indicated that managers directed the program and employees were involved but did not own the program. The Team concluded that this perception was part of the broader communication issue discussed in the previous section and below.

Opportunity for Improvement: In conjunction with ongoing efforts to eliminate communications barriers, SAS managers should look for ways to better empower employees so that an equal partnership and ownership of the safety program are built and sustained.

All employees have the opportunity for involvement/participation in the safety programs. There are multiple avenues for employee involvement. These include, but are not limited to, participation in accident/incident investigations, conduct of scheduled workplace inspections, development of job hazard analyses, and participation in safety and health committees.

In the Hanford Patrol organization, there is a dedicated Hanford Patrol Safety Council member on each of the shifts to capture, address, and/or elevate safety issues and provide feedback. Workers also stated they can communicate issues through e-mail, shift turnover, shift supervisor or HGU safety representative. Representatives of this council report to SAS EZAC. This council has representation from all disciplines within the organization. SAS also participates in the Hanford PZAC.

All employees who were interviewed indicated that they would be comfortable reporting any type of hazard or safety-related items. Moreover, employee issues, whether formal or informal, are evaluated and acted upon as appropriate. Some items are verbally communicated and fixed by the supervisor without documenting the issue to take credit for the resolution. This practice was previously identified in the 2006 Patrol Safety Workshop and in the Patrol Safety Council meeting minutes in 2007. This situation also has caused some of the perception that the originator of the issue does not get the credit/reward. Safety log books are rarely utilized; the last entries were in 2005. Some employees stated that they were not aware that safety logs were in place, and several expressed a preference for raising issues for resolution either verbally without accompanying documentation, or electronically. Every employee interviewed stated that FH was a safe place to work.

Managers and employees work together to perform health and safety assessments and develop annual SIPs. The Vital Porcelain Press is one tool used to communicate safety-related information supplied by employees and is very effective. Employees are encouraged to submit articles, have done so in large numbers, and are recognized accordingly. A monthly prize is awarded to the author of the "best" article, based on employee voting on an electronic ballot that contains a list of the articles, with hyperlinks to each. Other communication methods include the SAS Safety Central Web site, Safety Council minutes, bulletin boards, weekly and monthly safety meetings, and daily plan-of-the-day/lineup meetings. Review of the SAS Safety Central Web site determined this to be a very useful tool for workers to find safety-related information if it is kept current. One section under assessments had not been populated since 2005 and needs to be updated.

SAS has two separate Safety Councils, one for the Patrol and the other for nonpatrol workers. Both are employee-led, and members participate in a variety of extra activities. Evidence indicates that there is a good mix of SAS and Patrol members involved in the facility inspection program, including both managers and BU members. The Safety Councils addressed and acted upon items that were raised during the FH safety standdown in August 2007. All FH employees were involved in identifying safety issues and concerns. These are being tracked at the project committee/council level and forwarded for company consolidation. Most employees know the proper channels to have safety concerns and issues addressed. However, a few of the employees who were interviewed stated that some issues are not resolved in a timely manner. The Team observed that the SAS ES&H Issues database has several items that have been open for up to a year. A contributing factor to this situation could be the lack of a prioritization scheme for issues by severity or risk. This is discussed in Section VI, Hazard Prevention and Control.

Opportunity for Improvement: SAS should track verbally communicated safety issues in the ES&H Issues database and prioritize by safety significance.

Despite the various communications means available, some members of Patrol stated that there is a communication problem in the HGU ranks as the information from the Patrol Safety Council does not always flow down to all of the troops. This situation is part of a broader communication issue between managers and BU workers (see Section III, Management Leadership). As mentioned in Section III, the Improving Communications Meetings that were originally held on a weekly basis are now being conducted monthly because of the ongoing improvement in employee/manager communications.

Opportunity for Improvement: SAS leaders and HGU should continue to look for opportunities to encourage and improve communications between managers and the Patrol and strive to eliminate the perception that an "us versus them" mentality prevails.

