



DEPARTMENT OF ENERGY

MISSION SUPPORT CONTRACT

MISSION SUPPORT ALLIANCE

VOLUNTARY PROTECTION PROGRAM ANNUAL SELF-
ASSESSMENT

CALENDAR-YEAR 2017



Mission Support Alliance
2017 VPP Annual Report

1.0 SUMMARY

Mission Support Alliance (MSA) maintains three Department of Energy (DOE) Voluntary Protection Program (VPP) Stars: the Volpentest Hazardous Materials Management and Emergency Response (HAMMER) Federal Training Center, Safeguards and Security (SAS), and Mission Support Services (MSS). The calendar year (CY) 2017 annual evaluation of the DOE VPP included assessing the processes and implementation of requirements for maintaining Star level participation.

The scope of the annual VPP review included all facilities and activities managed by MSA. Three trimester VPP reviews were conducted during the year. This approach provided three data points to continuously monitor the health of VPP implementation and progress of improvements while allowing workers and managers to respond to changes within the work environment and the dynamic influences of ever-changing resources. Supplemental data gathered from multiple sources, such as results from Integrated Safety Management System (ISMS) Surveillance Team field observations, internal management assessments, Hanford General Employee Training (HGET) voluntary survey, and the DOE Headquarters (HQ) VPP recertification team evaluation, were reviewed and included in this assessment, as applicable.

The following Appendices provide specific assessment results and detailed information for each Star Site:

- Appendix A, HAMMER
- Appendix B, SAS
- Appendix C, MSS

Total recordable case (TRC) rate and days away, restricted or transferred (DART) rates for HAMMER, SAS and MSS Star Sites have been trending lower over the past three years, and all are below the comparison industry average. These rates, as presented in Appendices A, B, and C, clearly meet the expectations for participation in the DOE-VPP.

2.0 CONTINUOUS IMPROVEMENT

MSA assurance processes implement activities designed to identify deficiencies and opportunities for improvement, report deficiencies to the responsible managers, and implement effective corrective actions. In addition, these processes are designed to evaluate/assess the environment, safety, and health (including quality assurance and integrated safety management); safeguards and security; cyber security; and emergency management attributes of contractor assurance. The individual elements (processes) are:

- MSA self-assessment activities including surveillances, management and independent assessments
- Worker feedback

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- Issues management
- Operating Experience/Lessons Learned
- Performance measures

MSA utilizes a comprehensive contractor assurance system (CAS) that monitors areas of performance metrics for the elements listed above. A combination of leading (i.e., process or behavioral) and lagging (i.e., outcome or results) indicators are used to identify areas for improvements, along with specific actions taken to maintain or achieve long-term performance objectives. MSA committed to the FY 2017 ISMS performance objectives, measures and commitments (POMCs), which are specific objectives/goals and commitments for key improvement initiatives and safety performance metrics.

During CY 2017, the CAS was reported to the MSA Executive Safety Review Board (ESRB) monthly and to the DOE-Richland Operations Office (DOE-RL) at quarterly CAS meetings. For any adverse incidents/trends or predicted areas of risk, corrective actions were developed, tracked to closure, and evaluated for effectiveness. MSA posted monthly performance data on the CAS website, which can be accessed by all MSA employees.

SAFETY & HEALTH IMPROVEMENT PLAN (SIP)

In pursuit of zero accidents and injuries, and continuous improvement objectives in 2017, MSA developed and approved a 2017 Safety Improvement Plan (SIP). The SIP embodies the company's safety strategy and unites all the organizations and Zero Accident Council groups in a coordinated effort to achieve common safety goals. The workers – in partnership with management – committed to five areas of improvement to ensure the greatest impact for improving employee safety and creating safe work environments.

During 2017, progress toward meeting these continuous improvement actions was monitored by individual MSA organizations, and progress was reported at company-level safety meetings. At the end of 2017, a summary report of the completed actions are reported in this VPP Annual Report to DOE as documentation of MSA's pursuit of a safe work environment through continuous improvement activities.

The 2017 SIP was developed based on observations and assessment results from the previous year to address cross-cutting safety and health (S&H) issues that apply to all organizations within MSA. However, organizational SIPs, recognized by employees as part of their annual S&H goals, were developed in partnership with employees and managers through work group safety councils. All SIPs were accessible to employees, either electronically or hard copy, posted on safety bulletin boards, and located on the VPP webpage.

Goals and measurements defined in the MSA 2017 SIP are listed below. Yearend status is discussed in individual annual reports for the 3 STAR Sites (Appendices A, B, and C), as applicable.

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MANAGEMENT/LEADERSHIP COMMITMENT

Goal: Increase management's engagement in steady communications with safety leaders.

Action: Invite management to safety meetings, and work group activities, and include on agenda for safety discussions.

Goal: Improve mitigation of hazards in the work area, office environment and utility vehicles.

Action: Implement a dedicated time (or roll back) at the end of each month to conduct inspections and perform housekeeping activities.

Measurement:

- Document safety conversations, inspections, and "roll back" activities in the meeting minutes.
- Vice president-level staff meetings include an agenda item to discuss open safety issues and housekeeping status (Safety Log or Issues Identification Form).
- Inspection reports indicate vice president's participation.

Champions: MSA Vice Presidents, EZAC Chairpersons, Safety Leaders.

EMPLOYEE INVOLVEMENT

Goal: Improve work area conditions and increase employee participation by incorporating effective housekeeping practices as an ongoing operation: not just a "hit-and-miss" activity or only done at the end of a shift.

Action: Work with management to ensure cleaning and organizing is done on a regular basis by integrating housekeeping into daily activities.

Action: Frequently inspect work areas to identify deficiencies that can be corrected and eliminate the hazard.

Measurement:

- Inspection reports, safety log entries, inspection and housekeeping checklists, meeting minutes and emails will provide evidence of participation for these opportunities and positive outcomes.
- Communications and Monday Morning Safety Starts provide guidance and support for this action.
- Third Trimester interview questions evaluate participation levels and action effectiveness.

Champions: MSA President, Vice Presidents, MSA Leadership, Safety Professionals, Bargaining Unit Safety Representatives, VPP Core Team

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WORKSITE ANALYSIS

Goal: Improve overall understanding of implementation of MSC-OTHER-SP-1200369, MSA General Hazard Analysis (GHA).

Action: The VPP Core Team will lead an effort to provide EZAC Chairpersons a review of the GHA that can be shared at ZAC safety meetings with the assistance of safety professionals who can offer practical application at the work locations.

Measurement:

- Required reading, EZAC Meeting Minutes and meeting attendance rosters.
- Third Trimester interview questions evaluate knowledge and understanding of GHA.

Champions: MSA Vice Presidents, VPP Core Team, EZAC Chairpersons, Safety Professionals

HAZARD PREVENTION AND CONTROL

Goal: Continue to improve knowledge and implementation of Hierarchy of Controls (HOC)

Action: Display posters, distribute two Safety Starts, and provide HOCs as safety topics at ZAC meetings.

Measurement:

- EZAC Meeting Minutes and meeting attendance rosters.
- Third Trimester interview questions evaluate knowledge and understanding of HOC.

Champions: MSA Vice Presidents, VPP Core Team, EZAC Chairpersons

SAFETY AND HEALTH TRAINING

Goal: Increase employee awareness of the safety inspection process to improve attention to hazard identification and mitigation.

Action: Encourage MSA employees to complete the MSA Safety Inspection Training Overview and Phase I Safety Inspection Modules.

Action: Incorporate training modules into one weekly Safety Start per month.

Measurement:

- Safety inspection reports, EZAC meeting minutes and meeting attendance rosters.
- Third Trimester interview questions evaluate knowledge and understanding of Safety Inspections.

Champions: MSA Vice Presidents, VPP Core Team, EZAC Chairpersons

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IMPLEMENTATION OF IMPROVEMENTS

Improvements of the SIP made throughout the year were captured, documented, and reported on a trimester basis. Additional focus areas were incorporated to ensure continuous improvement of the S&H Program. This information was provided to the VPs during VPP assessment debriefs, reported at both PZAC and EZAC meetings, and distributed via Weekly Safety Starts. All information was accessible to employees on the VPP website.

VPP FOCUSED PROGRAMS AND INITIATIVES

MSA maintained several programs and initiatives that focused on employee participation, continuous improvement, and safety awareness. The following activities are designed to recognize and promote effective safety and health management:

ISMS Surveillance Team

MSA engaged the ISMS Surveillance Team to continually monitor safety culture through their assessment strategy (field observation, interviews, and document reviews). Scope for the Team's field observations aligned with MSA's fiscal year 2017 performance POMCs, emphasizing work planning and control (WPC), execution, and safety practices. During each surveillance, the Team provided immediate feedback to workers and supervisors/managers relative to identified observations and/or opportunities for improvement. The affected personnel within the organization were provided a detailed outbrief of each field observation, along with a report. Each report was entered into the MSA Integrated Document Management System (IDMS) in accordance with document control requirements.

2017 Safety Awareness Campaign

The MSA 2017 safety campaign kicked off in July and continued through December 2017. The safety campaign was comprised of three word-search puzzles with questions based on the 2017 MSA Safety Toolbox booklet, the 2017 SIP, and the MSA safety inspection modules. Upon completion of all three puzzles and certification of an EZAC chair or manager, employees were eligible to redeem a campaign item at an MSA Safety Store.

Work Planning and Control (WPC) Program Improvement Initiative

Extensive efforts to improve the WPC processes were conducted throughout the year. Scheduled activities were documented in MSA's corrective action management system (CAMS), and POMCs were developed to capture improvement objectives and commitments, monitored monthly, and incorporated in the CAS. The increased focus and modified WPC processes resulted in improved line management, safety professional, and worker engagement in defining work scope, identifying and analyzing hazards associated with work activities, implementing controls to effectively mitigate potential risks, and providing activity-level feedback to improve the work processes.

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Safety Culture Improvement and Monitoring

In FY2017, MSA has continued to sustain and improve safety culture through surveys, self-assessments, VPP reviews, and specific leading indicators. These tools provided data that were analyzed and monitored through the period. Based on these data, MSA recognized positive safety practices and responded to negative trends through communicating with key organizational personnel, implementing safety topics, and deploying other mechanisms, such as lanyard cards, designed to address these trends. Some of the ongoing data collection included:

- Continuous review and analysis of feedback information received from employees as a result of safety culture questions included in the annual Hanford/MSA General Employee Training (HGET/MGET) survey.
- Analysis of MSA employee input derived from VPP trimester assessments, with discussions of results with individual MSA organizations.
- Field information/feedback received as a result of continued ISMS Surveillance Team mentoring and analysis activities.

Figures 1 and 2 below show, over a period of time, an improving trend in employees' willingness to report injuries. Even though the reports of injuries and first aid cases have continued to increase over the past few years of reporting, the rates of significant injuries (TRC/DART) have declined, which indicates a positive safety culture. These data suggest that MSA employees feel free to report safety incidents without fear of retribution.

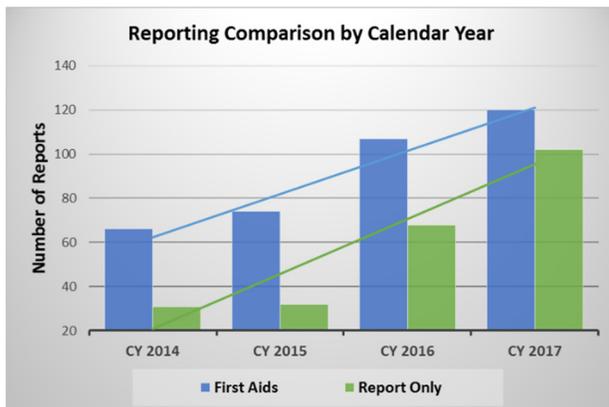


Figure 1. Reporting Comparison by Calendar Year

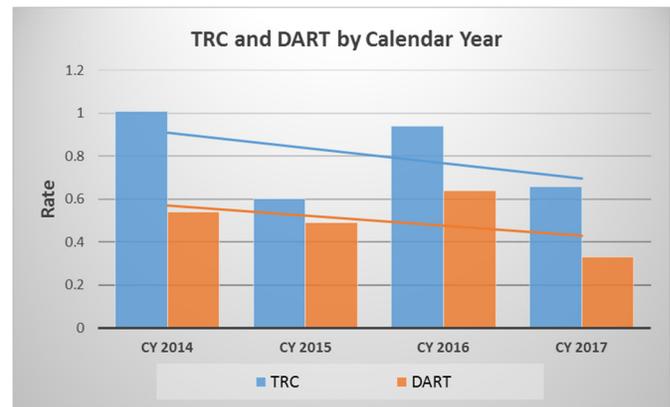


Figure 2. TRC and DART by Calendar Year

MSA leadership continued to emphasize the variety of avenues for reporting safety concerns and issues available to employees and ensuring that employees are aware of the prevention of and/or detection of retaliation actions/behaviors. Company-wide communications from the MSA Independent Oversight Organization informed employees of processes available for raising issues, encouraged employees to raise issues when necessary, and affirmed MSA's commitment to a retaliation-free work environment. Weekly and monthly meetings were held where employee feedback was encouraged as an avenue to share and address safety issues before they become concerns.

