



**U.S. Department of Energy
Voluntary Protection Program
Recertification Review of
Facility Engineering Services KCP, LLC at
Kansas City National Security Campus**



**Office of Environment, Health, Safety and Security
Office of Health and Safety**

March 2024

PREFACE

The Department of Energy (DOE or Department) recognizes that excellence can be encouraged and guided but not standardized. 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.

DOE-VPP encourages DOE contractors and subcontractors to surpass compliance with DOE requirements and achieve excellence through systematic approaches emphasizing creative solutions through cooperative efforts with managers, employees, and DOE.

DOE-VPP bases program participation on the existence of comprehensive management systems that ensure employees are actively involved in assessing, preventing, and controlling the potential safety and health hazards at their sites. All DOE contractors and subcontractors working for production facilities, laboratories, and support organizations may participate in DOE-VPP. In keeping with DOE-VPP philosophy, *participation is strictly voluntary*. Additionally, any participant may withdraw from the program at any time.

The DOE-VPP, as with the OSHA VPP, consists of three levels of participation: Star, Merit, and Demonstration. The Star level recognizes outstanding protectors of employee safety and health. The Merit level recognizes participants that have good safety and health programs but need time and DOE guidance to achieve Star status. The Demonstration level allows DOE to recognize an organization's health and safety achievements in unusual situations that DOE needs to learn more about before determining recognition for the Merit or Star level.

Approving an applicant for participation in DOE-VPP demonstrates that DOE recognizes that the applicant exceeds the basic elements of systematic protection of its employees. Participants receive certificates of approval and are allowed to display flags and other paraphernalia indicating the appropriate DOE-VPP program level achieved. Participants may also choose to illustrate the DOE-VPP logo on its letterhead and award items for employee incentive programs.

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ABBREVIATIONS AND ACRONYMS

BLS	Bureau of Labor Statistics
CAIRS	Computerized Accident Injury Reporting System
DART	Days Aways, Restricted, and Transfer
DOE	Department of Energy
EHSS	Office of Environment, Health, Safety and Security
EHSS-12	Office of Worker Safety and Health Assistance
FES	Facility Engineering Services KCP, LLC
Honeywell FM&T	Honeywell Federal Manufacturing and Technologies, LLC
KCNSC	Kansas City National Security Campus
NAICS	North American Industry Classification System
OSHA	Occupational Safety and Health Administration
PPE	Personal Protective Equipment
SME	Subject Matter Expert
Team	Office of Environment, Health, Safety and Security DOE-VPP Team
TRC	Total Recordable Case
VPP	Voluntary Protection Program

EXECUTIVE SUMMARY

This report provides the Department of Energy (DOE) Director, Office of Environment, Health, Safety and Security (EHSS), with the results of the DOE Voluntary Protection Program (VPP) triennial review of Facility Engineering Services KCP, LLC (FES). The review was conducted November 13-16, 2023, at the Kansas City National Security Campus (KCNSC), located in Kansas City, MO. Based on this review, the DOE-VPP Assessment Team (Team) recommends that FES continue to participate in DOE-VPP at the Star level.

FES, a subsidiary of Burns & McDonnell, is a subcontractor to Honeywell Federal Manufacturing & Technologies, LLC (Honeywell FM&T), the management and operations contractor for the National Nuclear Security Administration KCNSC. Honeywell FM&T assembles and manufactures components for national defense systems that do not involve radioactive, explosive, or special nuclear materials. FES provides utility system management, engineering/design support, and construction oversight to Honeywell FM&T plant management operations. Federal oversight of KCNSC operations is provided by the Kansas City Field Office.

FES is comprised of approximately 43 full-time employees, supplemented by personnel from Burns & McDonnell, as needed. Most FES employees are office workers that occasionally enter and evaluate KCNSC plant areas. Potential hazards to FES employees include those common to general industry such as fire, electrical, mechanical, chemical, and natural phenomena. FES employees are not part of a collective bargaining organization.

FES entered the DOE-VPP in 2006, and was recertified as a Star participant in 2008, 2012, 2015, and 2018. In 2018 and 2023 FES received a Legacy of Stars award for outstanding injury prevention, outreach, and mentoring. EHSS conducted this recent triennial onsite assessment to verify that FES continues to meet expectations for participation at the Star level. The results of the review indicate FES is:

- Maintaining accident and injury rates that are lower than comparable industries;
- Committed to ensuring accomplishment of missions safely, without unnecessary or unanalyzed risks;
- Engaging the workforce in maintaining a strong safety culture and empowering workers to identify issues, recommend improvements, and stop and pause work when questions or issues arise;
- Correctly identifying and analyzing hazards using teams of subject matter experts, workers, and managers, and maintaining job hazard analyses for all work where FES employees are involved;
- Properly controlling hazards using the appropriate hierarchy of controls, and collaborates with safety and health professionals from Honeywell FM&T in processes to properly define, authorize, control, and complete work safely; and
- Appropriately training and qualifying all workers, managers, and subcontractors to recognize and control the hazards they may encounter.

FES continues to foster a safety conscious work culture of collaboration with Honeywell FM&T and, despite its small footprint, has become a critical part of the KCNSC's success. FES leaders prioritize safety and understand their role as the main onsite facilities engineering service contractor, encouraging engagement of personnel not only for FES assignments but also for sitewide safety success.

