



# Facility Engineering Services KCP, LLC

**Report from the Department of Energy  
Voluntary Protection Program  
Onsite Review  
November 10-21, 2008**



U.S. Department of Energy  
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## Foreword

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

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

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

DOE contractors are not required to apply for participation in DOE-VPP. In keeping with DOE’s VPP philosophy, *participation is strictly voluntary*. Additionally, any participant may withdraw from the program at anytime. DOE-VPP consists of three programs with names and functions similar to those in OSHA’s VPP: Star, Merit, and Demonstration. The Star program is the core of DOE-VPP. This program is aimed at truly outstanding protectors of employee safety and health. The Merit program is a steppingstone for contractors and subcontractors that have good safety and health programs, but need time and DOE guidance to achieve true Star status. The Demonstration program, 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 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 associates at the site. The symbols of this recognition provided by DOE are certificates of approval and the right to use flags showing the program in which the site is participating. The participant may also choose to use the DOE-VPP logo on letterhead or on award items for employee incentive programs. DOE will provide the opportunity for contractors to work cooperatively with the agency to resolve health and safety problems. Each approved site will have a designated DOE staff person to handle information and assistance requests from DOE contractors.

This report summarizes the results of the HSS DOE-VPP Team’s evaluation of Facilities Engineering Services KCP, LLC during the period of November 10-21, 2008, and provides the Chief Health, Safety and Security Officer with the necessary information to make the final decision regarding the company’s continued participation in DOE-VPP as a Star site.

## TABLE OF CONTENTS

<b>ABBREVIATIONS AND ACRONYMS.....</b>	<b>iii</b>
<b>EXECUTIVE SUMMARY .....</b>	<b>iv</b>
<b>OPPORTUNITIES FOR IMPROVEMENT.....</b>	<b>vi</b>
<b>I. INTRODUCTION.....</b>	<b>1</b>
<b>II. INJURY INCIDENCE/LOST WORKDAYS CASE RATE.....</b>	<b>2</b>
<b>III. MANAGEMENT LEADERSHIP.....</b>	<b>3</b>
<b>IV. EMPLOYEE INVOLVEMENT .....</b>	<b>6</b>
<b>V. WORKSITE ANALYSIS .....</b>	<b>9</b>
<b>VI. HAZARD PREVENTION AND CONTROL .....</b>	<b>11</b>
<b>VII. SAFETY AND HEALTH TRAINING .....</b>	<b>13</b>
<b>VIII. CONCLUSIONS.....</b>	<b>15</b>
<b>Appendix A: Onsite VPP Assessment Team Roster .....</b>	<b>A-1</b>

## ABBREVIATIONS AND ACRONYMS

AHA	Activity Hazard Analysis
BLS	Bureau of Labor Statistics
C.F.R.	Code of Federal Regulations
DART	Days Away, Restricted or Transferred
DHA	Daily Hazard Analysis
DOE	U.S. Department of Energy
ELMS	Electronic Learning Management System
FES	Facility Engineering Services KCP, LLC
FM&T	Honeywell Federal Manufacturing & Technologies
HS&E	Health, Safety and Environment
HSS	Office of Health, Safety and Security
KCP	Kansas City Plant
KCRIMS	Kansas City Responsive Infrastructure Manufacturing and Sourcing
KCSO	Kansas City Site Office
NAICS	North American Industry Classification System
NM	New Mexico
NNSA	National Nuclear Security Administration
OSHA	Occupational Safety and Health Administration
OST	Office of Secure Transportation
PPE	Personal Protective Equipment
SHINE	Safety and Housekeeping Implementation Needs Everyone
Team	Office of Health, Safety and Security Team
VPP	Voluntary Protection Program

## **EXECUTIVE SUMMARY**

The Kansas City Plant (KCP) is situated on approximately 141 acres of the 300-acre Bannister Federal Complex located within the city limits, 12 miles south of downtown Kansas City, Missouri. The plant shares the site with several other Federal Agencies: Federal Aviation Administration; Defense Finance and Accounting Service; U.S. Marine Corps; General Services Administration; National Oceanic and Atmospheric Administration; and the National Logistics Support Center. KCP comprises the largest portion of the Bannister Federal Complex.

The mission at KCP is to assemble and manufacture components for national defense systems. A key element of the National Nuclear Security Administration (NNSA) nuclear weapons complex, KCP is responsible for the production and procurement of nonnuclear components for the U.S. Department of Energy (DOE) nuclear weapons program. Parts produced and procured by KCP include nonnuclear electric, electronic, electromechanical, mechanical, plastic, and nonfissionable metal components. Additionally, KCP supports the NNSA Office of Secure Transportation by building and refurbishing transport trailers. No operations directly involving radioactive materials or explosives normally associated with nuclear weapons are conducted at KCP. KCP also supports other Government Agencies, as well as National Laboratories, universities, and U.S. industries. Its work-for-others program provides services, products, and systems for Department of Homeland Security, the Department of Defense, and other Government Agencies. KCP provides 85 percent of the components for nuclear weapons (over 100,000 parts annually) and weapons support from concept through production and to retirement. KCP does not store any special nuclear material.

