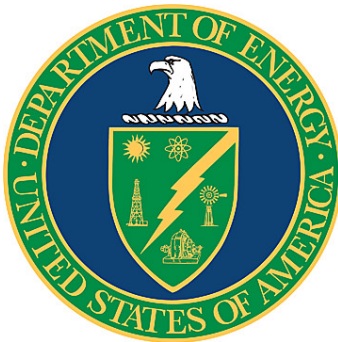


# **Centerra-Nevada Nevada National Security Site**

**Report from the Department of Energy  
Voluntary Protection Program  
Onsite Review  
May 12-21, 2015**



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

## Foreword

The Department of Energy (DOE) recognizes that true excellence can be encouraged and guided but not standardized. For this reason, on January 26, 1994, the Department initiated the DOE Voluntary Protection Program (VPP) to encourage and recognize excellence in occupational safety and health protection. This program closely parallels the Occupational Safety and Health Administration (OSHA) VPP. Since its creation by OSHA in 1982 and DOE in 1994, VPP has demonstrated that cooperative action among Government, industry, and labor can achieve excellence in worker safety and health. The Office of Environment, Health, Safety and Security (AU) is responsible for managing DOE-VPP. AU intends to expand contractor participation complex-wide and coordinate DOE-VPP efforts with other Department functions and initiatives, especially Integrated Safety Management (ISM).

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

Requirements for DOE-VPP participation are based on comprehensive management systems with employees actively involved in assessing, preventing, and controlling the potential health and safety hazards at their sites. DOE-VPP is designed to apply to all contractors in the DOE complex, including production facilities, laboratories, subcontractors, and support organizations. DOE contractors are not required to participate in DOE-VPP. In keeping with OSHA and DOE-VPP philosophy, *participation is strictly voluntary*. Therefore, participants may withdraw from the program at any time.

DOE-VPP consists of three programs with designations and functions similar to those in OSHA's VPP: Star, Merit, and Demonstration. The Star program is the core of DOE-VPP. This program is aimed at truly outstanding protectors of employee safety and health. The Merit program is a steppingstone for participants that have good safety and health programs, but need time and DOE guidance to achieve true Star status. The Demonstration program, , allows DOE to obtain additional information to recognize achievements in unusual situations about which DOE needs to learn more before determining approval requirements for the Merit or Star program.

By approving an applicant to participate in DOE-VPP, DOE recognizes that the applicant strives to exceed the basic requirements for systematic protection of employees at the site. As the symbols of such recognition, DOE provides certificates of approval and the right to use DOE-VPP flags for the program in which the site is participating. The participants may also choose to use the DOE-VPP logo on its letterheads and/or on award items for employee incentive programs.

This report summarizes the results from the evaluation of Centerra-Nevada, during the period of May 12-21, 2015, and provides the Associate Under Secretary for Environment, Health, Safety and Security with the necessary information to make the final decision regarding Centerra-Nevada's continued participation in DOE-VPP.

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## ABBREVIATIONS AND ACRONYMS

AED	Automated External Defibrillator
AU	Office of Environment, Health, Safety and Security
BLS	Bureau of Labor Statistics
CATS	Consolidated Assessment Tracking System
CFR	Code of Federal Regulations
DAF	Device Assembly Facility
DART	Days Away, Restricted or Transferred
DOE	Department of Energy
EMETL	Enterprise Mission Essential Task List
ES&H	Environment, Safety and Health
ESC	Employee Safety Committee
HHE	Health Hazard Evaluation
IDLH	Immediately Dangerous to Life or Health
IGAN	Independent Guard Association of Nevada
ISM	Integrated Safety Management
ISMS	Integrated Safety Management System
mph	Miles per Hour
NAICS	North American Industry Classification System
NFO	Nevada Field Office
NNSA	National Nuclear Security Administration
NNSS	Nevada National Security Site
NOPD	Notice of Potential Discipline
NSTec	National Security Technologies, LLC
OJT	On-the-Job Training
OSHA	Occupational Safety and Health Administration
PPE	Personal Protective Equipment
PROFORCE	Protective Force
PFAT	PROFORCE Annual Training
PFSC	Protective Force Safety Committee
RAR	Risk Analysis Report
SPO	Security Police Officer
SSC	Senior Safety Committee
Team	Office of Environment, Health, Safety and Security DOE-VPP Team
TRC	Total Recordable Case
VPP	Voluntary Protection Program
WSI-NV	WSI-Nevada

## EXECUTIVE SUMMARY

Centerra-Nevada is the prime contractor for the security protective force and electronic security system services at the Nevada National Security Site (NNSS). The National Nuclear Security Administration's Nevada Field Office manages the contract and provides direction to, and oversight of, Centerra-Nevada. The Department of Energy (DOE) admitted Centerra-Nevada (and its predecessors) to the DOE Voluntary Protection Program (VPP) as a Star participant in 2001, and recertified it in 2004, 2008, and 2012.

As a DOE-VPP Star participant, the Office of Environment, Health, Safety and Security (AU) DOE-VPP team (Team) performs triennial evaluations to ensure Centerra-Nevada demonstrates continued qualification for the Star program, identify problems that could adversely affect continued Star program qualification, and determine whether those problems require additional evaluation. This report provides the results of that triennial onsite evaluation and the Team's recommendation for Centerra-Nevada's continued participation in DOE-VPP.

The Team recommends that Centerra-Nevada continue in DOE-VPP in a *Conditional* status for 12-18 months while it works with the protective force (PROFORCE) to address these issues. Centerra-Nevada has faced significant challenges over the past 3 years. Budget restrictions, reduced PROFORCE numbers without corresponding reductions in patrol requirements, and degradation of facilities from severe weather contributed to increased workloads, extended time to address deficient conditions, or decisions to accept deficient conditions. In its desire to meet customer expectations, Centerra-Nevada managers sometimes make decisions that are not popular with the PROFORCE. PROFORCE members' frustrations with these conditions, in some cases, increase Security Police Officers' (SPO) sensitivity to managers' behaviors and language that appear to conflict with Centerra-Nevada's stated values. The result is that significant portions of the PROFORCE, while committed to performing work safely, do not believe they are in a partnership with Centerra-Nevada managers and are not participating in the safety program. A significant portion of the PROFORCE do not believe they can raise a safety issue without fear of reprisal. Many of the frustrations and perceptions result from ineffective communication both up and down the chain of command. In order to demonstrate the performance expected for a DOE-VPP Star site, Centerra-Nevada needs to: (1) evaluate and improve its communication methods; (2) work closely with the Independent Guard Association of Nevada to reestablish an effective partnership; (3) include workers in the hazard analysis and hazard control development processes; and (4) revise its stop-work policy and employee standards of conduct to remove the threat of insubordination if an SPO raises a safety concern.

The Centerra-Nevada mission is to protect activities at NNSS facilities against: unauthorized access, theft, or diversion of special nuclear material; acts of sabotage or espionage; theft or loss of 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. Centerra-Nevada works in concert with the Nye County Sheriff's Office who provides all traffic control, and TechSource who provides visitor control, badging operations, and security awareness programs for the site.

The Team performed the assessment from May 12-21, 2015. The assessment included reviews of Centerra-Nevada procedures, policies, orders, and training programs that implement its Integrated Safety Management System. The Team interviewed managers, supervisors, and

employees to elicit their views, opinions, and concerns, and identify those areas where Centerra-Nevada can focus its resources and efforts as it pursues continuous improvement in safety. Centerra-Nevada should consider the opportunities for improvement identified throughout this report, and address them in its annual VPP self-assessment report.

Centerra-Nevada managers are concerned for the health and welfare of the workforce, desire a safe and healthy workplace, and consider safety excellence a prerequisite for effective mission performance. Since the last VPP assessment in 2012, a significant gap in trust and communication has opened between SPOs and Centerra-Nevada managers. That gap is leading to an increased fear of reprisal, retaliation, or retribution among SPOs for raising safety concerns. In many cases, managers' actions and messages, as well as some Centerra-Nevada policies, are incongruent with the commitment to safety excellence, leading to workers' distrust of managers. In order to close that gap, and regain SPOs' trust, Centerra-Nevada needs to evaluate how it communicates with the workforce, including seeking professional communication assistance. Centerra-Nevada also needs to revise its policies to remove the threat of insubordination from its stop-work policy. Finally, it needs to implement an issue tracking system for all employee-raised concerns to ensure managers do not dismiss issues, and that the concerned individual accepts the resolution of the issue.

Employee Involvement at Centerra-Nevada is encouraged through incentives to participate in safety programs, such as motor vehicle safety, injury-free job performance, and the safety slogan contest. Centerra-Nevada safety committees strive to facilitate a safe and healthy working environment for all Centerra-Nevada employees.

Centerra-Nevada needs to remove barriers that prevent elevating concerns to the integrating senior safety committee and the feedback on the status of the concern. SPOs must accept their responsibility and accountability to continuously improve the work environment for all concerned and become engaged in the safety process.

Centerra-Nevada understands the fundamental hazards posed by the mission at NNSS. By involving the SPO workforce in the worksite analysis, Centerra-Nevada can improve the identification of hazards, the analysis of hazards, and implementation of controls in the risk analysis report (RAR) to reduce the need for interpretations of procedures in the field. As Centerra-Nevada pursues involvement of the SPOs, it can improve the documentation of RARs and orders by documenting the hazards analysis or referencing its existence in other documents. Tracking the number of issues corrected "on-the-spot," a leading indicator, can increase the scope of surveillance of the worksite.

Centerra-Nevada is engaged in identifying and preventing hazards in the workplace. Centerra-Nevada uses the hierarchy of controls to minimize or eliminate exposures and hazards. The occupational medical provider continues to provide support for Centerra-Nevada employees. Centerra-Nevada uses National Security Technologies, LLC's support for radiation protection other than radioactive sources managed by Centerra-Nevada to test detection equipment.

