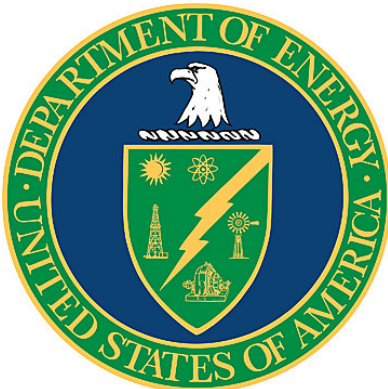


# Swift and Staley Team Infrastructure Support Contract Paducah Gaseous Diffusion Plant

**Report from the Department of Energy  
Voluntary Protection Program  
Onsite Review  
December 1-5, 2014**



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

## Introduction

The Department of Energy's (DOE) Office of Worker Safety and Health Assistance Voluntary Protection Program (VPP) team (Team), within the Office of Environment, Health, Safety and Security (AU), performed a DOE-VPP Annual Merit review of Swift and Staley Team (SST) at the Paducah Gaseous Diffusion Plant (PGDP) from December 1-5, 2014.

SST is the infrastructure prime contractor to DOE's Portsmouth/Paducah Project Office at PGDP. SST is a partnering agreement among three companies. The teaming companies consist of Swift & Staley, Inc., URS Safety Management Solutions LLC, and Wastren Advantage, Inc. SST provides infrastructure support to DOE and DOE contractors at PGDP, including: administrative; technical; grounds maintenance; utilities; environment, safety and health; physical security; and records management support.

PGDP is located approximately 15 miles west of Paducah, Kentucky, near the Ohio River in McCracken County. The DOE property comprises 3,600 acres, 750 of which are inside the PGDP security fence. The Paducah site began operations in 1952 to produce low-assay enriched uranium. In 1993, in accordance with the Energy Policy Act of 1992, DOE turned uranium enrichment operations over to the United States Enrichment Corporation (USEC). USEC produced enriched uranium for use in the United States and abroad. In 2014, USEC terminated its operation of PGDP and returned all leased areas to DOE. DOE's primary focus is now environmental restoration of the Paducah site and managing waste generated from those activities, as well as waste generated during the period prior to the transfer to USEC operations.

SST is a small business venture with a limited scope of work at PGDP and performs much of the work itself. SST subcontracts specialty work (pest control, air-conditioning repair, etc.) to local businesses. The return of the leased portions of PGDP to DOE resulted in a significantly expanded scope of work for SST. In 2014, SST effectively doubled its workforce from approximately 85 to 170 full-time employees. The United Steel Workers Union (USW) Local 550 represents approximately 48 employees. Other significant changes include combining the safety committee and the VPP Core committee into a single Safety Success Team and moving most of its managers to the site from its previous location in Kevil, Kentucky (Kevil building).

In 2012, DOE's former Office of Health, Safety and Security (HSS) performed the initial VPP assessment of SST, and SST was admitted into DOE-VPP at the Merit level. The DOE-VPP documents require annual evaluations of Merit participants until they achieve Star status or withdraw from the program. HSS performed the first Merit progress review in May 2013 and determined that while SST had progressed, the management team had taken actions that diminished employee engagement and participation. The Team recommended that SST continue at the Merit level. This report documents the results of the second progress review.

This review focused on the four specific opportunities for improvement identified during the May 2013 Annual Merit review that SST needed to address in order to demonstrate the level of performance expected of a DOE-VPP Star site. Because of the narrow focus of this review, the Team is preparing this report as an addendum to the May 2013 report. This report presents the Team's observations and conclusions relative to the four specific opportunities for improvement that SST needed to address and provides some additional observations where appropriate. The Team identified some new opportunities for improvement that SST should consider as it pursues continuous improvement and excellence, but these do not constitute major programmatic failures

or noncompliance with requirements. Finally, this report provides the basis for the Team’s recommendation that SST be elevated to Star status in DOE-VPP.

## Results

**2013 Opportunity for Improvement:** Managers need to ensure supervisors adequately address employees’ concerns, clearly communicate how they resolved the concerns, and obtain employee agreement before work proceeds.