KCP is managed and operated by Honeywell Federal Manufacturing & Technologies (FM&T)/KCP for DOE/NNSA. Facility Engineering Services KCP, LLC (FES) is a subsidiary of Burns & McDonnell Engineering Company that is subcontracted to Honeywell FM&T/KCP to provide engineering and design support for facility construction and modification. FES is physically located in the KCP office building with Honeywell FM&T/KCP and the DOE Kansas City Site Office.

FES submitted its application to the DOE Voluntary Protection Program (VPP) in 2006 and was initially certified as a Star site that same year. This assessment marks FES' first recertification review to determine whether FES has maintained its status as a DOE-VPP Star site. Additionally, the site earned the DOE-VPP Star of Excellence award for 2007 at the 2008 Voluntary Protection Program Participants' Association National Conference in Anaheim, California.

Continuation of Star status in DOE-VPP requires an onsite review by the DOE Office of Health, Safety and Security DOE-VPP Team (Team) every 3 years. The Team conducted its review during November 10-21, 2008, to determine whether FES continues to perform at a level deserving DOE-VPP Star recognition. This review was conducted approximately 6 months earlier than the triennial recertification date to move FES into the same recertification cycle as Honeywell FM&T/KCP and allow for more efficient scheduling of future recertification. The purpose of this report is to document the results of the Team's review and provide the Chief Health, Safety and Security Officer with the necessary information to make the final decision about FES' DOE-VPP status. Based on discussions and interviews with 38 of approximately 40 workers, supervisors, and managers, as well as some observation of limited work activities at KCP, and the review of various records and documents, the Team determined that FES has maintained a culture of safety excellence and achieved an exemplary degree of

teamwork that firmly demonstrates its commitment to making safety a top priority in accomplishing its mission at KCP. Accordingly, having observed firsthand that FES continues to fully meet all VPP tenet requirements, the Team recommends that FES retain its DOE-VPP Star status.

The standard for Star status is not perfection, but rather that, in addition to an excellent safety record, managers and workers are dedicated to and effectively pursuing continuous improvement and excellence in safety performance. Consistent with that goal, the Team identified one opportunity for improvement. This opportunity reflects an area where FES can further improve its performance (see table 1). While no formal action plan is required to address this opportunity, FES should consider and specifically address it in its annual status reports.

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

<b>Opportunity for Improvement</b>	<b>Page</b>
As a VPP Star site, FES should be more distinct from Honeywell FM&T/KCP. FES should identify ways to enhance its current recognition program to include more than just meeting zero injury goals and include safe catches, implemented suggestions, and finding solutions to safety problems rather than relying too heavily on the Honeywell FM&T/KCP employee recognition program. A well designed and properly funded employee recognition program will enhance and promote the already strong safety culture among the FES employees.	<b>7</b>

## **I. INTRODUCTION**

The U.S. Department of Energy (DOE) Voluntary Protection Program (VPP) onsite review of Facility Engineering Services KCP, LLC (FES) was performed November 10-21, 2008. This was the first triennial recertification review conducted at FES, and was conducted in conjunction with the fourth triennial review of Honeywell Federal Manufacturing & Technology (FM&T) Kansas City Plant (KCP).

KCP is geographically situated on a 141 acre site as a 3.2 million square-foot facility located 12 miles south of the city center of Kansas City, Missouri. The mission at KCP is to assemble and manufacture components for national defense systems. A key element of the National Nuclear Security Administration (NNSA) nuclear weapons complex, KCP is responsible for the production and procurement of nonnuclear components for the DOE nuclear weapons program. Parts produced and procured by KCP include nonnuclear electric, electronic, electromechanical, mechanical, plastic, and nonfissionable metal components. Additionally, KCP supports the NNSA Office of Secure Transportation (OST) by building and refurbishing transport trailers, and also provides line management for Honeywell FM&T/New Mexico (NM), which primarily supports NNSA OST. The DOE/NNSA Kansas City Site Office (KCSO) provides direction to, and oversight of, both Honeywell FM&T/KCP and Honeywell FM&T/NM.