Centerra-Nevada has an extensive training program that ensures personnel have the skills and knowledge necessary to safely accomplish the security mission. The program incorporates an awareness of the hazards and risks encountered during training and patrol activities. While all employees receive training to recognize the hazards of the work environment, Centerra-Nevada

should periodically review training delivered in the field to ensure the training is effective. Centerra-Nevada could improve the professional development of lieutenants with a formal mentoring program.

**TABLE 1**  
**OPPORTUNITIES FOR IMPROVEMENT**

<b>Opportunity for Improvement</b>	<b>Page</b>
Centerra-Nevada should consider reviewing open safety issues in the CATS' database during the SSC meetings, including a review of the length of time the issue has been open and the effectiveness of the identified corrective actions.	4
Centerra-Nevada should modify its safety award program to find means that are more effective for workers to earn the award rather than qualify by not having an accident or injury.	5
Centerra-Nevada should review the NSTec Downtown Safety committee open letter to managers published in December 2014 and incorporate the recommendations into the Centerra-Nevada walkabout process.	6
Centerra-Nevada should seek professional communications assistance to help the company evaluate existing communication pathways, identify effective strategies to communicate with the workforce, and develop effective feedback mechanisms from the workforce.	8
Centerra-Nevada needs to change its approach to the annual survey results and recognize that if an employee is not sure they can report safety issues to managers without fear of retaliation, retribution, or reprisal, there is a significant safety culture issue.	8
Centerra-Nevada needs to revise its policies to remove the threat of insubordination from its stop-work policy.	9
Centerra-Nevada needs to review its suggestion system and work with employees to establish an effective process that ensures the employee making the suggestion agrees with, and accepts, the final resolution.	14
IGAN members need to reevaluate their commitment to the process and determine internally if VPP meets their needs. If IGAN decides to continue supporting VPP, the IGAN membership needs to accept its roles and responsibilities in establishing and maintaining effective communications.	14
SPOs must accept their responsibility and accountability to continually work at improving their work environment.	15
Centerra-Nevada should include an analysis column in the RAR table and provide instructions in SP2-016, <i>Risk Analysis Program</i> , defining the analysis and rationale information to include in the analysis column.	18



Centerra should conduct analysis of the chemical hazards from the diversionary devices and incorporate those hazards, analysis, and potential controls into the RAR.	18
Centerra-Nevada needs to revise SP2-016 to include SPOs as part of the RAR development team and include SPO input on the identification of hazards, the analysis of hazards, and the development of hazard controls in RARs and orders.	19
In order to clarify the hazard category assignment and ensure a consistent approach, Centerra-Nevada should define the thresholds for high, medium, or low hazard facilities.	20
Centerra-Nevada should consider documenting and tracking issues identified and corrected on the spot during facility inspections.	20
Centerra-Nevada should consider sending the ES&H manager and any other personnel involved in those investigations to formal accident investigator training.	20
Centerra-Nevada should request installation of bollards behind its administrative building for the backup generator and the unprotected circuit breakers.	22
Centerra-Nevada must correct the contradicting stop-work requirement to reflect expectations within ISMS, VPP, and 10 CFR 851, and review all procedures for confusing and inconsistent directions.	23
In the absence of a course walkdown, Centerra-Nevada should ensure it incorporates other compensatory controls (e.g., additional safety spotters, pads, or nonparticipant walkdowns to identify changed hazards) into the obstacle and Donga courses to help SPOs avoid hazards of tripping and falling due to degradation of the courses.	24
Centerra-Nevada should consider incorporating scenario-based training to help SPOs understand how and when to exercise personal judgement and legitimately raise safety concerns without countermanding the authority of superior officers.	25
Centerra-Nevada should strive to provide the appropriate setting for training; establish the training expectations; if outside of a classroom, to ensure ES&H training is effective; and trainers should periodically attend field training to review the quality of training delivered in the field.	26
Centerra-Nevada should consider implementing a formal mentoring program for new lieutenants.	27

## I. INTRODUCTION

Centerra-Nevada is the prime contractor for the security protective force (PROFORCE) and electronic security system services at the Nevada National Security Site (NNSS). WSI-Nevada (WSI-NV), the previous contractor, became Centerra-Nevada in 2014 following a corporate purchase. The corporate change did not affect the workscope or the management team. The National Nuclear Security Administration's (NNSA) Nevada Field Office (NFO) manages the contract and provides direction to, and oversight of, Centerra-Nevada. The Department of Energy (DOE) admitted Centerra-Nevada (and its predecessors) to the DOE Voluntary Protection Program (VPP) as a Star participant in 2001 and recertified it in 2004, 2008, and 2012.

As a DOE-VPP Star participant, the Office of Environment, Health, Safety and Security (AU) DOE-VPP team (Team) performs triennial evaluations to ensure Centerra-Nevada demonstrates continued qualification for the Star program, identify problems that could adversely affect continued Star program qualification, and to determine whether those problems require additional evaluation. This report provides the results of that triennial onsite evaluation and the Team's recommendation for Centerra-Nevada's continued participation in DOE-VPP.

The Team performed the assessment from May 12-21, 2015. The assessment included reviews of Centerra-Nevada procedures, policies, orders, and training programs that implement its Integrated Safety Management System (ISMS). The Team interviewed managers, supervisors, and employees to elicit their views, opinions, and concerns and identify those areas where Centerra-Nevada can focus its resources and efforts as it pursues continuous improvement in safety. Centerra-Nevada should consider the opportunities for improvement identified throughout this report and address them in its annual VPP self-assessment report.

Centerra-Nevada teams with Lockheed Martin, Pro2Serve, and Longenecker & Associates through subcontracts. Lockheed Martin provides technical services for security systems and information technology. Pro2Serve provides security systems engineering support. Longenecker & Associates supports the contractor assurance section. Although under subcontracts, Centerra-Nevada integrates these partners seamlessly into its overall organization. Centerra-Nevada employs approximately 300 people, about half of which are uniformed security police officers (SPO). The Independent Guard Association of Nevada (IGAN) Local Number 1 collectively represents the SPOs.

The Centerra-Nevada mission is to protect activities at NNSS facilities against: (1) unauthorized access, theft, or diversion of special nuclear material; (2) acts of sabotage or espionage; (3) theft or loss of classified matter; (4) theft or loss of government property; and (5) other hostile acts that may cause unacceptable impacts on National security, or on the health and safety of employees, the public, or the environment. Centerra-Nevada works in concert with the Nye County Sheriff's Office, which provides all traffic control, and TechSource that provides visitor control, badging operations, and security awareness programs for the site. Centerra-Nevada maintains special security capabilities in direct alignment with its primary mission.

## II. INJURY INCIDENCE/LOST WORKDAYS CASE RATE

Table 2.1 Injury Incidence/Lost Workdays Case Rate (Centerra)					
Calendar Year	Hours Worked	Total Recordable Cases (TRC)	TRC Rate	Days Away, Restricted, or Transferred (DART) Cases	DART Case Rate
2012	655,654	14	4.27	9	2.74
2013	610,298	13	4.26	10	3.27
2014	613,007	8	2.61	7	2.28
3-Year Total	1,878,959	35	3.73	26	2.77
Bureau of Labor Statistics (BLS-2013) average for NAICS * Code 92212, police protection.			11.5		5.1
Table 2.2 Injury Incidence/Lost Workdays Case Rate (Subcontractors)					
Calendar Year	Hours Worked	TRC	TRC Rate	DART Cases	DART Case Rate
2012	51,440	0	0	0	0
2013	58,809	0	0	0	0
2014	55,232	1	3.62	1	3.62
3-Year Total	165,481	1	1.21	1	1.21
Bureau of Labor Statistics (BLS-2013) average for NAICS * Code 92212, police protection.			11.5		5.1

\*North American Industry Classification System

**TRC Incidence Rates, including subcontractors: 3.52**

**DART Rates, including subcontractors: 2.64**

### Conclusion

In the first half of the fiscal year 2014, Centerra-Nevada reached a TRC rate of six. The General Manager, concerned with the high number of injuries, emphasized the use of safe work practices during his briefings at the muster of SPOs. The work-safely message also carried into other Centerra-Nevada meetings and the workforce, resulting in a significant decrease of the TRC and DART case rates (see Management Leadership). As of this assessment, the TRC rate is 0.4 for calendar year 2015. The Team reviewed several of the 122 reported injuries from 2012 to the present and found no discrepancies in the documentation of the injuries. Interviews with workers did not indicate any disincentives to report injuries. The Centerra-Nevada injury incidence rates continue to meet the expectations for continued participation in DOE-VPP.

### **III. MANAGEMENT LEADERSHIP**

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

In 2012, the Team determined that WSI-NV managers were committed to a strong and self-sustaining safety culture where all employees actively cared for the safety of each other. Mature policies, programs, and procedures were in place to support continuous safety improvement. There were areas where WSI-NV could improve its performance and gain employee support by modifying its management observations, improve its annual evaluation process, and change managers and workers' belief that injuries were unavoidable and expected during training. The Team recommended that WSI-NV managers should continue to explore methods to improve communications and further develop partnerships with workers based on communication, respect, and trust.

A dedicated, experienced management team that has been at the site for many years continues to lead Centerra-Nevada. The management team is visible to workers, understands the issues and problems facing the workforce on a daily basis, knows most workers by name, and cares about the workforce's morale and welfare. Managers are listening to concerns and issues raised by workers and rewarding them for taking appropriate actions. For example, Centerra-Nevada has issued over 300 "good job" recognitions since January 2015. Those recognitions take the form of coins, letters, cash awards, and verbal recognition at musters. The General Manager frequently talks about safety in the workplace, the need for personnel to identify issues, recommend solutions, and be accountable.

Centerra-Nevada has an extensive set of policies, procedures, and orders that include safety and health. These include an approved Worker Safety and Health Plan that implements the requirements of title 10, Code of Federal Regulations part 851 (10 CFR 851). These establish the expectations and practices for most tasks that Centerra-Nevada performs. For work other than the PROFORCE patrols, Centerra-Nevada uses the National Security Technologies, LLC's (NSTec) work planning and control process and Real Estate Operations Permits.

