Fluor Federal Services, Inc.
Richland, Washington

Report from the Department of Energy
Voluntary Protection Program
Onsite Review
June 6-9, 2011

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

Foreword

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

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

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

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

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

This report summarizes the results from the evaluation of Fluor Federal Services, Inc. during the period of June 6-9, 2011, and provides the Chief Health, Safety and Security Officer with the necessary information to make the final decision regarding its continued participation in DOE-VPP.

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ABBREVIATIONS AND ACRONYMS

ARRA	American Recovery and Reinvestment Act
AJHA	Automated Job Hazard Analysis
ALTY	A Little Thank You
BBS	Behavior-Based Safety
CBT	Computer-Based Training
CCHEST	Council on Certification of Health, Environmental, and Safety Technologists
CFR	Code of Federal Regulations
CGET	CHPRC General Employee Training
CHST	Construction Health and Safety Technician
CHPRC	CH2M HILL Plateau Remediation Company, Inc.
CSC HOHS	CSC Hanford Occupational Health Services
DART	Days Away, Restricted, or Transferred
DOE	Department of Energy
EJTA	Employee Job Task Analyses
EPC	Engineering Projects and Construction
ES&H	Environment, Safety and Health
FFS	Fluor Federal Services, Inc.
HAMMER	Volpentest Hazardous Materials Management and Emergency Response Training Center
HGET	Hanford General Employee Training
HPI	Human Performance Improvement
HSS	Office of Health, Safety and Security
IH	Industrial Hygiene
JSA	Job Safety Analysis
MSDS	Material Safety Data Sheet
NAICS	North American Industry Classification System
OJT	On-the-Job Training
OSHA	Occupational Safety and Health Administration
PM	Preventive Maintenance
PPE	Personal Protective Equipment
PRC	Plateau Remediation Contract
PRIDE	People Respecting Individuals, Dedication and Excellence
ROC	Regional Office Complex
STS	Safety Trained Supervisors
Team	HSS DOE-VPP Team
TRC	Total Recordable Case
VPP	Voluntary Protection Program
WCH	Washington Closure Hanford

EXECUTIVE SUMMARY

The Department of Energy (DOE) Voluntary Protection Program (VPP) onsite review of Fluor Federal Services, Inc. (FFS) in Richland, Washington, was conducted June 6-9, 2011. FFS conducts design/architecture/engineering, procurement, construction, and construction management (subcontractor) activities at the 560-square-mile Hanford Site. FFS is a preselected subcontractor and partner with CH2M HILL Plateau Remediation Company, Inc. (CHPRC) on the Hanford Plateau Remediation Contract (PRC). FFS also performs subcontract work for the other site prime contractors, Washington River Protection Solutions, LLC and Washington Closure Hanford (WCH). FFS is also partnering with and mentoring other small businesses seeking work at the Hanford Site. Personnel are located in workshops and trailers at the Hanford Site and in the Regional Office Complex (ROC) in Richland. FFS employs approximately 510 people (339 noncraft, 171 craft). Of those, approximately 400 are seconded or staff augments to CHPRC. As such, they receive daily direction from CHPRC, not FFS. Craft personnel consist of building trades people (electricians, pipefitters, carpenters, ironworkers, sheet-metal workers, heavy equipment operators, painters, and laborers) and are represented by the Building Trades Council. Noncraft employees include a full range of engineering and administrative support staff.

FFS entered DOE-VPP at the Star level in June 2001 and was recertified in September 2005 and again in June 2008. This marks the third recertification for FFS, and this report documents the result of the onsite assessment.

Total Recordable Case and Days Away, Restricted or Transferred case rates for FFS were trending downward through 2009, but increased in 2010. FFS attributed the increase primarily to the infusion of new workers under American Recovery and Reinvestment Act, and the distractions resulting from significant contract changes at the Hanford Site. Although the rates increased, they remain a very small fraction of the comparison industry rates (Heavy Construction). FFS is very aware of every injury that occurs, and remains vigilant in its efforts to avoid and prevent injuries.

Since 2008, FFS has continued to demonstrate strong, effective management commitment and leadership in worker safety and health programs. Opportunities for improvement identified in 2008 were accepted and acted upon, and are showing positive results in improved safety and health culture, improved employee participation, and a more active program overall. Workers were almost universally satisfied with their managers' presence and availability.

Since 2008, FFS has substantially improved the ROC safety and health committee by making it more effective and improving employee participation. FFS employees continue to be actively involved in promoting safety and improving safety culture at FFS. The workforce continues to believe FFS is a safe place to work and that their managers and supervisors share in the commitment to safety.

FFS has continued to engage the workforce in reducing hazards and ensuring adequate controls are communicated and its overall quest for improvement is very evident. Efforts to ensure hazards specific to its scope of work are identified and analyzed, and controls employed have resulted in improvements since the 2008 assessment. There were numerous examples observed during this assessment where workers participated in the identification, analysis, and control

selection that have contributed to the low accident injury rates. Clearly, FFS personnel have fully adopted the FFS safety and health program.

FFS has also continued to maintain a well established training and qualification program that ensures workers are appropriately trained to recognize hazards and protect themselves and coworkers. The FFS training program helps managers, supervisors, and employees understand the established safety and health policies and the rules and procedures to promote safe work practices and minimize exposure to hazards.

FFS continues to meet the expectations for participation in DOE-VPP, and the Office of Health, Safety and Security DOE-VPP Team recommends that FFS continue to participate at the Star level.

