



Honeywell Federal Manufacturing & Technologies (FM&T)/Kansas City

Honeywell



Report from the DOE Voluntary Protection Program Onsite Review, August 6-8, 2002



U.S. DEPARTMENT OF ENERGY
Office of Environment, Safety and Health
Office of Worker Health and Safety
Office of Regulatory Liaison
Washington, D.C. 20585

September 2002

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Abbreviations and Acronyms

ART	accident review team
BLS	Bureau of Labor Statistics
CA/MP	cause analysis and mistake proofing
CBT	computer-based training
CPR	cardiopulmonary resuscitation
DOE	U.S. Department of Energy
DOE-VPP	U.S. Department of Energy Voluntary Protection Program
EH	Office of Environment, Safety and Health
EH-1	Assistant Secretary for Environment, Safety and Health
EOC	Emergency Operations Center
ERO	Emergency Response Organization
ES&H	Environment, Safety, and Health
ESAP	Environmental Self-Assessment Program
FM&T	Federal Manufacturing & Technologies
JHA	Job Hazard Analysis
ICS	Incident Command System
IMS	Incident Management System
KCP	Kansas City Plant
LWDI	lost workday incidence
MDA	methylene dianiline
MMIS	Maintenance Management Information System
MOPS	Management Observing and Promoting Safety
MSDS	Material Safety Data Sheet
NNSA	National Nuclear Security Administration
NPR	National Performance Review
OKCSO	Office of Kansas City Site Operations
OSHA	Occupational Safety and Health Administration [of the U.S. Department of Labor]
PHA	Preliminary Hazard Analysis

PPE	personal protective equipment
RII	recordable injury incidence
SIC	standard industrial classification
SMRI	Stockpile Management Restructuring Initiative
VPP	Voluntary Protection Program
VPPPA	Voluntary Protection Program Participants Association

Kansas City Plant - Overview

The Department of Energy's Kansas City Plant (KCP) is part of the Bannister Federal Complex located within the city limits on a 120-hectare (300-acre) site 19.2 kilometers (12 miles) south of downtown Kansas City, Missouri. KCP occupies 56.4 hectares (141 acres) of this reservation that is zoned by local government for heavy industry. The plant shares the site with nine other Federal agencies. KCP is a major operational facility engaged in the production of non-nuclear weapons components for the Department of Energy (DOE) nuclear weapons program. The principal mission of KCP is to serve DOE by producing and procuring non-nuclear electric, electronic, electromechanical, mechanical, plastic, and non-fissionable metal components for the DOE nuclear weapons program.

KCP is a National Nuclear Security Administration (NNSA) facility managed and operated for NNSA by Honeywell Federal Manufacturing & Technologies (FM&T). As the prime contractor, Honeywell FM&T employs more than 2,800 associates at this facility with an annual budget of approximately \$360 million. There are two unions represented at the Kansas City Plant representing a total of 1135 employees. The International Association of Machinists and Aerospace Workers, American Federation of Labor-Congress of Industrial Organizations (AFL-CIO) is the largest union representing 1,046 employees followed by the International Union of Security, Police and Fire Professionals of America (SPFPA) representing 89 employees. The Kansas City Plant was constructed in 1942 to build aircraft engines for the Navy. After World War II, it was used for storage, and in 1949 it was selected for its current mission, manufacturing non-nuclear components for nuclear weapons.

Although no immediate risk to employees or the public exists, the plant has been aggressively cleaning up its environmental problems. A Resource Conservation and Recovery Act Post Closure Permit with the Missouri Department of Natural Resources currently regulates clean-up activities at the KCP. Various spills and leaks from production activities have resulted in soil and ground water contamination. Ground-water contamination is mainly trichloroethylene and its degradation products 1,2-dichloroethylene, and vinyl chloride. Soil is contaminated with volatile organic compounds, polychlorinated biphenyls, and petroleum products. The area surrounding the facility consists of single- and multiple-family residences, commercial establishments, industrial districts, and public-use lands.

Executive Summary

This report summarizes the Department of Energy (DOE) Voluntary Protection Program (VPP) re-evaluation of Honeywell (formerly AlliedSignal) Federal Manufacturing & Technologies (FM&T)/Kansas City, August 6-8, 2002.

The three-member re-evaluation team reviewed program documentation, conducted formal and informal interviews with associates and managers, made workplace observations, and analyzed the company's injury and illness experience. The team identified and documented improvements under all of the VPP elements. It is believed that Honeywell FM&T's success in establishing exceptional employee involvement and management commitment has maintained continuous improvement during the last three years.