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MSA has developed additional metrics that demonstrate the culture of safe behaviors throughout the company and provide leading indicators of a healthy MSA safety culture. The data that were collected in 2017 are summarized below in Figures 3 and 4.

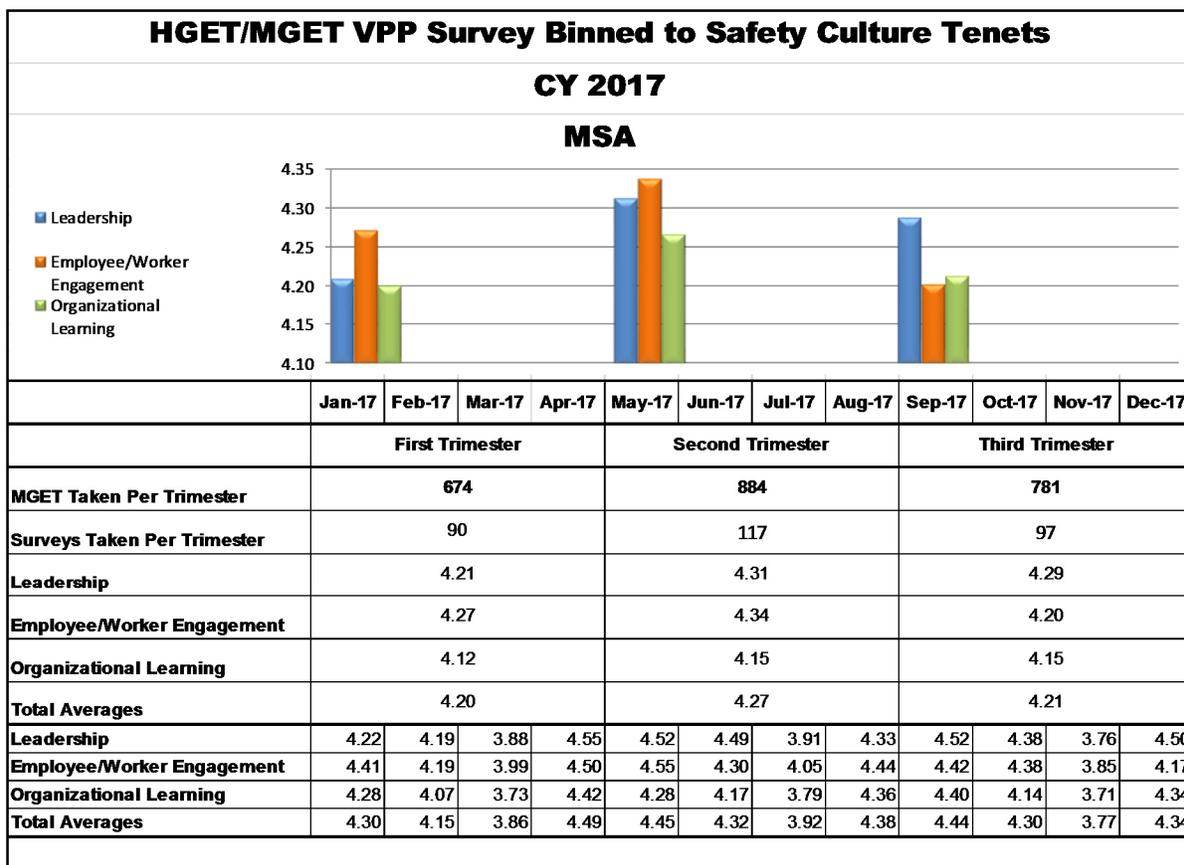


Figure 3. HGET/MGET VPP Survey Binned to Safety Culture Tenets

MSA monitors safety culture data through data points drawn through two different processes: (1) a voluntary annual VPP survey available to all employees at the conclusion of HGET/MGET training; and, (2) a review of VPP trimester interview responses to questions that are binned to safety culture attributes.

The VPP survey consists of 17 questions that have been binned to the three safety culture focus areas, as applicable, shown in Figure 3. The data are compiled three times annually and reviewed for significant comments and negative trends. During the year, 13% of MSC employees completed the survey, which reflects little variation between scores in the reporting period, in the 4.2 to 4.4 range.

VPP trimester assessment responses were collected through one-on-one interviews, with candidates randomly selected from each of the MSA organizations. During 2017, over 600 employees provided feedback that was independently reviewed and scored by a selected panel of safety personnel to ensure consistency in scoring the responses. All responses were averaged on a 1 to 5 scale, with a high score of 5 indicating a positive response or attitude toward safety culture attributes, as shown in Figure 4.

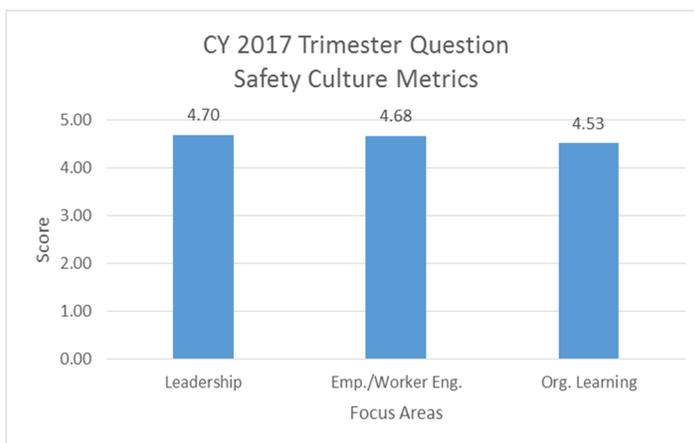


Figure 4. CY 2017 Trimester Question Safety Culture Metrics

Considering this sampling and based on the strong safety culture scores shown in Figures 3 and 4, MSA is confident that safety culture remains healthy.

Voluntary participation rates is another indicator of safety culture health. In each of the previous years, MSA has provided employees many opportunities to be involved with safety, including safety recognition, safety challenges and campaigns, stretching programs, and safety log usage. These processes and programs are strictly voluntary. Through participation, employees may gain safety information and knowledge, or they may perform an activity or action recognized by their peers as valuable to their safety or the safety of their coworkers. Figure 5 shows the continual upward trend of participation, grouped by types of opportunity for involvement, except for safety log usage, which is discussed below.

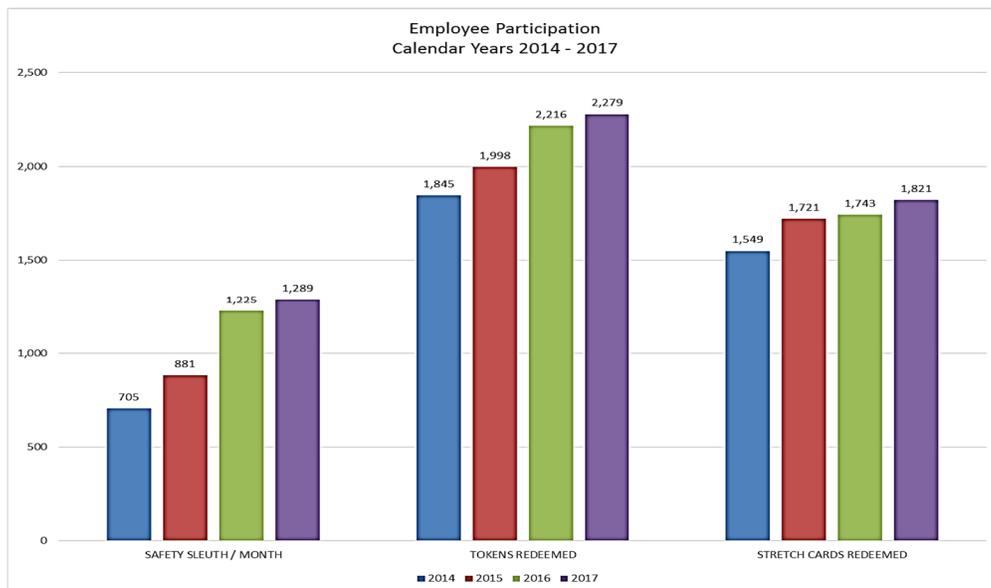


Figure 5. Trend of Employee Participation by Type of Involvement Opportunity

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As mentioned earlier, voluntary participation in these activities is a positive safety culture attribute. In addition to the increases seen above in Figure 5, MSA has experienced continual participation increases for safety log use, as shown in Figure 6. At the same time, the priority to address and correct safety log items continues to improve, while the length of time from identification to correction has been reduced, as shown in Figure 7. These trends indicate continued management dedication to correcting safety issues and support for employee participation in safety activities. Additionally, MSA worker participation in safety activities, including identification and correction of safety deficiencies, remains a high priority.

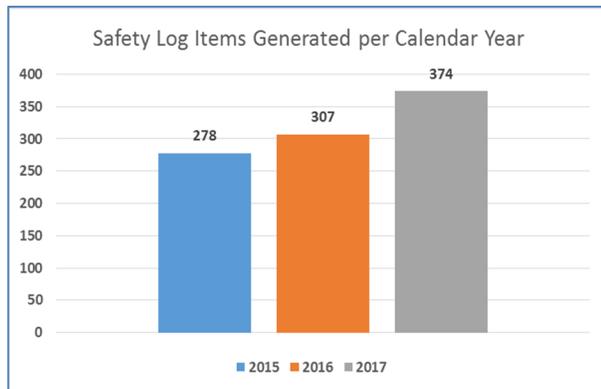


Figure 6. Safety Log Items Generated

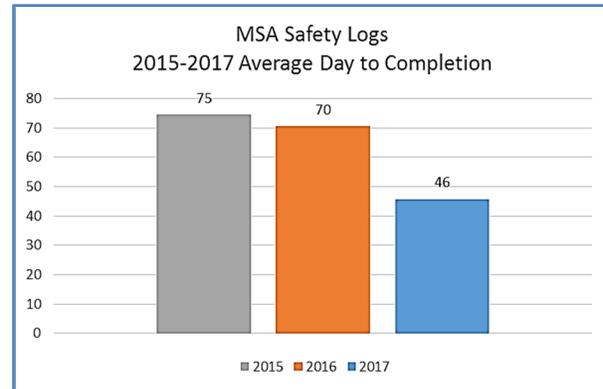


Figure 7. MSA Safety Log Completion Trend

Management and Employee Partnership and Communication

MSA senior management commitment strengthened and matured while reinforcing the partnership with employees. MSA leadership continued to address cross-cutting issues through communication and attention to the needs of the worker by attending onsite meetings, conducting all-employee meetings, communicating messages to the workforce, and participating in safety meetings and recognition events.