TABLE 1
OPPORTUNITIES FOR IMPROVEMENT

Opportunity for Improvement	Page
FFS should consider reinvigorating HPI and BBS programs, including more training and coaching in their application, as a way of identifying and correcting organizational influences on individual and group behaviors.	4
FFS should expedite the completion of the hazard baseline assessment for the new shop areas in the 200 East Area.	8
FFS should develop a process to ensure first aid kits are fully stocked, and out-of-date materials are removed.	10
FFS should ensure AJHA process is used when setting up portable or temporary field equipment such as portable generators.	11
FFS should ensure workers are aware of and use appropriate PPE when accessing or traversing shop areas until the appropriate postings are in place.	13
The FFS design authority needs to work with IH, Craft Safety Representatives, and the welders to ensure the centralized filtration system in the welding shop is evaluated, a design baseline is established, and the system upgraded to ensure it appropriately controls and mitigates the hazards associated with welding, brazing, and grinding activities on materials containing potentially hazardous elements such as hexavalent chromium or manganese.	14
FFS needs to ensure the acceptance criteria for the centralized filtration system establishes system face-flow rates and trunk hose placement specifications for effective mitigation of hazards during welding operations.	14
FFS should consider utilizing the HAMMER Training Center to assist with design of the Leadership and Fundamentals Training, and add a coaching and mentoring element to help reinforce the skills being taught.	18
FFS should consider encouraging supervisors to pursue STS certification.	18
FFS should find ways to increase the awareness and use of the *Craft Employee Handbook and Safety Guidelines* by workers.	19

I. INTRODUCTION

The Department of Energy (DOE) Voluntary Protection Program (VPP) onsite review of Fluor Federal Services, Inc. (FFS) in Richland, Washington, was conducted June 6-9, 2011. FFS conducts design/architecture/engineering, procurement, construction, and construction management (subcontractor) activities at the 560-square-mile Hanford Site. FFS is a preselected subcontractor and partner with CH2M HILL Plateau Remediation Company, Inc. (CHPRC) on the Hanford Plateau Remediation Contract (PRC). FFS also performs subcontract work for Washington River Protection Solutions, LLC and Washington Closure Hanford (WCH). FFS is partnering with and mentoring other small businesses seeking work at the Hanford Site. Personnel are located in workshops and trailers at the Hanford Site and in the Regional Office Complex (ROC) in Richland. FFS employs approximately 510 people (339 noncraft, 171 craft). Of those, approximately 400 are staff augments to CHPRC. Staff augment employees to CHPRC are treated as CHPRC employees, but FFS maintains a very active connection to them. FFS intentionally gets involved with ensuring workers get the proper care, treatment, training, etc. Statistics are credited to CHPRC for reporting purposes, but FFS is maintaining its own records as well to be able to track its own workers' performance, even when its workers are working under the CHPRC processes and procedures. Craft personnel consist of building trades people (electricians, pipefitters, carpenters, ironworkers, sheet-metal workers, heavy equipment operators, painters, and laborers) and are represented by the Building Trades Council. Most of the craft are assigned to the Engineering and Projects Construction (EPC) group within CHPRC. Noncraft employees include a full range of engineering and administrative support staff.

FFS was granted DOE-VPP Star status in June 2001 and recertified as a DOE-VPP Star site in September 2005 and again in June 2008.

Continuation in DOE-VPP requires an onsite review by the Office of Health, Safety and Security (HSS) DOE-VPP Team (Team) to determine whether the applicant is performing at a level deserving DOE-VPP Star recognition. The Team evaluated the FFS safety programs against the provisions of DOE-VPP. During the site visit, the Team observed activities, performed field walkdowns, evaluated relevant safety documents and procedures, and conducted interviews to assess the strength and effectiveness of the health and safety programs at FFS.

During the onsite assessment, the Team had contact with approximately 100 different individuals. Assessment activities included observation and inspection of shop and office areas, walkdown of work areas in both the 200 East and 200 West Areas, 100 K, HX, and B Areas, prejob briefings, work planning meetings, and safety committee meetings. The hazards encountered by workers include the full range of construction hazards complicated by the potential radiological and chemical hazards present at the Hanford Site.

II. INJURY INCIDENCE/LOST WORKDAYS CASE RATE

FLUOR FEDERAL SERVICES
INJURY INCIDENCE / LOST WORKDAYS CASE RATE

Injury Incidence / Lost Workdays Case Rate (Non-Staff Augment Personnel Only)					
Calendar Year	Hours Worked	Total Recordable Cases (TRC)	TRC Incidence Rate	DART* Cases	DART* Case Rate
2008	230,768	0	0.00	0	0.00
2009	250,595	0	0.00	0	0.00
2010	207,419	0	0.00	0	0.00
3-Year Total	688,782	0	0.00	0	0.00
Injury Incidence / Lost Workdays Case Rate (Staff Augments)					
Calendar Year	Hours Worked	TRC	TRC Incidence Rate	DART Cases	DART Case Rate
2008	1,129,272	2	0.35	0	0.00
2009	825,944	1	0.24	0	0.00
2010	926,905	3	0.65	3	0.65
3 Years	2,882,121	6	0.42	3	0.21
Bureau of Labor Statistics (BLS-2010) Average for North American Industry Classification System (NAICS) Code 237 (Heavy and civil engineering construction)			**TRC Rate** 3.8		**DART Case Rate** 2.2

*Days Away, Restricted, or Transferred

Combined TRC Rate: 0.34
Combined DART Rate: 0.17

Conclusions

TRC and DART rates for FFS were trending downward through 2009, but increased in 2010. The increase was primarily attributed to the infusion of new workers under the American Recovery and Reinvestment Act (ARRA), and the distractions resulting from significant contract changes at the Hanford site. Although the rates increased, they remain a very small fraction of the comparison industry rates (Heavy and civil engineering construction). FFS is very aware of every injury that occurs, and remains vigilant in its efforts to avoid and prevent injuries. Statistically, FFS continues to meet the expectations for continued participation in DOE-VPP at the Star level.

III. MANAGEMENT LEADERSHIP

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

In 2008, the Team found a strong safety and health program in place at FFS. Management commitment to improvement and excellence was evident in policies, procedures, and resources. The theme that "We can always restart work – we cannot eliminate an accident after it has happened" remains the mindset of the entire workforce.