EXEMPLARY ACTIVITIES

The re-evaluation team identified and observed several exemplary activities associated with each of the VPP tenets. These include:

Management Leadership — Managers actively seek employee involvement in all safety-related activities and programs. The “**3999 – Concerns Call!**” phone line provides associates (Honeywell FM&T's term for employees) direct access to top management and “3181” phone line provides employees additional access to express any ES&H concerns. Their Environmental Self-Assessment Program (ESAP) is another significant achievement. FM&T/KC has adopted Six Sigma concepts and it is actively applying this approach to all their ES&H programs. The company has become a leader in the DOE in implementing the Chronic Beryllium Disease Prevention Program in accordance with 10CFR850. Additionally, Integrated Safety Management (ISM) was implemented by the Plant, and other achievements include ISO 14001 certification and its ongoing ergonomics program. The “**Management Observing and Promoting Safety**” (MOPS) program places management in work areas on a routine basis to meet with associates to discuss any safety issues. Management continues to support associates' involvement in safety-related conferences, benchmarking initiatives, and external assistance activities.

Employee Involvement — The safety responsibilities of associates are clearly established and defined. In addition, associates are well represented and are involved as members of any accident investigation, job hazard analysis, and a number of committees and routine inspection teams. The team approach is fully institutionalized at Honeywell FM&T. A key mechanism for employee involvement is through the “VPP Steering Committee,” which is primarily staffed by associates and charged with conducting a comprehensive annual review of the safety program, identifying and making

recommendations for improving program performance, and ensuring completion of past recommendations and areas for improvement.

Worksite Analysis/Hazard Prevention and Control — The emphasis on management commitment and employee involvement is evident in increased focus on the use of teams for most worksite analysis tasks. In view of the Gantry crane accident in January 2002, it is suggested that Honeywell continue to strengthen its subcontractor oversight, and promote further improvements to controls/procedures for non-routine work. The enhanced site Intranet system enables all associates to have access to ES&H information.

Safety and Health Training — Associates have complete access to their own training records. All work planning activities include a discussion of required training and knowledge. Employees receive a comprehensive set of safety training courses and the caliber, quantity, and quality of available training is judged to be very high.

RECOMMENDATION

The re-evaluation team concluded that Honeywell FM&T/Kansas City continues to meet or surpass all DOE-VPP requirements and warrants re-certification.

I. Introduction

This report provides an update on the status of the occupational safety and health program at Honeywell (formerly AlliedSignal) Federal Manufacturing & Technologies (FM&T)/Kansas City. A team consisting of three professionals from DOE-HQ, DOE-RL, and DOE-WV (See Appendix for a roster) performed a review on August 6-8, 2002. The review consisted of a comprehensive analysis of program documents, interviews with management and employees, and workplace tours and spot checks. Honeywell FM&T/Kansas City received STAR level recognition under the DOE-VPP in March 1996. STAR participants are reviewed every three years under the DOE-VPP. A re-evaluation was conducted in 1999, and Honeywell FM&T was re-certified as a STAR site at that time. This is the second re-evaluation by DOE-VPP.

The report presents the onsite review team's analysis and results from the re-evaluation of Honeywell FM&T activities to consider the site for re-certification under the DOE-VPP. It reflects extensive document review and analysis as well as the results of employee and management interviews and workplace observations. The re-certification process focused on significant changes and improvements to the Honeywell FM&T safety and health program since its re-certification in 1999. The plant is primarily located in a single complex and large building that was originally built by the US Navy to assemble engines (Pratt-Whitney) for Navy fighter planes. During the last 50 years, the plant has evolved into a high-tech production, development, and research facility that specializes in science-based manufacturing. Stockpile Management Restructuring Initiative (SMRI), a site-wide plan to reconfigure the whole plant into a more compact and efficient allocation of space is being implemented. This could generate significant changes to work spaces and may, if not monitored closely, impact safety.

The primary mission of the KCP is to produce and procure non-nuclear electrical, electronic, mechanical, and plastic components for nuclear weapons. Approximately 2800 employees (1000 hourly employees and 1800 salary employees) work at the site. In addition, 140 subcontractor employees work at the same site, performing various types of activities including construction, etc. The main hazards at the site are: high voltage energy sources (electrical) and construction (evacuation, underground utility, general demolition). (The KCP was classified by NNSA as a low-hazard non-nuclear facility. As an adjunct to the VPP re-certification review, the Team reviewed recent safety occurrences to preview the safety culture of this site. Two incidents in 2002 (a Gantry crane accident that had two components, equipment damage and a near miss with a production worker in the work zone, and an accident at the Industrial Wastewater Pretreatment Facility) do suggest, however, that there is still a potential for risks to worker safety. The Team concluded these accidents were thoroughly investigated by Honeywell FM&T and DOE-Office of Kansas City Site Operations of the NNSA, and appropriate corrective actions were taken promptly (none of these accidents were categorized as Type B or Type A by DOE). The DOE-Site Office

located in the same building at KCP provides excellent support and guidance to Honeywell management. It is apparent the safety culture and due diligence remain strong at this facility.