Safety awareness and recognition programs are utilized with worker input. Employee job task analysis (EJTA) documents are reviewed annually with employees. Monthly/quarterly walkthrough inspections are completed with worker input. In the past, design reviews did not always include employee input. An example given was the construction of the canine post #602. Major modifications had to be made to address a list of safety issues identified by the workers utilizing the facility. Managers have since communicated the importance of worker involvement, and there is evidence of upfront employee involvement in upgrades and

modifications made. For example, the team observed the trial of the Natsaka barrier that involved members of several SAS organizations, including Patrol members who will be responsible for operating the barrier. (See Section V, Worksite Analysis.)

SAS employees attend safety and health conferences and participate in other contractors' self-assessment teams as well as their own. Several employees, including Safety Council members, attend the Regional Voluntary Protection Program Participants Association Conference, and all employees have the opportunity to attend the annual Hanford Safety Expo on company time. Some felt, however, that conference attendance was limited to a small number who had been trained and selected; thus, limiting the opportunity for attending offsite events by all other SAS employees.

Opportunity for Improvement: SAS should provide more opportunities for employee involvement in other site assessments and attendance at safety and health conferences.

Conclusion

SAS has a positive safety culture that allows employees to participate in the safety program and help resolve safety issues when they can. The overall assessment is that SAS continues to meet the basic requirements of the Employee Involvement tenet.

V. Worksite Analysis

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

SAS safety and health professionals are actively involved in identifying and analyzing hazards associated with new facilities and systems. For example, the Team had the opportunity to observe the development of the operational procedure as part of the turnover process for a newly installed portable barrier. Safety professionals, engineers, and operations personnel, including Patrol personnel who will operate the barrier, were all active participants in this evolution. A detailed safety walkdown was conducted, and step-by-step procedures, with discussions and demonstrations by all participants, were developed for review and approval. Similarly, the Team participated in a safety walkdown prior to a tactical exercise, observed the AJHA development process, attended pre-job meetings, and also observed work.

In November 2007, the SAS Director mandated that a management review be conducted of the work management processes and practices within the Technical Security (TS) organization. As a result of this review, TS is transitioning all work activities, including emergent work and periodic maintenance, from its legacy work management process to the Job Control System (JCS), which is used by most of the projects at the Hanford Site. This transition is expected to be complete in May 2008.

The AJHA tool is effectively used by Hanford Patrol, the Patrol Training Academy, and the TS organization for planned work activities. An AJHA is being developed for skill-of-the-craft work and preventive maintenance done by TS, and AJHAs are being developed for routine patrol activities. Identified hazards and applicable controls are incorporated into work documents, where appropriate, and communicated to workers through pre-job briefings or lineups prior to beginning work.

Workers, supervisors, and ES&H professionals, as well as representatives from functional support groups, are actively engaged in conducting frequent workplace inspections and surveillances to ensure that health and safety standards are being met. Inspections and reviews are conducted as in accordance with FH and SAS procedures, and inspection records are maintained. Inspection findings or issues are communicated to affected workers and are tracked for proper disposition. Trained teams of managers, professionals, BU members, and nonexempt employees conduct scheduled ES&H inspections. Shop areas are inspected monthly, and nonshop areas are inspected quarterly. This is outlined in procedure SAS-7307, “SAS Hazard Inspection Program.” The inspection schedule is posted on the Safety Central Web site. Safety concerns are communicated with the Building Administrator and, when possible, are corrected on the spot. A written document of the results is tracked through completion. SAS employees may view these reports and the results of any safety issues at the Safety Central Web site through

the ES&H Issues database. In addition to scheduled safety inspections, many SAS activities incorporate an inspection component prior to the conduct of work.

Trend analyses are conducted for all data accumulated under the health and safety program (including injury and illness experience, inspections, and employee reports of hazards) to help identify systemic problems that may not be noticed if only isolated incidents are considered. SAS injuries, accidents, and other pertinent safety performance data elements are tracked and trended using statistical process control methods and charts. The charts provide information on a number of issues (e.g., age/experience on the job, body part, cause, day of week, hour of occurrence, job type, organizations, and type of injury).