FES is a subsidiary of Burns & McDonnell Engineering Company. FES is physically located in the KCP office building with Honeywell FM&T/KCP and KCSO. There are approximately 40 FES employees and more than 2,500 Honeywell FM&T employees at KCP. The FES mission is to provide engineering/design support and oversight to Honeywell FM&T/KCP.

Recertification in DOE-VPP requires an onsite review by the DOE Office of Health, Safety and Security (HSS) DOE-VPP Team (Team) to determine whether the contractor is still performing at a level deserving DOE-VPP recognition. The Team evaluated FES safety programs against the provisions of DOE-VPP. During the site visit, the Team observed work activities when possible, attended work planning meetings and safety committee meetings, evaluated relevant safety documents and procedures, and conducted interviews to assess the strength and effectiveness of FES health and safety programs.

The Team had contact with 38 of the 40 FES managers, engineers, and support personnel, primarily in formal interviews; however, some interviews were conducted informally during observation of some limited work activities. The facilities that comprise Honeywell FM&T/KCP are low hazard. The principal hazards that exist at the facilities are common to general industry and include fire, electrical, production, development and nonproduction chemicals, explosives, and natural phenomena. In addition to these common industrial hazards, KCP has worked with, and continues to work with, beryllium-containing materials, and nearly 1,000 workers have been identified as potentially exposed. Although FES employees' job functions are primarily performed in offices, there are times when onsite in the plant areas, they may be potentially exposed to the same hazards as Honeywell FM&T/KCP workers.



**II. INJURY INCIDENCE/LOST WORKDAYS CASE RATE****Facilities Engineering Services KCP, LLC Personnel**

Injury Incidence/Lost Workdays Case Rate (FES)					
Calendar Year	Hours Worked	Total Recordable Cases	Total Recordable Case Incidence Rate	DART* Cases	DART* Case Rate
2005	95,000	0	0	0	0
2006	87,000	0	0	0	0
2007	87,000	0	0	0	0
2008	82,000 (YTD)	0	0	0	0
3-Year Total	269,000	0	0	0	0
Bureau of Labor Statistics (BLS-2006) average for NAICS** Code # 541330			1.5		0.7

\* Days Away, Restricted or Transferred

\*\* North American Industrial Classification System

***Total Recordable Case Incidence Rate, including subcontractors: 0.0******Days Away, Restricted or Transferred Case Rate, including subcontractor: 0.0***

A review of the accident and injury statistics over the past 3 years shows that FES has worked for over 3 years without a recordable injury or lost workday. This is an admirable record and is well below the industry average.

### 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 associates at all levels of the organization. Elements of that management system must include clearly communicated policies and goals, clear definition and appropriate assignment of responsibility and authority, adequate resources, and accountability for both managers and workers. Finally, managers must be visible, accessible, and credible to employees.

FES managers remain committed to maintaining a strong safety culture at FES. Employee interviews indicated all managers lead by example and strive to maintain the best working conditions for all employees. They remain fully engaged in addressing safety and health concerns or issues in a timely manner. Several employees provided the Team with examples of how responsive their managers were whenever safety and health issues or concerns were raised. Additionally, interviewed employees noted that all safety and health recommendations or suggestions are important. Managers are committed to embodying the NNSA, DOE, and Honeywell FM&T/KCP commitment to safety. FES' mission is to make its client (Honeywell FM&T) successful. Its vision is to "achieve excellence in quality facility management and engineering." This is clearly communicated through various tools and is often reiterated during staff meetings and e-mail messages sent to staff members.

The safety culture at FES continues to remain strong throughout all departments. Most managers and employees were previously employed by Honeywell FM&T/KCP where workplace safety was already a high priority and was woven into the company's culture and way of conducting its business. A strong commitment to safety excellence and continuous improvement is evident throughout the organization from the FES Project Manager to all employees. Interviews of managers and workers at all levels confirmed a continued, strong management commitment for safety. In almost every instance, the employees interviewed by the Team spoke highly about management visibility and accessibility. Employees continue to be involved in the pursuit of safety excellence. Managers empower employees, commit the necessary resources, and continue to act on employee safety and health issues and concerns in a timely manner.

Safety and health program roles and responsibilities remain well defined in FES documents. Roles and responsibilities are effectively defined and communicated to all employees by their managers through the FES Annual Safety and Health Plan, meetings, e-mails, and training. All FES employees are required to sign and date an "Agreement and Acknowledgement Statement" indicating that they have read and fully understand the Annual Safety and Health Plan and his/her individual responsibilities, and that he/she agrees to abide by the provisions of the Plan. Senior managers, line managers, supervisors, and individual employees all clearly understand their safety and health responsibilities. FES' discipline policy is in place and is also an effective tool when an employee is found willfully violating safety and health requirements. However, positive recognition continues to be the FES safety and health program's primary instrument in reinforcing safe behavior, and it continues to reap significant benefits in keeping safety and health awareness alive and flourishing.

