

Advancing Cultural Change through Communications – 14428

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ABSTRACT

Hanford's Plutonium Finishing Plant (PFP) was formerly the "end of the road" for plutonium production at the U.S. Department of Energy's (DOE) Hanford Site. PFP is now one of the most significant nuclear hazard risks in the nation. It poses a cleanup challenge to remove the facility and reduce the hazards within to protect human health and the environment. It is the largest above-ground source term at Hanford and a national priority for nuclear decommissioning and environmental remediation.

Today, CH2M HILL Plateau Remediation Company's (CH2M HILL) mission is to safely and efficiently take down PFP from the inside out. This comes with great hazards and risk which takes careful management, intensive hazard controls and rigor in work performance. This monumental job also requires a major shift in the workforce's way of life – a change in culture, behavior, and thinking. CH2M HILL brings to this challenge unique lessons learned in leading culture change associated with nuclear facility demolition and closure missions from managing some of DOE's major closure projects like Rocky Flats and the Miamisburg Closure Project.

INTRODUCTION

The Plutonium Finishing Plant (PFP), located in the 200 West Area of the Hanford Site, began operations in 1949 and produced plutonium metal during the Cold War. Production was stopped in 1988, the facility was formally shut-down in 1996, and material processing completed in 2004. Currently, the PFP Closure Project is progressing toward Decontamination and Decommission (D&D) closure, with mission complete by September 30, 2016.

As the tearing down of PFP becomes imminent, the workforce faces career uncertainties, which can lead to resistance to change, low morale, and adverse impacts to productivity. Addressing this challenge takes careful and purposeful leadership and communication to engage the workforce in the mission while recognizing the powerful culture change that goes with it.

BACKGROUND

PFP, also known as Z-Plant, was once shrouded in secrecy. For decades, barriers, razor wire, guns, guards, and dogs surrounded the complex. Workers went through multiple searches, metal detectors, and nuclear material detectors to enter the complex.

That's because during PFP's operational years, from 1949 to 1989, the workforce processed plutonium into solid, hockey-puck sized "buttons" and plutonium oxide powder that could then be safely shipped to the country's weapons production facilities. PFP produced nearly two-thirds of the nation's plutonium stockpile.

By December 2009, all remaining plutonium bearing special nuclear material that had been stored at PFP was successfully stabilized, packaged, and shipped to the Department of Energy's Savannah River Site. Iconic security was removed – metal detectors, vehicle inspection stations, armed guards, and razor wire were all gone. This marked the end of the high security profile long associated with PFP and ushered in a new era for PFP workers: cleaning out, decontaminating, and ultimately removing the PFP complex.

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The PFP Closure Project now faces a monumental cleanup challenge to remove the facility and reduce the risks of the hazards within to protect human health and the environment. Demolishing the PFP complex presents several challenges, including working with an outdated critical ventilation system, removing the complex configuration of remaining gloveboxes and equipment, and minimizing the risk of the several kilograms of residual plutonium and americium that remain in the facility. In addition to the cleanup challenge, the Project's workforce faces the challenge of adjusting to a different way of life, transitioning from an operations culture to a D&D culture.

METHOD

In April 2013, an interdisciplinary team of CHPRC and U.S. Department of Energy – Richland Operations Office (DOE-RL) representatives conducted a Value Engineering (VE) study to advance the strategy and path forward for demolishing PFP by 2016. The team identified several initiatives to maximize team engagement and productivity amidst change.

One of the major focus areas was the need for a robust communications strategy to support the actions resulting from the study and improve overall communications on the PFP Closure Project.

The communications strategic goal was to help transition the PFP workforce from an operations project to a closure project, rally the entire organization behind the common goal of completion of PFP closure, and provide the workforce a window into the future beyond PFP to help alleviate some uncertainty. Key elements of this strategy include:

- Laying the foundation for the workforce's common understanding of the Project's mission.
- Engaging in frequent face-to-face communications with employees.
- Developing project-specific communications vehicles that consistently confirm key messages.
- Establishing a rewards and recognition program to motivate and reward project accomplishments toward the common goal.
- Providing employees a vision for their future beyond PFP closure.

DISCUSSION

Understanding the PFP Mission

CH2M HILL senior managers kicked off the communications program with an all-employee meeting where they provided employees a comprehensive pathway to PFP closure. The meeting began with the company president and vice president of PFP recognizing team and individual accomplishments for safely and compliantly moving toward closure. The leadership team then showed before and after photos of the plant to drive home the point that the project's goal is to completely demolish PFP. The visual provided the foundation for discussions on how to achieve the vision.

PFP Vision

- Safely and compliantly demolish PFP by 2016



Figure 1. *A picture is worth a thousand words ... senior managers showed these photos to employees to give them a sobering look at PFP's future.*

PFP management initiated several strategies to advance from an operations mode to a Deactivation, Decommissioning, Decontamination, and Demolition (D4) closure mode. Recognizing employee involvement is key to the project's success, PFP's leadership team sponsored a team of PFP workers to visit the DOE Advanced Mixed Waste Treatment Plant (AMWTP) site in Idaho to observe equipment that would assist in entering highly contaminated areas. This visit was a prime example of worker involvement and sharing experiences across the DOE complex. This visit resulted in PFP employees taking the lead in adapting what they learned in Idaho to their jobs at PFP. They began using new types of equipment to enter highly radioactive and chemically contaminated areas, allowing for increased productivity in the complex removal and size reduction of highly contaminated components while maintaining worker safety.