Workers and supervisors were not necessarily involved in creating or reviewing the charts, but were knowledgeable of directions to locate and obtain the information. Most employees were cognizant of the role that data trending plays in determining corrective actions and felt that managers are effective in communicating applicable statistics. The findings are available to employees through their Safety Council members, as well as on the Safety Central Web site, which is accessible by all employees. Some SAS employees indicated that they knew how to access the trending charts, but would rather obtain the information directly from their safety reps as to who got injured and how.

Workers and managers in the TS organization understood the work control processes and tools related to determining open or overdue work orders, including preventive maintenance and corrective maintenance activities. Additionally, workers and managers in TS understood that many safety concerns or issues related to facility equipment could be managed through JCS simply by preparing work requests and processing work orders with the appropriate prioritization.

EJTA documents are prepared for all employees and indicate the hazards applicable to specific job assignments. The procedure calls for an annual review, as well as updates when the job description changes. EJTA is reviewed with the employee by the supervisor and then reviewed by ES&H. Most of the employees who were interviewed stated that their EJTA had been recently reviewed.

A system for initiating and tracking hazard correction in a timely manner is in place and functioning. It allows employees, without fear of reprisal, to notify managers in writing about conditions that appear hazardous and to receive timely and appropriate responses. The system may also include oral notification by employees, but in all instances must include written tracking of responses and hazard corrections. Workers at all levels were knowledgeable of processes for reporting identified issues and felt that the system was highly effective.

The reporting of safety issues or concerns is supported and encouraged by managers, and workers do not feel any sense of fear of reprisal for reporting these issues. Workers and supervisors of all departments were familiar with reporting mechanisms, including notification of line managers or their respective safety representatives. SAS maintains an ES&H Issues database for entering and tracking identified issues for resolution. The Safety Council agenda includes time each month to share reports on open and delinquent safety issues. Also, the weekly meetings conducted by senior managers review these reports as part of the respective

meeting agenda. The Safety Central Web site is used to track hazards to completion and allows employees easy-to-use access.

An investigation system is in place that includes written procedures or guidance; requires written reports of findings, hazard correction tracking, and identification of causes; and provides for identification of and followup for preventive and/or corrective actions. The system includes provisions for a narrative report, suitable for dissemination to all employees that contains root causes, analysis, and lessons learned. SAS employees and managers comply with HNF-PRO-077, "Reporting, Investigating and Managing Health, Safety and Property/Vehicle Events." Accident investigations and related reports are completed by appropriately trained and qualified workers, supervisors, and managers. Information from these investigations and reviews is shared with SAS employees in an effort to improve organizational performance. SAS personnel use Safety Council meetings and other communication techniques (Toolbox meetings, lineups, electronic reports, e-mail, Safety Central Web site, etc.) to share the results of investigations.

SAS managers are aggressively sponsoring the use of HPI concepts and techniques as a component of future accident/incident reviews. SAS employees and managers are attending HPI training courses to familiarize themselves with these concepts, including techniques directed at investigations. HPI goals and objectives are aligned with attaining a *Just Culture* where the reporting of accidents, incidents, or near-misses is openly encouraged and sponsored.

A system is in place to track first-aid cases, injuries, accidents, and other incidents and investigations. This system includes written procedures that document the initial notification, case summary, hazard correction tracking, and identification of causes, followup, communication, and interviews with medical facilities and appropriate personnel. This is followed up by a peer review by FH case managers to determine the injury classification (e.g., reportable, first aid). For Hanford Patrol, the initial notification of the incident is usually listed in the Patrol daily log.

In order to identify existing hazards and potentially significant risks and to ensure employer awareness and control of those risks, trained and qualified safety and health professionals conduct comprehensive health and safety surveys at intervals appropriate for the nature of workplace operations.

A baseline survey of ES&H hazards was accomplished through initial comprehensive industrial hygiene (IH) and safety surveying. These baselines are reviewed and updated in accordance with FH procedures.

In addition, nationally recognized procedures for all sampling, testing, and analysis are used, and written records of results are maintained.