In addition to the FES health and safety personnel, FES has appointed Safety Advocates to ensure that activities comply with Honeywell FM&T/KCP and FES safety policies and rules. Managers and employees are all aware of the potential hazards to which employees might be exposed. The ultimate responsibility lies with the FES Project Manager, who provides direction and guidance to the three departmental managers in FES.

The FES annual review process holds all employees, including managers, accountable for their performance in safety and health-related areas. All employees have a primary health, safety and environment (HS&E) element in their individual performance plans in which their understanding of, and participation in, safety and health programs is evaluated. The determination of monetary awards (bonuses) depends on the employee's rating. All employees are held accountable for safety; however, managers take the final responsibility as stated by the company policy: "Accidents, injuries, and illnesses arising from FES employment will be regarded as operational errors due to management oversight and as such are avoidable." All workers at FES have "stop work" authority and are expected to use it when safety concerns arise.

The VPP criteria and basis of the FES safety and health program is evaluated at least annually. The issues derived from the evaluation result in unit-specific and facility-wide improvement action plans, and all improvement actions are tracked to completion. The ultimate goal of the annual evaluation is continuous improvement of the safety and health program, systems, and processes. FES effectively utilizes self-evaluations and the data gathered during evaluations to enhance their programs and drive feedback and improvement, and corrective actions.

Although FES has not had any recent hires, it continues to maintain a comprehensive program for ensuring that new employees receive the necessary orientation. The same orientation is also extended to current subcontractors, vendors, and visitors. In particular, visitors are oriented to security, safety and health, emergency evacuation, and general organizational information requirements. The orientation to new employees includes the Occupational Safety and Health Administration (OSHA) 10-hour Construction Safety Training and Red Cross first aid and cardiopulmonary resuscitation courses.

Employees are initially notified of their rights at the new employee orientation. Their right to access information is also communicated through several other mechanisms after the initial employment and site-specific orientation. For example, the FES Project Manager communicates a health and safety message via e-mail to all FES employees weekly. Employees are encouraged to submit suggestions to improve safety, and their participation is regularly reinforced through a variety of promotional programs, such as "Safety Month," and recognition awards called the "Bright Idea Award." Employees are also required to sign an agreement and acknowledgement statement that they have reviewed the FES Annual Safety and Health Plan annually.

A significant project currently under way at KCP is the Kansas City Responsive Infrastructure Manufacturing and Sourcing (KCRIMS) project. This project involves design and construction of a new plant with a smaller footprint, as well as more efficient and flexible manufacturing processes. In response to those efforts and to better maximize resources due to the construction efforts of the project, FES has streamlined its organization from four departments to three: Utilities Engineering Management; Programs Management; and Project Engineering Management. Corporate Health and Safety is a Burns & McDonnell entity and is located offsite, further streamlining the FES organization. The Project Engineering and Construction Oversight functions have been combined. Under the most recent organizational structure, the Utilities

Engineering Manager manages utility engineers and maintenance planners, while the Programs Manager is responsible for KCRIMS, the Roof Asset Management Program, and program/project controls. The Project Engineering Manager has responsibility for construction management, the project engineering group, cost engineering, designers, and project assistance activities. The managers of these organizations report to the FES Project Manager. FES uses the human resources and training facilities available at Burns & McDonnell Headquarters. However, the organization and the work conducted by FES depend on the Honeywell FM&T/KCP management directives, policies, and procedures.

FES, with extensive support from Honeywell FM&T/KCP, continues to maintain sufficient resources needed to operate health and safety programs. The capital resources necessary for safety equipment and personal protective equipment (PPE) are covered by arrangements with Honeywell FM&T/KCP and Burns & McDonnell. Employees indicated FES managers are very responsive in addressing the equipment, tools, and PPE needs of their employees.

Safety, health, and the environment are primary considerations integrated into the FES planning processes, from top company-wide strategic planning down through planning for each job. At the company level, safety and health planning is incorporated into the annual budget process. The FES Team Performance Plan includes a safety planning component that reflects DOE and Honeywell FM&T/KCP strategic plan and goals.

While the Team observed a strong safety culture at FES, it also observed that as the company continues to streamline its mission, function, and resources, it will be very important that managers continue to identify and implement ways to keep employees fully engaged and empowered in the HS&E program. (See Section IV, Employee Involvement.)

## **Conclusion**

FES managers continue to regard management of HS&E as a core business value. This has been demonstrated throughout all levels of the company and is evident in the positive feedback the Team received during the review. FES's leadership and commitment to safety has also been demonstrated by the fact that the company has performed work at KCP for over 5 years without an OSHA recordable injury.