3.0 VPP ACCOMPLISHMENTS

Listed below are a few CY 2017 highlights that were recognized at the company level:

- 91 good practices in 5 categories were identified by the MSA ISMS Surveillance Team, based on planning stage reviews and work observations in the field.
- SIPs were developed and worked through by workgroups.
- MSA Presidents Office, Hanford Atomic Metal Trades Council (HAMTC) President and VPs (with their organizational safety team) received briefings on their trimester VPP evaluations.
- 347 safety log entries were recorded and addressed throughout MSA locations
- Closing a safety log issue only took an average of 46 days
- 747 safety inspections were conducted throughout MSA work locations (Figure 8)

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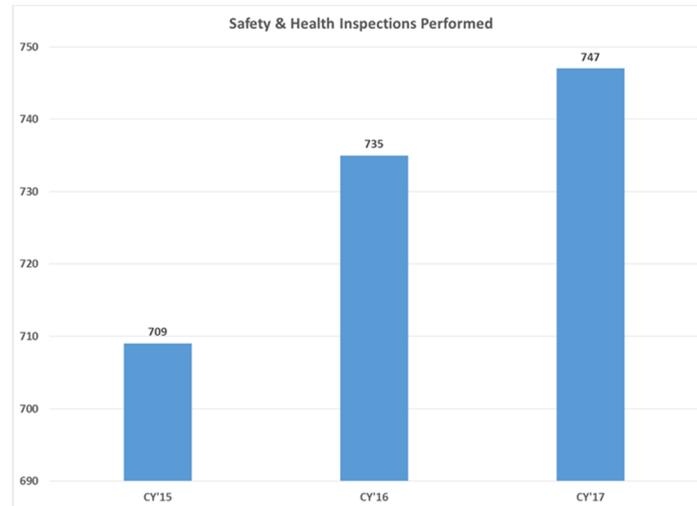


Figure 8. MSA Safety & Health Inspections; 3-Year Performance

4.0 VPP APPLICATION

No changes or work scope revisions within MSA required revision to existing VPP Applications.

5.0 MENTORING AND OUTREACH

MSA management participated in and/or supported employee involvement in mentoring and outreach throughout the year.

- **MSA CARES**

MSA is committed to being a good corporate citizen by supporting the Tri-Cities and surrounding region in which our employees live and work. MSA encourages our employees to provide support to local causes through donations of their time or fundraising efforts. Events and activities supported by MSA Cares align with organizations supported by our corporate giving, those listed in the Volunteerism Policy, or those that receive approval from MSA Cares staff and executive leadership. Corporate giving is focused on the following areas: education and leadership for youth; economic development, and local quality of life.



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MSA RECOGNIZED BY SECRETARY OF STATE FOR COMMUNITY INVOLVEMENT

MSA was recently recognized by Washington Secretary of State Kim Wyman as part of the 2017 Corporations for Communities Award. Corporations for Communities honors extraordinary Washington businesses that give their best efforts in helping their communities.

As the recipient of an Honorable Mention award, MSA was recognized for its corporate giving and community outreach program, MSA Cares, as well as the outstanding efforts by employees to raise money for and donate volunteer time to non-profit organizations in our community.

MSA MAKES YEAR-END DONATIONS TO NON-PROFITS

MSA proudly announced a series of year-end charitable contributions in support of the Tri-Cities community. MSA purchased a pediatric stander to help with critical therapeutic care for the Children's Developmental Center. A contribution was made to Second Harvest Tri-Cities that provided 25,000 meals to those in need in the region. Additionally, donations were made to Habitat for Humanity, Domestic Violence Services and the Tri-City Union Gospel Mission.

MSA also gave employees the opportunity to direct donations through their 30 Days of Caring Program. MSA employees were able to nominate a non-profit organization; nearly 25 various organizations received donations from MSA's 30 Days of Caring.

- **MSA Helps Crush Cancer at Fundraising Breakfast**

MSA has sponsored the Tri-Cities Cancer Center Foundation's Fundraising breakfast since 2011. As the title sponsor for the Tri-Cities Cancer Center Foundation's annual



fundraising breakfast, MSA made a huge impact for local cancer patients.

This year, nearly 40 MSA employees attended the event to help raise money for local cancer patients and their families.

The event raised a record breaking \$105,000.

- In mid-April, a dozen MSA employees spent a Friday morning spreading wood chips on the Tapteal Greenway at the Chamna Preserve in Richland. MSA employees worked safely and efficiently and completed far more work than expected.



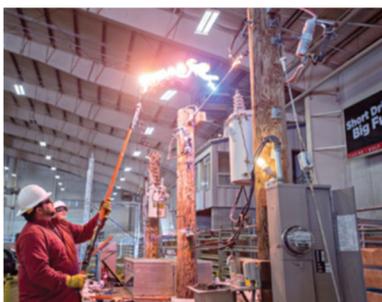
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- MSA, in partnership with the other Hanford Site Contractors and DOE, actively participated as members of the Hanford Site VPP Champions Committee. This committee is a unique mix of both contractors and DOE that work together to mentor and facilitate excellence in safety and health, representing over 9,000 employees across the Hanford site. Support to Hanford projects and contractors is provided as they pursue and or maintain VPP recognition. MSA supported both the Waste Treatment Plant and CHPRC by providing team members to assist in their VPP annual self-assessments. This was an example of MSA and other Hanford contractors working together to improve the S&H of the Hanford Site.

- Several MSA employees spent one of the first hot days of the year giving back by volunteering with Habitat for Humanity. Employees laid sod and painted the interior of a home that was dedicated to the family the next day.



- The 2017 Safety Connect expanded the annual Health & Safety Expo's focus and emphasis on safety. With increased activities in science, technology, engineering and math (STEM), and nationally-recognized keynote speakers, including Captain Richard Phillips and Kevin Delaney of Street Science, the event brought together participants ranging from Hanford employees and community members to students from across the area.



Participants experienced an interactive heart exhibit “walkthrough,” live Jaws of Life demos, Hanford’s amazing K-9 program, “STEM Jeopardy” competitions from local schools, a Bicycle Rodeo for elementary school kids, and numerous other safety-related exhibits and demonstrations.

The MSA-sponsored event, a collaborative effort involving companies and organizations across the Tri-Cities area, assisted MSA in demonstrating its commitment to the Hanford mission and related safety initiatives.



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- **MSA Supported the Special Government Employees (SGEs) Program** by approving SGEs to participate on non-DOE site VPP onsite reviews. The SGE Program was established to allow industry employees to work alongside Occupational Safety and Health Administration (OSHA) team members during VPP onsite evaluations. This effort encompasses the spirit of VPP—industry, labor, and government cooperation. This cooperation embodies the idea of continuous improvement, which allows SGEs to bring a unique perspective to the team effort and take back to their sites ideas and best practices to further improve worker protections.

- **MSA Supported JA**—MSA employees championed Junior Achievement (JA) during the 2017 annual bowling fundraiser. A total of 59 teams raised \$43,482 to support JA programs. This was a significant increase over 2016, when 43 MSA teams participated, raising a total of \$30,081.



Each year, several MSA employees also serve as JA classroom volunteers, teaching programs to energize and empower local students on subjects from budgeting to the global marketplace to business and marketing.

- **The Hanford Site Traffic Safety Enhancement Committee (TSEC)** served as the advisory group to provide consensus direction for Hanford Site Highway and Vehicle issues affecting the Hanford site. The DOE Richland Operations Office (RL), Office of River Protection (ORP) and affected Contractors acknowledge that a joint committee provides the best approach for identifying, evaluating, and recommending traffic safety related improvements. MSA has provided both the leadership and administrative resources to ensure that the committee functions and remains effective.
- **After School Matters**—MSA, along with other Hanford Contractors, participated in the After School Matters Program, which assists students from families where the adults are often unemployed or underemployed and who often have limited exposure to career choices. This program emphasizes building relationships between young people and adults through academic tutoring, homework assistance, mentoring and physical fitness development. Volunteers also traveled to the local schools to talk about their professions and the hazards they face and allowed the kids to experience hands-on activities related to their jobs. Overall, this program provides students with a vision of new and diverse career choices beyond those they have previous been exposed to.



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- **The Second Harvest Annual Hanford Food Drive** began in 1986. Since then, Hanford employees have collectively helped spread holiday cheer by donating food. This year's drive was held in December. Collection boxes were placed across the Hanford Site, and employees gathered more than 15,000 pounds of non-perishable food items to donate.

MSA supports Second Harvest in more than one way. Along with a corporate contribution that provides financial support for the *Bite 2 Go* program, MSA employees have stepped up in a big way to volunteer their time. In July, the third volunteer event was held at Second Harvest where MSA Cares volunteers came together for this cause.



- **MSA Employees Help Stack the Packs—** 150 school-aged foster children received backpacks full of school supplies, thanks to the generosity of MSA employees. Another 100 foster children benefited from these donations.

Members of MSA's Synergy Network, under the leadership of Stack the Packs founder and MSA employee Patti Lingle, served as ambassadors and collected the donations in early August.

- DOE-RL, with support from MSA, donated more than 150 pieces of excess clothing, valued at \$11,000, to the Columbia Basin Veterans Coalition, which requested the clothing to assist local veterans in finding civilian employment.

As the Hanford Site integrator, MSA processes excess property, including clothing, from Hanford's prime contractors and DOE offices. MSA employees from Compliance & Risk Mitigation and Property & Warehouse Management/Asset Control championed this effort to ensure this donation took place in a timely manner.



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- MSA sponsored the Youth of the Year Program for the Boys & Girls Clubs of Benton and Franklin Counties. The Youth of the Year competition is the club's premier leadership and recognition program for teens.

Participants received leadership development training and coaching and then put their skills to the test through a competition that included

written essays, speeches and interviews. Several MSA employees had the opportunity to judge the competitions this year. This year's winner was Alex Garcia, a senior at Pasco High School and 13-year member of the Boys & Girls Clubs.



- Encouraging a Reporting Culture MSA's Gordy Denman, RJ Debevec and Rocky Simmons (pictured at left) presented the benefits of incident reporting at the National VPPPA Symposium. At MSA, the number of reported incidents over the last three years correlates strongly with a decrease in recordable injury rates, demonstrating that increased reporting helps reduce injuries.
- MSA and its employees supported the Children's Reading Foundation of the Mid-Columbia, donating \$40,000 in the past four years in support of the Books for Babies Program. In that time, MSA's donations have enabled over 20,000 parents and their newborns to receive their first book, helping to begin the love of reading from the very start.

6.0 MANAGEMENT LEADERSHIP

Throughout 2017, the management leadership element was assessed and monitored to ensure improvement actions were effective and conducive to the partnership with all MSA employees. Based on results from assessment reports, VPP Trimester interviews, HGET VPP survey results, and management attendance and participation in safety meetings and safety activities, Management Leadership at MSA continues to be strong and is supportive of a reporting culture and stop work authority, continually encourages employees to make safety the first priority in all work situations, and promotes a 24/7 safety culture.

MSA experienced a change in leadership at the President Level in CY2017 with the Chief Operations Officer (COO) filling the President position, and a new COO appointed from a company outside of MSA. Of significance in this transition was the lack of impact on the priority of safety. This stability reflects the solid foundation that MSA has established through the partnership with all employees. Safety is dependent on all employees

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contributing to their own safety, as well as the safety of their coworkers, other site workers, their families, and the community. Some of the activities that support the priority of safety at MSA include:

- Establishing and supporting 2017 MSA Values and Goals and setting expectations.
- Conducting “MSA Management Fundamentals” course for all supervisors and managers. This course addresses fundamental skills up through advanced skills that all supervisors/managers need to be successful in their roles as leaders for MSA. Topics include: labor charging, compensation essentials, purchasing, event/accident process overview, what your signature means, protecting information, investigations, etc.
- Conducting monthly meetings that include the MSA ES&H VP and the HAMTC Chief Stewards, providing a forum to listen to concerns, address emerging safety issues, and follow up on actions previously committed.
- Communicating regularly with employees via All Employee Meetings and messages from the MSA President, both designed to provide continuing information to employees on trends and upcoming challenges.
- Conducting monthly PZAC meetings that support the following initiatives:
 - Workers partnering with management to provide the safety topic
 - Workers sharing good news stories of activities within their workgroup that were achieved safely
 - Managers sharing detailed injury reports, emphasizing actions taken to avoid future incidents
 - MSA President and Chief Operations Officer having a platform to discuss information, changes, goals, and expectations for safety
 - Creating an opportunity for workers to share ideas, make comments, and voice concerns
- Supporting/attending EZAC meetings where agendas include an “open discussion” for raising issues and concerns.
- Leadership Council

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- MSA continued to recognize worker contributions through the MSA Breakfast of Champions. The Breakfast of Champions award ceremony represents a commitment to recognizing the exceptional performance of employees across the company.