FES consistently seeks effective ways to evaluate workforce needs and improve worker experience. FES maintains clear communication with Honeywell FM&T to ensure employees are aware of all hazards that might be present onsite. FES managers and technical staff exhibit a partnership focused first on safe work execution and constantly collaborate with other site workers when analyzing workplace hazards and controls. Strong communication ensures that all hazards FES employees might encounter are properly evaluated and abated.

The Team observed a workforce that communicates openly and is unafraid to ask questions, raise concerns, and freely discuss possible hazard abatement methods. This openness between managers and workers demonstrates that all levels of employees take their responsibilities towards each other's safety seriously and serve as an example to peers throughout DOE.

The Team identified some opportunities for improvement that may assist FES in its continuing efforts to empower its workforce and recognize the strengths of its staff. The Team did not identify any programmatic noncompliance with DOE safety requirements that would preclude participation in DOE-VPP. FES continues to meet all the expectations for DOE-VPP.

TABLE 1: OPPORTUNITIES FOR IMPROVEMENT

Opportunity for Improvement	Page
FES staff would benefit from greater interaction and/or participation in DOE safety-related committees and communities of practice (e.g., DOE-VPP peer benchmarking, Energy Facility Contractors Group Safety Culture Community of Practice, Accident Prevention and Investigation Program, Construction Safety Advisory Committee).	8
FES should track all forms of worksite hazard control verification in a centralized manner to clearly document compliance with DOE-STD-1232-2019, <i>U.S. Department of Energy Voluntary Protection Program, Vol. 1</i> , frequency expectations.	10
FES should develop mechanisms for consolidating results of all observation and inspection programs (e.g., <i>Safety Walks, Intervention Program, Behavior Observation Program</i> , project review walkdowns, etc.) to categorize similar issues and identify trends and leading indicators.	10
FES should train employees to familiarize them with the MacCulture Recognition Program tools and resources and foster increased use of this positive reinforcement tool.	14
The Team recommends FES develop and provide training to familiarize its employees with the capabilities of the newly adapted Learning Center application.	17

I. INTRODUCTION

This report provides the Department of Energy (DOE) Director, Office of Environment, Health, Safety and Security (EHSS), with the results of the DOE Voluntary Protection Program (VPP) triennial review of Facility Engineering Services KCP, LLC (FES). The review was conducted November 13-16, 2023, at the Kansas City National Security Campus (KCNSC), located in Kansas City, MO. Based on this review, the DOE-VPP Assessment Team (Team) recommends that FES continue to participate in DOE-VPP at the Star level.

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EHSS conducted this 2023 triennial review in accordance with DOE-STD-1232-2019, *U.S. Department of Energy Voluntary Protection Program, Vol. 1-4*, requirements to verify that FES continues to meet DOE-VPP expectations for participation at the Star level. The Team performed onsite work observations, document reviews, process validations, and interviews.

This report contains a review and discussion of FES injury and illness rates and an assessment of safety management system elements compared to the DOE-VPP tenets of Management Leadership, Employee Involvement, Worksite Analysis, Hazard Prevention and Control, and Safety and Health Training. The report also provides opportunities for improvement that may assist FES' continuing efforts to empower its workforce and recognize the strengths of its staff.

II. INJURY INCIDENCE CASE RATES

To maintain DOE-VPP Star status, a contractor's average for both Total Recordable Case (TRC) rates and Days Away, Restricted, or Transfer (DART) case rates for the most recent 3-year period (based on calendar year[CY] for this report) shall be at or below the most recent specific industry national average North American Industry Classification System (NAICS) code published by the Bureau of Labor Statistics (BLS). The NAICS code for FES is 54133, *Engineering Services*.

The following table presents the most recent 3-year period data validated by the Team using FES Occupational Safety and Health Administration (OSHA) 300 Logs, data from the DOE Computerized Accident Incident Reporting System (CAIRS), the Team's calculation of the TRC and DART rates, and the specific industry national average for the comparable industry. The data presented applies to employees directly working for FES. FES does not employ subcontractors.

TABLE 1: FES 3-Year Injury and Incidence Rates

CY	Hours Worked	TRC	TRC Incidence Rate (per 200,000 Hours)	DART	DART Case Rate (per 200,000 Hours)
2020	60,644	0	0.00	0	0.00
2021	67,689	0	0.00	0	0.00
2022	71,216	0	0.00	0	0.00
Totals	199,549	0	0.00	0	0.00

The 2022 BLS TRC and DART rates for NAICS code 54133 are 0.60 and 0.30, respectively.

Discussion

FES has not experienced any recordable cases in the last 3 years. The Team reviewed the DOE CAIRS for CY 2020 to 2022. This review confirmed FES has entered zero recordable cases into CAIRS and the work hours reported for those years closely matched the hours in its annual self-assessment VPP report. The Team did not find any evidence of underreporting or any incentives that would encourage workers to avoid reporting injuries. Interviews with workers indicate they do not fear reprisal for reporting and acknowledge managers encourage the reporting of an injury, incident, near-miss, or first aid case.

FES is maintaining complete and accurate recordkeeping logs as required. The recordkeeper posted the OSHA 300A Summary according to the recordkeeping standard during the required periods. The Summary remains accessible to all personnel throughout the calendar year. The logs reflect the safety and health conditions under this contractor's control. The FES recordkeeper has completed CAIRS training and is knowledgeable of the recordkeeping requirements.