II. Quantifiable Program Results

A. HONEYWELL FM&T/KANSAS CITY RATES

The team reviewed the OSHA *Log and Summary of Occupational Injuries and Illnesses* (OSHA 200 log) for the current year (2002) and three preceding calendar years. The recordable injury incidence (RII) rate and the lost-workday incidence (LWDI) rate for injuries were calculated for Honeywell FM&T/Kansas City, using the following standard formulas:

$$\text{RII Rate} = \frac{\text{No. of RIs [Col(1) + Col(2) + Col(6)] x 200,000}{\text{No. of employee- hours worked}}$$

$$\text{LWDI Rate} = \frac{\text{No. of LWD cases [Col(2)] x 200,000}{\text{No. of employee-hours worked}}$$

The following table presents the calculated Honeywell FM&T/Kansas City injury rates and associated data for the preceding three calendar years and the three-year average. Rates are calculated using injury data only, and compared to the latest injury rates published by the Bureau of Labor Statistics (BLS) for SIC Code 367, "Electronic Components and Accessories."

Calendar Year	LWD Injury Cases	RII Cases	Employee-Hours Worked	LWDI Rate	RII Rate
1999	9	20	5,524,684	.33	0.72
2000	11	21	5,158,005	0.43	0.81
2001	4	11	5,116,694	.16	.43
3-Year Average Rates				0.30	.65
BLS 2000 National Average for SIC Code 367:				1.5	3.2

SIC Code 367-Electronic Components and Accessories

As the preceding table shows, Honeywell FM&T meets the requirement that the 3-year-average LWDI and RII be at or below the most recent average for its specific industry.

The data entered on the OSHA 200 log supports the information submitted in the application and contained in the associated injury and illness documents, including first-aid logs and DOE accident/incident reports.

The person responsible for maintaining the log is knowledgeable in OSHA recordkeeping requirements. The accident review team (ART) determines recordability of an incident. The ART includes members from the safety, industrial hygiene, and medical care departments. The ART functions in accordance with a Honeywell FM&T work instruction, which requires members to communicate any change in the status of recordable injuries/illnesses to the division accident/incident investigation coordinator. A review of the records confirmed that recordability determinations are assigned conservatively and may overstate Honeywell FM&T's recordable injuries.

Interviews with associates confirmed that the data on the log and the supporting documentation are accurate.

B. SUBCONTRACTOR RATES

The rates presented in the following table were calculated for all combined subcontractor operations to serve as an indicator of Honeywell FM&T's management of its subcontractor safety and health programs. Since Honeywell FM&T's subcontractors perform varied construction and maintenance activities, their rates were compared with those for SIC Code 15, "General Building Contractors."

Calendar Year	LWD Injury Cases	RII Cases	Employee-Hours Worked	LWDI Rate	RII Rate
1999	1	1	176,991	1.13	1.13
2000	2	3	218,081	1.83	2.75
2001	3	8	320,845	1.87	4.99
3-Year Average Rates				1.68	3.35
BLS 2000 National Average for SIC Code 15				3.8	7.7

SIC Code 15: General Building Contractors

The calculated three-year average rates for Honeywell FM&T's subcontractors are below the average for SIC Code 15. They are a positive indicator of Honeywell FM&T's effective management and flowdown of safety and health program requirements and expectations to the subcontractors.

III. Management Leadership

Honeywell (formerly AlliedSignal) FM&T continues to demonstrate a high level of management leadership in maintaining and improving the site's occupational safety and health program. Since receiving DOE-VPP STAR re-certification three years ago, Honeywell FM&T/Kansas City has continued to hold managers accountable for and focus on safety as a priority.

A variety of training programs, safety campaigns, and other programs have been developed and implemented since STAR recognition in March 1996 and 1999. Current programs have benefited from the three years of maturing experience and continual improvement. A safety theme, entitled "Passport to the Star," is an example of a recent program designed to ensure continued awareness and commitment to safety program effectiveness. Management and associates participate jointly in all safety and health activities ranging from inspections to planning.

Management supports a variety of growing and expanding safety training and committee activity. Several safety committees exist across first and second shifts enabling all associates to get involved in safety-related activities. The Monthly ES&H Executive Committee Meetings provide a forum for information and issues to be communicated to top managers and labor representatives. Top managers have become more hands on in the daily operation of safety programs. From interviews it was apparent that managers were acutely aware of all incidents and accidents regardless of where they occurred at the Kansas City Plant (KCP).