In 2013, employees reported that SST had not effectively implemented managers’ expectations for stopping work. They identified specific cases where supervisors did not follow requirements that ensured corrective actions adequately addressed employees’ concerns before work restarted. Since 2013, SST managers and supervisors have worked closely with the Safety Success Team to identify and publish corrective actions to employee concerns. SST implemented a new hazard database where any employee can enter a safety concern or condition. The hazard database is now a repository where employees review the status of corrective actions. The Safety Success Team Chairperson discusses the status of actions, in particular, closure actions during the monthly company safety meetings. This process provides a means to ensure SST informs employees of corrective actions to address safety concerns. Most employees interviewed during this assessment identified they had the ability to stop work and have safety concerns addressed. The local USW leadership was very strong in its belief that all SST employees had the right and ability to stop work without fear of retribution.

SST can continue to make improvements in this process. Although not identified by any employees as a concern, the current practice of announcing the corrective action at the company safety meeting might hinder employees from publicly disagreeing with the corrective action. To reduce the potential for future issues, SST should consider consulting with the employee who raised a safety concern in the hazard database and confirm that completed corrective actions effectively addressed the employee’s concern.

**Opportunity for Improvement:** SST should consider consulting with the worker who raised a safety concern in the hazard database and confirm that completed corrective actions effectively addressed the worker’s concern.

SST is effectively implementing its stop work process, and progress is sufficient to demonstrate the performance expected of a DOE-VPP Star participant.

**2013 Opportunity for Improvement:** SST needs to find effective methods to encourage greater employee participation in the Safety and VPP committees, restore employees’ faith that managers value, and encourage their ideas and leadership.

In 2013, employees on the SST Safety and VPP Core committees voiced their disappointment in the way these committees were functioning. The employees expected that managers would empower and engage them in developing improvements. The employees explained that they became an audience to listen to solutions decided by others who senior managers appointed. Several events in 2012 impaired the efforts to improve the VPP culture at SST, and remnants of the management team’s leading versus empowering approach existed. The loss of a USW champion due to medical issues, and employee disappointment with the modified structure and conduct of the VPP and safety programs also hindered SST’s progress toward the DOE-VPP

Star. In 2012, employees were eagerly seeking additional involvement and anticipated greater participation because of their attendance at regional and national Voluntary Protection Programs Participants' Association, Inc., conferences. After attending the conferences, several employees volunteered to participate on the VPP Committee and the SST Safety Committee, but subsequently resigned. Those employees expressed that rather than contributing, being part of the solution and making SST a better and safer place, they became an audience to listen to decisions made by managers. In 2013, after the last Merit progress review, USW was considering removing support for SST's continued participation in DOE-VPP unless SST began living up to its commitment to involve and empower the workforce in the safety program.

In 2013, SST made significant changes to its management team. The changes included a new Program Manager, a new Environment, Safety, and Health Manager, and several other managers. As of this assessment, only 3 of 11 managers had been onsite for more than a year. The new management team strongly embraces the value of employee empowerment. The management team effectively demonstrated its willingness to listen to employees, empowered them to make recommendations and take actions, and earned the trust of most of the employees. The management team, led by the Program Manager, is visible, approachable, and credible with employees. The new Program Manager has many years of experience at PGDP and most employees know her. Other managers brought in by SST have significant experiences at other DOE-VPP sites and understand the value of giving employees an active role in the safety program.

Employees have responded very positively to these changes. Employee involvement has improved significantly since the 2013 review. The Team observed employees actively participating in walkdowns, identifying hazards, and seeking ways to become involved. Safety and VPP committee members that had resigned from the committees have returned to active roles. In early 2014, SST safety committee members and VPP committee members, with support from the management team, combined their efforts into a single, Safety Success Team. The union leaders are satisfied that SST is allowing employees the appropriate role in the safety program. The union leaders are not hesitant about their ability to withdraw support if SST reduces employees' role in the future.

The Safety Success Team is now responsible for planning and organizing the monthly company safety meetings. Rather than managers telling the team what to do, the team is self-directed with management sponsorship. The Safety Success Team has designed and implemented several safety improvement initiatives, including traffic pattern improvements, a 360-degree walkaround campaign to prevent vehicle damage, a Good Catch recognition program, a regular newsletter (SST You and Me), and the hazard database previously discussed. A current effort launched prior to this assessment is a Safety Passport. This passport allows employees to voluntarily complete several safety improvement actions, and in return attend a free breakfast in March 2015. The Team observed many employees and managers actively planning and pursuing this reward.