Conclusion

FES 3-year TRC and DART rates are both 0.00. As the 2022, BLS TRC and DART rates for NAICS code 54133 are 0.60 and 0.30, respectively, and the Team did not find any reason to

dispute the record keeping or employees' reporting of incidents, FES meets the expectations for continued DOE-VPP participation.

III. MANAGEMENT LEADERSHIP

Management Leadership is a key element in obtaining and sustaining an effective safety culture and implementing the guiding principles of integrated safety management. The contractor shall demonstrate senior level management commitment to integrated safety management, occupational safety and health, and meeting the requirements of DOE-VPP. Management systems for comprehensive planning shall address safety and health requirements and initiatives. Elements of those management systems shall 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 that are visible, accessible, and credible to employees. As with any other management system, the organization shall integrate authority and responsibility for employee safety and health with its management system and shall involve employees at all levels of the organization.

Since the 2018 DOE-VPP assessment, FES has served a key support function through notable KCNSC changes, including significant site turnover and staffing increases, site footprint expansion, and Coronavirus Disease 2019 Pandemic remote work restrictions. In response to these challenges, FES has taken proactive measures such as increasing its project management and engineering staff, expanding its leadership team, and implementing human-performance tools in its work documentation to ensure consistent quality. In 2023, the FES management team continued to champion safety prioritization among its staff and broadening its service roles to Honeywell FM&T in engineering, construction management, and project management.

FES, as a subcontractor to Honeywell FM&T, is required by contract to comply with the Honeywell FM&T *Contractor Safety Handbook* which includes a requirement to furnish a written safety plan. FES describes its safety and health policy and outlines compliance with Honeywell FM&T contract safety plan requirements using the *FES Safety and Health Plan*. FES is supported in its safety plan implementation by parent company Burns and McDonnell, which maintains an extensive safety program document and provides supplemental resources to FES, such as safety and industrial hygiene professionals, as needed.

FES summarizes its safety policy using the slogan, “Safe in all we do.” FES staff exhibits an example of their slogan by putting one of the safety plan aspects, stop work authority, into action in all they do, both at work and at home. FES management has instituted an *Intervention Program* which encourages employees to briefly summarize and submit to the program owner instances, called interventions, where an employee identified an unsafe condition, spoke up, and intervened to stop an unsafe activity. FES has documented interventions from staff performing normal engineering and oversight duties, transiting through general workspaces, and away from work either at home or in their community. Intervention examples include notifying subcontractors to change out tinted eye protection as outdoor lighting darkened and notifying an at-home tree trimmer to shut off mulching equipment before reaching in to dislodge debris. FES managers encourage interventions as one mechanism for putting safety policy into action and exercising employees’ stop work authority on a routine basis. FES employees interviewed were familiar with company safety policy and credited practical applications, such as the *Intervention Program*, as examples of integrating the policy with their work in support of their overall mission.

FES, while supported by parent company safety professionals and Honeywell FM&T safety staff, is entirely a line organization and integrates safety responsibility into all roles and activities. FES managers hold employees accountable for safety and empower staff to exercise their responsibility to work safely. FES considers safety when evaluating employee performance. The company expects its leaders to be recognized by direct reports as a champion who cares about their safety and build cultural safety alignment with their staff, traits which cultivate a safety conscious work environment. FES managers also create an environment conducive to prioritizing safety. For example, FES has developed a *Design Engineering Manual* and *Project Management Manual* to align designers and project managers with company good practices and ensure consistent application of safety and quality when providing customer service. The FES design engineering and project management process manuals include safety practices such as periodic field walkdowns, hazard awareness, and safety concern intervention. Employees are also able to engage directly with Honeywell FM&T staff and are empowered to participate in Honeywell FM&T safety committees, giving FES a voice in overall KCNSC site safety.

New FES staff receive thorough orientation to site safety and expected work practices during onboarding processes. New employees must review the *FES Safety and Health Plan* and receive safety orientation from Honeywell FM&T prior to accessing industrial or construction work areas. Burns and McDonnell provides corporate training to set high-level safety expectations. FES managers and the VPP Steering Committee, a chartered body of FES employees promoting safety and fully described in the Employee Involvement section of this report, engage new employees in the specific safety expectations of their role and of the FES mission supporting Honeywell FM&T. FES managers leverage long-tenure staff knowledge and a strong safety culture to instill safety prioritization in new employees.

Managers have also created a community environment within the company and are visible and accessible to all FES staff. FES staff interviewed consistently emphasized their appreciation of their leaders' focus on safety above schedule and that management provides resources (e.g., the VPP Steering Committee) and strategies (e.g., scheduled design review walkdowns described in the *Design Engineering Manual*) to prioritize safety.

FES managers and VPP Steering Committee peer leaders proactively assess safety knowledge and culture. The Team reviewed the *FES 2022 Annual Safety and Health Program Evaluation*, submitted to meet DOE-VPP annual report requirements, which included recent safety survey results. The VPP Steering Committee conducted an FES-VPP Satisfaction Survey in 2022 to evaluate employee engagement with FES safety programs and employee understanding of safety practices and expectations. The survey received a 96 percent participation rate. VPP Steering Committee members noted valuable feedback from both closed- and open-ended survey responses. For example, only 71 percent of FES staff answered that they knew how to report a safety concern. The VPP Steering Committee recognized the knowledge gap, with 26 percent of respondents wanting to know more and 3 percent of respondents not knowing how to report a safety concern. FES acted quickly and incorporated safety issue reporting into its next Learning Over Lunch company-wide information and engagement session to close this knowledge gap. Open-ended survey questions also provided actionable feedback, around which FES planned its safety communication strategy and information session topics for the subsequent year. Employee feedback initiatives, such as safety surveys provide opportunities to identify leading indicators in

the areas of safety culture, safety practices, and employee engagement and are a best practice among DOE-VPP peers.