Centerra-Nevada has a small environment, safety, and health (ES&H) support staff that consists of three people. These three personnel provide subject matter expertise in occupational safety, industrial hygiene, and environmental protection. Centerra-Nevada also has access to NSTec resources through service requests for personnel support and a memorandum of understanding for borrowing equipment.

Centerra-Nevada uses three safety committees to address safety issues and concerns (see Employee Involvement). One of those three committees is the senior safety committee (SSC) that integrates the activities of the other two committees. The SSC prioritizes recommendations from the other two safety committees and can assign resources if necessary to address an issue. The General Manager chairs the SSC, which includes senior managers, the chairpersons for the employee safety committee (ESC) and PROFORCE safety committee (PFSC), and a member of the IGAN executive board. The SSC meets monthly.

The SSC met during this assessment, and the Team observed the meeting. The committee records the meetings so Centerra-Nevada can accurately prepare the minutes. The meeting began with a discussion of recent injuries and accidents, updates on the TRC and DART rates, and a discussion of vehicle accidents. The committee then discussed open issues raised from the other two committees and other issues the company is working to address. The SSC meeting observed by the Team did not include a review of open issues in the Consolidated Assessment Tracking System (CATS). That system includes all significant issues identified by assessments, inspections, evaluations, or raised by the safety committees. As a means of tracking those issues, and ensuring that it assigns appropriate resources, Centerra-Nevada should consider reviewing open safety issues in the CATS database during the SSC meetings, including a review of the length of time the issue has been open, and the effectiveness of the identified corrective actions.

**Opportunity for Improvement:** Centerra-Nevada should consider reviewing open safety issues in the CATS' database during the SSC meetings, including a review of the length of time the issue has been open and the effectiveness of the identified corrective actions.

Over the past several months, Centerra-Nevada has seen a significant reduction in the number of injuries reported. During interviews, managers could not attribute this reduction to any specific efforts, but believed it was the result of continued emphasis by managers and supervisors on attention to safety in every activity. Workers did not describe any concerns about reporting injuries. The General Manager recognizes the difficulty of maintaining that level of attention and believes that Centerra-Nevada must find ways to avoid complacency if personnel lose their focus on safety. To prevent complacency, the General Manager is looking for ways to "refresh the safety program." As part of that effort, and to ensure Centerra-Nevada addresses issues that lead to injuries, Centerra-Nevada recently began a *Safe Work Continuation* program. In that process, the general manager, deputy manager, safety and health manager, union stewards, and the injured person discuss the accident or incident. The managers try to ask probing, open-ended questions in a nonthreatening environment to identify process weaknesses, expectations, or other contributing factors. Centerra-Nevada conducted the first such meeting during this assessment after an SPO suffered a back strain while inspecting a truck entering the site. During the meeting, the managers were inquisitive and caring, and the meeting identified several potential suggestions to prevent such an injury in the future. Those suggestions included both potential behavioral changes, revision of the post orders, and possible engineering changes at the security post.

Centerra-Nevada continues to have an annual Safety Award Program (\$25 per quarter, up to \$100 per year). This program disqualifies personnel on a quarterly basis that have an at-fault or preventable accident or injury during the quarter. The award accumulates through the year and is included in a regular paycheck in July. Although this program could appear to discourage

workers from reporting an accident or injury, no workers identified this program as discouraging them from reporting. More significantly, the Team did not identify any personnel that were either aware of the award or had noticed it in their paycheck. With approximately 300 personnel company-wide that participate in the safety award program, Centerra-Nevada could be spending approximately \$30,000 annually on an incentive program that is not effective. Centerra-Nevada should modify its safety award program to find means that are more effective for workers to earn the award rather than qualify by not having an accident or injury. Such a change could be included in the General Manager's effort to refresh the safety program previously discussed.

**Opportunity for Improvement:** Centerra-Nevada should modify its safety award program to find means that are more effective for workers to earn the award rather than qualify by not having an accident or injury.

Centerra-Nevada provides resources for outreach, employee involvement, and community support. Often, these resources come out of the award fee rather than reimbursable costs on the contract reflecting the parent company's recognition of the importance of these activities. Centerra-Nevada has used its award fee to sponsor an employee softball team, donated to the Susan G. Komen *Race for the Cure*, supports a local elementary school, and provided meals and holiday stockings for needy members of the community.

A few years ago, in an attempt to increase managers' presence and visibility to the PROFORCE, Centerra-Nevada managers began performing walkabout tours. Initially, these walkabouts were informal, unscheduled visits to patrol stations. Managers would arrive, spend a few minutes with the SPOs, ask them if there were any issues or problems, and then leave. SPOs rarely reported any issues or concerns during these visits because the visits were too short to spark the conversations. Managers did not delve into specific areas or issues with the SPOs, and eventually Centerra-Nevada came to the belief that the visits had little or no productive value. After the Y-12 security incident in 2012, Centerra-Nevada began using these manager walkabouts as part of its quality assurance program. Rather than informal, unscheduled visits, Centerra-Nevada began assigning specific times, locations, and tasks to observe for manager walkabouts. The managers submit a written report from the walkabout and include any issues or problems that the manager or SPOs identify. Centerra-Nevada encourages managers to use these walkabouts as an opportunity to interact, build relationships with the SPOs and build credibility and familiarity between managers and the PROFORCE.

In order to help establish and verify high levels of readiness and competency, Centerra-Nevada began using these walkabouts to conduct limited Performance Testing. This practice has had the effect, in most cases, of causing managers to focus on specifically identified topics with little other interaction. While this process fulfills a specific quality need, it has reduced the effectiveness of the walkabouts in helping managers improve their working relationship with the PROFORCE personnel. Because of the specific observations, the SPOs treat these manager walkabouts as they would any other inspection or assessment and do not believe the visits are always constructive.

The NSTec Downtown Safety Committee published in its November/December 2014 newsletter an open letter to managers regarding how managers could be more effective in their worksite visits and employee interactions. Although Centerra-Nevada and NSTec have a close working

relationship, Centerra-Nevada managers were not aware of that letter. That letter identified several insightful recommendations for managers when interacting with workers during worksite visits. In order to help improve worker trust of managers, Centerra-Nevada should review the NSTec Downtown Safety committee open letter to managers published in December 2014 and incorporate the recommendations into the Centerra-Nevada walkabout process.

**Opportunity for Improvement:** Centerra-Nevada should review the NSTec Downtown Safety committee open letter to managers published in December 2014 and incorporate the recommendations into the Centerra-Nevada walkabout process.

Over the past few years, Federal budget restrictions and sequestration have stretched the Centerra-Nevada operating budget. These limitations, combined with security program requirements arising from other issues throughout the DOE/NNSA complex, have created the need for significant austerity in all Centerra-Nevada's programs and, in some cases, created significant problems for workers. Centerra-Nevada managers are working with DOE/NNSA to address those problems and concerns raised by PROFORCE personnel, but with limited success. One particularly emotional issue for PROFORCE personnel has been the ability to perform on-duty physical training. DOE/NNSA removed that ability in 2009 based on a DOE/NNSA determination that the government would save money by not permitting on-duty physical training. That decision, however, had unintended consequences. Since 2009, NNSA has reduced authorized security forces at NNSS from 300 to 165 authorized SPOs. Although NNSA reduced the number of authorized SPOs and reduced some security patrol requirements, the resulting workload has stressed the PROFORCE. Centerra-Nevada is working with NFO and the NNSA's Chief Defense Nuclear Security to obtain an increase in the PROFORCE authorized strength. As a result, many SPOs work 14-hour days, 4 or 5 days a week. Any increase to a workload beyond 5 days requires the approval of the General Manager. To meet physical conditioning requirements, Centerra-Nevada expects the PROFORCE to participate in fitness activities on their personal time at least 3 times per week. Combined with a lengthy commute in each direction, many members of the PROFORCE believe this schedule leaves them with insufficient time to sleep, perform physical training, and participate in personal off-duty activities. Additionally, some PROFORCE members consider the expectation an unfair imposition of work activities on personal time. Because of the reductions, SPOs may spend an entire shift in one location without rotation to other posts. Coupled with the commuting demands, the unintended consequence of these practices is boredom and lower worker morale. The current manning level does allow PROFORCE members to earn significantly more money from overtime work. Centerra-Nevada is trying to permit the financial benefit while preventing a reduction in performance and health. Managers encourage PROFORCE employees to ask for time off if necessary, but this approach has not been fully effective.

In accordance with the agreement between Centerra-Nevada and IGAN, SPOs bid for their shifts weekly based on seniority. The uncertainty for lower seniority personnel resulting from this practice also contributes to worker dissatisfaction and distrust. Approximately two-thirds of the workforce is capable due to seniority of selecting and keeping the shifts for which they bid. This leaves the other one-third unable to plan their work schedule. If workers are absent for any reason, these same lower seniority personnel could be directed or "called out" on additional overtime; but since 2012, there has not been a single instance when personnel with less seniority have been involuntarily called out. Some higher seniority personnel do not help other workers

by taking additional overtime, resulting in a heavier overtime load on junior personnel. This condition may be contributing to some polarization within PROFORCE, with PROFORCE members blaming managers for a condition beyond Centerra-Nevada's control.

Centerra-Nevada has a strong reliance on discipline as a means of ensuring SPOs understand the importance of following orders. Unfortunately, SPOs' perception of discipline is also contributing to workers' distrust of managers. Managers follow the letter and intent of the collective bargaining agreement when they believe SPOs do not follow shift and general orders. This process begins with the supervisor or manager issuing a Notice of Potential Discipline (NOPD). The NOPD itself is nonpunitive and serves notice to the worker that there will be an investigation and hearing, but workers perceive it as punitive. Centerra-Nevada rescinded approximately 25 to 30 percent of NOPDs between May 2013 and May 2015 after investigating the circumstances. The Centerra-Nevada disciplinary process requires: "Upon completion of the investigation of the violation, if there is probable cause for corrective disciplinary action, managers will give a written notice, Form CN-037, *Notification of Pending Disciplinary Action*, to bargaining unit employees." The collective bargaining agreement with IGAN requires the NOPD to notify personnel of an investigation. Centerra-Nevada uses many other nonpunitive methods to correct behavior and maintain discipline (counseling), but SPOs perceive any corrective action as punishment.