SST must be careful not to reduce its apparent support for the safety improvements in the past year. For example, since USEC left the site, SST has been very busy supporting a new contractor that will manage and conduct environmental restoration, decontamination, and demolition activities. The new contractor has placed a heavy demand on SST personnel, and in some cases employees perceive themselves as "too busy" to participate in safety activities. Many employees missed attending the November 2014 safety meeting in order to support

customers or meet incentive deadlines. Although SST provided these employees with the presentation slides used during the safety meeting, they did not receive all the information presented. Consequently, they were unaware of, or did not fully understand, two new safety improvement efforts rolled out during the safety meeting. SST should ensure it reinforces the message that participating in safety improvement efforts is not an additional work duty, but is an essential part of mission success.

**Opportunity for Improvement:** SST should ensure it reinforces the message that participating in safety improvement efforts is not an additional work duty, but is an essential part of mission success.

**2013 Opportunity for Improvement:** SST needs to conduct a comprehensive lessons-learned investigation into the excavation events that occurred during the C-755 Trailer and the Training Trailer installation projects.

**2013 Opportunity for Improvement:** SST needs to ensure that all as-built drawings are updated to reflect the location of the damaged water drain and the red concrete-capped electrical feeder line in the next as-built drawing update.

The 2013 assessment identified multiple situations during the C-755 trailer installation project that placed employees at risk. SST failed to perform appropriate subsurface surveys to validate drawings. Employees encountered buried utilities during excavations, such as high voltage power lines and building grounds. Because of these situations, DOE issued a stop work order to SST related to subsurface digging and penetration. SST subsequently identified a myriad of issues that contributed to this condition, including weaknesses in work planning and control, supervisory qualifications and training, and SST's readiness to perform project work of this scale. SST took many corrective actions, including revising work planning requirements, excavation and penetration survey requirements, training for employees and supervisors, and assignment of project responsibilities to qualified personnel. The results of these corrective actions were evident during this assessment when a heavy equipment operator performing trenching in support of another site contractor's work refused to excavate beyond the surveyed boundaries despite pressure from the other site contractor (see below). Employees cited multiple examples to the Team where similar actions have occurred. Employees are more aware of unknown subsurface hazards and ensure surveys are current before digging. Additionally, SST revised its engineering procedures to ensure it updates drawings as information becomes available from surveys.

### **Other Observations**

Most employees interviewed indicated that they were very comfortable with their right to stop work if they felt that something was unsafe or if they were unsure of the workscope or tasks. For example, the aforementioned heavy equipment operator that refused to excavate beyond the surveyed boundaries. However, some employees interviewed were less comfortable with stopping work since their personal histories with SST were not as positive. They indicated that in the past there were perceived retaliatory events, but did not provide definitive examples. In contrast, the union leaders believe SST is fair in its treatment of workers that raise questions or concerns and only uses discipline in accordance with the bargaining agreement. SST should continue to reach out to employees and encourage all employees that SST expects them to exercise their right to stop work.

<p><b>Opportunity for Improvement:</b> SST should continue to reach out to workers and encourage all employees that SST expects them to exercise their right to stop work.</p>
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SST produces a monthly newsletter called “SST You & Me.” The November 2014 newsletter thanks employees for working as a team to support transition efforts from USEC to DOE control. SST rewarded employees who identified improvement areas with “good catch” stress balls and put recipients’ pictures on the front page of the newsletter. In addition, the Safety Success Team members and their phone numbers are on the front page. Recent newsletters include winter driving tips, precautions for using portable heaters, deerstand safety tips, holiday safety tips, and a welcome message to new employees.

The 2013 assessment Team noted that SST was developing hazard maps with pictures to indicate where hazards were located in the workspaces. At that time, the vehicle repair shop had a map posted at the entrance, and SST was working on another map where carpenters were building partitions in a trailer. SST is expanding that effort to a hazard map of the site that includes hazards for mowers and snowplows.