Conclusion

FES leadership clearly places safety first while communicating priorities and policies to the workforce. FES has expanded both its management team and staff employees to meet increased demand while maintaining a strong safety culture. FES managers hold staff accountable for safety in their performance goals and through regular work team interactions. FES staff know and understand their ability and responsibility to integrate safety into their daily roles and be safety champions in their engineering and project support roles at KCNSC. The VPP Steering Committee supports FES leadership by identifying employee needs, coordinating safety resources, and sharing knowledge to empower employees working safely. FES uses strategies such as the *Intervention Program* and process manuals to encourage employees to focus on safety and consistently manage their responsibilities safely. FES meets the expectations for Management Leadership and continued participation in DOE-VPP.

IV. EMPLOYEE INVOLVEMENT

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

During the 2018 DOE-VPP assessment, FES exhibited its VPP Steering Committee as the primary driver for safety initiatives within the company. The Team observed continued employee safety leadership from the VPP Steering Committee during the 2023 DOE-VPP assessment. The VPP Steering Committee is chartered by FES to promote employee safety and health program participation and to encourage and promote a positive safety culture and safe work practices throughout the workforce. The committee charter identifies a *VPP Bill of Rights* for all employees to:

- Stop work due to unsafe acts or conditions for any safety and health concern or doubt, without fear of reprisal.
- Willingly participate and become actively involved in safety and health issues.
- Examine accident, incident, and safety tour reports; medical and exposure records; injury and illness logs; safety and health audits and inspections; and citation data.
- Demonstrate continuous improvement.

FES VPP Steering Committee members help uphold employee safety rights by educating FES staff about safety and communicating good safety practices throughout the organization. The VPP Steering Committee also facilitates self-evaluation of company safety performance via the annual self-assessment report to meet DOE-VPP requirements and additional evaluations such as the FES-VPP Satisfaction Survey, discussed in the Management Leadership section of this report. VPP Steering Committee members are enthusiastic about the strong safety culture FES has built and continues to maintain this culture in a period of work expansion and personnel increase. Discussions with FES staff, both VPP Steering Committee members and non-members, credited the significant efforts of the committee with keeping a company-wide focus on personal safety and integrating safety into work activities.

FES employees engage directly with peers on safety related topics during *Learning Over Lunch* sessions, meetings open to all staff to receive company updates and discuss informational safety briefings. The VPP Steering Committee organizes *Learning Over Lunch* sessions approximately every 2-3 months, focusing either on topics identified as company needs (e.g., through the VPP Satisfaction Survey discussed in the Management Leadership section of this report) or on topics of interest to employee volunteer presenters. FES staff members discussed with the Team various approaches to presentation development. For example, the Hazardous Area Awareness presentation addressed a vague instruction during a project review to look out for ill-defined

hazardous areas. The presenter used the topic as a research opportunity to learn about specific parameters for hazardous areas classified by explosive or combustible material presence and shared that knowledge with peers. Another presentation on compressed gas safety fulfilled a VPP Steering Committee request for a mechanical topic by discussing hazards of common home-use compressed gas systems. The Team observed an interactive ergonomic presentation during this assessment in which employees participated in stretches after the briefing to combat common ergonomic stresses. FES staff noted good participation by employees for many *Learning Over Lunch* sessions. The variety of topics, the broad spectrum of subjects from work-related to home-focused, and the opportunity for peer recognition and engagement make *Learning Over Lunch* sessions a significant contributor to FES employee safety involvement.

In addition to the FES VPP Steering Committee, employees can participate in other site-wide, safety-focused committees sponsored by Honeywell FM&T. For example, FES employees actively participate as subject matter experts (SME) on the Honeywell FM&T pressure safety, electrical safety, hoisting and rigging, construction safety, and counterfeit and suspect materials committees. Discussions with Honeywell FM&T staff indicated FES personnel are well integrated with Honeywell FM&T staff supporting KCNSC operations and are very engaged in safety committee activities.

Despite active participation in local FES and Honeywell FM&T committees, FES managers and staff noted limited participation in DOE-wide committees and communities of practice. The Team noted that some FES staff were familiar with industry-type committees but unfamiliar with various DOE-sponsored organizations not only in specific safety subject matter areas like construction safety, but also in general fields like safety culture and accident prevention.

Opportunity for Improvement:

FES staff would benefit from greater interaction and/or participation in DOE safety-related committees and communities of practice (e.g., DOE-VPP peer benchmarking, Energy Facility Contractors Group Safety Culture Community of Practice, Accident Prevention and Investigation Program, Construction Safety Advisory Committee).

Conclusion:

The FES VPP Steering Committee champions employees' right to work safely and plays a critical role promoting positive safety culture throughout the organization. FES employees take ownership of their own safety and safety of their peers as shown in examples like *Learning over Lunch* presentation topics covering both work practices and personal safety at home. FES staff serve the KCNSC as SMEs on various safety committees and should pursue greater connection with DOE communities of practice to enhance already proactive and safety conscious FES resources. FES meets the expectations for Employee Involvement and continued participation in DOE-VPP.