The team's observation is that management is genuine in keeping the lines of communication open with all associates. The "**3999-Comments, Please!**" phone line, which provides an easy mechanism for associates to register and resolve concerns about safety, is one example of several mechanisms that demonstrate management's interest in worker input.

Honeywell FM&T management believes that safety and health programs need to be continually modified and improved to maintain worker interest and to strengthen program effectiveness. The "**Management Observing and Promoting Safety**" (MOPS) program is an example of a continually improving program.

The MOPS is an evolution of the Director Tours program initiated in 1992 to perform periodic physical inspections of work areas. Today MOPS is an interactive assessment program that addresses the behavioral aspects of working safely. The evolution from physical inspection to a behavior-based approach is indicative of Honeywell FM&T's maturing, evolving, and improving corporate safety culture. During interviews by the on-site review team, it was found that nearly all directors of the FM&T were participating in MOPS, and we encourage that they continue to conduct such tours and to further enhance this successful program.

Honeywell FM&T has also continued to improve management accountability for safety and health. A review and comparison of current and past Performance Evaluation Plans for managers revealed multiple specific safety-related performance elements. Discussions with management and associates supported the notion that managers are held accountable for safety.

Honeywell FM&T management has continued to apply adequate resources to its safety programs. These include aggressive promotion of internal as well as external training and conference participation. Approximately six associates were expected to attend the National Voluntary Protection Program Participants Association (VPPPA) conference in Orlando, Florida, in September 2002. Honeywell FM&T management continues to integrate safety staffing in its ongoing restructuring processes. New staff has been added across the environment, safety and health (ES&H) organization over the last three years.

The re-evaluation Team concludes the management commitment remains strong at this site, and meets the expectations of DOE-VPP.

IV. Employee Involvement

Honeywell FM&T considers employee involvement a critical element to achieving the Plant's goal of becoming a world class manufacturing facility while ensuring that ES&H performance continues to improve. Interviews with Plant associates indicated that management values and expects associates to participate in the decision making process with regard to individual job assignments. Employee involvement continues to mature along with the Voluntary Protection Program and overall company safety culture. The re-evaluation team observed a strong synergism between associates and management with regard to all aspects of VPP at the Kansas City Plant.

The Plant continues to stress employee involvement through several new initiatives in the last three years. Recently, 25 bargaining unit associates attended a 10-hour training course on OSHA to support conducting workplace inspections to uncover safety issues on a peer-to-peer level. A second shift safety committee has been organized to address issues identified by maintenance personnel and is supported by full time second shift ES&H personnel.

The Six Sigma approach applied by Honeywell FM&T continues to mature and provide tangible benefits in the VPP process. Continued involvement of associates, with the strong support of management, in various safety and health activities demonstrates the maturity of the Voluntary Protection Program at the Kansas City Plant.

Support of and participation in the VPP Steering Committee continues to be strong at the Plant. All associates interviewed felt confident in their ability to participate in Committee activities, volunteer to serve on the Committee or various Sub-committees and indicated that management leadership has convinced the majority of associates that VPP is of great value added. Senior leadership of the bargaining unit at the plant also felt that Plant management has continued to focus its attention on the maturation of VPP and enhancing its implementation.

Interviews with bargaining unit associates indicated a strong feeling of ownership towards the VPP. Several long-term associates indicated a definite positive change in management attitudes toward safety, elevating it to a balanced priority with production schedules and budgets. Management interviews reflected this same attitude, with the line supervisors clearly understanding the company president's message that associates are expected to raise safety questions before undertaking any job assignment. The new hire associates consistently identified the safety culture at the Kansas City Plant as much better than previous places of employment.

The Team concludes that KCP continues to exhibit a strong employee involvement attribute that meets the expectations of DOE-VPP

V. Worksite Analysis

A. PRE-USE/PRE-STARTUP ANALYSIS

FM&T/KC routinely analyzes new or significantly modified equipment, materials (including chemicals), processes and facilities for potential hazards prior to use. The chief mechanism for assessing hazards is the Preliminary Hazard Analysis (PHA). The primary focus of the PHA program is to identify hazards associated with the planned action and controls to eliminate or mitigate those hazards. Interviews with personnel associated with the west powerhouse project confirmed that subcontractors also adhere to the PHA protocol. ES&H subject matter experts (SMEs) are instrumental in review and field verification activities associated with PHAs. Several examples of PHAs, addressing processes, equipment and chemicals, were reviewed. All appeared to be thorough assessments of the hazards associated with their particular subjects.