Communication of corrective actions/issue status remains a significant concern among Centerra-Nevada managers and workers alike. In 2012, the Team identified that "A very small group of employees perceived a potential fear of reprisal that was discussed at length with both the employees and Centerra-Nevada managers." The Team recommended "Centerra-Nevada managers should find effective means to communicate with employees when rumors or misinformation begin to permeate the workforce." In response to that opportunity for improvement, Centerra-Nevada decided that it had multiple means of communicating with the workforce to include newsletters, muster briefings, labor management meetings, managers' visits, and the use of video conferencing, and that implementing the recommendation had limited productive value. Consequently, Centerra-Nevada took no action to evaluate the effectiveness of those communication paths.

Centerra-Nevada continues to use the same methods, but managers and SPOs alike continue to complain about communication. In many cases, SPOs raise safety issues verbally to their supervisor or safety representative, but never submit the issue in written form. The supervisors may filter those issues, make a determination that the issue is not a safety issue, or just ignore the issue. Since SPOs are not using the available written format (fear of reprisal), there is no mechanism to ensure the safety committees review all issues, and no means exist to ensure Centerra-Nevada provides effective feedback on the issues, further contributing to perceptions of communication problems. Despite the depth and breadth of the communication problems, Centerra-Nevada has not asked the safety committees to address this issue nor did the SSC identify communication as a topic for discussion during its meetings. Managers continue to make other communication errors, such as sending e-mails that are misinterpreted as derogatory to the SPOs, or do not make it clear why managers are directing specific actions. An often-cited communication problem from workers was that managers dismissed or "squashed" concerns as non-safety issues, or the issues are never raised through the safety committee structure. Feedback mechanisms on issues do not ensure that personnel are aware of, or agree with, the final resolution. Although all managers and nearly all workers interviewed recognized



communication as a problem, Centerra-Nevada has not initiated any targeted effort to identify effective communication channels and strategies. To improve communications, Centerra-Nevada should seek professional assistance to evaluate existing communication pathways, identify effective strategies to communicate with the workforce, and develop effective feedback mechanisms from the workforce.

**Opportunity for Improvement:** Centerra-Nevada should seek professional communications assistance to evaluate existing communication pathways, identify effective strategies to communicate with the workforce, and develop effective feedback mechanisms from the workforce.

Centerra-Nevada conducts annual VPP self-assessments. It has used the same questions in 2013 and 2014 to compare results and identify shifts in employee opinions and perceptions. Unfortunately, Centerra-Nevada has not effectively used those survey results to identify and correct some safety culture problems. Consequently, it has not effectively addressed minority opinions representing 10-30 percent of the workforce. For example, the 2014 survey analysis determined that: “Seventy-one percent of employees surveyed felt they can raise issues regarding safety and health concerns to management without fear of reprisal, retribution, or retaliation. This represents a 7 percent decrease from the 2013 Employee Survey because more employees selected a neutral response (18 percent). The percentage of employees that disagreed remained unchanged (10 percent).” Most managers believed the SPOs do not treat neutral answers as a negative response. Centerra-Nevada needs to change its approach to the annual survey results and recognize that if an employee is not sure they can report safety issues to managers without fear of retaliation, retribution, or reprisal, there is a significant safety culture issue.

**Opportunity for Improvement:** Centerra-Nevada needs to change its approach to the annual survey results and recognize that if an employee is not sure they can report safety issues to managers without fear of retaliation, retribution, or reprisal, there is a significant safety culture issue.

The Team identified a number of contributors to SPOs’ concern about retribution, retaliation, or reprisal. The Centerra-Nevada *Stop Work Policy*, *Employee Standards of Conduct*, and *Worker Safety and Health* plan all establish the employees’ right to stop work and define the process to implement that right. These policies and procedures also contain restrictions on that right and allow a manager to determine a worker is insubordinate if they refuse to perform a task or follow orders. This limitation creates an internal conflict in the procedures that discourages SPOs from raising questions or stopping work. The stop-work policy restricts the use of stop work to an imminent danger situation. That policy defines imminent danger as “any condition or practice that creates a hazard that could reasonably be expected to cause death or serious physical harm to employees, permanent or prolonged impairment of the body or temporary disablement requiring hospitalization, unless immediate actions are taken to mitigate the effects of the hazard and/or remove employees from the hazard.” The *Employee Standards of Conduct* establish that “employees may refuse to obey instructions of their supervisors if they believe the order presents imminent danger, is illegal, immoral, or unethical. Refusal to obey instructions the employee believes presents imminent danger will be considered insubordination unless the following two

conditions are met: (1) the employee must clearly state the safety or health reasons for refusing the assignment; and (2) the alleged hazard must be clearly beyond the usual risk of the employee's job." Although a seemingly logical progression, the second provision is ambiguous and employees believe Centerra-Nevada uses the "usual risk" determination against an employee that raises a concern or stops work. 10 CFR 851.20(b)(9) establishes that workers have the right, without reprisal, to "stop work when the worker discovers employee exposures to imminently dangerous conditions or other serious hazards; provided that any stop-work authority must be exercised in a justifiable and responsible manner in accordance with procedures established in the approved worker safety and health program." However, expecting a worker to make that decision or face punishment for insubordination creates a fear of reprisal among the workforce and appears to exceed the intent of that provision.

PROFORCE personnel frequently cited one case as demonstrative of their concern about willingness to use the stop-work process. Under Centerra-Nevada procedures, insubordination carries a threat of termination. In this case, an SPO moved his duty position from the middle of the road to the side of the road because he was concerned about standing in the road with high-speed traffic approaching from behind him. The SPO did not inform his lieutenant or seek approval prior to taking the action in accordance with his orders, and was issued the NOPD for not following his orders. Centerra-Nevada reviewed the circumstances of the NOPD and, after careful consideration and discussion with the chain of command, elected to rescind the NOPD, but did require corrective training for the SPO. In this case, however, the immediate reaction that threatened discipline when the SPO was concerned for his personal safety has had a significant and lasting impression on the PROFORCE that Centerra-Nevada has not yet been able to reverse. Centerra-Nevada needs to revise its policies to remove the threat of insubordination from its stop-work policy.

<p><b>Opportunity for Improvement:</b> Centerra-Nevada needs to revise its policies to remove the threat of insubordination from its stop-work policy.</p>
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Centerra-Nevada has an annual self-assessment process that identifies issues and concerns and establishes goals for the coming year. The assessment did a good job identifying positive aspects of the Centerra-Nevada safety and health program, but did not establish goals and objectives addressing the cultural issues and perceptions the Team identified. The goals and objectives established in the report focus on lagging indicators of safety rather than identifying specific program improvements and efforts that will drive those lagging indicators. For example, goals established for 2014 were to reduce occupational injury/illness rates by 10 percent, reduce the total number of injuries and illnesses by 10 percent, achieve 1,000,000 miles driven without a preventable accident, and achieve 4,000,000 miles driven without an at-fault recordable accident. There was no discussion in the report about how Centerra-Nevada would achieve these goals. The report established similar goals for 2015 without programmatic recommendations.

A positive aspect of the 2014 assessment was that it collected, evaluated for collective significance, and then discussed comments provided during the survey. The issues raised were the same issues raised by SPOs to the Team during this assessment. In most cases, Centerra-Nevada kept the issues open, or closed them with continued monitoring. The answers provided in the annual assessment were responsive to the issue, and did explain the basis for closing or monitoring the issue. The fact that SPOs continued to identify many of the same

issues to the Team is symptomatic of the communications and trust problems previously discussed.

## **Conclusion**

Centerra-Nevada managers are concerned for the health and welfare of the workforce, desire a safe and healthy workplace, and consider safety excellence a prerequisite for effective mission performance. Since the last VPP assessment in 2012, a significant gap in trust and communication has opened between SPOs and Centerra-Nevada managers. That gap is leading to an increased fear of reprisal, retaliation, or retribution among SPOs for raising safety concerns. In many cases, managers' actions and messages, as well as some Centerra-Nevada policies, are incongruent with the commitment to safety excellence, leading to workers' distrust of managers. In order to close that gap, and regain SPOs' trust, Centerra-Nevada needs to evaluate how it communicates with the workforce, including seeking professional communication assistance. Centerra-Nevada also needs to revise its policies to remove the threat of insubordination from its stop-work policy. Finally, it needs to implement issues tracking systems for all employee-raised concerns to ensure no one dismisses a concern, and that the concerned individual accepts the resolution of the issue. Once it addresses these issues, Centerra-Nevada will meet the expectations for Management Leadership and continued participation in DOE-VPP.

#### IV. EMPLOYEE INVOLVEMENT

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

The 2012 review observed employees engaged in safety activities and improvements at Centerra-Nevada. Centerra-Nevada was addressing worker suggestions although the method to communicate the status of their inputs needed managers' attention. Employees expressed a need for greater opportunities to participate in those activities, such as training on accident and incident investigations, and including them as members of the accident or incident investigation team. The 2012 Team observed employees actively participating in safety awareness campaigns and involved in safety committees with strong management support. The 2012 Team, through interviews, found indications that management presence on some committees may be eclipsing employee participation. Despite this management presence, workers remained significantly involved in their personal safety and that of their peers. They understood their rights to a safe and healthy workplace and their responsibility for helping to create that condition. The 2015 Team observed that some issues observed in 2012 still remain even though they are considered closed by the contractor.

Worker involvement at Centerra-Nevada is encouraged through incentives to participate in safety programs, such as motor vehicle safety, injury-free job performance, and the safety slogan contest. SP2-017, *Safety Awards Program*, states that the purpose of the safety awards program is to promote a heightened awareness among employees that contribute to a safe work culture. SP10-608, *Recognition Programs*, documents the standard practices to recognize employees, such as monetary awards for safety slogans, safe driving, or on-the-spot *Safety Bravo* awards, and distinguished performance. Other recognition awards include attendance awards, suggestion awards, proficiency awards, *Above and Beyond the Call of Duty* awards, and group/team recognition.