In 2008, the Team identified that FFS could benefit from identifying more specific safety and health improvement initiatives, such as a worker wellness program and establishing means to measure participation in those initiatives. Goals for participation could then be established that would demonstrate increasing participation. FFS accepted that challenge, and in the ensuing years has used the annual self evaluation process to identify specific actions and goals. The goals are not simply tied to a TRC/DART rate, but identify actions to be taken that improve worker knowledge, awareness, and behavior. Although TRC and DART rates have fluctuated over the past 3 years, they have remained well below the national averages for the comparison industry, due in large part to the actions and goals undertaken by FFS. This is particularly noteworthy since the workforce experienced significant change as a result of additional work or accelerated work under ARRA.

Resources for safety and health improvement, in the form of recognition and rewards, are specifically identified and budgeted. These resources cover both bargaining unit (craft) and nonbargaining unit personnel. Rewards and recognition programs are targeted at ensuring personnel are encouraged to identify and report safety concerns, injuries, or accidents.

In 2008, the Team determined that while mangers were clearly committed to safety, FFS could benefit from increased manager visibility. Senior managers had not been significantly involved in helping the health and safety committees in performing the annual safety and health program evaluation or developing safety and health improvement plans. Since 2008, FFS has significantly increased visibility of senior managers. Safety and health committee activities are now an agenda item on all senior staff meetings, and senior managers participate in most ROC safety and health committee and People Respecting Individuals, Dedication and Excellence (PRIDE) committee meetings. The new Executive Director and Project Manager, although only in that position for a few weeks at the time of this assessment, has made it a priority to spend at least one morning every week visiting project work with the Craft Safety Representatives. He has also established an expectation that his senior management team make similar efforts to visit

project worksites and interact with the workers. Workers encountered by the Team expressed their satisfaction that managers were present in the field, were supportive of safety and health improvements, and were determined to accomplish the work safely and correctly the first time.

During this evaluation, the Team did not identify any significant use of either Behavior-Based Safety (BBS) or Human Performance Improvement (HPI) processes or principles in the course of day-to-day work. Interviews with some senior managers indicated that their past experiences with these programs at the Hanford Site had not been positive, and expressed their beliefs that in many cases these processes had been used to excuse workers from being held accountable for intentional acts. The Team believes these attitudes and beliefs are probably the result of ineffective implementation and misunderstanding of the underlying principles of HPI. As an opportunity, FFS may want to consider reinvigorating these programs, including more training and coaching in their application, as a way of identifying and correcting organizational influences on individual and group behaviors. This would provide FFS with better insights on its own latent weaknesses, and eliminate those weaknesses before they contribute to accidents or incidents.

Opportunity for Improvement: FFS should consider reinvigorating HPI and BBS programs, including more training and coaching in their application, as a way of identifying and correcting organizational influences on individual and group behaviors.

As a result of contract transitions at the Hanford Site, FFS is now a partner and preselected subcontractor on the PRC and no longer maintains the independent leadership role it had in the past. This new relationship presents challenges to the organization, especially with respect to daily direction and implementation of work processes. The bulk of the craft workforce is actually in a staff augmentation role to CHPRC. They continue to identify themselves as FFS employees, but they receive their daily direction and supervision through CHPRC in the EPC group. The challenge to FFS is to encourage those workers, while identifying themselves as EPC, to continue to set the example for safety and health and reflect the FFS corporate values. FFS managers all recognized this challenge, and expressed confidence that they were rising to the occasion.

Conclusions

Since 2008, FFS has continued to demonstrate strong, effective management commitment and leadership in worker safety and health programs. Opportunities for improvement identified in 2008 were accepted and acted upon, and are showing positive results in improved safety and health culture, improved employee participation, and a more active program overall. Workers were almost universally satisfied with their managers' presence and availability. FFS continues to meet the requirements for continued participation in DOE-VPP at the Star level.

IV. EMPLOYEE INVOLVEMENT

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

The FFS safety and health program provides opportunities for all employees to participate in programs that affect their health and safety. This participation was noted by the Team during observation of prejob briefings, observation of work in progress, and during employee interviews at all levels.

FFS has two safety committees to promote worker safety and health. The PRIDE committee represents all of the FFS construction activities at the Hanford Site. The PRIDE committee functions as the joint Labor-Management Safety Committee, in accordance with the DOE-VPP requirement for construction contractors. Project-based steering committees are represented on the PRIDE committee by one worker and one manager from each steering committee. Additionally, the Craft Safety Representative, representatives from the Safety, Health and Environment Director, the Quality Assurance Director, and the Construction Manager also serve as voting members. A review of the minutes of the meetings showed that the PRIDE committee has been functioning very effectively, as was noted by the 2008 Team.

The second committee is the ROC safety and health committee which covers the office workers involved in low-risk tasks. It is comprised of two members from each of the four floors occupied by FFS and an employee chairperson as voting members and has a management champion. In response to the opportunity for improvement identified in 2008 to revitalize ROC, FFS has made significant improvements. A new chairperson and new floor representatives have been elected within the past 2 years. The recent meeting minutes demonstrate regular attendance by employees, the Project Director or Deputy Project Director, and the Management Champion. There is a concerted effort to have new members on the committee. One initiative that has boosted attendance at the monthly safety meeting is the inclusion of a guest speaker covering a safety topic at the beginning of the meeting. Health experts presented several topics, such as "Heart health, healthy eating," at recent ROC safety and health committee meetings. One of the popular topics was "Identity Theft," presented by the Richland Police Department. The employees interviewed stated that they were motivated to attend the ROC safety and health committee meetings to hear these presentations.

In March and April of 2010, the ROC safety and health committee ran a successful campaign called "Find It Fix It" in which the employees identified safety hazards and took action to mitigate them. Thirty employees covered by the ROC safety and health committee participated.

The employees documented their action on a form and submitted it to the ROC safety and health committee for a prize. The ROC safety and health committee had a weekly drawing to award car safety kits. All participants were recognized by "A Little Thank You (ALTY)" certificate and movie tickets for their participation. The ROC safety and health committee future plans include a survey of the employees to determine their interest in a "Coronary Heart Improvement Program" offered by a local hospital.