Award recipients were recognized for outstanding achievement in one or more of several categories that reflect commitment and dedication to achieving company milestones/deliverables safely.

- MSA Management leadership continued involvement and partnership with MSA employees in 2017. For example, managers:
 - Conducted all employee meetings at multiple locations to accommodate workers and work schedules. The purpose of the meetings was to ensure communication of current issues and raise awareness of selected safety topics.



- Opened meetings with a safety topic
- Partnered with employees to present safety topics at PZAC meetings
- Presented recognition awards to employees
- Reviewed results of VPP trimester evaluations with designated Points of Contact (POC) and working together, determined actions to address potential weaknesses

7.0 EMPLOYEE INVOLVEMENT

Employees within the MSA organizations were strongly engaged in safety initiatives, such as the following:

- Monday morning back-to-work meetings continue to be very positive. This process allows management the opportunity to bring the work group back to focusing on the business of the day and the upcoming week. Safety Start topics were gathered from the field from those who were interested in submitting ideas for sharing. Other topics were selected based on injury trends, seasonal injuries, and current efforts to raise awareness and reduces injuries. MSA completed a revision to the format to reduce the length of the safety start and hone the focus based on input from employees. These changes have resulted in a positive impact that encourages more interaction during the safety start meetings.
- MSA continues to maintain over 40 EZACs to allow all employees to participate with VPP at the local group level. EZACs are open to all employees.



- MSA Employee Zero Accident Council (EZAC) chairs were recognized for their time and commitment to employee safety at a special meeting. The MSA safety program is greatly enhanced by the work and communication of the 46 EZAC chairs and co-chairs. At the event, each chair and co-chair was individually acknowledged and thanked for their contributions to keeping MSA employees safe.

MSA employees continue to achieve company safety goals that are established in the annual Safety Improvement Plan (SIP). The SIP identifies attainable goals that support the continuous improvement of safety for employees. The SIP was developed based upon reviews of the previous period to identify areas for improvement.

MSA Employee Zero Accident Councils (EZACs) reviewed SIP status and progress toward the goals at the monthly EZAC meetings. By communicating the SIP status, all employees remained aware of activities that support the goal as well as their own role in completing each of the goals. Through these efforts, MSA will continue to provide a safe work environment and maintain VPP Star status at each of the three MSA VPP sites.



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Employee Participation and Recognition

MSA has several opportunities to recognize and reward employees for safe behavior and actions. These awards include the following:

President's Star Award

This award is presented to an employee who demonstrated self-sacrificing behavior in the rescue of another (specific event) or who has demonstrated a pattern of safety service to others (sustained behavior). The award may recognize a worker beyond their normal duties as a Hanford employee (e.g., community service, volunteerism). Nominations are received and evaluated by the PZAC Planning Committee, and a selection is recommended to the President's Office for concurrence.

President's Lifesaving Award

This award recognizes and honors employees who have demonstrated caring and courage by taking immediate action directly attributable to saving a life.

President's Safety Team Award

This award is designed to recognize a team that has made a significant contribution to safety. The team can be a work team, department or organizational team, committee, or an ad hoc team. The significant contribution can be an improved process, providing a safety model in having a high safety standard in their teaming approach, and/or being recognized for leading a safety initiative.

PZAC Safety Honor Roll Award (aka "PZAC Answering the Call Award")

This award recognizes and honors employees who have demonstrated commitment to safety through some heroic, or "safety significant" action short of actually saving a life.

Kathryn Wheeler Safety Leadership Award

The annual Kathryn Wheeler Safety Leadership award recognizes MSA personnel based on worker engagement and activities that are collaborative, cooperative, and proactive. Employees nominate coworkers for their contributions toward creating a safe work environment and promoting safety throughout the workplace.

Performance Incentive Programs for Safety

The Performance Incentive Programs for Safety is designed to promote overall safety performance toward achieving the MSA's safety goals. Employees are required to attend monthly safety meetings and are encouraged to participate in at least 3 of 16 safety activities per trimester. Personnel completing the minimum number of activities are eligible to participate in a safety luncheon.

On-the-Spot Awards

Awards intended for immediate recognition of safety consciousness by employees awarded from EZACs and/or Management in the form of a token, which the employee may redeem at the MSA-managed Safety Store.

8.0 WORK SITE ANALYSIS

MSA has several programs and procedures that provide worksite analysis. Worksite analysis, field work activities, and prejob briefing observations revealed some noteworthy and good practices. The following are examples of MSA work site analysis activities:

- MSA work control improved the hazard analysis process by completing a pilot program with selected groups. This increased focus on the specifics of the task as it is paired with a General Hazard Analysis (GHA) and a Craft Specific Hazard Analysis (CSHA).
- Efforts continue to ensure a robust safety and health inspection program designed to help employees identify and mitigate hazards. MSA also documents improvements and identifies early trends and conditions that will allow us to take action before injuries to employees or damage to the environment occur.
- Industrial Hygiene baseline Hazard Assessments are being conducted. The results are posted in an industrial hygiene data base for easy access by facility personnel. Quarterly observations and walkthrough's by the MSA safety personnel produce information that continually update the data base.

MSA has several avenues for reporting hazards: Management Chain of Command, Open Door Policy, HAMTC Safety Representatives, MSA Employees Concerns Program, DOE Employees Concerns Program, MSA or MSS Organizations S&H Professionals, Safety Logs, and Issue Identification Forms (IIFs).

MSA also established an Operations Communications department for creating the "MSA Daily Report" to summarize critical work-related information.

Line management is responsible for preparing and investigating all injury case reports with the assistance of the MSA's Worker Protection and HAMTC Safety Representative groups. The MSA safety department provides individual organizations with monthly safety data so that they can track occupational injuries to identify adverse trends. Types of occupational injury cases include: first aid, recordable, and DART. Identified trends are analyzed and are used to develop areas for increased awareness activities and to determine where an increased MSA safety and health presence may be needed.

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Effectiveness of VPP is also demonstrated through trend analysis, which continually evaluates the performance of VPP. Additionally, as employees complete mandatory annual HGET training, they can participate in an optional VPP perception survey. Survey results are captured and monitored, and the general organizational information is shared with the VP and their safety team at the trimester debriefs.

Refer to Appendices A, B, and C for details of work site analysis within the three Star Sites within MSA.

9.0 HAZARD PREVENTION AND CONTROL

The following company activities were performed in support of hazard prevention and control at the Hanford Site:

MSA's Integrated & Site-wide Safety Systems (also known as Site Wide Standards) is responsible for ensuring standards are consistent among Hanford contractors. Since Hanford Site workers may perform work in various facilities that are controlled by several contractors, safety is improved by providing a standardized approach.



The Hanford Site Fall Protection Program (DOE-0346) is one of the standards recently revised with the help of a site-wide committee consisting of contractor subject matter experts, HAMTC representatives, and Building Trades representatives from each of the affected contractors.



Removal of the 25,000 pound blast wall at the 181B River Pump House involved a multi-craft, multi departmental, weather-dependent effort. Electrical Utilities staff worked alongside Crane and Rigging, Facilities Maintenance, Water Utilities, Hanford Fire Department, Biological Controls, and concrete masons to complete the project. The wall was safely removed, giving workers necessary and safe access to the transformer.

10.0 HEALTH AND SAFETY TRAINING

- **Safety Inspection Modules**—In 2017, MSA addressed an ongoing weakness of inconsistency in performing safety inspections. New goals were established to fortify the importance and commitment of improving the inspection process. By improving the consistent application of safety inspections work area safety has correspondingly improved. Potential hazards are identified, documented, and corrected in a timelier manner. MSA also developed a series of Safety Inspection Modules and distributed them to all employees monthly at Safety Start meetings, along with a Monday Morning Safety Start on the subject module. MSA has achieved some success and improvement and has committed to continue to produce and implement the inspection modules.
- **MSA Safety Toolbox Revision**—MSA initiated and completed a review and revision of the MSA Safety Toolbox. The revision included the review and update of the information from MSA Subject Matter Experts. New booklets were distributed to every current MSA employee, and booklets are given to new employees when they hire in or transfer to MSA.
- **MSA Field Work Supervisor program** focused on providing first-line supervisors with the necessary tools and qualifications to be successful in the field.

Safety Communications

- “Safety Starts” are weekly newsletters that consist of common safety topics and are distributed to employees for use in “back-to-work” meetings. The selected topics are timely and designed to encourage discussion, developed by a team of SME’s, and applicable to workplace or community safety and environmental issues.
- The MSA Integrated Management System (IMS) website contains quick-links that provide the user timely access to a large variety of webpages. The *Safety First!* link is a valuable tool that can be used as a shortcut to other safety and health resources within MSA, such as the VPP website.
- **OPEXShare: Sharing Industry Experience**—OPEXShare recently underwent a facelift that includes added navigation features and a new Success Stories section on the homepage. Currently over 3,800 articles, videos and reports are available on OPEXShare from around the DOE complex and from industry that include:
 - Best practices
 - Lessons learned
 - Product recalls
 - Safety alerts, and more

With over 8000 registered users from more than 120 different companies, OPEXShare has had over 500,000 views and over 140,000 articles downloaded.



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- Conducted company level new hire orientation in partnership with management and labor. Field orientation for new hire and interns being conducted by the organizations management and the local EZAC Chair.

11.0 AWARDS AND RECOGNITION



January 2017 was an icy month, no doubt, but on January 17, 2017, ice was building up so quickly on some windshields, that our Hanford Patrolmen helped clear windows as workers came through the barricade.

Randy Stevenson and Brad Park of Hanford Patrol was recognized for keeping MSA employees safe.



Pam Williamson was recognized for ensuring a stranger involved in an ATV accident received medical treatment for a potentially life threatening head wound.

Kathryn A. Wheeler Safety Leadership Award

The 2017 award winner was John Jeskey, who leads MSA's Hanford Atomic Metal Trades Council (HAMTC) safety representatives and has been a safety advocate at the Hanford Site for nearly 40 years. His dedication as a safety advocate is admired throughout MSA and across the Hanford Site.



The annual Kathryn A. Wheeler Safety Leadership Award recognizes a member of MSA who demonstrates support of safety through worker engagement and activities that are collaborative, cooperative and proactive. It highlights the importance of a safe work environment that is essential to a successful Hanford mission. The award honors Kathryn Wheeler and her dedication to safety.

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MSA Honors Night

MSA hosted its 6th annual Honors Night, recognizing 24 employees and 7 teams for their outstanding achievements over the past year. Categories include; Voluntary Protection Program, Most Valuable Players, Site Integration, Employer of Choice, and Delivering on Commitments.



VPP Awards



MSA's Safeguards and Security received the DOE Voluntary Protection Program Participants' Association's (VPPPA) highest honor—The Legacy of Stars Award. This award is given to a site that has achieved the DOE VPP Star of Excellence Award for the fourth consecutive year.

The HAMMER Federal Training Center received the VPP Star of Excellence Award for keeping accident and injury rates significantly below comparison industries.



MSA Mission Support Services received the VPP Star of Excellence Award for keeping accident and injury rates significantly below comparison industries.

Appendix A

HAMMER

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DEPARTMENT OF ENERGY

MISSION SUPPORT ALLIANCE, LLC

HAMMER FEDERAL TRAINING CENTER

VOLUNTARY PROTECTION PROGRAM ANNUAL SELF-
ASSESSMENT

CALENDAR YEAR 2017

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1.0 SUMMARY

The Volpentest Hazardous Materials Management and Emergency Response (HAMMER) Federal Training Center’s mission is to save lives and avert disasters. HAMMER has achieved world-class status and is a recognized U.S. Department of Energy (DOE) resource with best practices for its expert staff, worker trainers, partnerships, and hands-on safety training. HAMMER is DOE’s premier hands-on health, safety, and emergency response training organization offering the most realistic and comprehensive training for nuclear waste cleanup workers and emergency response personnel.

HAMMER’s model is comprised of many components including: staff, worker trainers, management, partnerships, the facility, programs, and the core principles of respect, inclusivity, and collaboration, and the values of safety, integrity, teamwork, customer service, and excellence.