SP2-027, *Safety Committee Program*, describes the Centerra-Nevada safety committees. The purpose of safety committees is to "facilitate a safe and healthy working environment for all Centerra-Nevada employees through employee involvement, employee feedback, and continuous improvement of safety and health programs." There are three safety committees with separate charters and scope. The ESC is predominantly composed of non-management members. The PFSC is composed mainly of PROFORCE managers. The SSC is predominantly senior managers. Each of these committees has a charter and scope with meeting minutes recorded and posted on company bulletin boards. Conceptually, the intent of the three-committee approach is to engage workers with the SSC assuming the role of integrating the input from the ESC and the PFSC. However, the Team observed that the makeup of the individual committees weighed heavily toward a management-driven process that could potentially minimize the input and

effectiveness of the employee-operated ESC and creating the potential for the PFSC to dismiss concerns before senior managers properly evaluate the concerns in the SSC.

The ESC charter states that the primary purpose of the committee is to involve employees in ES&H matters, empowering them to contribute to the safety and health of the workplace. The membership includes a chairperson, cochair, and representatives from each of the following organizations: two security service members, one from North Las Vegas (NLV) and one from NNSS; one from plans and operations; one from support services; one from fitness and facilities; one from electronic security systems; one from training; one from Pro2Serve; and five from IGAN. Each of these members has one vote for the purposes of approving or disapproving minutes, initiatives, or other committee actions. Nonvoting members may include an administrative assistant to record meeting minutes, an ES&H specialist, and the ES&H manager. The charter states that any employee of Centerra-Nevada may attend the monthly meetings. ESC members receive training (10-hour Occupational Safety and Health Administration (OSHA)) to familiarize them with potential safety issues, and Centerra-Nevada expects ESC members to inspect the facilities they represent at least quarterly. The charter indicates that members serve a term of 2 years unless operational necessity dictates otherwise as determined by senior managers. A weakness brought to the Team's attention during this assessment centers on the inability of committee members to attend the meetings because schedule and staffing requirements make it difficult for members to find an alternate to cover their post. The senior managers, committee chairs, and the union are trying to find solutions to permit greater employee participation in the safety committees.

The PFSC provides a forum to address policies and practices related to training, equipment purchases, or other items deemed appropriate by the chairperson. Voting members include the director of security services, the ES&H manager, the manager of protective forces, the manager of support services, a labor relations specialist, the coordinator for emergency management, the coordinator for performance test and assessments, an instructor for the training academy, the ESC chairperson, a protective force lieutenant, an IGAN executive board member, and an IGAN member. The charter spells out the voting members, but the meeting minutes indicate that the ESC chair is not a voting member. Nonvoting members include the coordinator for quality assurance, PROFORCE labor relations, and the PROFORCE administrative assistant.

The SSC integrates the ESC and PFSC recommendations, prioritizes, and assigns resources to those recommendations. The general manager chairs the SSC and voting members include: representatives from each of the two other safety committees (PFSC and ESC); the deputy general manager; the director of field services; the director of technical security and support; the director of contract assurance; the director of safety, training, and performance; the director of security services (who also serves as the chair for the PFSC); the manager of human resources; the manager of security systems engineering (Pro2Serve); the ES&H manager; the manager of the training academy; the ESC chairperson; and one member from the executive board of IGAN.

Centerra-Nevada provided the Team with several examples where the committee system worked to enhance the safety of the workforce. Examples include the earplug fit-testing program, addressing washouts and hazardous driving conditions, implementation of the safe work continuation program, mitigations concerning wearing the gas mask while inspecting vehicles or badge checks, and water dispensers.

A weakness of the Centerra-Nevada committee system centers on the barriers to elevate a concern to the integrating SSC and provide feedback on the status of the concern. For PROFORCE issues, the ESC or individuals can forward concerns and suggestions to the PFSC. The ESC can also address other employee issues. In addition to committee involvement, IGAN, through its executive leadership, can elevate issues directly to Centerra-Nevada managers through e-mail or personal contact. Several employees voiced their experiences with feedback on concerns or suggestions they submitted to ESC or to their supervisor. They said they never hear if managers addressed the suggestion or if managers dismissed the concern or suggestion. The union president also acknowledged that sometimes managers dismiss concerns prior to receiving consideration at a safety committee. Although interviewees could not provide examples, employees said this was a common occurrence.

During this assessment, the union president talked about an e-mail that the PROFORCE acquired that indicated PROFORCE supervisors should be checking posts more frequently. According to the union president, union members misconstrued the wording and the intent of e-mail, which contributed to their distrust of managers. Neither the union nor the company has engaged the union members in a dialogue to clarify the e-mail's message.

An example where barriers have contributed to ineffective communication is the suggestion to employ automated external defibrillators (AED) at the Device Assembly Facility (DAF). A PROFORCE member initially suggested that Centerra-Nevada install AEDs in November 2014. Centerra-Nevada formally evaluated the suggestion and provided both written and verbal feedback to that SPO detailing why it did not intend to pursue the suggestion. In May 2015, an IGAN executive again suggested deployment of AEDs and a rescue chair for DAF. He e-mailed his manager and copied several other PROFORCE leaders about deployment, but did not use other means, such as documenting the suggestion on a Centerra-Nevada suggestion form or speaking directly with managers. The individual then wrote a letter to the SPO assigned to attend the PFSC monthly meeting outlining his suggestion. That SPO could not attend the PFSC monthly meeting because he could not be relieved from his post. As of this assessment, he had received no response for his efforts to communicate via e-mail. In this case, Centerra-Nevada believed it had already addressed the issue in November 2014, but the IGAN executive raising the issue in May 2015 believed Centerra-Nevada was ignoring his suggestion.

Centerra-Nevada has several ways for employees to suggest improvements, but SPOs are not using them. The current system advises employees to contact their manager or a safety committee member for a concern or suggestion or submit a written suggestion form. The Team noted that tracking occurs in the ESC meeting minutes for items identified by ESC members, but not for suggestions outside of the ESC, such as through supervisors. The person responsible for maintaining the CATS system only enters and tracks issues when directed by managers. Centerra-Nevada has a suggestion system whereby an employee can submit a concern anonymously. Centerra-Nevada reviews every suggestion. If the suggestion owner provides his name, Centerra-Nevada communicates the status of the suggestion and the rationale behind the decisions back to the employee. Despite this process, several personnel interviewed by the Team did not believe Centerra-Nevada effectively involved them in the review and resolution of their concern. Centerra-Nevada needs to review its suggestion system and work with employees to establish an effective process that ensures the employee making the suggestion agrees with, and accepts, the final resolution.

**Opportunity for Improvement:** Centerra-Nevada needs to review its suggestion system and work with employees to establish an effective process that ensures the employee making the suggestion agrees with, and accepts, the final resolution.

The IGAN members do not agree among themselves about their desired direction and involvement in VPP. The ESC Chair and the IGAN president, according to both parties, rarely agree about the significance of member-raised issues. Many SPOs were frustrated that their efforts to raise issues did not receive attention. Other SPOs simply quit offering suggestions or raising issues. This attitude is contributing to the communications problems between SPOs and managers. In order to reestablish effective employee involvement in the Centerra-Nevada safety program, the IGAN members need to reevaluate their commitment to the process and determine internally if VPP meets their needs. If IGAN decides to continue supporting VPP, the IGAN membership needs to accept its roles and responsibilities in establishing and maintaining effective communications.

**Opportunity for Improvement:** IGAN members need to reevaluate their commitment to the process and determine internally if VPP meets their needs. If IGAN decides to continue supporting VPP, the IGAN membership needs to accept its roles and responsibilities in establishing and maintaining effective communications.

SPOs have raised several issues repeatedly over the years, and have not agreed with or accepted the responses. In some of these cases, the SPOs refuse to believe the company is addressing the issue or are refusing to accept their responsibilities to help address the issue. For example, some SPOs have complained for several years about safety of the obstacle and tactical Donga training course. In response to those issues, Centerra-Nevada managers and IGAN union leaders reviewed the course, but did not agree there were safety issues. Centerra-Nevada determined the risks associated with the course reflected actual tactical risks SPOs would encounter. Centerra-Nevada is moving the course to a different location, but must await external approvals to use the course for required semiannual qualifications. The delay has led to a belief among the SPOs that Centerra-Nevada is not listening to their concerns. Another example raised by SPOs was emergency lighting in the Central Alarm Station that did not work. Centerra-Nevada determined that modifications to the normal lighting system provided backup power, and eliminated the need for the emergency lights, but the lights remain installed. Centerra-Nevada submitted a work request to NSTec to have these lights removed. This work request was a low priority and had not yet been funded. Centerra-Nevada discussed this issue during the PROFORCE Annual Training (PFAT). In the time between identifying the condition and hearing the resolution in PFAT, many SPOs convinced themselves the nonworking emergency lights were a safety issue that Centerra-Nevada was not addressing.

Another issue among SPOs is the requirement to wear the respirator in a bag on their legs while conducting various activities. SPOs believe the respirator bag interferes with their ability to perform some activities safely, such as driving, or climbing into truck cabs for vehicle inspections. Initially, Centerra-Nevada responded to this concern by modifying the station orders to allow SPOs to request permission to remove the respirator bag on a case-by-case basis. During this assessment, Centerra-Nevada revised the station order allowing SPOs to make the decision without requesting permission. Due to the communication issues previously discussed, SPOs were not aware of this change, and they continued to complain about the respirator bags.

Some issues raised by SPOs reflect issues created by SPOs themselves. For example, SPOs legitimately complained about cleanliness of water dispensers placed in stations. Centerra-Nevada attempted to solve the problem by providing cleaning supplies and procedures, and assigned cleaning responsibility to the B shift (night shift). Some SPOs on the A shift (day shift) do not trust the B shift SPOs to perform that responsibility, and refuse to clean the water dispensers themselves. SPOs have also raised station and vehicle cleanliness as issues, but refused to hold their fellow SPOs accountable for those conditions and contribute to the solution. Finally, SPOs have complained about not having cargo netting in security vehicles for loose gear, but do not properly store the gear inside the vehicles. SPOs must accept their responsibility and accountability to continually work at improving their work environment.