#### IV. EMPLOYEE INVOLVEMENT

Associates at all levels must continue to be involved in the structure and operation of the safety and health program and in decisions that affect employee health and safety. Employee participation is in addition to the individual right to notify appropriate managers of hazardous conditions and practices. Field observations and interviews indicate that FES workers are committed to their personal safety, as well as the safety of their coworkers and facility visitors. There are several ways for associates to participate and be involved.

The Team had contact with nearly all the FES employees, including the supervisors and top-level managers. The newest FES employee was a seasoned professional who joined about 3 years ago. This employee was better informed in safety than many other employees because of his professional career. Of note, was that almost all of the employees believed that DOE-VPP was significant in encouraging them and their coworkers to practice safety at work and home, and giving them ownership of safety. Several employees gave examples of how they became sensitized by safe practices at work (such as proper use of ladders, safety glasses, steel-toe shoes) to use those practices at home. They also encouraged their family members, friends, and neighbors to practice these safety measures. All of the interviews indicated that workers felt safer at KCP compared to their previous places of employment. These interviews confirmed that a strong safety culture exists at all levels, and employees feel empowered to raise safety concerns. Workers are aware of their rights under title 10, Code of Federal Regulations, part 851 (10 C.F.R. 851) and exhibit no fear of retaliation. Every employee interviewed indicated that they fully understood that they have the right and responsibility to stop work when they see an unsafe condition or action which might put them or their coworker in jeopardy. Several gave examples of past “stop work” incidents. For example, an FES worker recently smelled gas at his project area in which a welding activity was being conducted on a 16-inch main water line servicing the plant. The worker notified the FES safety and health manager to have the area checked for any unsafe conditions. It was determined that levels did not exceed permissible exposure limits or flammability limits, and work was resumed. FES Safety Advocates serve as a focal point of contact within FES, and this position is open to any employee within the organization. FES has appointed two Safety Advocates to assist the safety manager. The advocates participate in office inspections, address employee safety and health issues and concerns, and provide managers with input for the FES safety and health program. They also provide feedback to employees concerning issues raised, and have helped expedite improvements and quicker responses.

Employees effectively utilize computer-based communication systems, such as an Intranet site and Web page. Suggestions and ideas to improve safety may be submitted through these media.

The FES does not have its own Safety and Health Committee, but has a representative who participates in the Honeywell FM&T/KCP Safety and Health Committee. The Team attended the combined DOE-KCSO/Honeywell FM&T Kansas City Plant/Honeywell FM&T Kirtland Operations/FES Safety and Health Committee meeting. The joint meeting was established to share common safety goals among employees of all participants.

The FES VPP Steering Committee meets quarterly to discuss current issues related to FES employee and Honeywell FM&T/KCP construction contractor safety. This committee assesses and develops plans of action for current employee and contractor safety issues, reviews ongoing action items relating to safety concerns, and measures their performance against existing FES safety and health goals.

The FES Project Management group meets during the planning and development phase of each project to perform an assessment of project-related safety and health hazards. This assessment includes a jobsite walk-down to identify unique workplace hazards that are encountered during the execution of the work. These hazards are then identified in the scope of work that is issued to contractors. This group also reviews these hazards with contractors during the prebid/walk-through phase of the project cycle. The contractor then incorporates controls for these hazards into its Safety Plan and activity hazard analysis (AHA).

The FES Construction Management group meets during the submittal phase of each project cycle to perform an assessment of the contractor's Safety Plan and AHA. The assessment determines whether the contractor has identified all work elements associated with the project and whether those elements have identified associated hazards and controls prior to allowing the contractor to access the site to execute work.

The safety and health program at FES includes: the use of online Intranet suggestion forms; the right to convene an ad hoc safety and health committee, report safety and health concerns to a Safety Advocate, and submit a Bright Idea Award; discussions at regularly scheduled meetings; and participation in management meetings.

FES recognizes employee success in meeting injury/illness goals and maintaining a safe and healthy workplace with quarterly lunches. The FES Awareness and Recognition Committee supports the VPP Steering Committee with outreach activities reaching all FES employees. To strengthen the FES safety and health program and acknowledge and recognize its own successes and the contributions of its employees, FES should develop a formal employee recognition program that is uniquely its own, particularly as the company continues to streamline its function and resources. A separate and unique recognition program would continuously help managers keep employees engaged in the safety and health program by thinking about creative solutions to problems, recognizing "safe catches," making safety suggestions that are implemented, and developing various safety awareness topics or presentations pertinent to their work. FES may also want to consider incentive awards to recognize important safety suggestions by the employees to promote improvement in its safety culture.