The ROC safety and health committee also conducts monthly walkdowns of all office spaces, and uses checklists to document any safety concerns. A review of recent checklists noted a few concerns such as improperly stored material that were promptly corrected. The housekeeping in the office areas was very good. Most workers reported that if they requested an ergonomic evaluation, it was done and FFS took corrective actions to mitigate identified problems. The interviews with employees indicated that the committee is now functioning very effectively, and the efforts of FFS have generated more interest by members and improved participation.

Interviews with employees indicated that there is a very strong safety culture among the FFS workforce. They proactively look out for their coworker's safety by providing personal reminders, such as pointing out to a coworker the need for a hard hat in construction areas (see Hazard Prevention and Control Section for more details).

Most workers also stated that they felt comfortable raising safety and health concerns and were aware of the various avenues available, including the anonymous hotline. The majority indicated that they would go to their supervisors, their Craft Safety Representative, or the ROC safety and health committee representative (for office workers) to resolve a safety concern. Craft Safety Representatives and the ROC safety and health committee members have excellent access to the top managers and are able to quickly resolve safety concerns. For example, an employee raised an issue with the potential for slipping on ice on the iron stairway from the lower parking lot to the 1200 Jadwin Building lobby. The stairs were quickly covered with nonslip material to correct the situation.

Based on employee interviews, it was clear that employees understood their rights under title 10, Code of Federal Regulations, part 851 (10 CFR 851), to take timeout or stop-work if they saw a situation involving an imminent danger to themselves or others. They also understood this authority was a responsibility and stated that they would not hesitate to exercise it without fear of reprisal. The employees stated that they would report all injuries to their supervisor regardless of how minor the injuries were. They acknowledged that FFS looks very unfavorably on late reporting or nonreporting of injuries and stated that they were more likely to get into trouble for not reporting injuries promptly to their supervisors.

Craftsmen indicated that they are involved in the work planning process. They have input during preplanning, the automated job hazards analysis (AJHA), tool selection, and process improvement. All tools are subjected to engineering and ergonomics review prior to use.

FFS has implemented two employee recognition programs based upon worker input but neither is specifically designated for safety; ALTY and "Star" awards. An employee may be nominated by a coworker or supervisor for ALTY for a job well done or identification of a safety issue.

ALTY usually consists of a gift of small value but serves as a token of recognition. Supervisors nominate employees for Star awards for improvements, including safety, which are approved by the managers. The Star rewards are worth $75 to $100. All employees interviewed were aware of the ALTY and Star award programs.

Conclusions

Since 2008, FFS has acted on the opportunity for improvement identified by substantially improving the ROC safety and health committee, making it more effective and improving employee participation. FFS employees continue to be actively involved in promoting safety and improving safety culture at FFS. The workforce continues to believe FFS is a safe place to work and their managers and supervisors share in the commitment to safety. FFS continues to meet the requirements for the Employee Involvement tenet of DOE-VPP at Star level.

V. WORKSITE ANALYSIS

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

During the 2008 assessment, FFS was using two processes to evaluate work place hazards and develop controls: the Job Safety Analysis (JSA) process and the AJHA. The JSA process has been gradually phased out in favor of the AJHA. JSAs may still be used by subcontractors depending on contractual agreements. In some cases, such as work done for CHPRC or Mission Support Alliance, the AJHAs are developed by customer organizations. FFS found that in some cases those AJHA documents did not sufficiently address the specifics of the work to be performed by FFS or subcontractors FFS was managing. FFS conducts an additional review of all AJHAs by FFS planners to assure the specifics of FFS managed work have been adequately addressed. For example, an AJHA prepared by a FFS customer discussed extension ladder usage and hazards. When FFS planners reviewed the AJHA, they inserted a reminder for ladder users to use the 4-to-1 ladder rule for safe use of extension ladders. Although a minor change, this type of information reinforces basic safety awareness and continued improvement.

In 2008, the Team reviewed the hazard baseline documentation and identified some areas for improvement that were discussed with FFS Industrial Hygiene (IH). That particular weakness stemmed from lack of dedicated professional support. Since that time, FFS has added three personnel to support the IH program. During this assessment, FFS was in the process of moving from the old shops in the 200 West Area to the new shops in the 200 East Area. FFS was setting up work areas, installing equipment, and fabricating items to support ongoing work in the new shop areas. A complete hazard baseline assessment had not yet been completed for the new shops. The absence of a comprehensive hazard baseline document contributed to several issues observed by the Team related to implementing appropriate controls before the building was occupied (see the Hazard Prevention and Control section). FFS is aware of the shortcoming and is relying on a workforce that is "safety engaged" to bridge the gap until the baseline is completed. FFS should expedite the completion of the hazard baseline assessment for the new shop areas in the 200 East Area.

Opportunity for Improvement: FFS should expedite the completion of the hazard baseline assessment for the new shop areas in the 200 East Area.

Health and safety walkdowns continue to be performed as observed in 2008. When performed, those walkdowns do not individually cover the entire site or scope of FFS worksites but focus on certain areas of concern such that over the course of a month, all areas are addressed. Additional

walkdowns are performed by resident safety personnel, craft, and frontline supervisors as often as weekly for some areas. The Team was impressed with the emphasis on housekeeping at the worksites. This was an area that needed improvement in 2008, but now housekeeping is outstanding and workers take great pride in maintaining the work areas free of hazards.

The FFS safety organization continues to track and trend information garnered from safety walkdowns, monthly safety meetings, first aid cases, and employee surveys. FFS provided the Team with several examples of identified issues and the tracking to closure. These include occurrence reports, safety committee suggestions, employee suggestions, and employee surveys.

A particularly effective approach by FFS is using its tracking and trending to improve safety performance of subcontractors with the *Safety Countermeasures for Contractor Performance* program. Through this program, FFS and CHPRC personnel within EPC evaluate the safety performance of subcontractors for the past 3 years to identify adverse trends such as injury illness rates, type of injuries, and past performance before the contractor performs work on site. The contractor is notified prior to coming onsite of any adverse trends and is required to submit a plan to improve those trends while supporting EPC. FFS provided five examples of subcontractors with adverse safety trends and the corrective actions the subcontractors were required to implement. One subcontractor had a high number of hand injuries, so in the corrective action plan the use of gloves was mandatory, which resulted in fewer hand injuries while supporting FFS.