The importance of the IH program was recognized, and FH hired a full-time certified industrial hygienist (CIH) for SAS. Chemical hazards encountered by SAS staff potentially include carbon monoxide (CO), lead, and indoor air quality. Lead is monitored annually at the ranges, and results indicate exposures below the OSHA Action Level (AL). There was one instance of AL being exceeded, but two consecutive followup monitoring results were once again below the AL, and annual monitoring was resumed thereafter. CIH noted that the analytical laboratory,

although it was accredited by the American Industrial Hygiene Association, often approached a 30-day turnaround time to provide results.

Opportunity for Improvement: SAS should identify options for reducing the turnaround time for IH monitoring samples.

CO monitoring in 2004 at the Wye barricade showed no levels of concern. This year a study was made of CO levels in vehicles during live fire tactical exercises. The concern was for the level of CO being released from weapons fired from within a vehicle. Six different configurations were tested to simulate these exercises, by varying which vehicle windows or doors were open. Real time monitoring allowed observation of CO buildup and clearance times. The results clearly showed that CO could build to hazardous levels, and based on the results, no firing inside the vehicles was recommended unless all windows were open, the door was open, or the barrel was extended outside the windows. Other CO monitoring showed that patrol vehicles and canine vehicles have safe CO levels under normal use conditions. There is no known exposure to asbestos, beryllium, or ionizing radiation at SAS facilities, and when SAS personnel enter other Hanford facilities, they are protected under that facility's safety plan. Radiation badges are routinely issued.

Noise surveys identified a concern at the firing ranges and survey results were compared with MIL STD 1474D to determine appropriate hearing protection. The technical challenge of accurately measuring high-level, high-impact noise led SAS to authorize Bruel & Kjaer (B&K), a nationally recognized noise measurement and control firm, to come out and take measurements, and make recommendations. This survey is scheduled to begin in the next several weeks.

Hazard communication is largely the responsibility of the ES&H organization. The chemical inventory is updated every December during a physical inventory of each location, and all new chemicals must be approved in writing by ES&H before they are authorized for use. Material safety data sheets (MSDS) are maintained centrally by FH with an online system. All personnel are trained on MSDS access. One weakness is that some MSDS notebooks at individual facilities are incomplete and out of date. However, the information is readily available online, and one employee whom the Team questioned about MSDS readily confirmed that they were available online.

FH's interpretation of the OSHA exemption for articles had resulted in exemption of lead acid batteries from the MSDS system. However, these are being added to the inventory and MSDS collection. FH continues to exempt some office supplies, such as toner and ink cartridges, from the MSDS inventory, noting that usage is not different from home use. An outside contractor services the machines. Not having an inventory of these substances and their MSDSs fails to provide the expected level of hazard communication for a VPP Star site, particularly for those service contractors and any employees who may make significant use of these machines. The current MSDS collection contains a few office supply products, but two of the toners found in building1979 Snyder were not found in the online system. The administrator immediately faxed one over upon request.

Opportunity for Improvement: SAS should create a complete inventory of office machine toners and cartridges and add the respective MSDS to the online MSDS collection. Determine whether any employees have significant work exposure to these products and confirm their hazard communication training.

SAS has a good ergonomics program. Assessments of most SAS employees were completed within the past year. The results were provided to the employees and their managers for any followup action.

Conclusion

SAS has adequate worksite analysis processes and procedures in place. Hazard identification is thorough and good housekeeping was evident throughout the facilities. SAS continues to meet the requirements of the Worksite Analysis tenet.

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, and/or personal protective equipment (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.

SAS is sufficiently staffed with ES&H professionals with the requisite expertise to analyze hazards and implement the appropriate controls when elimination is not practical. SAS hired a full-time CIH 1½ years ago. CIH is responsible for all aspects of the IH program, including respiratory protection, hearing conservation, and baseline surveys. He is up to speed on the full range of his responsibilities and has undertaken a special study that involves bringing in nationally recognized noise control experts (B&K) to assess noise conditions at the firing ranges and recommend hearing protection. The health clinic, Advance Med Hanford, is staffed with physicians, all of whom are required to be board certified in occupational medicine. Through FH, SAS has access to certified safety professionals, fire protection engineers, and certified health physicists. As an example of this access, a fire protection engineer was brought over to evaluate the need for an additional egress from the men's locker room at Building 2754W. Weekly safety leadership meetings attended by the ES&H Manager and/or the CIH provide a forum for safety information sharing throughout the FH organization. As an example, the topic of handcart safety was discussed at the meeting attended by the Team. Both hazard recognition and controls were discussed, stimulated by two recent incidents in other, non-SAS, FH projects. These regularly scheduled meetings provide opportunities for SAS ES&H managers to work with their peers within FH and share common problems. The FH organization provides many safety awareness communication tools and manages a site-wide MSDS system online.