V. WORKSITE ANALYSIS

Management of safety and health programs begins with a thorough understanding of all hazards workers might encounter and the ability to recognize and respond to new hazards. The first two core functions of the DOE Integrated Safety Management model, *Defining the Scope of Work* and *Identifying and Analyzing Hazards*, form the basis for a systematic approach to identifying and analyzing all hazards encountered as work planners use the results of the analysis in subsequent work planning efforts. Effective safety programs integrate feedback from workers regarding hazards and include a system to address newly recognized hazards. Successful worksite analysis also involves implementing mitigating measures during work planning to anticipate and minimize the impact of hazards.

FES personnel analyze new work activities, equipment, and worksites to identify and address hazards. FES staff compare the results to the job hazard analyses performed by Honeywell FM&T or project-specific subcontractors of Honeywell FM&T to ensure consistency in hazard identification. Interviews with project managers, computer-aided designers, engineers, and construction managers identified that walkdowns of planned work areas are a key component of project or work-execution planning and typically include a variety of stakeholders such as operators, supervisors, planners, and safety and industrial hygiene SMEs. FES workers noted involvement in prejob review of job hazards and familiarity with the presence of safety and industrial hygiene staff both during job planning and during execution of work.

FES employees work in an environment that encourages personal responsibility for safety. Interviewed workers were confident in their ability and duty to notify coworkers and managers of hazards and changing conditions and to stop work, if necessary. All interviewed FES employees were able to adequately describe to the Team the process of taking a time-out in the event of a safety concern and identified various methods available to report hazardous conditions. The most immediate notification methods to report a hazardous condition is directly to supervisors and safety and industrial hygiene workers at the worksite. Workers may also request a time-out to pause work until an identified issue is addressed. In addition, FES employees interviewed were well versed in the procedures to manage workplace injuries and accidents.

FES staff perform a variety of field walkdowns, observations, and inspections which provide opportunities to verify hazard controls and identify issues. FES employees perform office safety inspections of their immediate work areas on a quarterly basis and document results using a general *Office Safety Checklist*. Groups of FES staff regularly perform *Safety Walks*, targeted walkdowns of a particular work area or project footprint guided by the assigned project or construction manager. *Safety Walks* familiarize staff with projects and work practices with which they may not normally interact and provide fresh viewpoints that may identify safety concerns within the project scope or area.

The *Intervention Program*, previously discussed in the Management Leadership section of this report, enables any FES employee to highlight and document safety concerns whether at work or at home and encourages employees in their ability to pause work when unsafe or unsure. The *Behavior Observation System* is another mechanism for documenting safety related observations and particularly emphasizes identification of positive safety behaviors. In addition to these

processes, project management and design review processes also require walkdowns at various check points by computer-aided designers, project managers, design engineers, and other SMEs. Construction managers walk down active project work areas at least weekly in their oversight role.

FES inspection processes reviewed and observed by the Team meet DOE-STD-1232-2019, *U.S. Department of Energy Voluntary Protection Program, Vol. 1*, expectations for worksite hazard control verification. FES has implemented a tracking dashboard which follows VPP Steering Committee focus activities such as *Safety Walks*, *Intervention Program*, and *Behavior Observation System* participation for all FES employees. Although these activities are tracked closely, the data points do not fully document FES completion as required in DOE-STD-1232-2019. For example, walkdowns performed by project teams and construction managers while performing their operational roles are not clearly tracked or documented consistently.

Opportunity for Improvement:

FES should track all forms of worksite hazard control verification in a centralized manner to clearly document compliance with DOE-STD-1232-2019, *U.S. Department of Energy Voluntary Protection Program, Vol. 1*, frequency expectations.

FES collects valuable information from its *Safety Walks*, *Intervention Program*, and other hazard control verification observations. FES staff document observation results in various formats (e.g., emailed intervention summaries, *Behavior Observation System* forms, general *Office Safety Checklists*, etc.). Although the various processes are valuable for identifying overt hazards and issues and for sharing lessons learned among FES staff, the inconsistent documentation practices allow limited opportunity for trending of the data to identify leading indicators and underlying issue patterns. Even simple observation categorization (e.g., ergonomic issue, electrical safety issue, housekeeping issue, etc.) can reveal trends from isolated issues and observations.

Opportunity for Improvement:

FES should develop mechanisms for consolidating results of all observation and inspection programs (e.g., *Safety Walks*, *Intervention Program*, *Behavior Observation Program*, project review walkdowns, etc.) to categorize similar issues and identify trends and leading indicators.

Conclusion

The workforce is knowledgeable of the hazards they face and are confident they can perform work safely. Field observations, documents, and interviews confirmed that FES works in conjunction with Honeywell FM&T staff to conduct workplace inspections in areas where FES employees perform work. However, FES should track all forms of worksite hazard control verification in a centralized manner to clearly document compliance with DOE-STD-1232-2019. FES should also develop mechanisms for consolidating results of all observation and inspection programs to bin similar issues and identify trends and leading indicators.