In prejob meetings, the Team observed discussions reminding workers to be vigilant for error precursors and potential improvements to the work processes. As discussed in the Management Leadership section, FFS is not currently promoting HPI, so this may be a holdover from previous attempts to infuse HPI into work processes since the 2008 assessment. The use of these techniques by workers indicates they may be ready and receptive to a renewal of the HPI efforts. This improvement has been discussed in the Management Leadership section of this report.

All employees interviewed during this assessment were knowledgeable of the routine hazards within their work area and how to safely use the chemicals and tools. They clearly were able to identify precautions, such as ventilation when using certain chemicals within the shop complex, use of hearing protection, or the use of safety glasses. Signs clearly indicated the requirement for hearing protection and safety eyewear when necessary in the construction areas, but as discussed further in the Hazard Prevention and Control section, were not posted in the shop areas. The Team reviewed the AJHA for the 100-HX Pump and Treat construction project, and interviewed workers about the safety requirements and controls specific to that project. Unlike most construction projects, the project AJHA does not mandate hard hats to be worn at all times. The workforce and safety professionals developed the AJHA and determined that per the Occupational Safety and Health Administration (OSHA) *Safety and Health Regulations for Construction, Personal Protective Equipment and Life Saving Equipment* (29 CFR 1926, subpart E), hard hats need only be worn in the vicinity of overhead work. The caveat to that conclusion was that if the workers became complacent, they would have to revert back to wearing hard hats at all times. Interviews with workers clearly showed their ownership of the control and they were very proactive in ensuring that hard hats were used when required. When work was being performed from an elevated platform, workers erected tape warning barriers to

identify those areas where hard hats were needed. Workers were also observed reminding other workers of the requirement while preparing for activities near overhead work.

100-HX Pump and Treat is the second pump and treat facility built by FFS. After the completion of the first project and prior to construction of 100-HX; planners, managers, and the workers met and discussed the lessons learned from the first pump and treat construction. The workers pointed out that the sequence of installation caused hazards related to temporary power, temporary lighting, and temporary fixtures installed to facilitate component installation. The result of this meeting adjusted the schedule to install electrical service and lighting directly after building construction. According to the workers, fewer hazards were encountered, lighting was much better inside the building, and component installation was safer and more efficient.

During the 2008 assessment, each shop was required to have a chemical inventory sheet in storage areas for chemicals. These were typically found on the outside of the doors of flammable and chemical storage cabinets. This requirement still exists but since the move to the new shops has not been completed, as discussed previously, FFS should assure the practice is maintained in conjunction with the completion of the baseline assessment. All flammable and chemical cabinets had not been moved into the new shops during this review. Also, when the need arises for a new chemical there is a process that must be followed prior to receipt of the new chemical. The approval process includes a review by safety professionals and an evaluation of less hazardous substitutes. This process was in effect in 2008 and is still required.

In 2008, the Team identified locations where chemicals were in use but eyewash stations were not available, or only one-quart eyewash bottles were available. In some cases, the Material Safety Data Sheet (MSDS) for the chemical in use identified a 15-minute flush as a first aid action. The OSHA construction safety standards only identified a 15-minute eyewash station for caustic chemicals. Since the chemicals in use were not identified as caustics, FFS had not provided larger eyewash stations. The Team recommended that FFS expand the use of eyewash stations when MSDS instructions recommended the longer duration flush. Since 2008, eyewash stations have been upgraded and are appropriately located in the work areas. The Team noted portable eyewash stations at worksites that clearly met the intent of the requirement with sufficient eyewash to support instructions contained in MSDS documents.

The Team noted that some of the first aid kits located around FFS worksites had tamper devices and some did not. Also, some first aid kits had dates of inspection and some did not. Workers also had first aid kits in company-supplied vehicles. For first aid kits that did not have tamper devices, the Team could not determine if the kits were fully stocked or not. Some of the larger kits within buildings had empty shelving or slots that held supplies. FFS should develop a process to ensure first aid kits are fully stocked, and out-of-date materials are removed.

Opportunity for Improvement: FFS should develop a process to ensure first aid kits are fully stocked, and out-of-date materials are removed.

It is critical that the hazard identification, analysis, and control selection be performed such that the analysis supports the selection of the appropriate control set and that the process is

documented. During the walkdowns of construction activities, the Team noticed that some temporary power generators were roped off due to noise levels and some were not. Discussions with IH professionals indicated that noise surveys were being performed, and IH provided the Team with documentation for those generators that were roped off. Discussions indicated that some equipment that did not have barriers were located in areas where frequent exposure was not anticipated. Although this may have been true, the noise hazard warning was absent. This indicates that the AJHA process was not effectively used when setting up the portable generators. FFS should ensure AJHA process is used when setting up portable or temporary field equipment such as portable generators.

Opportunity for Improvement: FFS should ensure AJHA process is used when setting up portable or temporary field equipment such as portable generators.

Interviews with construction employees and field work supervisors indicated that there is a free flowing exchange of information between the workforce and managers. Most workers indicated that the preferred route of exchange was verbal. Typically, all personnel interviewed indicated satisfaction with responses to concerns and there was no indication of issues. There are numerous instances of rewarding construction forces for bringing up improvements and safety issues. The employee concerns program appeared to be evident and in use. At job locations, both at ROC and at construction sites, forms for addressing issues or suggesting safety improvements were readily available.

In 2008, the Team concluded that accidents and upsets are investigated in accordance with the site-written process for accident investigation and causal analysis. The result of the site process produces a written report that is available to all employees and where required, corrective actions and the tracking to completion of action items. The Team did not find any discrepancies in this area during the assessment. Further, the Team observed in prejob meetings, discussion of accidents, upsets, or near-misses from the Hanford Site and across the DOE complex that might affect the days planned work.