**Opportunity for Improvement:** SPOs must accept their responsibility and accountability to continually work at improving their work environment.

In other cases, issues that are beyond Centerra-Nevada's control frustrate SPOs. For example, SPOs were consistent in their desire to return to performing physical fitness training while on shift. In 2009, DOE/NNSA directed termination of this practice as a cost-savings measure. Centerra-Nevada has presented its case to restore this practice and is awaiting a final decision from DOE/NNSA, as well as funding to put the necessary resources in place. SPOs are frustrated by the amount of time it is taking to resolve the issue and frequently cite this as an example of Centerra-Nevada not listening to worker concerns. Similarly, SPOs cite other issues beyond company control as examples of Centerra-Nevada not listening to workers. These examples include repair of rough or washed out roads, signs and safety reflectors for truck and bus lanes at control points, and the operation and maintenance of the tower hatch at DAF.

In some cases, SPOs believe Centerra-Nevada has not adequately evaluated their concerns. This was particularly evident in the SPOs' concerns about the obstacle and Donga course. Centerra-Nevada's annual VPP self-assessment reports that there have been no accidents or injuries associated with semiannual qualification on the obstacle and Donga courses based on reviews of recordable injuries since 2008. SPOs reported cases to the Team where personnel tripped, fell, and experienced injuries during qualification and training events, but those cases were either not reported, or were not categorized as recordable injuries. SPOs were also concerned that Centerra-Nevada did not adequately consider deterioration of the course due to recent rains. The SPOs did not agree that the course adequately represented the actual terrain they would encounter and believed the tripping hazards presented by the course were not a necessary risk. As previously mentioned, in response to this repeated concern, Centerra-Nevada is moving the entire course to a different location, but the distrust created by the disagreement will take more effort to resolve.

Centerra-Nevada managers and workers are aware that communication barriers are a major contributing issue to the current culture. The discussions in the Management Leadership tenet, as well as observations detailed in the Employee Involvement tenet, indicate that issues observed by the 2012 Team persist as of this assessment at Centerra-Nevada.

## Conclusion

Worker involvement at Centerra-Nevada is encouraged through incentives to participate in safety programs, such as motor vehicle safety, injury-free job performance, and the safety slogan



contest. Centerra-Nevada safety committees strive to facilitate a safe and healthy working environment for all Centerra-Nevada employees. Centerra-Nevada needs to remove barriers that prevent elevating concerns to the integrating SSC and providing feedback on concern status. SPOs must accept their responsibility and accountability to continuously improve the work environment for all concerned and become fully engaged in the safety process to demonstrate the expectations for Employee Involvement and continued participation in DOE-VPP.

## 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. Implementation of the first two core functions of ISMS, defining the scope of work and identifying and analyzing hazards, form the basis for a systematic approach to identifying and analyzing 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 regarding additional hazards that are encountered and include a system to ensure that new or newly recognized hazards are properly addressed. Successful worksite analysis also involves implementing preventive and/or mitigating measures during work planning to anticipate and minimize the impact of such hazards.

In the 2012 assessment, the Team found the basic structure for hazard analysis that the workforce was familiar and comfortable with the mechanics of the process, and the contractor understood the fundamental hazards posed by the security mission at NNSS. The Team recommended that the contractor devote more attention to refining its hazard analysis methods by assuring that it validated control selection, avoided the use of generic descriptors, and documented the rationale for control selection, quantitatively if practical. The contractor had access to a tracking database to monitor issues raised by the employees and safety committees, but the Team recommended the contractor should continue looking for additional methods to foster better communication of results to its employees.

Since 2008, Centerra-Nevada has used the procedure, *Risk Analysis Program*, SP2-016, as the guide to develop the workscope, work activities, hazard identification, hazard controls, and the risk of the activity. Centerra-Nevada uses this information to build the risk analysis report (RAR). Centerra-Nevada develops an RAR for all new firearms and/or explosives-related facilities, training, and operations. The RAR contains a general description of the activity and a table that includes more detailed work activities, associated hazards, hazard controls, and a risk computation of the activity. As in the past two assessments, Centerra-Nevada does not include the analysis of the hazards that justifies the selected controls in the table. The Team reviewed several RARs and found general descriptions of controls without a link to the analysis and rationale of the control. The tables did not contain an analysis of the hazards and the rationale to validate the control selection. For example, in RAR 10-006, *Device Assembly Facility (DAF) Force on Force Training Exercise*, controls include “gloves are recommended,” “eye protection is required,” and “participants must wear clothing and protective gear appropriate to tasks.” The general descriptors of controls, such as “gloves are recommended,” do not communicate the intended controls recommended by a subject matter expert, and may allow SPOs and supervisors to select controls based on their experiences. Including the specific analytical details in the RAR would provide a ready resource for personnel to either better understand the control selected or give them a basis to challenge the specific controls and suggest improvements. Centerra-Nevada should include an analysis column in the RAR table and provide instructions in SP2-016, *Risk Analysis Program*, defining the analysis and rationale information to include in the analysis column.

**Opportunity for Improvement:** Centerra-Nevada should include an analysis column in the RAR table and provide instructions in SP2-016, *Risk Analysis Program*, defining the analysis and rationale information to include in the analysis column.

In another example, RAR 10-007, *Diversionary Device*, the scope of work includes the live fire of diversionary devices (smoke grenades) during training. This RAR involves devices that, when used, will create significant health exposure issues. In May 2004, Sandia National Laboratories conducted toxicological testing of smoke grenades and measured elevated levels of acrolein, formaldehyde, and crotonaldehyde. Some air sampling results found formaldehyde and crotonaldehyde exceeded the Immediately Dangerous to Life or Health (IDLH) level for these compounds and recommended using supplied-air respirators. Using supplied-air respirators during security response exercises is probably not practical, but RAR 10-007, *Diversionary Device*, does not contain analysis of the hazardous components and the exposure potential. Without such analysis, the RAR does not evaluate the need for other controls to protect the SPO from the smoke or provide a basis to accept the residual risk. The Team provided Centerra-Nevada with a copy of the Sandia report. Similar to the smoke grenade, other diversionary devices covered by the RAR, such as flash-bang devices, may have health exposure issues that need analysis. Due to the potential for IDLH exposures to chemicals from diversionary devices, Centerra-Nevada should conduct analysis of the chemical hazards from the diversionary devices and incorporate those hazards, analysis, and potential controls into the RAR.

**Opportunity for Improvement:** Centerra should conduct analysis of the chemical hazards from the diversionary devices and incorporate those hazards, analysis, and potential controls into the RAR.

Centerra-Nevada uses the risk analysis process to determine the risk level of the mitigated activity hazards. It makes that determination by assigning a hazard level and a probability. The hazard level is determined based on the unmitigated health, environmental, or property loss effects of the hazard. The probability is determined based on the mitigations in place. Centerra-Nevada uses the evaluation process iteratively until it determines that the final risk of the activity is low.

Procedure SP2-016, *Risk Analysis Program*, specifies the role of managers, supervisors, and safety professionals in the development of an RAR. Employees who are the end user of the RAR “are responsible for accomplishing the work within the specified controls, providing feedback on the adequacy of the controls, and reporting potential hazards associated with any work process.” SPOs are not involved in the development of the RAR and the evaluation of the hazards. This limits the SPO’s ability to contribute his experience and interpretation of the controls in the final product. For example, while completing a vehicle inspection, an SPO found a loaded gun in the trunk. According to SPOs interviewed, when they identify a weapon during an inspection, their order specifies the SPO to render the weapon safe. The SPO, acting on his interpretation of the order, removed the bullets from the cylinder and ensured the gun was unloaded. The gun and bullets remained in the trunk. When a supervisor arrived on scene, the supervisor criticized the SPO for not following the order because the SPO did not have the training to handle that specific weapon and should have left it alone. The SPO believed leaving the weapon loaded would be in

violation of the order. Since SPOs were not involved in the development of the safe weapon order, Centerra-Nevada did not recognize this ambiguity. Another example involves raising a sign to indicate severe weather conditions. When there is lightening near DAF, an SPO goes outside to raise a warning sign, potentially exposing the SPO to an increased risk for a lightning strike. In response to SPO concerns, in April 2015 Centerra-Nevada revised standing orders allowing PROFORCE personnel to make their own decision based on the circumstances whether to raise the sign or not. The only caveat is to inform their supervisor of that decision. Further, Centerra-Nevada revised the standing order telling the SPO NOT to exit the guard station if lightning was within 5 miles. This hazard, analysis, and control were not initially included because the SPOs were not involved in the development of the RAR and post orders. A third example was the positioning of an SPO in the middle of a two-lane secondary road to check badges of incoming traffic from Highway 95 near the site boundary. The posted speed limit for the highway is 70 miles per hour (mph), the exit ramp speed is 55 mph, and the secondary road to Mercury is 55 mph. As cars transition from the highway onto the secondary road, cars may exceed the posted speed limits for the ramp and the secondary road. Cars leaving Mercury approach from behind the SPO. In one case, an SPO, after experiencing near misses from cars while in the middle of the secondary road, moved to the shoulder where he was safer. As previously discussed (Management Leadership), a supervisor criticized the SPO for not following the order and not informing the supervisor of the concern. In each of these examples, the lack of SPO involvement in the development of the RAR and order led to unidentified and unanalyzed hazards, which led to inadequate or ambiguous hazard controls. In order to ensure Centerra-Nevada includes the SPOs' perspective in identifying, analyzing, and controlling hazards, Centerra-Nevada needs to revise SP2-016, *Risk Analysis Program*, to include SPOs as part of the RAR development team and include SPO input on the identification of hazards, the analysis of hazards, and the development of hazard controls in RARs and orders.

**Opportunity for Improvement:** Centerra-Nevada needs to revise SP2-016 to include SPOs as part of the RAR development team and include SPO input on the identification of hazards, the analysis of hazards, and the development of hazard controls in RARs and orders.