For work that is outside the skill sets of the SST workforce, SST subcontracts with offsite vendors. Work such as pest control; paving; heating, ventilation, and air-conditioning (HVAC); and some plumbing work are examples of subcontracted work. During this review, the Team observed a subcontractor respond to an SST sewage problem within an hour after SST found the problem. Work supervisors indicated that their relationship with subcontractors and the subcontractors’ responsiveness were meeting SST’s expectations and operational needs.

SST follows the hierarchy of controls. For example, SST eliminated the potential for flying debris over snowblades by installing a rubber shield on top of the blade to channel snow and debris away from the windshield of the vehicles. In another case, SST eliminated hazards from detached and unused hydraulic lines. SST removed the lines and installed a bypass block to eliminate loose hydraulic lines. SST mitigated the potential for chaffing hydraulic lines in the cabs of machinery by installing protective sheathing over the lines. This sheathing prevents failures that might spray hot hydraulic fluid on the operator. SST recently conducted an extensive campaign to identify and replace road signs onsite. SST changed to a one-way traffic pattern in the C-755 trailer complex to minimize risk to pedestrians and minimize vehicles backing into two-way traffic. The use of personal protective equipment is apparent with safety shoes, eye protection, and high-visibility vests in common use.

SST has a thorough set of activity hazard analyses (AHA) that planners use as reference for most routine tasks. SST planners demonstrated how the work control process (contained in SST Procedure 06.01.01 R10, *Paducah Work Control Process*), integrates previously completed AHAs into work packages. SST’s system for work control uses 3 tiers: level 1 work is the most hazardous; level 2 can require more analysis than level 3; and level 3 is the least hazardous. The procedure guides the user through the steps necessary to develop work packages and integrate the required hazard reviews. Higher hazard activities (level 1 work), such as those not previously performed or presenting a greater risk for injury, require a hazard assessment team (HAT) to review the scope/tasks, walkdown the steps of the work evolution, and develop a specific job task hazard analysis (JTHA). The Team reviewed several JTHAs during this assessment, including one that started as a level 3 work package, but became a level 1 package because of hazards identified during the planning process. SST can retrieve previously performed AHAs into the JTHA for subtasks and avoid repeating the analysis already contained in the AHA.

SST does not normally document its basis for selecting the controls in its hazard analyses. For example, the JTHA includes columns for the workscope, hazard identification, risk-ranking, and the last column is for controls. Per the hazard analysis procedure, the risk-ranking is done subjectively by considering consequences and frequency of exposure. Safety leads and planners interviewed were unfamiliar with the risk process and its function and generally did not use it. SST is reevaluating the need for the risk-ranking process. In addition, safety leads and planners do not normally document their analysis of the hazard that justifies the selected control. SST should review its development and documentation of hazards to ensure that the documented analysis justifies the selected controls, including any assumptions and limits on the analysis.

**Opportunity for Improvement:** SST should review its development and documentation of hazards to ensure that the documented analysis justifies the selected controls, including any assumptions and limits on the analysis.

SST is currently reevaluating its training program. Due to the transition from USEC to DOE and the expanded role of SST to support new contracts and scope, SST has doubled its workforce and is using this reevaluation to identify any weaknesses and opportunities for improvement. Facing the new scope and potentials for additional training needs, SST is trying to ensure that the program meets the company's training needs for the immediate and foreseeable future. Although SST uses computer-based training for many of its training needs, it does provide some high quality classroom training, such as initial hazardous waste operations and emergency response (HAZWOPER) training and requalification, and hazard map training, both of which are led by USW.

## Conclusions

SST has significantly improved its relationship with the workforce and effectively empowered employees to participate in the safety program. Managers are eager to listen to employees' suggestions and complaints and act on those issues as a means of improving mission performance. The departure of USEC and return of leased areas to DOE presented SST with a number of challenges. SST used its improved relationship and employee involvement to rise to those challenges and meet customer expectations. Although a small portion of the workforce remains skeptical, SST is teaming with USW to ensure improvements implemented over the past 18 months remain effective. The Team recommends that SST be elevated from Merit to Star status within DOE-VPP.

## Appendix A

### Onsite VPP Audit Team Roster

#### Management

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