Conclusions

FFS has continued to improve its safety culture and engage the workforce in reducing hazards and ensuring adequate controls are communicated. Some areas could use additional improvement but overall its quest for improvement is very evident. Practices to ensure hazards specific to its scope of work are identified, analyzed, and appropriate controls employed, have improved since the 2008 assessment. There were numerous examples during this assessment where workers participated in the identification, analysis, and control selection that has contributed to the low accident injury rates. Clearly, FFS personnel have enhanced the FFS safety and health system. FFS continues to meet all the elements of the Worksite Analysis tenet for continued participation in DOE-VPP at the Star level.

VI. HAZARD PREVENTION AND CONTROL

Once hazards have been identified and analyzed, they must be eliminated (by substitution or changing work methods) or addressed by the implementation of effective controls (engineered controls, administrative controls, 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.

The nature of the work performed by FFS provides only limited opportunities to implement engineered controls, but FFS is implementing or assisting with engineered controls where practical. Two key projects observed during this assessment demonstrated effective engineered controls. The first project is the replacement of the firewater system in the 300 Area. Initially planned as a full demolition project by WCH, the Pacific Northwest National Laboratory identified a critical need to maintain some category 2 nuclear facilities in operation. That requirement necessitated a replacement of the firewater loop around the 300 Area. The firewater system is located underground up to 8 feet or more in many locations, and is below other critical utilities, such as duct banks, power systems, and instrumentation conduit. Complete excavation of the water line would create significant potential to damage other systems, expose workers to trenching and other high-energy systems (steam and electricity). Finally the work was targeted for a small firm. FFS teamed with another small contractor and identified a "Pipe Burst" technology that would allow replacement of the installed water lines with a flexible plastic pipe that is drawn through the existing pipe. Use of the pipe burst technology significantly reduces the amount of excavation, exposure of workers to other hazards, and minimizes the potential to damage other installed systems.

A second engineered control was identified for a rail car decontamination and demolition project for CHPRC. Again FFS teamed with another contractor that specialized in special and heavy lift equipment. Special hydraulic lifting equipment was brought in to lift the locomotives and cask cars onto special trailers that could be used to transport the railcars to the Environmental Restoration Disposal Facility for burial or to the B-Area museum. The use of specialized equipment significantly reduced the potential for dropped equipment, spread of contamination, and minimized the number of personnel at risk in the vicinity of the loads.

While observing the rail car lift, the workers demonstrated a very effective technique to ensure workers were alert and on task. The "Two Minute Drill" was a short review of critical tasks, assignments, and responsibilities conducted immediately before the most hazardous portion of the work began. This process was initiated by the workers on that job and is an excellent practice. FFS should share this technique across all its workgroups and with the other Hanford Site contractors as a means of proactively teaching workers to step-back periodically and ensure they are ready to perform the job.

Walkdowns of the newly constructed shop areas (welding, carpenters, and laborers shops) identified some weaknesses in appropriate hazard controls. Surveys had determined hearing

protection was required and safety glasses are normally required in the vicinity of operating shop machines, but these requirements were not posted in any of the newly constructed shops. The Craft Safety Representatives were aware of the missing postings, and signs were on order, but procurement had been delayed. Personnel have been working in the shops for more than 3 months without the required postings. The lack of postings may be contributing to a weakened awareness for PPE requirements by nonshop personnel who routinely walk through on their way to other locations. These nonshop personnel were observed crossing through the shops without appropriate PPE. Although shop personnel would halt work to allow them to safely pass through, this practice puts an undue burden on shop personnel to be alert to these interruptions and respond appropriately. This may also create unwarranted distractions for shop workers that might draw their attention away from their work and immediate hazards. In addition, the practice may have fostered an unwanted perception that nonshop personnel do not need to consider appropriate PPE when accessing hazardous areas. FFS should establish effective contingency measures to ensure workers are aware of and use appropriate PPE when accessing or traversing shop areas until the appropriate postings are in place.

Opportunity for Improvement: FFS should ensure workers are aware of and use appropriate PPE when accessing or traversing shop areas until the appropriate postings are in place.

During the assessment, workers identified several issues regarding the centralized dust and particulate filtration system being installed for the new welding shop. The centralized system in the new welding shop has seven trunk lines mounted throughout the shop that are designed to be swung into position to filter air during welding, brazing, and grinding operations.

Although installation was incomplete, the system was operational and sound level monitoring identified noise levels of 85 db average across the entire shop. At these levels, the entire shop would require hearing protection any time the filtration system was in operation. Engineering's discussions with the vendor indicate that some reductions in noise level will occur with the placement of the collection drum but it is anticipated that the noise levels in the current configuration will still require hearing protection, if used routinely. The vendor does offer several noise dampening options for the internal exhaust that will greatly reduce the noise generated by the system. These options are currently being evaluated by the design authority group.

The filtration unit itself is designed for use indoors or outdoors, however, outdoor installation or ventilation to the outdoors was rejected by designers. Proximity to the roadway and foot traffic going to and from the lunchroom located in the next building was a primary consideration. In addition, DOE Order 430.2B, *Departmental Energy, Renewable Energy and Transportation Management*, restricts energy usage per square foot in new federally-owned buildings. The large volume of air the system would exhaust out of the building would require additional makeup air units to maintain appropriate heating and cooling for the building. These units would result in an unacceptable energy usage that would not meet the expectations set by DOE O 430.2B.
In addition, the currently installed filtering system associated with this unit is not designed to filter any of the fumes associated with welding and brazing operations using manganese or

hexavalent chromium-containing materials. The manufacturer recommended a higher efficiency filter upgrade to the system that would effectively mitigate those hazards. The need for this control was not initially identified in the procurement package prepared by the design engineering group.

The Team's concern is that the process for identifying and addressing these hazards during the design and procurement phase was not effective. The process for selecting the appropriate system that addressed all anticipated hazards and effectively mitigated them failed to address several key elements. FFS needs to ensure that future decisions regarding system upgrades are effectively communicated with the input of the design authority engineers, IH, Craft Safety Representatives, and the welders. A list of approved materials to be used in the welding shop and the type of work to be performed on the materials should be the basis of the hazards the system is designed to mitigate.