Another pre-use/pre-startup analysis process employed at the FM&T/KC facility is the Beneficial Occupancy Inspection (BOI). It is conducted upon completion of construction or remodeling projects. The process includes a physical inspection of the premises to identify ES&H concerns prior to release of the facility for occupancy. A review of a typical BOI report revealed that the inspection process is very thorough and identified deficiencies are tracked to completion.

B. COMPREHENSIVE SURVEYS

FM&T/KC continues to maintain an aggressive comprehensive survey program. The PHA process initiates the formal ES&H reviews of equipment, chemicals, processes and facility modifications prior to initiation of activities. It is designed to identify ES&H concerns, identify controls and ensure adherence to plant operating thresholds. Groups typically involved in the PHA process are ES&H, engineering, and members of the affected work area/process. PHAs reviewed during this re-evaluation effort confirmed that the process is comprehensive.

During their 2000 Annual DOE-VPP review, Honeywell FM&T/KC self-identified a weakness in their ES&H inspection program and recommended that the existing program be revised to assure that the entire facility is inspected by qualified ES&H professionals. In their February 2001 annual review, FM&T/KC noted that the inspection program was revitalized, but recognized that the program needed to mature. The 2002 re-evaluation team discovered that the FM&T/KC annual ES&H inspection program is continuing to mature. A schedule has been developed to allow inspectors to inspect the entire facility in one year. Each inspection is performed by a team of ES&H professionals, which includes a safety

engineer, industrial hygienist, fire protection specialist and an environmental protection specialist. Inspections are conducted using work site walkthroughs and include an assessment of work area and equipment condition, adequacy of administrative controls, and personnel training. The inspection is documented and corrective actions are tracked to completion. A review of completed reports confirmed that the inspections were comprehensive and corrective actions were tracked to completion.

In addition to the preceding survey techniques, the FM&T/KC ES&H group routinely conducts surveys to assess noise exposure, asbestos characterization, lead exposure, beryllium characterization, and confined spaces.

C. Routine Hazard Assessments (SELF-INSPECTIONS)

Routine, general worksite safety and health inspections continue to be performed at FM&T/KC. One of the systems in place is the Environmental Self-Assessment Program (ESAP). This program provides line management and associates with a self-inspection tool to easily assess their areas for unsafe conditions and initiate corrective actions. The ESAP computer application is available on the facility intranet, and is readily accessible throughout the facility. Divisions and departments are self-inspected about every other month by departmental personnel. The department manager is responsible for initiating and closing corrective actions. ESAP inspection results are entered into the site-wide ES&H database. The ESAP system is periodically evaluated to ascertain if identified issues have been appropriately addressed. Interviews with plant personnel confirmed that associates are actively involved in the ESAP self-inspection process.

Another self-inspection system in place at FM&T/KC is the Management Observing and Promoting Safety (MOPS) program. This program encourages management to periodically walk their areas to reinforce observed safe behaviors and practices and interact with their associates.

Another self-inspection system in use at FM&T/KC is designed to validate construction site safety inspection. Inspections are conducted by FM&T/KC safety engineers on a routine basis. Similar daily inspections are conducted by construction subcontractors.

In the 2000 DOE-VPP annual report, it was reported that a third party safety and health assessment recommended enhancing the facility's safety program by establishing a peer-based job observation program. During this re-evaluation, several interviewees discussed the genesis of such a program. This associate-based program focuses on peer-to-peer mentoring of proper personal protective equipment usage. The team feels that the concept is well founded and encourages FM&T/KC to nurture this program into a more substantial associate-based job observation program.

D. ROUTINE HAZARD ANALYSIS

FM&T/KC utilizes the Job Hazard Analysis (JHA) Program as its routine hazard analysis system. The JHA program ensures that jobs, processes and the interaction among activities are assessed to identify hazards and appropriate controls. The program requires both line management and associate input during development, establishes an annual review requirement, and requires the review of job-specific JHAs with new or transferred associates. Random interviews with managers and associates confirmed that the program operates as intended. On-the-floor personnel confirmed that JHAs specified in work documents are readily available to personnel performing the work. Hazard analysis utilized by subcontractors is a combination of subcontractor company processes and FM&T/KC protocol.

JHAs are available to site personnel through the on-site computer network. Production workers accessing computerized work instructions, through the Manufacturing Execution System, have ready access to the JHA database. Likewise, work planners using the FM&T/KC MAXIMO system to develop work packages for maintenance activities have ready access to identified job specific hazards and controls.

Random interviewees were queried regarding their experience providing feedback for JHA development/revision. Personnel providing feedback indicated that their comments were considered and satisfactorily addressed prior to finalization of the JHA. Site personnel also indicated that JHAs are used in training, generally during departmental weekly safety meetings.

The worksite analysis-work control interface in place at FM&T/KC is commendable.