The Electronics Security Systems section (Lockheed Martin) performs work across NNSS and, through an agreement, uses the NSTec work control procedures. Because the systems they work on are typically within NSTec-controlled facilities, NSTec approves the work package. Lockheed Martin then schedules approved work packages onto the plan-of-the-day of the appropriate facility manager.

Industrial hygiene analyzes the hazards of new systems before Centerra-Nevada acquires the systems to validate the claims of manufactures and to avoid introducing hazards unnecessarily into the work environment. For example, in 2013, industrial hygienists air sampled carbon monoxide and lead exposure from the test firing of UTM™ blank ammunition in simulation weapons. The air sampling results were above allowable exposure levels, so Centerra-Nevada cancelled the acquisition of that system. *Industrial Hygiene Program*, SP2-003, requires a health hazard evaluation (HHE) of facilities on a periodic basis. The HHE includes an evaluation of the facility with a detailed report. The ES&H manager assigns a hazard category for each facility, and hazard categories drive the surveillance frequency. SP2-003, *Industrial Hygiene Program*, does not include a definition for each category. In order to clarify the hazard category

assignment and ensure a consistent approach, Centerra-Nevada should define the thresholds for high, medium, or low hazard facilities.

**Opportunity for Improvement:** In order to clarify the hazard category assignment and ensure a consistent approach, Centerra-Nevada should define the thresholds for high, medium, or low hazard facilities.

CATS is the only issue tracking system used by Centerra-Nevada. Typical tracked issues include findings from external inspections, such as a fire safety inspection. Issues raised in the PFSC or ESC use the committee minutes to keep track of issues and resolutions. ES&H continues to trend injury and illnesses, TRC, DART, and motor vehicle accidents. ES&H uses bar charts to represent and trend the data.

Centerra-Nevada conducts quarterly facility inspections described in *ES&H Inspection, Assessment, and Employee Involvement Program*, SP2-015. ESC members inspect facilities using the Facility Safety Checklist. Centerra-Nevada uses other safety checklists to inspect security stations, explosives storage, and environmental compliance. Managers also inspect various equipment or procedures used by the SPOs. CATS tracks discrepancies found during the inspection until the corrective actions are completed. Some issues are corrected on the spot when found during an inspection. Centerra-Nevada does not document or track these issues, which could be a leading indicator for other safety issues or complacency. As a means of pursuing further improvement, and identifying other trends, Centerra-Nevada should consider documenting and tracking issues identified and corrected on the spot during facility inspections.

**Opportunity for Improvement:** Centerra-Nevada should consider documenting and tracking issues identified and corrected on the spot during facility inspections.

Centerra-Nevada uses *Investigations, Reporting, and Recording Keeping*, SP2-002, to investigate illnesses/injuries and accidents. Centerra-Nevada began a new program called the *Safe Continuation of Work* (see Management Leadership). The purpose is not to assign blame and to have an honest and open discussion of the accident. The information learned in this meeting can improve processes, create open dialogue, and lessons learned. The ES&H manager is an integral part of the accident investigation process. Although knowledgeable and experienced in safety and health, the ES&H manager has not received any formal accident investigation training. In order to improve its investigations of injuries and accidents, Centerra-Nevada should consider sending the ES&H manager and any other personnel involved in those investigations to formal accident investigator training.

**Opportunity for Improvement:** Centerra-Nevada should consider sending the ES&H manager and any other personnel involved in those investigations to formal accident investigator training.

## Conclusion

Centerra-Nevada understands the fundamental hazards posed by the mission at NNSS. By involving the SPO workforce in the worksite analysis, Centerra-Nevada can improve the

identification of hazards, the analysis of hazards, and implementation of controls in the RAR to reduce interpretations of procedures in the field. As Centerra-Nevada pursues involvement of the SPOs, it can improve the documentation of RARs and orders by documenting the hazards analysis or referencing its existence in other documents. Tracking the number of issues corrected on the spot, a leading indicator can increase the surveillance of the worksite. Once it addresses these issues, Centerra-Nevada will meet the Worksite Analysis expectations for continued participation in DOE-VPP.

## VI. HAZARD PREVENTION AND CONTROL

The second and third core functions of ISMS, identify and implement controls and perform work in accordance with controls, ensure that once hazards have been identified and analyzed, they are eliminated (by substitution or changing work methods) or addressed by the implementation of effective controls (engineered controls, administrative controls, or personal protective equipment (PPE)). Equipment maintenance processes to ensure compliance with requirements and emergency preparedness must also be implemented where necessary. Safety rules and work procedures must be developed, communicated, and understood by supervisors and employees. These rules and procedures must also be followed by everyone in the workplace to prevent, control the frequency of, and reduce the severity of mishaps.

In 2012, Centerra-Nevada was actively engaged in identifying and preventing hazards in the workplace. Managers, safety staff, and employees used the hierarchy of controls. The occupational medical provider had instituted several programs that improved the wellness of employees and the ability of managers to assess and manage the magnitude of any injuries that occurred.

As in 2012, Centerra-Nevada uses all elements of the hierarchical approach to hazard controls. Centerra-Nevada provided several examples of hazard elimination to the Team. The use of the simulated training system eliminated some of the live fire training exercises. Additionally, for training days, Centerra-Nevada eliminated the transport of loaded firearms back and forth from the training center and the administrative building. Centerra-Nevada and NSTec are concurrently eliminating surplus chemicals from their facilities. This effort is still in progress.

Where Centerra-Nevada cannot eliminate hazards, it attempts to substitute a different product that is less hazardous. For example, the armorers continue to use water-based cleaners rather than solvent-based cleaners. Due to considerable concern over the past 3 years about the current obstacle course and safety hazards, Centerra-Nevada is moving the course to a different location as suggested by a lieutenant. Centerra-Nevada ES&H reviewed a requisition for a Pocket Fault Locator to detect micro-bends, fiber breaks, and other sources of optical attenuation using a Class III laser. Based on that review, Centerra-Nevada ES&H recommended a less hazardous Class II laser instead, which Centerra-Nevada procured. Centerra-Nevada also looks for ways to prevent accidents through engineered controls. New engineered controls include rear-view cameras and sensors on vehicles to prevent backing incidents. It also requests NSTec to install or paint bollards to help drivers identify backing hazards.

The Team noted that bollards did not protect the backup generator and a rack of circuit breakers behind the Centerra-Nevada administrative building. This area is a parking lot for employees and frequently used by employees to turn around. Centerra-Nevada should request installation of bollards behind its administrative building for the backup generator and the unprotected circuit breakers.

<p><b>Opportunity for Improvement:</b> Centerra-Nevada should request installation of bollards behind its administrative building for the backup generator and the unprotected circuit breakers.</p>
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Administrative controls are the next line of defense for hazardous activities. This is evident in the controls for firing range activities where the discipline and structure is stringent. Centerra-Nevada requires the use of a spotter, if available, while backing vehicles to prevent backing collisions. Other administrative controls include identifying washouts and hazardous driving conditions, implementing the safe continuation of work program, mitigating concern about wearing the gas mask while inspecting vehicles or performing badge checks, and cleaning water dispensers. Recently, employees at DAF were concerned about administrative controls requiring SPOs to change signs during lightning events (see Work Site Analysis).

As discussed in Employee Involvement and Management Leadership tenets, there are instances of confusing and inconsistent direction contained within the Centerra-Nevada procedures regarding stop work. Centerra-Nevada must correct the contradicting stop-work requirement to reflect expectations contained within ISMS, VPP, and 10 CFR 851, and review all procedures for confusing and inconsistent directions.

**Opportunity for Improvement:** Centerra-Nevada must correct the contradicting stop-work requirement to reflect expectations within ISMS, VPP, and 10 CFR 851, and review all procedures for confusing and inconsistent directions.

The final step for protection is the use of PPE. Centerra-Nevada conducts many training exercises using paint-marking ammunition (simunition). These lower velocity and lower hazard rounds allow realistic exercises using force-on-force techniques. SPOs use protective masks, throat protectors, and groin protectors during these training exercises to prevent injury from simunition. Centerra-Nevada provides protection from damaging ultraviolet rays in sunlight using sunscreen, shaders, and hats. Each SPO is fitted with hearing protection to minimize or prevent hearing loss when shooting. Centerra-Nevada implemented the earplug fit-testing program to provide personalized protection to employees that frequently receive exposure to high noise areas, such as the firing range.

On numerous occasions, the Team observed that SPO firing range instructors delivered adequate and consistent safety briefings during the classroom lesson and on the qualifying courses. The instructor discussed precautions to address hazards prior to performing the training activities, gave the students opportunities to ask questions, and professionally answered all questions. The Team observed the instructor and students perform walkdowns of some qualification courses, but they did not walk down the obstacle course or the Donga qualification course. Centerra-Nevada training principles dictate that students not walk down the course to prevent knowing target locations, and compromising the expectations of that qualification activity. By not permitting students to walk down the course, instructors and managers must assume greater responsibility for removing hazards, implementing compensatory controls, or delaying running the course if necessary to remediate deteriorated conditions (e.g., washouts). Other protective forces in the DOE complex commonly use walkdowns to discuss the expectations of skill demonstration and to discuss the hazards and controls associated with the course activities to minimize the potential for injury. In the absence of a course walkdown, Centerra-Nevada should ensure it incorporates other compensatory controls (e.g., additional safety spotters, pads, or nonparticipant walkdowns to identify changed hazards) into the obstacle and Donga courses to help SPOs avoid hazards of tripping and falling due to degradation of the courses.



**Opportunity for Improvement:** In the absence of a course walkdown, Centerra-Nevada should ensure it incorporates other compensatory controls (e.g., additional safety spotters, pads, or nonparticipant walkdowns to identify changed hazards) into the obstacle and Donga courses to help SPOs avoid hazards of tripping and falling due to degradation of the courses.

As observed in 2012, nearly every person interviewed recognized or knew the ES&H staff members. Interviews consistently found employees were aware of the Centerra-Nevada administrative controls and PPE requirements related to their jobs. Workers are aware of the availability of PPE should they require it for performing work. Employees frequently contact their ES&H staff for questions relating to PPE or other safety questions.