HAMMER works to collaboratively solve problems with its knowledge-based pool of expertise. Last spring, Richard Trumka, AFL-CIO President, recognized HAMMER as “the single most important partnership between Labor and Management in the country.”



“HAMMER is the single most important partnership between Labor and Management in the country.”

Richard Trumka,
President, AFL-CIO

For over twenty years, HAMMER has continued its mission by providing the most advanced health and safety training possible—training that is based on HAMMER’s commitment to worker involvement, communication, and its unsurpassed safety culture.

One year after hosting a tour for United States Secretary of Energy Dr. Ernest Moniz, HAMMER was privileged to welcome Secretary of Energy Rick Perry. Senator Maria Cantwell (WA-D), Congressman Dan Newhouse (WA-R), and Congressman Greg Walden (OR-R), as well as DOE, Labor, and Site representatives accompanied the Secretary during his visit. He was provided with an overview of HAMMER’s partnerships and training programs and participated in a respiratory protection demonstration presented by HAMMER worker trainers. HAMMER’s vast capabilities, significant contributions, and accomplishments in environmental cleanup and energy emergency response were showcased as a model within the Department and for other federal agencies.



Secretary Rick Perry visits HAMMER in August 2017.

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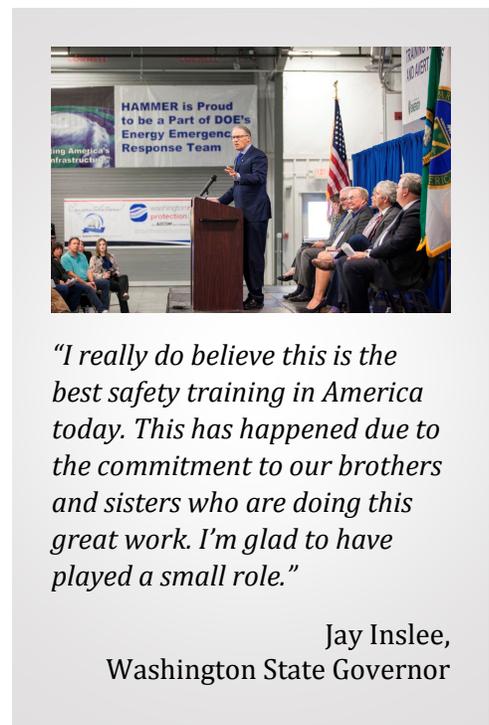
The following week, HAMMER hosted a tour for Deputy Secretary, Dan Brouillette. Like Secretary Perry, Deputy Secretary Brouillette engaged in several presentations and hands-on training demonstrations throughout his visit.



(Left) HAMMER worker trainers provide a respiratory demonstration for Secretary Perry. (Right) Deputy Secretary Dan Brouillette participates in a hands-on demonstration during his visit to HAMMER.

HAMMER celebrated the 20th anniversary since the facility was dedicated to Sam Volpentest in 1997 in conjunction with the 47th HAMMER Steering Committee meeting. Many distinguished guests and speakers attended the celebration, including guests such as Washington State Governor Jay Inslee; General Presidents Eric Dean, International Association of Bridge, Structural, Ornamental and Reinforcing Iron Workers (IW); Dan Stepano, Operative Plasterers' and Cement Masons' International Association (OPCMIA); Ken Niles, Assistant Director for the Oregon Department of Energy; and Bob Wilkinson, Chief Operating Officer of Mission Support Alliance.

Governor Inslee has witnessed significant safety improvements at Hanford and the expansion of HAMMER's mission to save lives and avert disasters into other federal sectors. "I really do believe this is the best safety training in America today. This has happened due to the commitment to our brothers and sisters who are doing this great work. I'm glad to have played a small role," he said.



"I really do believe this is the best safety training in America today. This has happened due to the commitment to our brothers and sisters who are doing this great work. I'm glad to have played a small role."

Jay Inslee,
Washington State Governor

Throughout 2017, HAMMER supported Hanford contractors in many areas to promote health and safety training throughout the Site. HAMMER supported two Health Physics Technician (HPT) Trainee Programs for Washington River Protection Solutions (WRPS). The first trainee program was conducted from December 2016 until May 2017, and the

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second was recently completed running from August until mid-December 2017. HAMMER dedicated instructors to assist in the aptitude testing, interviews, and implementation of the programs. The most recent class attained a 100 percent passing rate on their final exam.

Collaboration continues with IHTs from both Washington River Protection Solutions and CH2M HILL Plateau Remediation Company to develop relevant and job-related activities and scenarios for the fundamentals curriculum.

HAMMER has had the same values of collaboration and dedication to safety for over 20 years—the foundation of its success. HAMMER provides the best safety and health training, bar none. It is an organization founded upon the principles of safety and customer service, which go hand-in-hand, because safety is the best kind of customer service there is. HAMMER has a reputation within DOE as a credible, trusted partner in finding effective solutions. Through its expertise, precision, and care, HAMMER’s true value is revealed: helping to make people safe.

SUMMARY OF THE VPP EVALUATION AT HAMMER

HAMMER Federal Training Center utilized the MSA Trimester VPP evaluation process to continually review and provide feedback to employees and management throughout the year. The self-evaluation was conducted through employee interviews with questions based on the five tenets of VPP. Questions for each trimester were provided by the Mission Support Alliance’s VPP Core Team. The interview team for HAMMER consisted of members from the Director’s VPP Team, Employee Zero Accident Council (EZAC), Safety, volunteers from the staff and a volunteer from another MSA facility EZAC. The team interviewed a representative sample of each work group and job classification at HAMMER.

For the answers received from each interview question, an overall grade was assigned a score on a 1 – 5 scale, with 5 being the best possible implementation of the VPP. Subtotals were calculated for each of the tenets within each trimester, and an overall score for each trimester was calculated from those scores.

Overall, HAMMER scored very well during each trimester. HAMMER scored a 4.8 for the comprehensive average for all trimesters. Scores for each individual trimester and tenant are shown in the following chart.

VPP Tenet	1 st Trimester	2 nd Trimester	3 rd Trimester
Management Leadership	4.4	5.0	4.9
Employee Involvement	4.9	4.7	4.8

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Work Site Analysis	4.8	4.9	4.8
Hazard Prevention & Control	4.6	4.5	4.7
Safety & Health Training	5.0	4.4	4.9
Average	5.0	4.4	4.9

Areas of improvement were identified after each trimester and addressed throughout the year. Improvement opportunities were addressed by the HAMMER EZAC, the Director’s VPP Team, various safety initiatives, or the Safety Improvement Plan (SIP), as applicable.

Below is a summary from each of the three 2017 HAMMER VPP Trimester self-evaluations.

January – April 2017

The first Voluntary Protection Program (VPP) Trimester Evaluation for the HAMMER Federal Training Center was conducted in March.

Percent of Staff interviewed: ~10%

Total Interviewed: 14

Noteworthy Practices:

- Almost all employees responded positively to Management providing resources like funding, PPE, or time to make safety a priority.
- Management recognizes employees with safety tokens.
- Managers encourage participation in safety committees and meetings.
- Employees understand the reasoning and value behind determining if a workplace or office is free from recognized hazards.
- 100% of the staff members interviewed knew their EZAC chairperson and safety professional.
- Employees reported that the Monday Morning Safety Start and EZAC were very effective in communicating safety information.
- Employees have requested to present at the Monday Morning Safety Starts, which allows other employees to share their experiences in regards to the weekly safety topic.
- Employees are encouraged that ES&H, co-workers, and Management are all involved in walking down worksites and office areas to identify hazards.

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Potential Improvement Opportunities Although the EZAC conducted table top drills during every EZAC, a separate drill program has not been fully implemented. A more robust drill program and/or drill team should be developed in 2018.

May-August 2017

The second Trimester Evaluation was completed in August.

Percent of staff interviewed: ~10%

Total Interviewed: 15

Noteworthy Practices

- Managers communicate safety performance expectations through Monday Morning Safety Meetings, conversations, Performance Incentives Program for Safety (PIPS) logs and associated processes, VPP safety topics and EZAC.
- All employees interviewed stated that safety issues are communicated often and timely.
- Management conducts performance appraisals. Expectations between management and employees regarding safety hold each other accountable.
- When disagreements occur, most individuals responded they knew they could involve other subject matter experts, safety professionals, and, when necessary, elevate the issue to the next level of management.
- Management is highly participative in the analysis of job hazards for their employees.
- Employees felt confident in how to respond and follow up on a submitted safety concern.
- Employees feel recognized in their safe behaviors, which includes safety token, STAR and LIVE awards, and service recognitions.
- Employees feel confident in bringing up ergonomic considerations to Management and ES&H personnel.
- Most employees understood how hazard controls are communicated and what to do if those controls are inadequate for the task at hand.

Potential Improvement Opportunities

Employees and Management understand the hierarchy of controls, and can effectively discuss the levels of control, however several individuals stated that Engineering Controls “eliminate” the hazard, which is technically incorrect. This clarification should be addressed via a briefing or other type of communication.

MSA created facility safety inspection training for all employees, including HAMMER, to be delivered during the Monday Morning Safety Start meetings. However, when asked if they

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remembered the training, most individuals could not recall that they had received training on the “workplace inspection modules”. Future facility safety inspection modules should be delivered in a more memorable method that includes a better explanation of their purpose.

September – December 2017

The third Trimester Evaluation was completed in November.

Percent of staff interviewed: ~10%

Total Interviewed: 15

Noteworthy Practices

- Staff members reported during interviews that management demonstrates a positive safety relationship with employees, such as attending safety meetings and presentations, making sure that safety is the first priority, and being directly involved with Stop Work actions.
- Staff members feel confident that Management is providing support for safety issues, and communicates safety concerns in a timely manner.
- Interviews revealed that staff members have a very high level of trust in their supervisor or manager’s decisions to support worker’s safety concerns and the safe performance of work.
- Employees feel empowered to have a questioning attitude, and they feel that management supports them in this endeavor, which includes open door policy, pre-job Q&A, and support of Stop Work actions.
- Management is diligent in communicating safety concerns that arise from a site-wide level, not just at the department level.
- Employees were knowledgeable in responding to a work situation that does not have the adequate safety device or control in place.

Potential Improvement Opportunities

A Stop Work was put into place after an unqualified employee operated an electrical breaker. The employee believed that operating the breaker was within his ability and was unaware that additional training was required to do so. A Corrective Action Plan was developed and documented via an Issue Identification Form (MSA-IIF-2017-0577). This event could reflect that employees may not understand what tasks they can and cannot perform at HAMMER even though they might perform them at home. The remaining corrective actions should be completed to avoid any similar issues from occurring.

2.0 CONTINUOUS IMPROVEMENT

The Mission Support Alliance (MSA) Trimester VPP self-evaluation process, conducted by representatives of the Director’s VPP Team and EZAC, gathered key information on how

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HAMMER meets the VPP tenets. The self-evaluation is broken into a trimester review cycle to provide three data points during the year versus the single format used in the past. Evaluating VPP three times over the course of the year allows HAMMER to identify strengths and weaknesses dynamically. Early identification of strengths and weaknesses allows HAMMER to identify opportunities for improvement within a time frame that prevents potential detrimental conditions from becoming larger concerns. Opportunities for improvement identified from the self-evaluation process are tracked to resolution by the EZAC using the SIP or the Director's VPP Team action item list.

3.0 HAMMER VPP ACCOMPLISHMENTS

- HAMMER/Hanford Training was certified a Star Site in September 2002.
- Re-certified as a DOE-VPP Star Site in July 2005, January 2011 and September 2014.
- After an on-site by a DOE Headquarters VPP assessment team, HAMMER was recommended to be recertified as a Star site in November 2017.
- Awarded VPP Star of Excellence in 2003, 2005, 2006, 2008, 2013, 2014, 2015 and 2016.
- Awarded VPP Superior Star in 2009, 2010, 2011, and 2012.
- Awarded VPP Legacy of Stars in 2007.

4.0 VPP APPLICATION

HAMMER has not had any scope or organizational changes; therefore, there are no changes to HAMMER's VPP application at this time.