E. EMPLOYEE REPORTING OF HAZARDS

Several avenues are available for associates to report hazards. They include reporting the concern directly to their supervisor, union representative, ES&H representative, or ES&H department; using the ES&H Concern Line (3181), the ES&H web page and "Telephone 3999, Comments, Please." Subcontractors can also use these FM&T/KC reporting methods. The ES&H department manages the hazards reporting program. Corrective actions are entered and tracked in the site's computerized tracking system. Upon completion of corrective actions the originator of the concern is notified.

Random interviews with site personnel revealed that site personnel do report hazards, including stopping work to assess potentially hazardous situations. All persons indicated that they had no apprehension to report hazards and no fear of reprisal. Identified hazards were addressed in a timely, satisfactory manner.

F. ACCIDENT INVESTIGATIONS

The Management Project Specialist is responsible for maintaining the accident/incident investigation program. All near-miss incidents, ES&H concerns, first-aid injuries/illnesses, OSHA recordable injuries/illnesses, and property and vehicle damage incidents are reported to the Management Project Specialist. Based on interviews conducted, the use of the concerns/near-miss notification process appears to be well received by site personnel.

Notification of accidents/incidents is provided electronically to management, the safety and health professional assigned to the particular division, and other interested parties through the site's computer network. The assigned safety and health professional is responsible for forming the "natural team" and enlisting required resources. The "natural team" includes, at a minimum, the safety and health professional, the person involved in the accident/incident, line management and applicable subject matter experts. If any accident/incident involves subcontractors, subcontractor personnel are included in the "natural team."

Accident/incident investigation data are maintained in an electronic database format. The database fields support NNSA, corporate, state, and federal information requirements. Queries can be developed to support tracking, trending, and reporting information. The database is available in two formats. Only medical staff and the system administrator use one as it contains sensitive personnel information. The other format is available to any associate with a business need; however, sensitive information has been extracted. Accident/incident investigation reports are maintained based on a graded approach. Investigations of de minimus events are recorded in the ES&H Concerns/Near Miss database. Investigations of more serious events with open corrective actions are documented and tracked to completion in the facility's Corrective Action Tracking System (CATS). This system is available to any associate through the Plant's computer network. Based on predetermined criteria, lessons learned reports are generated and shared with associates, the DOE, and Honeywell Corporate.

Accident investigators are formally trained in accident investigation techniques, cause analysis/mistake proofing techniques, and office ergonomics. Personnel involved in the accident/incident investigations indicated that from their perspective, the investigation process is very thorough, appropriate corrective actions are developed and corrective actions are completed in a timely manner.

G. TREND ANALYSIS

FM&T/KC uses trend analysis to identify ES&H program deficiencies and to facilitate program improvements. The ES&H department maintains the trend analysis program. Data used for trend analysis includes first aid cases, accident investigation results, OSHA recordable cases, audit findings and ES&H concern line information. Subcontractor information is also included in the trend analysis program. Analyzed data is accessible to all facility personnel through the ES&H website.

Trend analysis data is presented monthly to general management at the ES&H Executive Committee, distributed to division managers and posted on the ES&H website. These data are reviewed on an annual basis to determine where to focus resources to reduce injury/illness rates.

H. CONCLUSION

The Team concludes that “Worksite Analysis” remains strong at this site, and meets the expectations of DOE- VPP.

VI. Hazard Prevention and Control

A. ACCESS TO CERTIFIED PROFESSIONALS

Honeywell FM&T continues to provide qualified, certified professional staff in the areas of safety and health. The staff provides both first and second shift coverage to ensure safe and responsible operations throughout the Plant. Construction safety engineers provide routine coverage of all construction activities in the Plant. The S&H professionals participate in accident investigations, conduct inspections, support the implementation of the automated job hazard analysis program and assist the VPP Steering Committee as appropriate.

B. METHODS OF HAZARD CONTROL

Honeywell continues to implement hazard controls in the preferred order as discussed below.

Process or material substitution – Honeywell has established operational specific teams to evaluate each chemical process in the facility. With the assistance of the industrial hygiene department, all chemicals used in the plant have been evaluated for substitution of a less hazardous material. The ES&H department continues to review all chemical purchases to ensure Material Safety Data Sheets are up-to-date and available to all associates.

Engineering controls – The Plant places an emphasis on developing engineering controls to eliminate or mitigate hazards wherever possible. For example, all lathes, grinders, and other machines have an individual tag that lists the required guarding that must be in place prior to operating that machine. The maintenance group performs preventative maintenance on both first and second shift to ensure that all equipment and associated engineered hazard controls are in place and functioning properly. All associates, both line supervisors and bargaining unit, had a thorough understanding of the hazards associated with their tasks and the respective controls established to eliminate or mitigate those hazards.