NNSA NFO approved Centerra-Nevada's Worker Safety and Health Plan in January 2015. Particularly important to Centerra-Nevada are chapters on explosives and firearm safety that SPOs encounter on a daily basis. Centerra-Nevada implements these requirements in Centerra-Nevada procedures, plans, and training requirements. In addition, ES&H staff conduct assessments to evaluate compliance. Centerra-Nevada uses industrial hygiene support to monitor noise and lead during firearm training activities that validate controls are adequate for those activities.

As observed in the 2012 assessment, NSTec provides occupational medical services for Centerra-Nevada. NSTec also provides radiation protection support for Centerra-Nevada. Centerra-Nevada is responsible for identifying occupational exposures and hazards to the site medical provider. The medical provider then advises Centerra-Nevada of baselines, such as lead exposure or hearing exposure baselines that are required. The onsite medical provider also treats minor injuries or recommends further treatment or options for the injured worker. NSTec supports Centerra-Nevada for any radiological support needed, such as radiation work permits or technician support to control any radioactive material encountered by Centerra-Nevada personnel. Centerra-Nevada is responsible for several radioactive sources managed by the ES&H organization to test detection equipment used by Centerra-Nevada. The Centerra-Nevada ES&H organization manages its radioactive sources in secured cabinets.

## Conclusion

Centerra-Nevada is engaged in identifying and preventing hazards in the workplace. Centerra-Nevada uses the hierarchy of controls to minimize or eliminate exposures and hazards. The occupational medical provider continues to provide support for Centerra-Nevada employees. Centerra-Nevada uses NSTec support for radiation protection other than radioactive sources managed by Centerra-Nevada to test detection equipment. In a few cases, Centerra-Nevada needs to reevaluate its control selection based on workers' concerns primarily due to weaknesses previously discussed in Worksite Analysis. Centerra-Nevada meets the Hazard Prevention and Control expectations for continued participation in DOE-VPP.

## VII. SAFETY AND HEALTH TRAINING

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

The 2012 assessment found an established training and SPO qualification program that trained employees to recognize hazards and to protect themselves and coworkers. The training program helped managers, supervisors, and employees to understand the established safety and health policies, to promote safe work practices, and to minimize exposures to hazards. Additional safety focus occurred within the all-employee Safety Summit, the OSHA 10-hour safety course, and defensive driving for newly hired SPOs. A recommended improvement included adding a discussion on activity hazards and associated controls into training lesson plans. Another recommended improvement included walking down all firing range qualifying courses and discussing the hazards and controls for that course (see Hazard Prevention and Control).

With the resumption of hiring new SPOs in 2014, Centerra-Nevada resumed training of new employees using the TRF-100D, *Introduction to Protective Forces*. This 7-week course trains new hires on the requirements from the DOE National Training Center and DOE Manual 470.4-3, *Protective Force*. Centerra-Nevada also trains on site-specific ES&H topics, such as driving safety, radiological awareness, and many other training topics contained in the ES&H SP2-015, *Inspection, Assessment and Employee Involvement Program*. Most of the SPOs have prior military experience. Their military experience allows new hires to quickly learn the paramilitary tactics required for the Centerra-Nevada mission. The military mindset may discourage SPOs from questioning decisions by superiors or exercising personal judgement about the safety of an activity (see Worksite Analysis). In order to help SPOs better understand how and when to exercise personal judgement and how to legitimately raise safety concerns without countermanding the authority of superior officers, Centerra-Nevada should consider incorporating these elements into its regular SPO training program. Such training could include scenarios based on actual situations where SPOs had safety concerns or questions.

**Opportunity for Improvement:** Centerra-Nevada should consider incorporating scenario-based training to help SPOs understand how and when to exercise personal judgement and legitimately raise safety concerns without countermanding the authority of superior officers.

The NNSA Enterprise Mission Essential Task List (EMETL) field manual defines the annual SPO training needs. The EMETL stakeholders, consisting of the training manager, the PROFORCE manager, the testing assessment manager, and the Pro2Serve vulnerability assessment representative, review past force-on-force exercises and threats and determine the proficiency of the SPOs. The stakeholders strategically determine the task training needs and its priority since the number of EMETL tasks are extensive for NNSS.

SP2-015, *Inspection, Assessment and Employee Involvement Program*, contains the initial and annual ES&H training topics for all personnel. After the exhaustive new hire training of ES&H topics, PROFORCE annual training includes integrated safety management (ISM), VPP, lead

awareness, blood-borne pathogen awareness, hearing conservation, and biennial beryllium awareness. The SPOs also receive annual underground worker safety training, biennial DAF general employee training, DAF emergency management, and Area 5 general employee training. Annual training for workers other than the PROFORCE includes ES&H updates, VPP, ISM, incidents and injuries, and biennial beryllium awareness. Non-PROFORCE personnel expressed familiarity with the required training and were confident in their safety and health while at work. Training coordinators notify the employees and their managers of scheduled training, and human resources maintains training records.

After a classroom lesson, students complete a training evaluation form, and the training manager compiles all the evaluations and comments into the course critique form. Managers review all the critiques and feedback, including the General Manager, to improve the course or acknowledge the feedback.

The majority of the safety training for the PROFORCE occurs in the classroom, such as the PROFORCE annual training course, but the training manager also makes use of computer-based training, and on-the-job training (OJT). To accomplish the volume of annual training requirements, safety and health training may occur at the post, and at times inside the Bearcat Fast Attack Vehicles. Since the training does not occur in a controlled setting, such as a classroom, several SPOs relayed concerns that training outside of the classroom was not as effective. In addition, training in the field does not allow the SPO to be attentive to the requirements of the orders or of the post. SPOs expressed that vehicles do not offer a background environment for learning and sometimes the training is hurried and not comprehensive. Centerra-Nevada should strive to provide the appropriate setting for training; establish the training expectations; if outside of a classroom, to ensure ES&H training is effective; and trainers should periodically attend field training to review the quality of training delivered in the field.

**Opportunity for Improvement:** Centerra-Nevada should strive to provide the appropriate setting for training; establish the training expectations; if outside of a classroom, to ensure ES&H training is effective; and trainers should periodically attend field training to review the quality of training delivered in the field.

Newly hired lieutenants receive training similar to the SPO new hires. Additionally, lieutenants receive the computer-based training version of the tactical leadership course, EMETL training, and other specific training. Eventually, lieutenants attend the DOE National Training Center to receive classroom training of the tactical leadership course. New lieutenants must attend the Centerra-Nevada formal Lieutenant Initial Training Program followed by a formal Lieutenant's OJT program over several weeks, pairing new Lieutenants up with seasoned Lieutenants at each work station/duty assignment. This training focuses on the skills and tactics necessary to perform the security mission. Elements of everyday leadership, fostering open communication, and response to concerns may not be sufficiently included in the new lieutenants training. Based on observations from SPOs, and the important role these lieutenants have in communicating safety concerns from the PROFORCE, Centerra-Nevada should review its new lieutenant training program to ensure it includes essential day-to-day leadership skills that build trust and open communication with members of the PROFORCE.

**Opportunity for Improvement:** Centerra-Nevada should consider implementing a formal mentoring program for new lieutenants.

Centerra-Nevada has a dedicated weapons training location that includes firing ranges and mockups to simulate actual field conditions SPOs may encounter, and serves to maintain the PROFORCE weapons qualifications. The DOE National Training Center Training Approval Program approved several of the SPO training courses. SPOs must pass evaluations and demonstrate proficiency in specific activities to become and maintain SPO I, II, or III qualifications.

Training and qualification programs are in place to ensure that all employees receive appropriate training to recognize hazards of the work environment and to protect themselves and coworkers. The training process provides the requisite knowledge, skills, and abilities to perform tasks safely. It applies to all employees, operations, and support activities. Additionally, SSC members, ESC members, and PFSC members all receive the OSHA 10-hour safety course to help them assess the safety and health of facilities and work areas.

## Conclusion

Centerra-Nevada has an extensive training program that ensures personnel have the skills and knowledge necessary to accomplish the security mission safely. The program incorporates an awareness of the hazards and risks encountered during training and patrol activities. While all employees receive training to recognize the hazards of the work environment, Centerra-Nevada should periodically review training delivered in the field to ensure the training is effective. Centerra-Nevada could improve the professional development of lieutenants with a formal mentoring program. Overall, Centerra-Nevada meets the expectations in Safety and Health Training for continued participation in DOE-VPP.

## VIII. CONCLUSIONS

The Team recommends that Centerra-Nevada continue to participate in DOE-VPP for 12-18 months as a Conditional Star while it works with the PROFORCE members to address and resolve these issues. Centerra-Nevada had significant challenges over the past 3 years. Budget restrictions, reduced PROFORCE numbers, and degradation of facilities from severe weather contribute to increased workloads, extended time to address deficient conditions, or decisions to accept deficient conditions. Centerra-Nevada has tried to mitigate the problems caused by these issues, but with limited success.

In its desire to meet customer expectations, Centerra-Nevada managers sometimes make decisions that are not popular with the PROFORCE. PROFORCE members' frustrations with these conditions sometimes increase SPOs sensitivity to managers' behaviors and language that appear in conflict with Centerra-Nevada's stated values.

The result is that a significant portion of the PROFORCE, while committed to performing work safely, does not believe they are in a partnership with Centerra-Nevada managers and is not participating in the safety program. A significant portion of the PROFORCE does not believe they can raise a safety issue without fear of reprisal. Many of the frustrations and perceptions result from ineffective communication both up and down the chain of command. In order to demonstrate the performance expected for a DOE-VPP Star site, Centerra-Nevada needs to: (1) evaluate and improve its communication methods; (2) work closely with IGAN to reestablish an effective partnership; (3) include workers in the hazard analysis and hazard control development processes; and (4) revise its stop-work policy and employee standards of contact to remove the threat of insubordination if an SPO raises a safety concern.

## APPENDIX A

### Management

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