SAS demonstrates an ongoing commitment to hazard prevention and control. Document reviews, work observations, and interviews provide overwhelming evidence that hazard elimination is a primary goal and that administrative and personal protective controls are used to supplement the preferred route of engineering controls. In almost every instance, the hazard corrections are not just responses to required standards, but go beyond minimum standards to assure the highest level of health and safety. Examples of recently installed hazard controls include:

- Providing rubberized ¼-mile running track at the Patrol Training Academy, reducing the need to run on roadways or to drive extra distances to a local school. The track is well maintained. Also, specified routes along roadways have been identified as the safest running routes for Hanford Patrol.
- Paving the apron by the Plutonium Finishing Plant to reduce gravel on the roadway that was recognized as a hazard for motorcyclists.
- Issuing new surge protectors that meet electrical safety needs and identifying these new protectors with a distinctive green dot to enable inspectors to verify that the correct surge protectors are in use.

- Installing eight automated external defibrillators (AED) throughout areas under SAS control. These AEDs have a maintenance schedule, and records are kept by
- CIH.
- Providing rodent controls in the Emergency Vehicle Operations Course (EVOC) cars by sealing all cracks and rust and putting Irish Spring hand soap in each vehicle. Other rodenticides and traps were considered, but the hazards associated with them were eliminated by using a common household hand soap that effectively repels rodents. Eliminating rodents reduces exposure potential to Hanta virus.
- Issuing weighing scales to the Patrol so that they could weigh their packs to prevent overweight lifting hazards.
- Installing a "Yield" sign at the exit alleyway from 1979 Snyder.
- Using Vigil Anti-Slip in a pilot project at MO-244 in 200W. It was found to mitigate snow and ice buildup to reduce slip and fall hazards. Very positive feedback on this pilot was received from one patrolman in February 2008. The test is ongoing.
- Switching to magnetized pistol magazine pouches to prevent accidental loss of a magazine.
- Upgrading patrol traffic control vests to meet an American National Standards Institute standard for visibility.
- Providing new Patrol uniforms made of 50/50 instead of 100 percent cotton to provide better clothing heat and breathing performance. In making this change, there was a review of an expressed employee concern regarding static discharge. Calls were made to at least six organizations that have bomb dog units about their experience with the 50/50 garments, and a literature review was conducted.
- Reviewing brass burns from discharged casings during weapons practice. Various capture devices were tested and found to be unsatisfactory. The implemented control is to spread out the patrol members with an empty stall between each, where feasible, and to require protective clothing to be worn around the neck and arm areas.
- Phasing in a National Institute for Occupational Safety and Health (NIOSH)-approved chemical, biological, radiological, and nuclear (CBRN) respirator with a longer service life to replace a Department of Defense and NIOSH approved CBRN respirator with a 15-minute capacity for Patrol. The newer model also provides a larger field of vision. Phase-in is starting with the new class of Hanford Patrol members. Selection of the new model was based on both technical performance specifications and positive user feedback from FH patrol on the older Avon model.
- Using a bucket truck to eliminate tower climbing for SAS.
- Upgrading the crosswalk and lighting at Camden Street.
- Developing a drop safety catch (DSC) tool to prevent accidental pistol discharge when dropped. Previously, the armorers visually inspected that the DSC was in place and properly spring loaded. An incident involving an accidental discharge due to weapon malfunction prompted a better assessment method. An SAS armorer designed a machined rod that can be used to push the rear of the firing pin forward while observing whether it can be pushed beyond DSC. This is now an additional required test.
- Reviewing potential germicidal agents for newly installed, therapeutic whirlpool tubs and selecting a product with single use tablet dispensers that are nonirritating to skin when diluted.