FES has established a reliable system for employees to notify management about hazards and sharing of lessons learned. FES has an adequate system for reporting and investigating accidents, incidents, injuries, illnesses, first aid, and near-miss cases. FES has access to Honeywell FM&T certified safety specialists and certified industrial hygienists and backup support from its parent company, Burns and McDonnell, safety SMEs to supplement its hazard identification and employee risk assessment efforts. FES has an effective work planning and control system to ensure a thorough understanding and mitigation of hazards encountered during work. FES has fostered a close working relationship with Honeywell FM&T to ensure adequate identification, analysis, and control of hazards. FES continues to meet the expectation in Worksite Analysis for participation as a DOE-VPP participant.

VI. HAZARD PREVENTION AND CONTROL

The third and fourth core functions of the DOE Integrated Safety Management model, *Identify and Implement Controls* and *Perform Work in Accordance with Controls*, ensures hazards are eliminated by substitution or changing work methods once identified and analyzed or addressed by the implementation of engineering and administrative controls, or personal protective equipment (PPE). Equipment maintenance processes are also considered to ensure requirement compliance. Additionally, emergency preparedness plans must be implemented to respond to and mitigate the impact of incidents. Safety rules and work procedures must be developed, communicated, and understood by supervisors and employees. These rules and procedures must be followed by everyone in the workplace to prevent, control the frequency of, and reduce the severity of mishaps.

FES works in collaboration with Honeywell FM&T and parent company Burns & McDonnell to maintain access to qualified professionals as resources to workers for safety and health needs. The Team confirmed an adequate number of certified professionals are currently employed for the scope of work and size of the FES workforce. Interviews with managers and workers did not raise any concerns about understaffed areas or safety initiatives that could not be implemented due to lack of certified resources. FES has created a culture where most hazards are expeditiously addressed and employees understand their responsibilities to maintain a safe work environment. Interviews with workers confirmed certified safety professionals regularly performed safety and health walkdowns of facilities. Additionally, employees interviewed know how to contact safety professionals or occupational medicine services, as needed, onsite or at Burns & McDonnell headquarters.

FES conducts field walkdowns before construction activities begin where its employees are involved and performs hazard analysis to ensure their safety. Identified hazards are captured in a FES job hazard analysis which is later compared to those conducted by Honeywell FM&T to ensure inclusion of all identified hazards. If the FES job hazard analysis identifies hazards not covered by Honeywell FM&T or one of its subcontractors, FES works together with the other organizations to ensure adequate mitigation of all identified hazards.

FES performs bi-monthly inspections and a minimum of quarterly safety and health inspections of all its occupied facilities. These safety and health walkdowns are documented in meeting minutes by the person-in-charge of this activity and findings and lessons learned are shared with all FES employees via email. If identified hazards are not within the FES contractual scope for abatement purposes, the information is relayed to Honeywell FM&T who takes the lead and corrects the deficiency. The FES employee who identified the hazard during the walkdown becomes the point-of-contact and is responsible for tracking hazard abatement with Honeywell FM&T. During the assessment, the Team observed FES was constantly cooperating and working with Honeywell FM&T safety and health professionals to adequately identify and abate hazards. The Team observed adequate tracking and trending of hazards and deficiencies during the assessment. FES shares lessons learned among all of its employees and works in close proximity with Honeywell FM&T, who keeps FES informed of site-wide lessons learned.

FES recommends the implementation of engineering and administrative controls in conjunction with PPE as a hazard prevention and control methodology to protect workers. Administrative

controls include the preparation of work instructions, such as lockout/tagout plans, and a training management system that tracks employee training records to ensure workers receive the training necessary to perform assigned work safely. For example, FES employees benefit from the use of a Honeywell FM&T hazard awareness card posted at the entrance of the Precision Inertial Laboratory (3.F105) where all PPE required prior to entry is listed alongside the hazards employees might be exposed to in the laboratory. The card also includes the contact information of the Honeywell FM&T safety and health professional responsible for the area and identifies the date the hazard list was last updated to provide awareness of its accuracy. Interviewed workers understood PPE requirements and knew how to get in contact with their facility safety representative if needed.

FES engineers and project staff apply the hierarchy of controls in their work processes and outputs for KCNSC staff. For example, FES designers provided feedback regarding a shaker room construction project to extend personnel platforms on shaker equipment to allow full walkarounds instead of requiring long steps or overreach. Additionally, FES computer-aided designers collaborate with Burns and McDonnell SMEs to improve facility drawing clarity by including egress paths as standard plan inputs. FES professionals are constantly looking for methods to eliminate hazards through the implementation of the hierarchy of controls and understand PPE is the last line of defense in keeping workers safe.

FES employees have access to the occupational medicine clinic located at the KCNSC, as well as the pharmacy and clinic located at Burns & McDonnell headquarters. At the Burns & McDonnell Health Center, FES employees can have their diabetes, cholesterol, weight, blood pressure and vital signs checked. At the Burns & McDonnell pharmacy, operated by Walgreens®, FES employees can purchase over-the-counter medications at a reduced cost compared to a normal retail pharmacy. FES employees can also elect to have outside prescriptions filled at the Burns & McDonnell pharmacy. The Honeywell Clinic provides employees with emergency medical services and wellness programs including blood pressure monitoring and wound dressing changes.

FES employees have access to occupational medicine specialists at the Burns & McDonnell clinic to include a full-time nurse practitioner and occupational medicine physician. Burns & McDonnell is also in the process of converting its occupational health clinic into a facility where employees can elect to utilize the clinic and its staff as their primary doctor.