**Opportunity for Improvement:** As a VPP Star site, FES should be more distinct from Honeywell FM&T/KCP. FES should identify ways to enhance its current recognition program to include more than just meeting zero injury goals and include safe catches, implemented suggestions, and finding solutions to safety problems rather than relying too heavily on the Honeywell FM&T/KCP employee recognition program. A well designed and properly funded employee recognition program will enhance and promote the already strong safety culture among the FES employees.

## **Conclusion**

The team found ample evidence of a strong safety culture among employees and managers at FES. Employees and managers are equal partners in ensuring that the culture of safety excellence is maintained and that safety performance is continuously improved.

## 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 they include a system to ensure that new or newly recognized hazards are properly addressed. Successful worksite analysis also involves implementing preventive and/or mitigative measures during work planning to anticipate and minimize the impact of such hazards.

As the subcontractor responsible for providing engineering and design support for facility construction and modification, FES is physically located in the KCP office building. Hazards encountered are those typical of an office environment (ergonomics, indoor air quality, limited lifting, etc.). FES relies heavily upon the hazard analyses processes performed by Honeywell FM&T/KCP. This section addresses only those aspects that FES has developed and that are not covered by Honeywell FM&T/KCP.

Worksite analysis at FES falls into two categories: the safety and health inspection and analysis of the FES personnel worksite, and that of the worksite occupied and under the direction of construction contractors. For the first category, each FES employee is informed, through a training program, of the responsibility to inspect their individual office workspace for safety and housekeeping issues. All employees receive information about the importance of correct ergonomic design in the workspace and are encouraged to inform either their managers or the Safety Advocate of any concerns or questions regarding ergonomics. The FES office space is routinely included in the Honeywell FM&T/KCP Safety and Housekeeping Implementation Needs Everyone (SHINE) inspection and evaluation process. In that process, each work area is inspected and evaluated by a team composed of workers and managers, resulting in a completed SHINE evaluation worksheet.

In the second category, before any project is started under the direction of FES, a packet of information is gathered to support the evaluation of hazards expected in execution of the project. FES employees work with the construction and maintenance organization to ensure that each project has engineering support as required. During the planning process, FES employees review the project site to identify safety and health issues that may be encountered during the completion of the construction or maintenance activity. Since the initial VPP certification, FES has improved the process by creating a Unique Site Hazard Check List to augment the Honeywell FM&T/KCP job hazards analysis process. (See Section VI, Hazard Prevention and Control.)

In addition, FES employees developed a Daily Hazard Analysis (DHA) form for all construction contractors and subcontractors. This form helps contractors recognize and note the hazards involved with each work task on a daily basis. Construction personnel complete the DHA daily.

The inventory of possible health and safety concerns is reviewed in accordance with a procedure using a graded approach; more complex activities require more people to become involved in the planning process. This graded approach pertains to the Unique Site Hazard Checklists and risk assessment. Larger and more formal projects have larger assessment teams consisting of a



project manager, a construction manager, a planner, and one or two engineers. Smaller hazard assessment teams consist of a program manager, a planner, and one engineer.

During the Team's interviews, several employees noted that the stop work authority has improved since FES received VPP status. In addition, the Maximo tool has been added to improve the management of work orders and has made the process easier by allowing better tracking and the addition of electronic signatures. Maximo is operated and maintained by Honeywell FM&T/KCP and used by FES in its work order process. Interviews indicated that Maximo has made it easier to obtain signatures for such permits as Hot Work, Confined Space Entry, Utility Location & Excavation, Life Safety Aisle/Exit Impairment, High Hazard Construction, Safe Work, and Energized Electrical Work. The electronic signature function eliminates the need to individually hand a document to the next signatory. It was also noted that Maximo has some gaps in project tracking, and FES has developed its own project tracking tool using Microsoft Access to address these gaps.

FES managers continue to convey their expectation that employees will identify, without fear of reprisal, conditions that pose an immediate risk to safety and health. Several reporting options are available to the employees. The FES safety Intranet, which has been updated and improved since the initial VPP certification, includes a Safety Concern/Incident Report that can be completed by any employee. Hazards can be identified to a line manager or to a Safety Advocate. Employees expressed confidence that issues raised would be promptly and properly addressed, and they had no fear of reprisal for raising concerns. Further, they were confident that any employee who recognized and reported a hazard would be appreciated by their management.