5.0 GOALS AND OBJECTIVES

HAMMER developed a Safety Improvement Plan (SIP) with specific goals and objectives. The SIP was sent out to all employees via email ensure that HAMMER staff understood the safety goals for the year. The following is an overview of the 2017 SIP.

MANAGEMENT LEADERSHIP

1. Provide visible leadership in implementing the HAMMER/Hanford Training Safety and Health Program. Continue management participation of campus initiatives, EZAC, VPP, and HAMMER Covenants. Convey safety information, issues, and concerns to staff.

Measurement: Managers will have attended at least one safety walkthrough or EZAC meeting per quarter. Track completion of meetings with employees through the Director's calendar. Notes from Monday Morning Safety Starts will track the delivery of Safety Start Presentations. Managers will have attended at least one PZAC meeting during the calendar year, and report back to HAMMER EZAC at the next HAMMER EZAC meeting.

Status: Complete, needing improvement.

HAMMER management actively engages in safety leadership. Almost all managers were confirmed to have attended at least one safety walkthrough or EZAC meeting per quarter. Of the nine managers, one manager missed this commitment in quarter one, and one manager missed this commitment in quarter three. Attendance was verified by consulting the work packages used to track and record the safety walkthroughs. EZAC attendance is tracked on rosters with signatures of each attendee. Each manager has also attended at least one PZAC meeting.

The HAMMER Director began meeting with staff members on a regular basis via a series of targeted employee meetings: Senior Program Manager's Meeting, Quarterly Instructor's Meeting, and the Next Generation Meeting. Each of these meetings ensures that the staff members have the ability and freedom to communicate issues and concerns to the Director. These meetings are a direct result of feedback from the 2015 third trimester interviews, which suggested that management engagement on a more routine schedule would benefit staff members.

- Senior Program Manager's Meeting: This meeting is held with the Senior Program Managers to discuss issues relevant to them. Additionally, this meeting is used by the Director to ensure that the Senior Program Managers continue to provide leadership in safety and training excellence to those supporting their programs.
- Quarterly Instructor's Meeting: Presentations are provided on various topics ranging from methods to engage students to generational learning to HAMMER's

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Training Hazard Analysis process. By assembling on a regular basis, the instructors are able to collaborate and learn together. This meeting promotes professional development.

- Next Generation of Leaders Meeting: A large segment of the Hanford workforce has reached the retirement age. HAMMER has already had several long-term seasoned employees retire. The Next Generation will inevitably need to step up to fill these positions. This meeting seeks to prepare the younger and newer staff members to fully embrace HAMMER's mission for saving lives and averting disasters and to commit to driving HAMMER's legacy far into the future. This meeting encourages employee growth.

MSA prepares a safety topic to be presented at the beginning of every work week, the Monday Morning Safety Start. Instead of simply reading the text from the Monday Morning Safety Starts, which could result in the audience tuning out, HAMMER actively ensures the staff presenter delivers a memorable presentations that include anecdotes, lessons-learned, and/or the presenter's own safety experiences. **EMPLOYEE INVOLVEMENT**

1. Promote employee involvement. Complete the quarterly Performance Incentives Program for Safety (PIPS) activities. Participate in campus-wide safety and housekeeping surveillances. Improve staff knowledge of the GHA.

Measurement: HAMMER staff will complete the requirements of the MSA PIPS by the end of the CY. Each full-time HAMMER employee will participate in at least one Monthly Safety & Housekeeping Walkthrough during the calendar year. Report attendance to managers. Measure progress through the use of the HAMMER PIPS Log.

Status: On-going

All staff members completed the requirements of the PIPs by the end of the calendar year.

All but three HAMMER employee participated in at least one Monthly Safety & Housekeeping Walkthrough over the course of 2017.

WORKSITE ANALYSIS

1. Educate HAMMER staff on the implementation of the GHA in their assigned workspaces.

Measurement: Provide a copy of the presentations. A completed questionnaire will be recorded on the PIPS log. Provide a copy of the updated material.

Status: Complete

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Two sessions were held to discuss the importance of the General Hazard Analysis (GHA) for employees in their assigned work areas, as well as for the HAMMER complex. The presentation provided a background of the GHA process, which provided a basic overview for all employees. Following the presentation of the GHA, each employee was handed a worksheet, which detailed all of the hazards within the GHA, and each employee circled which hazards pertained to them. Once it was agreed that the hazards were correct, the employees were paired up to discuss the controls necessary to mitigate the hazard, and they each presented on the results.

HAZARD PREVENTION AND CONTROL

1. Promote awareness and improve performance of housekeeping activities.

Measurement: Document discussions in the EZAC minutes. Provide a copy of the e-mail message. Assigned personnel e-mail results of the review to the VPP Lead. On a monthly basis, reminders will be sent out to Program Managers/POCs to assess their areas for housekeeping issues and document any findings/issues.

Status: Complete

The Operations group and EZAC communicated together prior to each EZAC, and discussed the trends of our housekeeping issues that were identified in the previous month. It was also decided that a database should be created to track the identified issues to closure. This list was created in August and has been instrumental to tracking and closing housekeeping issues, which is a tremendous improvement on its own. Additionally, Program Managers and POCs were asked to begin monitoring their storage areas monthly, to determine if there were any housekeeping issues. A database was created to address the issues identified, and is currently fully implemented.

SAFETY AND HEALTH TRAINING

1. HAMMER will conduct a facility Safety Focus Day. Improve staff knowledge of the CAMs Process.

Measurement: By the end of the third quarter, schedule and conduct a Safety Focus Day with participation by all available HAMMER/Hanford Training staff. Provide MSA CAMs training to HAMMER Staff and document staff participation via roster.

Status: Complete

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HAMMER conducted its annual Safety Focus Day on August 17, which provided an opportunity for HAMMER staff to focus on safety and attend engaging presentations from several powerful speakers. Presentations included “Risk Competency: Safe Work Practices that Engage both the Head and Heart” provided by Joe Estey; “The Rad Factor” by radiological instructors Melanie Wright, Drue Beebe, Jan Hedgecock, and Eva Maggard; “Tank Farms: History and Mission” by Steve Davis; “Toward a Healthy Safety Culture,” presented by Dr. Janice Kusch; and “Sustaining and Maintaining VPP Star is Not a Simple Task” by Jack Griffith and Barb Williams.



In order to meet the SIP goal of improving knowledge of the Corrective Action Management system, a presentation was held to ensure that employees understood they have multiple avenues in which to bring up safety issues: talk with management, submit a safety log item, and fill out an Issue Identification Form for tracking via the Corrective Action Management process. The presentation utilized an event that actually occurred at HAMMER as a teaching opportunity. The event was associated with an unqualified individual that operated a breaker without the appropriate level of training. The briefing attendees learned about the details of the event and the steps that were taken to identify the issue and implement a corrective action.

6.0 MENTORING AND OUTREACH

HAMMER continues to seek opportunities for VPP mentoring and outreach. The following items are a summary of the activities:

In September, at the request of the Mission Support Alliance (MSA) Voluntary Protection Program (VPP) core team, HAMMER instructors conducted a “Presenter’s Workshop” session for MSA personnel. Attendees consisted of MSA Employee Zero Accident Council (EZAC) chairs and other safety professionals. These attendees routinely present safety topics and relay critical safety information to fellow employees at their local EZACs and other meetings. The workshop empowers new presenters with the skills and techniques to effectively convey critical safety communications to their groups.

HAMMER Employee Zero Accident Council (EZAC) personnel participated in the Project Technical Services EZAC Skype meeting as part of a new initiative implemented by the EZAC team. In order to create a more united safety culture and focus across the Site, HAMMER EZAC members and Voluntary Protection Program (VPP) Champion will attend

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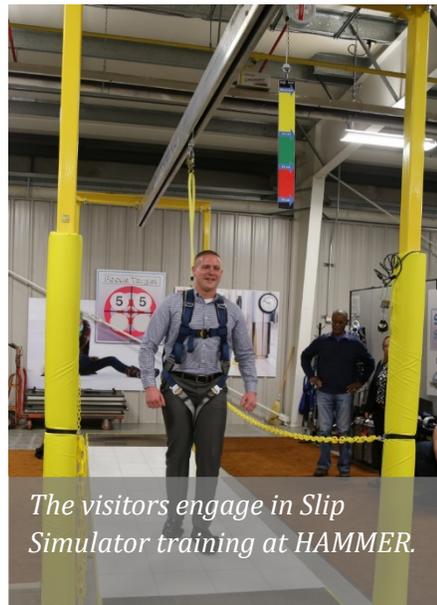
other Mission Support Alliance EZAC meetings. In turn, staff also invited EZAC personnel from other companies to attend HAMMER’s monthly EZAC meetings to help attain a broader scope of company safety practices and perspectives.

On October 16-17, HAMMER hosted Boeing personnel and members of the Aerospace Machinists Industrial District Lodge 751. The group consisted of personnel from the International Association of Machinists and Aerospace Workers (IAMAW) together with safety representatives and other personnel interested in Voluntary Protection Program (VPP) outreach.

Visit activities included Lockout/Tagout, Electrical Safety for Non-Electrical Workers, Slip Simulator, and Conduct of Operations class. A tour of the HAMMER campus as well as a workshop covered tenets and basic functions of VPP. HAMMER staff suggested various approaches to assist both Labor and Management in seeing the benefits of the VPP program.



HAMMER staff provides a Lockout/Tagout demonstration.



The visitors engage in Slip Simulator training at HAMMER.

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7.0 MANAGEMENT LEADERSHIP

Commitment to Health and Safety Protection

Annually, the HAMMER Director signs and issues a commitment to maintaining an Open Door Policy. The policy is distributed to all staff members as a reminder that all personnel have the opportunity to bring forward safety issues and/or concerns without fear of reprisal. The Director commits that all issues brought forward will be taken seriously, investigated, and resolved to the employee's concurrence.

Written Safety and Health Program

HAMMER's safety and health program is documented in MSC-PLN-WP-32219, *MSA Worker Safety and Health Program*, and identifies the implementing policies and procedures for 10 CFR 851 requirements. Additionally, HAMMER has posted the worker safety and health program requirements from 10 CFR 851 at many locations across the campus. HAMMER regularly takes the opportunity to educate the staff on the worker rights and responsibilities provided by 10 CFR 851, and interviews with staff confirm that understanding continues to improve.

8.0 EMPLOYEE INVOLVEMENT

HAMMER staff members actively participate in the delivery of safety topics. A HAMMER staff member provided a safety topic on texting and driving at President's Zero Accident Council (PZAC), recounting a personally significant event that affected his family. Another staff member provided a discussion on the General Hazard Analysis not only to HAMMER staff, but also to MSA's EZAC All Chairperson meeting.

MSA prepares a safety topic to be presented at the beginning of every work week, the Monday Morning Safety Start. HAMMER encourages staff members to elevate the message of the safety start into memorable presentations rather than simply reading from the screen.

The Hanford Site Voluntary Protection Program (VPP) Champions meeting was held on April 10. Representatives from all Site contractors attended and discussed current and future events and issues pertaining to the Hanford Site.

The discussion included the upcoming Region 10 VPP Conference on May 16-18 in Spokane, Washington. HAMMER Instructional Designer and VPP representative, Joe Estey, and Mask Fit Technician, Matt Marquardt, attended the conference.

On May 1, MSA initiated the 2017 Safety Campaign associated with educating employees on how to complete a basic safety and health inspection. The first safety start of each month focused on different aspects of safety inspections. HAMMER has very good employee participation in safety inspections. All but three employees took part in a safety inspection.

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The HAMMER Employee Zero Accident Council (EZAC) points of contact (POCs) conducted an initial meeting to discuss the challenges for the rest of the year, as well as receive feedback and advice from seasoned EZAC POCs. The meeting helped solidify roles and responsibilities of each POC and the Voluntary Protection Plan program manager, and also identified potential efficiencies in the reporting of employee safety activities. To promote learning and the sharing of ideas, the team decided to contact other Site contractor EZACs, visit their meetings, and invite them to HAMMER's EZAC meetings.