As part of the wellness program, FES employees have access to childcare at Burns & McDonnell headquarters and can utilize the gymnasium facilities at both Honeywell FM&T and Burns & McDonnell locations. Employees can also participate in wellness activities, including exercise and weight management plans, and earn points that can later be redeemed for discounts on health insurance premiums.

FES employees participate in emergency drills conducted by Honeywell FM&T and understand applicable emergency procedures. In November 2023, FES employees participated in a site-wide evacuation drill and post-drill lessons learned discussions by Honeywell FM&T and FES managers. During Team interviews, FES employees were capable of identifying the shelter-in-place and muster areas utilized in the event of an emergency. Although not in charge of coordinating the emergency drills for the site, FES does participate as part of the onsite Incident

Command System structure and assumes the lead role for facilities and utility infrastructure. Team interviews with emergency management personnel indicated FES active participation in the KCNSC Emergency Management Plan implementation and collaboration with Honeywell FM&T and other onsite subcontractors to ensure the safety of employees during an emergency.

FES utilizes a software-based application, Maximo®, to track maintenance activities that affect onsite utility systems. FES identifies predictive and preventive maintenance activities that impact onsite utility operations and creates the respective maintenance schedules. FES forwards the maintenance schedule to U.S. Engineering, the site contractor responsible for performing maintenance.

FES is responsible for developing and maintaining preventive maintenance procedures for systems for which they serve utility engineering roles. Maintenance issues are coordinated with Honeywell FM&T for corrective action. Preventive and predictive maintenance activities where FES works in collaboration with Honeywell FM&T are performed on schedule and safely as verified during Team interviews and document reviews. The Team determined FES preventive and predictive maintenance activities are adequate and planned within applicable requirements.

FES has a strong positive reinforcement culture where workers are recognized for their accomplishments. In addition to supervisory nominations, employees can nominate each other for a job well done. The MacCulture Recognition Program, facilitated by Burns & McDonnell, encourages employees or managers to recognize an employee in private or publicly by sending a digital badge, paper certificate, or both. As part of the positive reinforcement program at FES, managers are assigned a specific quantity of points based on the number of workers to be utilized for employee awards. In this system, 12 points are equivalent to approximately 1 dollar that employees can later exchange for gift cards, apparel, and other items from the MacCulture Recognition Program catalog. Nominated employees can receive a minimum of 500 and a maximum 1,000 points per nomination. FES employees became eligible to participate in the MacCulture Recognition Program in 2022. However, no training has been provided to FES employees to ensure familiarity with the website tools and its resources.

Opportunity for Improvement:

FES should train employees to familiarize them with the MacCulture Recognition Program tools and resources and foster increased use of this positive reinforcement tool.

FES employees can also participate in the Honeywell FM&T *Good Catch* program designed to recognize employees that have positive safety and security interventions. This program is a peer-to-peer and management recognition program where nominated employees receive a certificate. FES employees are also eligible to participate in the *Honeywell FM&T Summit - Embrace the Climb* program. This peer-to-peer recognition program is designed to recognize employees who go above and beyond in areas not related to safety.

A strong and fair disciplinary system exists at FES where guidelines are applied consistently and objectively. The disciplinary process is only used after thorough fact-finding investigations to determine the circumstances leading up to incidents. FES uses the fact-finding efforts to ensure

fair application of disciplinary actions and keeps the primary focus on correcting the root issue, not applying reactive discipline. The Team did not observe any issues with FES implementation of its disciplinary system during the assessment.

Conclusion

FES has developed processes and work procedures to analyze and address hazards and communicates those processes via training, worker engagement meetings, and company webpage postings. Managers and workers understand the hierarchy of controls applied to their various work area hazards and feel confident in their ability to talk to certified safety professionals when needed. Managers and safety professionals successfully strive to ensure proper PPE access. FES is constantly working on methods to improve the worker safety as illustrated by its constant collaboration with Honeywell FM&T and other onsite subcontractors to ensure adequate hazard prevention and controls in all facilities where FES employees work. FES provides workers with extensive occupational medicine support, emergency response capabilities, and adequate preventive and predictive maintenance capabilities. FES celebrates workers' accomplishments and contributions to the KCNSC using a strong positive reinforcement program and controls disciplinary action system bias by focusing on the root cause of the problem instead of placing blame on employees. FES should ensure employees are proficient with the use of positive reinforcement tools at their disposal. FES injury and illness rates reflect effective hazard prevention and control methods. FES meets the expectations for Hazard Prevention and Control and continued participation in DOE-VPP.

VII. SAFETY AND HEALTH TRAINING

Managers, supervisors, and employees shall know and understand the policies, rules, and procedures established to prevent exposure to hazards. Training for health and safety shall ensure personnel understand their responsibilities, recognize hazards they may encounter, and can act in accordance with management expectations and approved procedures.

The 2023 DOE-VPP review determined that FES continues to have a well-established and documented training and qualification program that trains workers appropriately to recognize hazards and protect themselves and their coworkers. Workers at all levels understand the hazards they face daily and can implement appropriate controls. In addition, senior managers provide direction for the FES training and qualification program to ensure worker training needs are satisfactorily met in accordance with DOE requirements.