Administrative controls – Honeywell effectively applies administrative controls in situations where engineering controls or substitution is not feasible. The ES&H group is continually promoting safety awareness and employee involvement to minimize exposure to hazardous conditions. A good example of this is the Beryllium Awareness Team. This Team, comprised of management, bargaining unit and ES&H staff, work together as a cohesive unit to ensure all Plant associates are aware of the areas in the Plant where Beryllium was present, machined or stored. The continued maturation of the VPP and continued effectiveness of the VPP Steering Committee were credited by all associates interviewed as raising the level of the safety culture and hazard awareness of the Plant staff.

Personal Protective Equipment (PPE) – While ES&H Plant staff clearly demonstrated that PPE was the least preferred method of hazard control; the PPE program in place at Kansas City was comprehensive and effectively implemented. Throughout the Plant, associates were observed wearing the proper PPE correctly and PPE requirements were clearly posted at the entrances to all shops, laboratories and construction areas. Most machines throughout the Plant had spare safety glasses and hearing protection located in the direct proximity of the machine. The industrial hygiene department continues to maintain an excellent respiratory protection program at the Plant. The integration of the medical department into the program is an outstanding example of how the combination of VPP and Integrated Safety Management provide compatible functional support to protect associates at the Kansas City Plant.

C. POSITIVE REINFORCEMENT

Associates interviewed during the re-evaluation all expressed support for the positive reinforcement efforts by management to encourage the development and growth of a safety culture at the Kansas City Plant. Information on safety programs, awards and safety suggestion programs was readily available, both electronically and hard copy publications. The Plant continues to implement and refine various recognition programs to reward positive safety behavior, including:

- Safety Slogan Contests
- Quality Improvement
- Associate Recognition
- Cost Reduction (Safety Suggestions)
- VIP Parking
- Above and Beyond

D. DISCIPLINARY SYSTEM

Honeywell FM&T has effectively implemented and consistently applied a disciplinary program. Associates interviewed were aware of the program's components and indicated that management fairly applied the program. Union representatives also pointed out that line managers were subject to the same program and treated no differently than bargaining unit personnel. All associates are informed of the system by several methods, initial orientation training, the FM&T Associate Handbook, Management Policy and respective bargaining unit representation. The re-evaluation team consistently observed associates complying with PPE requirements and practicing safe work habits during Plant walkarounds.

E. PREVENTIVE MAINTENANCE

The Facilities Management Service continues to improve with the continued maturation of the comprehensive computerized maintenance management system (MAXIMO). Work Orders generated with this system provide hazard information and controls in an integrated package for quick and easy access prior to the commencement of work. Through the VPP process, a Second Shift Safety Committee was established to address specific back shift concerns of maintenance personnel. As a result of this new committee's actions, second shift S&H staffing was established to respond to safety questions and issues.

F. EMERGENCY PREPAREDNESS AND RESPONSE

Honeywell FM&T's Emergency Management personnel maintains the emergency management program. The re-evaluation indicated that Honeywell FM&T has continued to demonstrate its preparedness and ability to respond to all anticipated emergencies, including terrorist activities and natural disasters. The Emergency Operations Center (EOC) maintains its level of preparedness by annually updating its Emergency Plan.

The Plant's Emergency Response Organization consists of the EOC, the Incident Management System (IMS), and the emergency press center. The EOC supports the initial response and mitigation of an emergency. The IMS ensures that all elements involved in responding to an emergency function as an integrated responsive unit to address public and plant safety and health issues quickly and accurately.

Honeywell FM&T maintains its own on-site Fire Protection Department and Haz Mat Teams. The Department provides 24-hour coverage of the plant for fire and chemical spill emergencies. The Department has liaisons with the Kansas City Fire Department, the Missouri Department of Natural Resources, and Missouri Emergency Management group.

All evacuation routes were clearly marked throughout the Plant. A Plant wide emergency notification system provides notification and instructions to employees in the event of an emergency. Procedures were in place to ensure disabled or handicapped individuals were provided the necessary assistance to evacuate the facility. Associates interviewed indicated a good understanding of their roles and responsibilities during an emergency event.

G. MEDICAL PROGRAMS

The Kansas City Plant provides its associates with a comprehensive medical facility. The integration of the Medical Services Department and ES&H is impressive. The Medical staff is involved in the evaluation of employee health risks and the development of controls and appropriate medical monitoring programs. Medical Services also offer preventative medicine and wellness programs that emphasize prevention of health problems. The integration of the occupational physician into industrial hygiene programs for lead, hearing

conservation, blood borne pathogens, asbestos respiratory protection, ergonomics and general chemical exposures continues to be impressive, as is the integration with the emergency response program. The medical facility is fully staffed for first shift. Second and third shift coverage is addressed by providing first aid and CPR training to all Fire Department personnel. Additionally, the Plant maintains agreements with local emergency service providers and a plant physician is on call 24-hours a day.