On August 29-September 1, a HAMMER staff member participated in the Voluntary Protection Programs Participants' Association (VPPPA) National Symposium in New Orleans, Louisiana. The event began with an opening ceremony featuring guest speakers such as Maureen Sullivan, Deputy Assistant Secretary of Defense for Environment, Safety, and Occupational Health in the Office of the Assistant Secretary of Defense.

HAMMER staff attended several safety-focused presentations throughout the duration of the event such as "Ten Feet Tall and Bulletproof" which focused on worker complacency and overconfidence, and "Driving Hazard Identification through Experiential Learning" which included several accident scenarios in which teams assessed the situations to identify the cause and prevent future occurrences.

Several staff members, other than EZAC leadership, succeeded in leading HAMMER to meet targeted SIP goals; however, all staff members were reminded that their participation in the safety activities throughout the year was key in meeting overall SIP goals.

HAMMER's Lockout/Tagout (LOTO) Training Program gained a new power pole training prop



Worker trainer, Lee Theobald, and Lockout/Tagout instructor, Kalle Hyrkas, utilize the utility pole prop during training.

in 2017. In response to several instances onsite where work was delayed as a result of improper lockouts on power poles, HAMMER staff reached out to Electrical Utilities (EU) and discussed the possibility of developing a prop in order to give Hanford personnel a better understanding of what they might see in the field when interfacing with EU. Linemen Todd Freeland

and Curtis Cromer built a power pole training prop using spare parts and spent time orienting the LOTO instructors who will use the new prop to train Hanford workers. This power pole replica will be a very important learning tool. The hands-on training it will provide will aid in reducing LOTO events and improving safety for the worker.

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Many Hanford Site workers such as Radiological Control Technicians and Nuclear Chemical Operators are routinely required to demonstrate their competency by completing job-jeopardy assessments which can cause severe anxiety. Such anxiety often leads to reduced performance and excessive worry. HAMMER staff are working with Dr. Janice Kusch, Clinical Psychologist at HPMC Occupational Medical Services, to find an effective solution. A



A new course, Managing Test Anxiety, is being designed to help students cope with the anxiety of facing job-jeopardy evaluations and examinations. This effort was prompted by HAMMER Radiological Safety Training instructor, Chris Brock, who noticed negative student impact caused by the high-stakes test anxiety. He observed obvious symptoms of distress and often noted that many knowledgeable, competent students struggled with testing due to the extreme pressure.

9.0 WORK SITE ANALYSIS

Baseline Surveys

HAMMER's Industrial Health Professionals conduct a baseline health and safety survey approximately every 12 to 18 months in accordance with MSC-PRO-WP-17916, *Industrial Hygiene Baseline Hazard Assessments*. The baseline survey was reviewed and revised in August 2017. HAMMER's Baseline Hazard Assessment is documented in document number BHA0259. Focus of the assessment includes sound exposure monitoring, ergonomic assessments, review of chemicals used at the facility, and evaluation of student and worker activities for potential industrial hygiene exposure.

Pre-Use/Pre-job Planning and Hazard Identification

Work and maintenance activities at HAMMER are analyzed for hazards in accordance with MSC-PRO-WP-079, *Job Hazard Analysis*. MSA's job hazard analysis process focuses first on the general hazards that the general employee might face on a routine basis; these controls are found on the General Hazard Analysis (GHA). From that, work activities are reviewed for hazards that may be encountered on a craft-specific basis; controls for this work are included on a Craft Specific Hazard Analysis (CSHA). To complement this analysis, additional hazard specific controls may be included into work documents via forms that provide direct guidance and approvals for beyond typical hazards encountered by crafts (e.g., lockout/tagout, energized electrical work, confined space entry).

All training activities at HAMMER are analyzed for hazards in accordance with HM-FP-01-3.3, HAMMER/Hanford Training Hazard Analysis and Control Process. All training activities are screened to determine if they are Low, Medium or High Hazard training activities. For Low Hazard training, the controls contained in the General Hazard Analysis are employed. For Medium and High Hazard training, a training activity specific analysis is conducted.

In support of Site contractor, WRPS, HAMMER staff implemented a five-month Radiological Control Technician (RCT) trainee program. HAMMER staff participated in all aspects of the process, including aptitude testing, candidate interviews, candidate selection, classroom presentations, testing, and practical factors evaluations. The first trainee program went from December 2016 through May of 2017. A second class began in July and will finish in December. There is a potential for a third class starting in the spring of 2018. Each class starts with 35 students and requires three instructors to implement.

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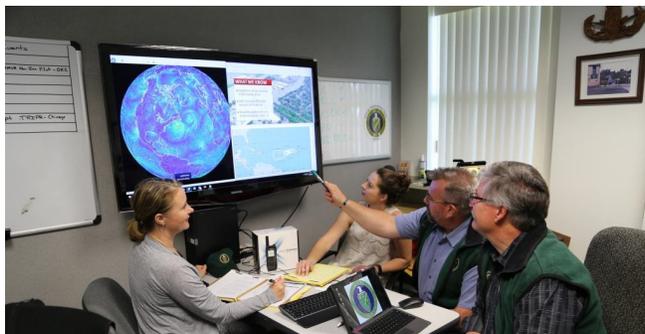
On June 19-20, HAMMER conducted the first round of airline system training for about 18 Washington River Protection Solutions (WRPS) Tank Farm workers. The intense training provided an “as real as it gets” approach and included pre- and post-job meetings, as well as dress up and use of all respiratory equipment that will be used in the Tank Farms.

The training focused on the skills needed to safely enter into a Tank Farm while using breathing air supplied by bottle cart. Practice included hose management, bottle cart operation, entering and exiting the work area using the airline system, and performing designed work tasks. Self-contained breathing apparatus (SCBA) were also used to support those who were on breathing air. One worker was able to use CarriAire on the last entry of the second day of training. The use of different kinds of breathing air highlighted the challenges and possibilities for each one. This training is part of WRPS’s continuing efforts to reduce or eliminate the impact of SCBA use on Tank Farm workers.



WRPS Tank Farm workers participate in airline system training at HAMMER June 19-20.

HAMMER’s Emergency Management team provided continued support throughout one of our nation’s most devastating hurricane seasons. Hurricane Harvey struck the Texas coast, followed by Hurricanes Irma then Maria which impacted the U.S. Virgin Islands, Florida, and Puerto Rico. Millions of people were affected – many lost their lives, were wounded, and/or found themselves stranded without power, transportation, the ability to communicate, and access to food and clean water. This team has directly and indirectly been associated with numerous live saving efforts such as restoration of critical energy infrastructure, coordinating emergency power generators for hospitals, fuel for emergency responders, and energy for critical food, water, and health care resources.



HAMMER Emergency Management staff provided critical hurricane response support in the fall.

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Secretary of Energy Rick Perry recognizes the DOE response team during a luncheon.

The team deployed and participated as Federal Emergency Management Agency (FEMA) Emergency Support Function #12 (ESF #12) responders who facilitate the restoration of damaged energy systems from the field and/or response centers. Another HAMMER staff member manned the Energy Response Center at DOE Headquarters in Washington, D.C., leading the logistics, finance, and administration functions for the team in

the field.

As the onslaught of hurricanes continued, HAMMER staff worked long hours and dealt with numerous evolving challenges ensuring responders and resources were in the correct positions to aid recovery and energy restoration. The team also worked with the DOE Energy Response Organization (ERO) to deploy personnel to support the FEMA response centers in Washington, D.C., Texas, and Florida. HAMMER provided expert coordination, ensuring each field responder had the experience, equipment, resources, and expertise needed to effectively fulfill their role.



The team provided ESF #12 Initial training for BPA personnel in preparation for their response deployment.

Once staff learned of Hurricane Irma's path toward the U.S. Virgin Islands, they worked throughout Labor Day weekend to deploy three ESF #12 responders, supplied with communications kits and satellite phones, to the islands ahead of the storm. Irma caused devastation throughout the Caribbean to Florida and Georgia. Responders on the islands of St. Thomas, St. Croix, and Puerto Rico provided critical first-hand knowledge of

the damage inflicted and worked to help restore power to hospitals and airports on the island of St. Thomas after the storm passed. An ESF #12 responder was deployed to the Florida State Emergency Operations Center in Tallahassee. He worked with the state as a liaison, providing critical support for energy infrastructure restoration.

As response efforts continued, a Category 5 storm, Hurricane Maria, moved through the Caribbean striking the U.S. Virgin Islands and Puerto Rico. The storm caused catastrophic damage leaving an estimated 3.4 million people without power. Beyond the heat and reeking conditions, many of the responders were without domestic water and power and they continued to assist recovery efforts. The DOE response team was recognized by Secretary of Energy Rick Perry for their outstanding contributions and support. HAMMER Emergency Management team received the MSA President's Safety Team Award during the

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President's Zero Accident Council meeting November 16, in recognition of their continued support throughout one of our nation's most devastating hurricane seasons.

Routine Hazard Control and Inspections

All HAMMER personnel are scheduled to participate in a facility walkthrough (inspection) on an annual basis. A facility walkthrough is conducted each month and is led by a knowledgeable member of the operations staff and/or the Safety Professional. Safety walkthroughs (inspections) follow the guidance found in MSC-PRO-WP-7652, *Safety and Health Inspections*. Written guidance on what to look for is provided on the inspection forms. Inspection forms contain tailored assessment criteria for each of the buildings on the HAMMER campus. Findings are documented on the forms. Where possible, corrections are made on the spot. If the issue cannot be immediately corrected, the issue is reported to Work Control for correction. The Employee Zero Accident Council actively reviews housekeeping items found during each monthly inspection to determine if there are negative trends that require attention.

Employee Reports of Hazards

Employees have several ways that they may report a hazard found on campus. In addition to reporting issues to management and/or sharing concerns at EZAC, employees may also call Work Control to report safety concerns.

All employees and students at HAMMER have the opportunity to identify and document safety concerns by using the Safety Log. HAMMER maintains two safety log locations, one at the main administration building and one at the Al Alm building, to ensure that the safety log is easily accessible. Safety logs are checked once a week. Once entered into the safety log, status on the safety issues are reported to staff every month at EZAC and every week at the Monday Morning Safety Meeting. Employees are reminded that if they feel uncomfortable for any reason to identify themselves as the initiator of a safety concern, they are welcome to anonymously submit a safety log item with the assurance that it will still be addressed with utmost importance.

There were four safety log items that were carried over from 2016. There were 33 safety log entries made in 2017 with three open going into 2018. The average safety log entry was open for 28 days. Safety log entries are not closed out until concurrence is obtained from the originator. Also, of those 30, 12 were closed out within 10 days; and 2 additional entries were closed out on the same day. Safety log use continues to be strong at HAMMER.

Accident Investigations

Accident investigations are conducted in accordance with MSC-PRO-PA-058, *Investigation of Abnormal Events, Conditions, and Trends*. Causal analysis is conducted to determine reasons for the event in accordance with MSC-GD-PA-33900, *Causal Analysis Guidance*.

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Corrective actions derived from event investigations are managed using MSC-PRO-PA-052, *Corrective Action Management*.

Trend Analysis

MSA safety professionals conduct injury and illness trend analysis and present this information each month at the President's Zero Accident Council. The injury information and statistics are taken from the PZAC and shared each month at HAMMER's Employee Zero Accident Council (EZAC). Injury statistics are also posted on safety information bulletin boards.

HAMMER updated the Craft Specific Hazard Analysis (CSHA) for the Electricians, Pipefitters, Teamsters and Warehousemen in accordance with the new procedure changes associated with MSC-PRO-079; implementation of this new procedure change was completed in August 2017.

10.0 HAZARD PREVENTION AND CONTROL

Access to Certified Safety Professionals

Certified Industrial Health Professionals (IH), Safety Professionals, Fire Protection Engineers, and an Occupational Health Provider are available to HAMMER staff when needed. A certified IH and Safety Professionals from the MSA Worker Protection group have been assigned to support HAMMER. The IH, Safety Professional and Hanford Atomic Metal Trades Council (HAMTC) Safety Representative photos are included in every Monday Morning Safety Meeting to ensure that HAMMER staff knows who they are.

The Safety Professional assists HAMMER with hazard identification and control on a regular basis when work packages are planned. The IH support assists HAMMER managers with completion of Employee Job Task Analyses (EJTA) for all HAMMER staff members.