- Implementing a pilot project to test the Brownells highly visible indicator whose distinctive yellow color indicates that the rifle is unloaded, while also protecting the ejection ports from dust. Twenty units were ordered in January 2008.
- Evaluating a stretch and flex program with a planned target date in April and implementation in June 2008.
- Closing the site due to high winds in February 2008. SAS personnel had previously been issued goggles and experienced no eye injuries, but other Hanford projects did have eye injuries.
- Posting signs in the stairwells to remind users to use the handrails.
- Giving all employees immediate access to hand sanitizers in their offices and company vehicles.

While positive reinforcement is used to promote safety, there are times when discipline results from unsafe behavior. The majority of employees who were interviewed about disciplinary actions reported that safety is a way of life at SAS and that there are few instances of employee violations of safety rules. One supervisor, while very familiar with the SAS disciplinary system, reported that a friendly reminder is usually sufficient to correct those few instances of forgetfulness. Positive reinforcement is achieved through peer pressure, supervisor involvement, and manager walkarounds. Employees may nominate fellow employees for their exemplary safety efforts, and each month, nominated names and their nominators are eligible for a random drawing and gift certificates worth $25. Separate drawings are held for each division of SAS. One division had a luncheon to celebrate a year with no recordable injuries.

Most preventive maintenance is performed either by TS in the case of security alarm, monitoring and locking systems, or by external organizations (e.g., vehicle maintenance; heating, ventilation, and air-conditioning; roads and sidewalks; brush clearing; trash; janitorial). The Team found no evidence of neglect in routine maintenance. The buildings are in satisfactory condition, and with the exception of slips and falls when the weather is icy, there was no evidence of injury due to poor maintenance. There appears to be a good working relationship between SAS and the various maintenance organizations for routine tasks because situations that are called in are generally responded to in a timely and satisfactory manner.

Some problems were identified in getting nonroutine safety-related work orders activated in a timely manner by other FH organizations. One example was a work order to correct a violation of title 29, Code of Federal Regulations, part 1910.303(f) pertaining to the labeling of circuits at an electrical panel in Building 3790. A work order to label the panel was submitted on January 17, 2007, but actual work was not started for more than a year. According to the Open Incidents report available online at the Safety Central Web site, there was no followup by SAS until August 27, 2007, an indication that the corrective action tracking system was not being utilized. Next, an update dated November 27, 2007, stated that Facility and Support Services was researching the drawings. On January 21, 2008, a note stated that the work was delayed due to a conflict with another project. The ES&H manager told the Team that he thought the work has now been completed, although it was not logged in as of the time of the assessment.

Other work orders to perform safety-related maintenance tasks also languished. An August 27, 2007, work order to install yellow warning postings to alert pedestrians to uneven pavement and unmarked steps at Building 3790 was updated on November 27, 2008, with a note that the work

is "currently in scheduling" and that weather may delay completion. A further update on January 10, 2008, stated that the task is on hold pending warmer weather.

Another delayed safety-related problem is the clearing of tall vegetation that obscures visibility while operating vehicles. A request was made on December 20, 2007, and an update on January 7, 2008, stated that the work is further delayed due to other competing activities.

A concern that the fire alarm in 2736ZB is too loud was confirmed by the Fire Department almost immediately after notification. The Fire Department put the corrective action on a 90-day schedule on October 31, 2007, but the alarm had not been fixed at the time of the assessment.

A fire extinguisher was found to have no tag during a routine inspection of the 2727E shop on January 16, 2008. A month later, on February 13, 2008, it was confirmed to be out of date, but the requested replacement took yet another 20 days. The Open Incidents report did not indicate why it took 20 days to obtain a replacement portable fire extinguisher.

Opportunity for Improvement: SAS should work with other FH projects to implement a work prioritization and corrective action scheme that provides for proper risk assessment and timely completion and correction of safety deficiencies.