Face-to Face Communications

The senior management team began holding informal meetings with individual work groups to provide updates, hear employees' concerns, and answer questions. The manager and employee meetings allow for reinforcement of PFP's mission and give employees an opportunity to gain perspective on the path forward. This mode of communicating with employees was instrumental in helping employees adjust to such things as the major change in PFP's skyline which signals the change from operations to D&D.

As of November 2013, the PFP Project evacuated and eliminated eight mobile office trailers that were turned over to another site contractor. In addition, nine facilities were emptied and prepared for demolition which is anticipated to begin at the beginning of calendar year 2014. Many of the personnel who previously occupied those facilities relocated into one large mobile

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office trailer that was set aside as “D&D Central”. This centralized location for D&D crews was established to cultivate greater teamwork, improve communications across crews and allow for more efficient allocation of resources. This move, which was originally met with resistance, was symbolic of the culture change that is occurring throughout the project. The move was later seen as a morale boost.

Project-specific Communications

Targeted communications were launched, including bulletins delivered to employees as needed, an enhanced website, and a site for submitting anonymous questions to the project’s senior executive.

These targeted communications vehicles were a great asset when the Project was faced with complex, sensitive issues. PFP’s leadership team frequently distributed brief bulletins to update employees on project status, accomplishments, moves and organizational changes. During times of great uncertainty such as workforce restructuring, PFP’s vice president distributed a personal email to keep employees informed. In a survey conducted after one event, employees rated communications from the vice president a 4 out of 5, noting that his commitment to keep the team informed via e-mail and frequent face-to-face interactions was effective.

Employees continue to frequently submit questions and concerns through this anonymous forum. This avenue allows management to address issues before they become widespread. It has also been an informal portal for process improvement ideas – one of which was adopted and implemented.

Rewards and Recognition

Employees who understand how their work impacts the overall success of the organization are more likely to take actions that align with organizational goals and ultimately help move the organization forward. To improve project performance and increase employee morale, PFP senior management implemented a rewards and recognition program to effectively communicate the organizations’ goals and recognize and reward employees’ contribution to achieving those goals.

As the project began seeing a positive trend toward reaching safety and performance goals, management held a celebration to recognize positive progress. This was reinforced with individual “pat on the back” recognitions and team achievement rewards. When a team completed a complex assignment, the project manager would award the entire team on-the-spot rewards (e.g., gift cards, movie tickets).

Life Beyond PFP

One of the biggest causes for resistance to change is fear of the unknown. In the case of PFP workers, many of whom have worked at PFP all of their careers, there is a fear of not having a job at PFP and possibly not having a job at other locations on the Hanford Site. PFP is a high priority cleanup project for DOE-RL and CH2M HILL. It is anticipated that as closure of PFP nears, other projects will increase in priority and would need some of the skilled employees currently working at PFP.

A graphic depiction of “Life Beyond PFP” was developed to help employees embrace the future by having a clear vision of upcoming projects. This graphic, an integral part of information products, reinforces that there are opportunities beyond PFP.

CONCLUSION

While communications is not the sole answer to effectively advancing cultural change, it is a key component. PFP is experiencing a positive shift in safety and performance and the heightened communication effort is presumed to contribute to the project's success.

The PFP team is safely and compliantly making gains in the schedule to completion through open, honest communication; providing a clear vision of the mission; rewarding employees for contributing to the achievement of goals; and inspiring hope for the future beyond PFP. Continuing the same trajectory, the project is anticipated to meet the 2016 completion milestone.

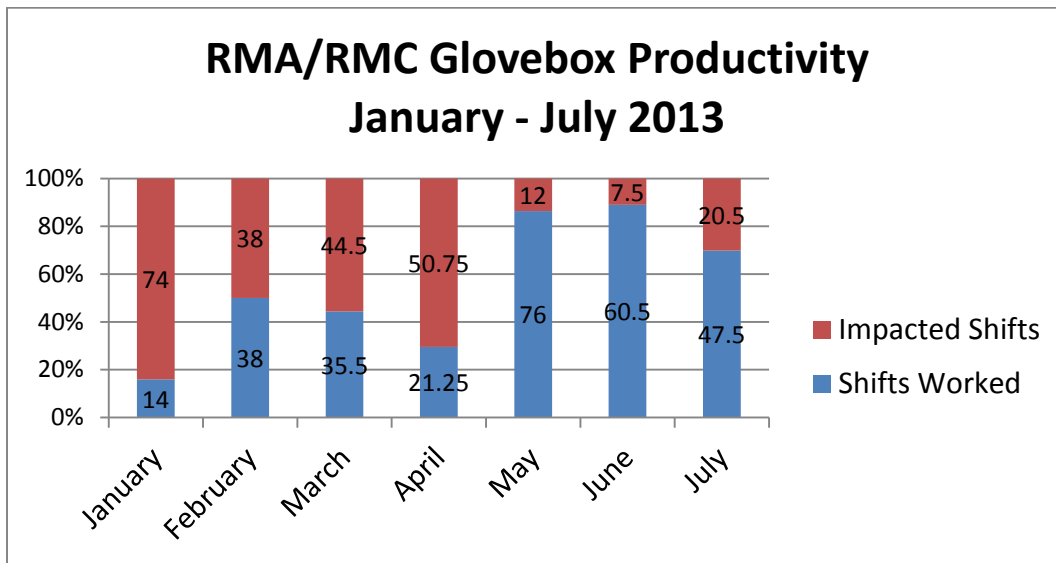


Figure 2. The above chart shows that glovebox removal productivity improved by an average of 50 percent during May, June and July.