Opportunity for Improvement: The FFS design authority needs to work with IH, Craft Safety Representatives, and the welders to ensure the centralized filtration system in the welding shop is evaluated, a design baseline is established, and the system upgraded to ensure it appropriately controls and mitigates the hazards associated with welding, brazing, and grinding activities on materials containing potentially hazardous elements such as hexavalent chromium or manganese.

Opportunity for Improvement: FFS needs to ensure the acceptance criteria for the centralized filtration system establishes system face-flow rates and trunk hose placement specifications for effective mitigation of hazards during welding operations.

During the assessment, workers understood and used the appropriate PPE during field work. PPE was emphasized at every prejob briefing, and the opportunity for questions or suggestions was always offered. In some instances, employees were observed reminding coworkers of the need for particular PPE, such as safety glasses and hard hats, while in the field. The ease with which workers would remind each other of the PPE requirements was a positive indicator of how the safety culture was ingrained throughout the FFS workforce.

FFS has safety professionals that provide expertise in industrial safety, IH, radiation protection, and fire protection, as well as certified safety professionals. Qualified and trained craftsmen also assist with electrical hazards, hoisting and rigging issues, and mechanical construction and maintenance activities. In the 2008 review, the concern was raised that IH may not be staffed to a level necessary to appropriately support FFS activities in a timely fashion. FFS agreed with this recommendation and has increased its IH staffing from 1.5 to 4 full-time equivalents. The new personnel were recruited in the past 18 months and their presence in the field was evident. As discussed in the 2008 review, FFS does not routinely perform preventive maintenance (PM) activities based on the elements of its contract. The FFS construction forces may perform some

limited PM in accordance with manufacturer's recommendation on equipment in its possession or under its operational responsibility.

In April 2011, AdvanceMed Hanford, the Hanford occupational health services contractor changed its name to CSC Hanford Occupational Health Services (CSC HOHS). CSC HOHS is responsible to establish a compliant and comprehensive occupational medicine program for workers employed at FFS that work on a DOE site for more than 30 days in a 12-month period or are enrolled for any length of time in a required medical or exposure monitoring program. FFS uses the Employee Job Task Analysis (EJTA) process to notify the occupational medicine provider of those workers.

CSC HOHS provides medical services for all site workers along with injury case management services including interaction with the offsite medical provider, the employee, and managers during the recuperation period following a job-related injury or illness. CSC HOHS occupational health specialists are expected to make worksite visits to become familiar with the hazards and to assess employee work conditions related to specific incidents that involve an occupational injury or illness.

FFS uses the EJTA process to identify employees with potential or actual exposures who require enrollment in specific medical-monitoring programs, e.g., lead, asbestos, or beryllium. The employee's manager, with input from the employee, the facility/project industrial hygienist, and the safety representative, completes an EJTA. The EJTA identifies the physical requirements of the employee's job, potential exposures to hazardous chemicals/materials, and assignment to special functions. Once established, EJTA is reviewed periodically, and updated if necessary, for each employee.

For FFS employees deployed throughout the Hanford Site, FFS requires them to participate in all drills and exercises conducted by its customers such as WCH, CHPRC or the Volpentest Hazardous Materials Management and Emergency Response (HAMMER) Training Center. Those customer programs have been evaluated by the Team in previous reviews and have been effective in ensuring workers are capable of responding appropriately to the range of emergencies.

FFS has assumed a lead role at ROC for emergency preparedness. Although only a tenant of the building, FFS has implemented processes, procedures, and training for building evacuation in an emergency. These include methods to ensure all offices are evacuated and all personnel are accounted for as quickly as possible following and evacuation. Drills are conducted twice a year. FFS uses the drills as opportunities to identify issues and problems. For example, during the last building evacuation drill, radios provided to floor monitors and the Building Warden did not function well. FFS purchased new radios that include secure transmission, and prepositioned those radios with the floor monitors. Additional radios were also positioned with the floor monitors to ensure the Building Warden would have rapid access to a radio in the event of an emergency. FFS has also prepositioned first aid kits and automated external defibrillators in easily accessible locations throughout the building. FFS has been actively seeking and assisting the other building tenants in the emergency preparedness program.

Conclusions

FFS has implemented an effective hazard prevention and control program. A process is in place to identify hazards and determine effective controls to protect the worker. As discussed in the Worker Involvement section, the workforce is clearly engaged in identifying and controlling hazards. The new welding shops filtration system procurement process will need to address several opportunities for improvement to ensure appropriate resolution. FFS meets all the elements of the Hazard Prevention and Control tenet for a DOE-VPP Star participant.

VII. SAFETY AND HEALTH TRAINING

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

FFS training and qualification programs are well established to ensure that all employees receive appropriate training to recognize hazards of work environment to protect themselves and coworkers. The training process is systematic and provides requisite knowledge, skills, and abilities to perform tasks competently and safely. It applies to all employees and all aspects of FFS operations, design, procurement, construction and support activities.

Most of the safety and health training is provided by the HAMMER Training Center and consists of computer-based training (CBT), classroom training, and on-the-job training (OJT). All new employees are required to take the Hanford General Employee Training (HGET), and those working on CHPRC must also take CHPRC General Employee Training (CGET). Additionally, they must complete annual HGET and CGET refreshers. OJT is provided by experienced craftsmen and requires the trainees to pass oral boards and demonstrate proficiency on the equipment. FFS has a good practice of pairing new craftsmen with experienced craftsmen who act as mentors.

Since the 2008 assessment, FFS has strengthened training of its construction supervisors and managers by adding several FFS-designed courses. The first is the Safety, Environment, Health and Orientation for Construction and Contractor Supervisors course which is recommended for key supervisors and field work supervisors. The course includes a detailed discussion of responsibilities under 10 CFR 851, including stop-work authority and reporting of all injuries, prejob briefings and weekly and monthly safety meetings. The class also includes an exercise for the attendees to prepare an AJHA for an activity. FFS has trained about 60 people and plans to make this a mandatory training for supervisors and field work supervisors. The Team attended a session of the training which has 9 students. The course was taught by an experienced instructor and the class participation was good. However, some of the class material required access to the FFS Intranet for looking up procedures etc., which did not work and reduced the effectiveness of the class.