There are several tracking systems in use at SAS. Many are published on the SAS Safety Central Web site. Workplace self-inspections are tracked for completion, scores, types of findings, and correction of findings. The archived reports are used to identify repeat findings. Employee perception survey results are tracked with monthly calculations of scores for the 17 questions. This ongoing survey was not mentioned in any interviews conducted by the Team, and the charts published online do not generally disclose the number of participants. The scores have shown a slight, but consistent improvement over the years. Occupational injury and illness cases are tracked for Patrol and for non-Patrol. The Open and Closed Incidents report tracks hazard reports and inspection findings. The very ambitious list of recommendations submitted as a result of the August 2007 standdown produced approximately 100 incidents, and all but 13 have been completed. The strength of this tracking system is that updates are added so that the status is displayed throughout the correction process. Once an incident is closed, it is moved out of the "open" file and into the "closed" file. Staff with assigned responsibility track IH monitoring, IH instrument calibration and repair, training, respirator approvals, monthly ground fault circuit interrupter testing, fitness equipment inspections, weapons inspections, monthly fire extinguisher checks, annual respirator inspections, etc. EJTAs are maintained online and are verified by ES&H staff.

Emergency preparedness is the mission of SAS, and Patrol activities are planned and executed to maintain the highest level of preparedness for the continued protection of nuclear materials and the safety of Hanford Site personnel. The Team was able to observe live fire training at the Yakima Range, night vision training, a force-on-force exercise, as well as EVOC training. Engineered and administrative controls were comprehensive, and the training and tactical exercises were conducted safely with no incidents. Back in the offices and shops, interviewed employees readily described their roles in emergency evacuations and shelter-in-place actions. Those assigned warden duties were able to describe their additional duties. Evacuation drills were conducted at the various SAS controlled buildings within the past year. Visitors and

subcontractors are informed of the emergency procedures before being allowed on site. A series of initiatives by Security heightens employee awareness of security issues and improves the interface between the Patrol and all other employees. The Security Ed Challenge is a weekly online single-question quiz that is based on a scenario containing hyperlinks to various security-related Web sites. From the list of personnel who submit a correct answer, names are drawn for various prizes each week. Hundreds of FH personnel participate in this weekly challenge, increasing awareness and knowledge of security measures. Within SAS, rewards are awarded to employees who do something to improve security. For example, there had been some close calls at the barricade gates. In response to this issue, a video was created this year to help improve traffic safety at the security gates. The video talks about safety issues such as cell phone use, glare on the windshields, passing other vehicles at the gate, motorcyclists showing their badges, and snow conditions. The video attempts to show the human side of the Patrol's job at the barricades. In addition, it builds awareness and promotes safe security checks.

The medical program is managed by Advance Med Hanford, a nationally accredited ambulatory health care organization located at 1979 Snyder. It provides medical exams, walk-in medical services, return-to-work and fitness-for-duty services, health education, ergonomics, emergency preparedness, and worksite visits. One example of the latter was their evaluation of the reconfiguration of the tactical obstacle course that provided recommendations for injury prevention. All of the physicians are board certified in occupational medicine. Employee feedback regarding their experiences with the onsite clinic was overwhelmingly positive.

Conclusion

SAS has effective means to prevent and control hazards in the training facilities, patrol stations, and workspaces. The hierarchy of hazard elimination, engineered controls, administrative controls, and PPE was clearly evident. Team observations of work, attendance at various planning meetings, and formal and informal interviews of employees and managers confirmed that SAS continues to meet the requirements of the Hazard Prevention and Control tenet.

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, that personnel recognize hazards they may encounter, and that they are capable of acting in accordance with managers' expectations and approved procedures.

Supervisors and managers understand their responsibilities and carry them out effectively. These responsibilities include understanding the hazards associated with a job and the potential effects on employees; understanding how to ensure, through teaching and enforcement, that employees follow the rules, procedures, and work practices for avoiding or controlling exposure to the hazards; and knowing how to make sure that everyone understands what to do in emergencies.

SAS uses the Integrated Training Electronic Matrix (ITEM), used by all FH projects, to manage and track training requirements for managers, supervisors, and employees alike.