As an engineering support organization, FES does not conduct independent accident investigations. The FES Health and Safety Plan specifies the actions required for any accident involving an FES employee. The FES organization reports near-misses and incidents on an incident form and forwards this information to the Honeywell FM&T/KCP health and safety organization, which coordinates the appropriate accident investigation. Employees know how and when to use the form and are given information regarding other incidents and near-misses. All injuries at KCP are reported to the Honeywell FM&T/KCP safety department (HS&E) immediately. The FES manager, or designated management representative if the FES Manager is unavailable, completes an accident report form for each accident at KCP involving FES personnel. The FES manager or representative submits a copy of the completed form to Honeywell FM&T/KCP, the project file, and the FES human resources specialist. Honeywell FM&T/KCP conducts the investigation and communicates the findings to the injured employee through the FES Manager or designated representative.

## **Conclusion**

FES has adequate worksite analysis processes and procedures in place that address the majority of hazards encountered. Worksite analysis methods are effective in addressing both existing and new hazards. The Team noted a disciplined practice of hazard recognition in all areas that fully supports a meticulous program of worksite hazard management.

## **VI. HAZARD PREVENTION AND CONTROL**

Once hazards have been identified and analyzed, they must be eliminated (by substitution or changing work methods) or addressed by the implementation of effective controls (engineered controls, administrative controls, and/or PPE). Equipment maintenance, PPE, processes to ensure compliance with requirements, and emergency preparedness must also be implemented where necessary. Safety rules and work procedures must be developed, communicated and understood by supervisors and associates, and must be followed by everyone in the workplace to prevent mishaps or control their frequency and/or severity.

The hierarchy of controls (elimination or substitution, then engineered controls, followed by administrative controls, and PPE) that protects workers outside of the office spaces occupied by FES employees has been institutionalized by Honeywell FM&T/KCP. Moreover, FES employees are covered by the occupational health and medicine services administered by Honeywell FM&T/KCP.

The FES medical program, provided by Honeywell FM&T/KCP and Burns & McDonnell, is comprehensive and includes such aspects as preplacement physicals as needed and periodic physicals for employees who are exposed to jobsite hazards. A few employees are respirator qualified and are required to have annual physicals. The medical staff, from physicians through technicians, is highly qualified and able to respond to any medical emergency. Medical facilities provided by Honeywell FM&T/KCP are strategically located to provide rapid and effective response. Annual physicals, respirator fit testing, and new-hire physicals are performed by the FES parent company, Burns & McDonnell.

Safety and health behavior and expectations are established and posted throughout the facilities. Elimination, substitution, and engineering controls are designed by Honeywell FM&T/KCP. FES relies heavily on the hazard analysis processes performed by Honeywell FM&T/KCP. Hazards encountered by FES workers are those typical of an office environment (ergonomics, indoor air quality, limited lifting, etc.). The behavior and expectations are basic and easy for employees to remember. The result of employees following the behavior and expectations is a safe and productive work environment. The Employee Handbook, which is available to every employee, clearly spells out the disciplinary policy. Disciplinary actions range from verbal instructions for nonserious violations up to time off or dismissal for serious violations. The development and posting of ergonomic posters throughout the workplace was noted as an improvement to the FES safety program.

FES employees are provided with a Construction Safety Handbook and a Service Subcontract Safety Handbook that outline PPE requirements and where PPE can be found. FES employees can obtain PPE from Honeywell FM&T/KCP or Burns & McDonnell equipment dispensaries at no cost to the employee, and prescription eyewear and safety boots are provided to FES employees. No significant changes have been made to the PPE program since the initial VPP certification.

The Team noted that the housekeeping and maintenance programs continue to remain very strong throughout all FES organizations.

One specific practice that has contributed to FES' history of zero accidents is the availability and use of ice cleats to prevent slips and falls in winter conditions. The ice cleats were provided by Honeywell FM&T/KCP to prevent slips while working on the roof during icy conditions. FES and Honeywell FM&T/KCP employees also use the ice cleats during icy conditions on their morning walks from the parking lot to the office or jobsites or as needed under these same conditions throughout the workday.

FES' comprehensive workplace program for ergonomic hazards has improved since the initial certification to include new posters and ergonomic reviews of employees' work stations. The ergonomics program is of prime importance at an engineering facility because most of the work is done at employees' computers. The Unique Site Hazard Assessment form, which identifies the hazards considered unique to the facility, serves as a communication tool to inform contractors of unique site hazards that workers will encounter on the construction project. Information from the Unique Site Hazard Assessment is then shared with prospective contractors during the bidding process. During the review of the successful bidder's Safety Plan/AHA, the Project Manager, Construction Manager, and Honeywell FM&T/KCP Safety Engineer ensure that the contractor has incorporated any unique hazards identified from the assessment form into his/her Safety Plan/AHA before the contractor is allowed to mobilize at the jobsite.