H. CONCLUSION

The Team concludes that all aspects of “Hazard Prevention and Control” at this facility are being maintained at levels well above expectations. Their achievements in this area readily exceed this VPP tenet.

VII. Safety and Health Training

The re-evaluation team verified that the FM&T/KC training program continues to be comprehensive and well administered. Training is offered on-line, as stand alone CD sessions, by instructors and/or as hands-on exercises. The method of presentation appears to be appropriate for the complexity of the subject matter presented. Testing is also commensurate with the complexity of the subject learned. Courses are periodically reviewed by SMEs and training specialists to determine if revisions are necessary.

Personal training is documented through a computerized database. Site personnel are able to access their training records through the ES&H website. The database is configured to prompt individuals via e-mail about a month prior to their required refresher date to arrange for training. As the refresher date approaches, and if they have not completed the required training, individuals are contacted by the ES&H training coordinator.

Construction subcontractor ES&H training is reviewed by a FM&T/KC construction safety engineer. The engineer is also responsible to ensure that subcontractor workers maintain their ES&H certifications. FM&T/KC may want to consider maintaining long-term subcontractor training records in the FM&T/KC training database to ensure worker training compliance.

The assignment of properly trained FM&T/KC personnel is also controlled through the work planning process. Qualifications of individuals identified for particular activities are compared to activity-specific qualifications. Personnel cannot be assigned to work activities they are not qualified to perform.

All site personnel interviewed, including subcontractors, responded that the level of safety and health training they have received is sufficient to allow them to conduct their job in a safe and healthy manner.

The team concludes that the facility exceeds the expectations of a quality safety and health training program routinely observed at other VPP sites.

VIII. General Assessment

A. SAFETY AND HEALTH CONDITIONS

The DOE-VPP re-evaluation team conducted a number of walkarounds, both as a group and individually, and conducted a number of interviews with Honeywell FM&T personnel. The consensus of the re-evaluation team was that the site was exceptionally well maintained and demonstrated a quality safety culture expected at facilities dedicated to continuous improvement.

B. SAFETY AND HEALTH PROGRAMS

The DOE-VPP re-evaluation team found that the Honeywell FM&T/Kansas City safety and health program has a continuing, highly effective safety program. The overall program is comprehensive, integrated, and well communicated. The re-evaluation team believes that this program has maintained its safety culture, and easily meets all the expectations of a DOE-VPP site.

IX. Recommendation

It is the unanimous recommendation of the DOE-VPP onsite re-evaluation team that Honeywell (formerly AlliedSignal) Federal Manufacturing & Technologies (FM&T)/Kansas City meets all the VPP tenets.

Appendix

DOE-VPP Review Team Assignments Honeywell FM&T Kansas City Plant

August 6-8, 2002

Name	Organization	Areas of Responsibility
Name: Rama Sastry Phone #(301) 903-4664 e-mail Rama.sastry@eh.doe.gov	Team Leader EH-51, DOE, Germantown, MD	Management Leadership Commitment, Responsibility, Line Accountability, Resources, Planning, Visible Management Involvement, Records Review, IIR, LWDI rates, Contract Workers, Site Orientation, Program Evaluation and Employee Notification
Name: Daniel A. Stachelski Phone #(716) 942-4690 e-mail: Daniel.a.stachelski@wv.doe.gov	DOE West Valley Demonstration Project, West Valley, NY	Safety and Health Training Employee Training, Supervisor Training, Manager Training
Name: Dan Stachelski Phone # e-mail		Worksite Analyses Self Inspections, Preventative Maintenance, Pre-use/Pre-startup Analysis, Accident Investigations, Trend Analyses, Job Hazard Analyses, Hazard Tracking
Name: Steve Bertness Phone #(509) 376-6221 e-mail Steven_L_Bertness@rl.gov	DOE- Richland Richland, Washington	Employee Involvement Degree and Manner of Employee Involvement, Safety and Health Committees, Employee Reports of Hazards (Worksite Analysis), Disciplinary System (Safety and Health Rules in Hazard Prevention and Control)
Name: Steve Bertness Phone # e-mail		Hazard Prevention and Control Comprehensive Surveys, Access to Certified Professionals (Professional Expertise), Methods of Hazard Control, Medical Programs, Radiation Protection Program, Positive Reinforcement (Safety and Health Rules), Personal Protective Equipment, Emergency Preparedness.