First-line managers ensure that employee training is current. Supervisors and managers encourage a safe work environment and take their safety training responsibilities seriously. Each lineup, Toolbox, and staff meeting starts with a safety share. In addition, supervisors encourage a weekly safety meeting where employees take turns providing safety information. Managers receive additional safety training that is tracked and managed through ITEM. SAS managers support the safety program and are proactive in identifying additional training opportunities. Senior leaders have committed to implement the HPI program in FY 2008, and extensive training across the organization is underway. This training is expected to help bridge the gap in safety awareness, consciousness, and communication. Managers expressed their desire that a questioning attitude will develop so that hazards associated with a task will be identified and addressed before performing the task.

Across the board, the employees interviewed indicated that they receive a high level of safety training and know that their managers fully support requests for additional training. The Team interviewed a wide range of workers from new hires to those with as much as 30 years at the site. Through training and enforcement, employees feel that the level of safety and health training they receive has made them aware of the hazards they may encounter during their work activities. They are also aware of the safe work procedures in place to protect themselves from potential hazards. Employee responsibilities include using PPE where required and knowing why it is required, what its limitations are and how to maintain it, and what to do in emergency situations. In addition to the training tracked in ITEM, other job-specific training is provided. The Patrol Training Academy conducts the security police officer (SPO) training program, which is certified by the DOE National Training Center (NTC). All Patrol Training Academy instructors maintain their SPO qualifications and carry NTC certifications in their areas of expertise. Hanford Patrol members receive yearly EVOC training to ensure that they can safely handle emergency driving situations. Safety briefs are given before each hazardous activity. The instructors maintain a good interaction with employees and ensure their awareness of all dangers associated with the activity. However, the safety briefs that were observed by the Team did not always include significant interactions with the workforce. For example, the live fire shoot house training exercise included a comprehensive detailed safety brief, but the participation from the SPOs was minimal.

Opportunity for Improvement: SAS should look for ways to promote interactive participation by trainees in pretraining/exercise safety briefings.

Conclusion

Personnel are well trained at SAS. The training from Hanford General Employee Training to more tailored functional training provides a solid foundation for maintaining the safe working environment that exists. SAS continues to meet the requirements of the Safety and Health Training tenet.

VIII. Conclusions

SAS has a strong safety culture and continues to benefit from its participation in DOE-VPP. Managers are committed to maintaining the safest possible working environment for their workforce and improving on their safety performance. Although communication barriers in the Hanford Patrol organization have impacted the sense of employee ownership that one would expect at a Star site, senior leaders have addressed and are continuing to address this issue. The Team observed firsthand that efforts to build and sustain the trust and manager/employee partnership required for a culture of safety excellence are ongoing and effective. While some opportunities for improvement were identified, the overall climate at SAS is one of safety excellence and a desire for continuous improvement. The Team recommends that SAS retain its DOE-VPP Star rating.

Appendix A

Onsite DOE-VPP Audit Team Roster

Management

Glenn S. Podonsky
Chief Health, Safety and Security Officer
Office of Health, Safety and Security

Michael A. Kilpatrick
Deputy Director for Operations
Office of Health, Safety and Security

Patricia R. Worthington, PhD
Director
Office of Health and Safety
Office of Health, Safety and Security

Bradley K. Davy
Director
Office of Worker Safety and Health Assistance
Office of Health and Safety

Quality Review Board

Michael Kilpatrick Patricia Worthington
Dean Hickman Robert Nelson

Name	**Affiliation/Phone**	**Project/Review Element**
Carlos Coffman	DOE/HSS (301) 903-6493	Team Lead Management Leadership Safety and Health Training
Frank Greco	DOE/HSS (301) 903-5522	Management Leadership Worksite Analysis Hazard Prevention and Control
Tyson Allen	BEA/INL	Worksite Analysis
Mary Anne Chillingworth	PEC	Hazard Prevention and Control
Darlene Smith	WSI-NV	Employee Involvement
Gregory Doss	CH2M HILL – Hanford Group	Employee Involvement