An FES employee designed and implemented a 90-degree remote racking device for the plant electricians who perform work on air circuit breakers. This device allows the electricians working on high voltage switchgear in the plant to rack breakers in and out from a location that is outside of the perimeter of a potential arc blast.

## **Conclusion**

FES continues to have processes and procedures in place to mitigate hazards, minimize employee exposure, and meet the requirements of the Hazard Prevention and Control tenet.

## **VII. SAFETY AND HEALTH TRAINING**

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

Safety and health training continues to be a top priority at FES. Part of each supervisor's performance evaluation is achievement of ontime training for each employee under his/her supervision. The identification of various required training courses is rigorous and on target to meet legal and performance standards. The courses are effective in building safety performance and implementing a culture of safety. Associates readily accept their training requirements and convey an appreciation that their training provides the knowledge and skills to perform their jobs safely. Members of the VPP Steering Committee demonstrated a wide range of safety knowledge. Department and division meetings generally discuss one or more safety topics at each meeting. Sometimes this is a formal presentation, such as a safety share, and sometimes the discussion is scheduled to cover safety concerns or interventions. Often these discussions involve several members contributing information or suggestions. Supervisors are well trained on the safety issues involving their staff. It is noteworthy that all associates, including top management, complete annual HS&E training. One opportunity for improvement is to create more awareness of VPP and to provide more training in implementing VPP.

Team interviews included the most recent hire. This person was hired 3 years ago, but had over 20 years of experience as a professional engineer in the private industry. The Team also interviewed nearly all of the FES employees and managers. All of the interviewees felt that they received good orientation training and job-specific training, and they receive annual refreshers and additional training as necessary. The workers and the managers felt that the safety and health training they received adequately prepared them to keep themselves and their coworkers safe.

All of the training is provided by Honeywell FM&T/KCP or subcontracted trainers. Additionally, FES employees can also attend training offered by the Burns & McDonnell University and one of the several universities in Kansas City area. All FES employees are required to take an OSHA 10-hour Construction Safety Course based on 29 C.F.R. 1926. Employees' training needs are evaluated annually by employees and their supervisors, and the course/curriculum is adjusted accordingly.

All FES employees also take Hazard Communications, PPE, and Ergonomics classes through Burns & McDonnell University. All FES employees attend a Honeywell FM&T/KCP site safety orientation class when they begin work at FES. Additional training, such as Respirator Protection and Fall Protection, is available depending on the hazards identified with the individual employee's job duties.

FES managers and supervisors attend the same safety and health courses as the employees. Additionally, they take courses for improving supervisory skills and regularly review the "lessons learned" communications generated by Honeywell FM&T/KCP.

Honeywell FM&T/KCP maintains the FES training records in the Electronic Learning Management System (ELMS). ELMS generates notices for the employee-required training/refresher and sends an e-mail to the employee, the training coordinator, and the supervisor. If the employee fails to take the training, the supervisor reminds the employee. Failure to take the required training and respond to the supervisor's reminder may lead to disciplinary action, including termination and denial of entry to KCP by security. This process ensures that employees are always current on their training and refresher training requirements.

FES employs a full complement of highly trained, competent, and experienced managers and engineers. These professionals receive up-to-date information and training, including computer-based training through the ELMS system. The computer programs have been updated to include a new user friendly Portal Communication Center and Maximo for work requests and tracking.

FES' reliance on Honeywell FM&T/KCP and Burns & McDonnell for providing training and maintaining training records is fully justified because of the small number of FES employees. Due to FES' function at KCP, it would be unreasonable to expect FES to use its resources to develop and implement its own training program and maintain its own training records.

## **Conclusion**

Safety and health training are a top priority at FES. FES employees, supervisors, and managers receive training commensurate with their level of responsibility. All personnel understand the hazards that might be present in their workplace and are capable of implementing the necessary controls.

## **VIII. CONCLUSIONS**

Safety is a top priority at FES, and managers and staff are thoroughly committed to maintaining a strong safety culture. The programs required for recognition as a DOE-VPP Star site have been maintained throughout the plant. No major weaknesses were noted in any of the VPP tenets. However, as FES' staffing requirements decrease in order to fulfill its mission to Honeywell FM&T/KCP, FES management and the VPP Steering Committee must continue to look for creative ways to keep staff fully engaged in the safety and health program.

Because FES continues to demonstrate a strong safety culture within all levels of the company and shows evidence of a strong desire for continuous improvement, the Team recommends that FES be recertified as a Star participant in DOE-VPP.

## Appendix A

### Onsite VPP Assessment Team Roster

#### Management

Glenn S. Podonsky  
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#### Review Team

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Steve Singal	DOE/HSS	Employee Involvement Safety and Health Training
Martin Rajsich	PEC	Worksite Analysis Hazard Prevention and Control