Managers are accountable for implementing training commensurate with the hazard levels of respective employees' job assignments. Training and qualifications records are current, and workers did not perform activities with expired qualifications. Supervisors are engaged to manage and monitor employee training and verify training requirements are up-to-date before assigning work tasks. FES employees training status is easily determined by observing their pictures in the Microsoft Teams® application. When an employee has completed all training courses on time, a green circle appears around their picture with the words "100% safe", therefore easily informing other team members of their training status. FES provides reminders, postings, required reading subjects, and lessons learned safety topics to encourage site safety awareness and works closely with Honeywell FM&T to ensure adequate training of FES employees.

FES safety and health training programs are based on programmatic requirements, such as Title 10, Code of Federal Regulations, Part 851, *Worker Safety and Health Program*, DOE requirements, and corporate initiatives. New employees receive initial training that includes general safety and health training topics such as integrated safety management, fire safety and protection, and hazard communication. In addition, once employees satisfactorily complete initial training, they are provided with more specific in-depth training pertaining to their respective job assignments. The training modules reviewed by the Team were adequate and provided employees with the tools necessary to deploy to their respective work units safely.

The Team observed a safety and health instructor from Burns & McDonnell provide FES staff training in ergonomics and human factors. The training provided in-depth information regarding the most common ergonomic hazards in an office environment, along with methods and techniques to adequately mitigate such hazards. The course instructor encouraged FES employees to ask questions and actively participate during the stretching exercises designed to alleviate common ergonomic injury stressors. The training was well received by FES employees and adequately covered common ergonomic and human factors hazards and workplace injuries.

FES offers a tuition assistance program that provides employees with 6 months or more of service to request tuition reimbursement if the educational courses of study are related to the FES work mission at the KCNSC. This program has a yearly tuition reimbursement cap of \$5,200 for all degrees of study except a master's in business administration where the cap is \$10,000. Since the last VPP assessment in 2018, five FES employees have participated in the program. FES

does not limit the number of employees that can request tuition reimbursement assistance through the program and has never rejected an employee from participating to date.

In 2022, FES employees were provided access to the Burns and McDonnell Learning Center, formerly known as Burns & McDonnell University. The Learning Center provides FES employees with a wide range of training subject matter from technical to human resources topics. The Learning Center also provides FES employees access to a safety moments library to further improve lessons learned sharing within FES. However, FES employees were unfamiliar with the site resources and were not able to demonstrate to the Team all of its features.

Opportunity for Improvement:

The Team recommends FES develop and provide training to familiarize its employees with the capabilities of the newly adapted Learning Center application.

The FES training program adequately satisfied training objectives as required by DOE requirements and other applicable regulations. The training program objectives are met through various methods, including formal classroom instruction, computer-based training, and web-based training through the Learning Center. Employees may also receive on-the-job training, as well as training through informal means, such as videos, newsletters, and safety meetings. The effectiveness of training courses and topics at FES is refined by utilizing surveys to collect data regarding employees' training needs. This practice of actively engaging with workers via surveys creates a continuous improvement culture where the effectiveness of training constantly improves.

Conclusion

FES continues to maintain an effective training and qualification program where employees are provided with adequate training and retraining as necessary. Training needs analyses are performed in conjunction with job hazard analyses to ensure employee training needs are accurately identified and met. FES provides numerous reminders, postings, required reading subjects, and lessons-learned safety topics to encourage safety awareness. Managers and employees receive training commensurate with their level of responsibility and experience. The training program derived from Honeywell FM&T contract requirements, DOE requirements, Burns & McDonnell corporate initiatives, and collaboration with the training department at Honeywell FM&T adequately meets the training needs of employees at all levels of the organization. FES meets the Safety and Health Training expectations for continued participation in DOE-VPP.

VIII. CONCLUSIONS

FES continues to maintain a strong safety culture that is ingrained in its workforce and promoted by management. FES continues to foster a strong working relationship with Honeywell FM&T to ensure work areas are adequately analyzed for safety and health hazards. If hazards are identified by FES staff and the correction responsibility falls to Honeywell FM&T, the hazards are promptly forwarded to Honeywell FM&T for abatement. FES has an active employee base willing and ready to raise concerns and who understands the different mechanisms available to them to ensure their safety. Interviewed workers consistently took responsibility for contributing to a safe work environment for themselves and their peers. The Team identified opportunities for improvement that will help FES continue to empower its workforce and recognize the strengths of its staff. The Team did not identify any programmatic noncompliance with DOE safety requirements that would preclude participation in DOE-VPP. FES continues to meet all the expectations for DOE-VPP, and the Team recommends FES continue to participate in DOE-VPP at the Star level.

APPENDIX A: Key Office of Environment, Health, Safety and Security Personnel

Management

Todd N. Lapointe
Director
Office of Environment, Health, Safety and Security

Christopher J. Roscetti
Deputy Director for
Environment, Health and Safety
Office of Environment, Health, Safety and Security

Kevin L. Dressman
Director
Office of Health and Safety
Office of Environment, Health, Safety and Security

Alfred G. Traylor
Director
Office of Worker Safety and Health Assistance
Office of Health and Safety

TABLE A-1: Onsite DOE VPP Assessment Team Roster

Name	Affiliation/Phone	Project/Review Element
Moises Atilas Team Leader	DOE/EHSS-12	Hazard Prevention and Control, Worksite Analysis, Recordkeeping, Safety and Health Training
Matthew M. Ramsey	DOE/EHSS-12	Management Leadership, Worksite Analysis, Employee Involvement