A second course is a performance engineering course given by a former FFS craft safety representative to foremen and supervisors. This course provides safety and health training primarily from the craft's perspective. It has also been given to about 60 people.

A third course is called Leadership Fundamentals Training and is for craft foremen, field work supervisors, and construction managers. This course has six modules. Each 90-minute module is scheduled to be given over lunch to minimize impact on work. These modules are given many days, weeks, or even months apart. So far, only two modules have been given in three classes of about 20 attendees each. FFS plans to complete the remaining modules by September 30, 2011. The first module covers Fluor's business fundamentals with emphasis on ethics, VPP, Integrated

Safety Management System, and Stop Work Authority. The second module is on legal fundamentals and includes a discussion of the Hanford Site Stabilization Agreement and Human Resources Policies. The third module is on communications and the fourth module is on teamwork fundamentals to build effective teams. The fifth module is on leadership and the sixth module is on performance.

The Team identified some opportunities to improve this training. The first is that the modules were given with considerable time lapses between modules which may be detrimental to effective learning. Also, the training should be followed up with effective coaching and mentoring to help new supervisors practice and further develop the necessary skills. FFS should consider utilizing the resources of the HAMMER Training Center to improve the training.

Opportunity for Improvement: FFS should consider utilizing the HAMMER Training Center to assist with design of the Leadership and Fundamentals Training, and add a coaching and mentoring element to help reinforce the skills being taught.

A program gaining support in general industry is the Safety-Trained Supervisors (STS) Program. This program provides supervisors with a third-party certification by the Board of Safety Professionals through the Council on Certification of Health, Environmental, and Safety Technologists (CCHEST). STS certification establishes a minimum competency in general safety practices. To achieve the certification, candidates must meet minimum safety training work experience and demonstrate knowledge of safety fundamentals and standards by examination. Those holding STS certification must renew it annually and meet recertification requirements every 5 years. The program has proven effective at other sites in helping supervisors recognize potential unsafe acts and conditions and make improvements in safety. FFS has not encouraged supervisors to pursue this certification, but may want to consider it as a potential means of gaining additional safety improvement.

Opportunity for Improvement: FFS should consider encouraging supervisors to pursue STS certification.

FFS is sponsoring and has scheduled a 3-day preparation course for certification as Construction Health and Safety Technician (CHST) for a class of 30 in Richland, Washington, June 23-26, 2011. CHST is another third-party certification offered by CCHEST, and may be used as stepping stone for the Certified Safety Professional certification. CHST certification is required to be selected as a designated safety and health representative or safety officer on some of the FFS projects, and this training should further enhance the safety and health program at FFS.

Each workgroup has a Position Task Code that specifies the training courses they are required to complete. This training is referred to as core training. Managers and supervisors determine any additional training based on employees' task assignments. For example, if an employee is required to work in a confined space, the employee must have the required confined space training. Team review of AJHAs indicated that specific training required for activities are clearly stated in the AJHAs.

FFS prepared an excellent publication, the *Craft Employee Handbook and Safety Guidelines*, which is distributed to all newly hired craftsmen during new employee orientation. It contains a wealth of information, including safety and health information which is easy to understand by the workers. However, the Team interviews indicated that very few of the workers were familiar with it or refer to it when questions arise. FFS should find ways to increase the awareness of and use of this handbook.

Opportunity for Improvement: FFS should find ways to increase the awareness and use of the *Craft Employee Handbook and Safety Guidelines* by workers.

A review of sample training documentation and interviews with employees indicated that training is being carried out in a thorough and systematic manner. FFS training records are maintained in the Integrated Training Electronic Matrix. The training coordinators prepare regular reports of training expiring in the next 90 days and 60 days and inform the supervisors and the employees of training expiration dates. These reports also indicate expired training cases. The employees and supervisors are responsible to ensure that the employees take the training prior to expiration. Since most of the training is CBT the Team ascertained that the craftsmen have sufficient access to computers to take the CBT. Team's review of the training records indicated that the training was mostly current. The few isolated cases of training lapses were due to extended illnesses or where the training was no longer required for the employee's current job assignment.

Conclusions

Since 2008, FFS has continued to maintain a well established training and qualification program that ensures workers are appropriately trained to recognize hazards and protect themselves and coworkers. The FFS training program helps managers, supervisors, and employees to understand the established safety and health policies, and rules and procedures to promote safe work practices and minimize exposure to hazards. FFS meets the requirements of the Safety and Health Training tenet of DOE-VPP at the Star level.

VIII. CONCLUSIONS

Since 2008, FFS has continued to make improvements in all aspects of its safety and health program. FFS attributed a small rise in TRC and DART rates in 2010 primarily to the infusion of new workers under ARRA, and the distractions resulting from significant contract changes at the Hanford Site. Although the rates increased, they remain a very small fraction of the comparison industry rates (Heavy and civil engineering construction). FFS is very aware of every injury that occurs, and remains vigilant in its efforts to avoid and prevent injuries.

Management commitment and leadership has remained strong since 2008. Opportunities for improvement identified in 2008 were accepted and acted upon, and are showing positive results in improved safety and health culture, improved employee participation, and a more active program overall. Workers were almost universally satisfied with their managers' presence and availability. Substantial improvements in the ROC safety and health committee were evident. FFS employees continue to be actively involved in promoting safety and improving the safety culture at FFS. Workers continue to believe FFS is a safe place to work and their managers and supervisors share in the commitment to safety. The workforce remains acutely engaged in identifying, removing, and controlling workplace hazards, although processes to identify and analyze hazards in the shop areas prior to being occupied need to be reviewed and strengthened. Finally, the training and qualification program remains effective, with some opportunities to expand and build on existing training classes by increasing coaching and mentoring after training is completed.

FFS continues to meet or exceed the expectations for continued participation in DOE-VPP, and the Team recommends that FFS continue to participate at the Star level.

Appendix A

Onsite VPP Audit Team Roster

Management

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