Hanford's Occupational Health Provider is available to staff members and provides the appropriate level of medical monitoring based on the employee's EJTA. On a quarterly basis, the Occupational Health Provider conducts a Health Fair on campus for HAMMER staff.

Methods of Hazard Prevention and Control

HAMMER uses the Hierarchy of Controls during work planning and project design to ensure facilities and conduct of work. Work packages are planned by a planner who ensures that safety requirements and worker feedback are incorporated into work documents. A questioning attitude is encouraged to ensure the pre-identified hazard control methods are understood by all prior to and during the conduct of work. This maintains employee involvement and narrows the window for an unexpected event.

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HAMMER follows the Mission Support Alliance Environmental Policy (MSC-POL-EI-5054) and MSA's Integrated Environment, Safety and Health Management System Description (MSC-PLN-WP-003). Waste minimization, recycling, and substitution of less hazardous materials are important for worker safety and environmental protection at HAMMER. MSA's environmental organization assists HAMMER in screening chemicals and suggesting substitute chemicals for work evolutions and hands-on training.

Interviews and facility observations confirm that ergonomic reviews by safety professionals have been conducted. Many workstations have been improved with ergonomic desk systems designed to relieve body stress.

HAMMER staff completed the winterization process for the 2017-18 season by draining sprinkler systems, readying ice melt, and reinstalling snow guards damaged from last winter's heavy snowfall. All windows in the mobile offices were also resealed.



In frigid weather, HAMMER does not use the outdoor fire extinguisher prop. Instead, classes are moved indoors and students perform hands-on fire extinguisher training using a laser-based video system. The laser system allows this important training to continue through the winter months without creating an additional hazard.

In August, the area experienced periods of extreme heat, as well as smoke from surrounding wildfires. HAMMER took actions to ensure students remained safe and moved many training sessions indoors to alleviate the physical stress caused by heat and/or smoke.



A student uses the laser based fire extinguisher training simulator.

Positive Reinforcement and Discipline

HAMMER uses the MSA Standards of Conduct (MSC-POL-HR-11385), which outlines the thresholds of employee discipline. If employee performance warrants improvement, MSA

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Human Relations specialists will utilize Managing Employee Performance (MSC-PRO-HR-050) to develop an improvement plan. MSC-PRO-HR-050 also outlines the methodologies for the annual employee performance appraisals used by HAMMER management.

There are many options for HAMMER to recognize and reinforce good safety behavior and acts. MSC-GD-WP-40148, *Safety Awareness and Recognition Program*, outlines these options, including the On the Spot Safety Award, the Performance Incentives Program for Safety (PIPS), and Incentive Awards for Stretching. HAMMER staff regularly use On the Spot Awards to recognize fellow staff members for active engagement in contributing to a safe and healthy work place. The requirements document for President's and Employee Zero Accident Councils, MSC-RD-WP-9982, outlines awards that are available through PZAC, including the President's Star Award, President's Lifesaving Award, PZAC Safety Honor Roll Award, and President's Safety Team Award.

Preventive/Predictive Maintenance

HAMMER is transitioning to a new Computerized Maintenance Management System. The new system is expected to provide for improvements in maintenance and resource scheduling. An interview with the maintenance engineer confirmed that HAMMER has a good history of completing maintenance work on schedule to ensure the facility and equipment is kept in a safe operating condition.

All new work requests are funneled through HAMMER's Work Control Center, where the request is recorded and then validated/screened to determine the level of work planning (skill of the craft to detailed work planning) required.

Tracking Systems

All employees and students at HAMMER have the opportunity to identify and document safety concerns by using the Safety Log. HAMMER maintains two safety log locations, one at the main administration building and one at the Al Alm building, to ensure that the safety log is easily accessible. Safety logs are checked once a week. Once entered into the safety log, status on the safety issues are reported to staff every month at EZAC and every week at the Monday Morning Safety Meeting. If a Safety Log item is not resolved within approximately 60 days, the item is entered into the Corrective Action Management System (CAM) via the Issue Identification Form (IIF). The CAM system provides a formal tracking system that screens issues for significance, appoints responsible managers and actionees, formalizes corrective action plans, and provides methods to track and trend issues on a wide scale.

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Emergency Preparedness

HAMMER follows the Hanford Emergency Preparedness protocols outlined in DOE/RL 94-02, *Hanford Emergency Management Plan*, and DOE-0223, *Emergency Plan Implementing Procedures*, which detail the roles, responsibilities and actions to take during an emergency. HAMMER also has developed a facility-specific emergency response plan. This plan is available to all HAMMER employees via the HAMMER internal webpage. Emergency response information is available in each building at HAMMER. Additionally, HAMMER participates in a sitewide drill every year.

Medical Program

An Occupational Medical Provider is available to HAMMER staff. Hanford's Occupational Health Provider is available to staff members and provides the appropriate level of medical monitoring based on the employee's EJTA. On a quarterly basis, the Occupational Health Provider conducts a Health Fair on campus for HAMMER staff. The medical provider routinely conducts on-site evaluations/surveys to ensure that they are aware of the activities and PPE used at HAMMER.

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11.0 HEALTH AND SAFETY TRAINING

HAMMER's safety culture has been recognized as a DOE Best Practice based on meaningful worker involvement built on two-way communication that fosters trust, respect, and collaboration.

HAMMER's expert training is made possible by its unsurpassed safety culture which has created positive impacts through proactive two-way communication, self-assessments, and higher expectations for worker health and safety. HAMMER's safety culture extends to its staff ensuring its own employees participate in safety and health training and promote safe work practices.



Student on the Slip Simulator

80% of HAMMER staff have completed training on the Slip Simulator. The Slip Simulator offers students a safe way to practice proper techniques when walking on slippery surfaces. It also offers a much needed awareness regarding slips, trips and falls for all seasons. Nationally, 16 percent of disabling workplace injuries are from falls on the same level, at a cost of 8 billion annually. Additionally, 16 percent of the US total occupational deaths are caused by slips, trips or falls on the same level. Trips, slips, and falls frequently happen, and this tool does help prevent them.

25% of HAMMER's employees are current in First Aid. First Aid is an optional class for most HAMMER employees.

Employee orientations and walk-arounds were conducted for the new employees, subcontractors and interns that were hired in 2017. The Employee Orientations are a good way for management, operations and EZAC to share about critical safety and facility information with the new workers. During the orientation, VPP is brought up as the foundation for how HAMMER works.

HAMMER completed the second trainee program in December. In June, over 700 applications were received for 37 HPT positions and of them, approximately 300 aptitude tests were administered. HAMMER supported the interview and aptitude testing process and dedicated two instructors to teach full-time at the Hanford Training Center from August to early December. HAMMER administered the final exam the week of December 4. The class achieved a 100 percent pass rate and graduated on December 11.

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HAMMER Instructional Designer Tony Jimenez; USW Grantee Worker Trainers Jason Brooks, Connie Reedy, Kelly Schmidt, Sherry White, and Grant McCalmant; USW International Worker Trainers Marybeth Potter and Billy Edington; USW Tony Mazzocchi Center Instructional Designer Diane Stien; and HAMMER HAZWOPER Program Manager Jerry Massey participated in the USW IDP at HAMMER.

On July 17-19, HAMMER hosted United Steelworkers (USW) from the Tony Mazzocchi Center (TMC) in Pittsburg as they conducted a Worker Trainer Instructor Development Program. The event included TMC instructional design staff, the worker trainer lead and training coordinator from Ohio, and HAMMER worker trainers.



HAMMER USW worker trainers become familiarized with new iPads provided by the Tony Mazzocchi Center during the IDP at HAMMER.

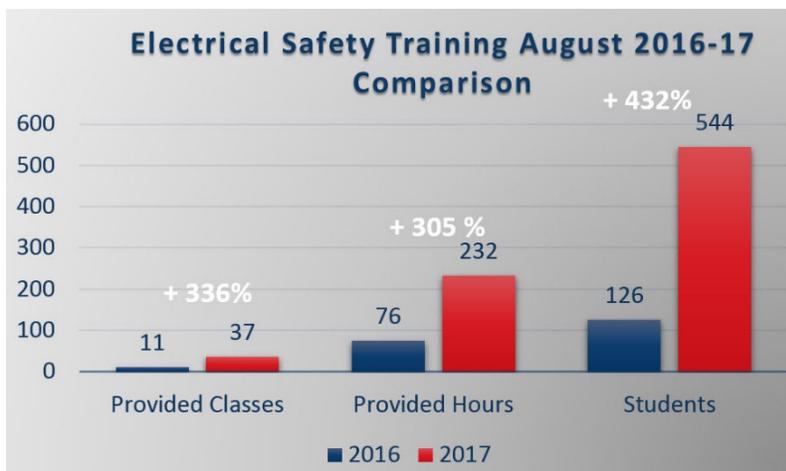
Attendees collaboratively completed a review of the 2017 revision of the HAZWOPER 8-Hour Refresher course materials and also familiarized the Hanford USW worker trainers with 24 new iPads provided by the TMC. The iPads were loaded with specific applications and reference materials to be used during HAZWOPER training activities. This marked a significant step for USW worker trainers and the USW-TMC in incorporating more innovative technology into their training programs.

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During the summer, HAMMER purchased a used boom section from a lattice boom mobile crane which will serve as a new training prop within the Hoisting and Rigging Training Program. It is the first hands-on prop to be used by the Crane Assembly/Disassembly course and will allow students to realistically apply their training. It will be incorporated into new activities as courses undergo biennial reviews.



HAMMER's Electrical Safety Training program met significant training demands since April. The spike was caused by the release of the 2017 edition of NFPA 70 National Electrical Code, updates to the Washington State Revised Code of Washington and Washington Administrative Code, as well as revisions of DOE 0359 Hanford Site Electrical Safety Program. The revision required hundreds of Site employees to receive additional training on the procedure. Compared to 2016, the program experienced a dramatic training demand in 2017. The number of students trained throughout the same six-month period increased from 772 in 2016 to 2,894 in 2017, an increase of 375 percent. Daily instruction was dramatically impacted as class sizes nearly doubled. In addition, extensive paperwork must be processed for every student to ensure their electrical licenses are properly maintained, certificates processed, and rosters submitted to state agencies.



This chart shows the Electrical Safety Training Program's increase in class sessions, hours, and students from August 2016 to August 2017.

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The five-day Energy Facility Contractors Group (EFCOG) Electrical Safety Task Group (ESTG) Workshop was based at HAMMER and the Pacific Northwest National Laboratory (PNNL) on July 24-28. HAMMER's Electrical Safety Training Program Manager, Andrew Olsen, served as the event host supported by Electrical Instructor and ESTG Secretary, Jennifer Martin. The workshop included meetings and presentations for nearly 100 participants within the DOE enterprise including personnel from DOE Headquarters and almost 40 other labs, sites, and organizations across the country. The presenters included subject matter experts within the DOE enterprise and electrical industry. The majority of the workshop was spent in working group breakout sessions at HAMMER which included focused groups on Hazardous Energy Controls (LOTO), Risk Assessment (NFPA 70E), DC Hazardous Energy, Subcontractor Requirements, and Electrical Training. These working groups yielded tremendous results to include the framework for several white papers and DOE Best Practices, arc flash calculators, and other tools to improve electrical safety both in the DOE complex and the general industry. HAMMER staff also provided a campus tour on Friday, July 28, for approximately 20 of the workshop participants. They were impressed by HAMMER's capabilities especially the Radiological Control and Lockout/Tagout training.



The Industrial Hygiene Technician (IHT) Fundamentals training program was initiated during the HAMMER Hanford Training Board of Directors meeting last March. Based on a strong need for IHT competency onsite, a consistent training and qualification program was developed in record time thanks to a team of subject matter experts from HAMMER, Site contractors, and Labor.

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HAMMER piloted the first module of the new program, consisting of an introduction and math course, on October 2-5, 2017, the same week as HAMMER's Steering Committee and subcommittee meetings and 20th Anniversary celebration. Collaboration continues with IHTs from both Washington River Protection Solutions and CH2M HILL Plateau Remediation Company to develop relevant and job-related activities and scenarios for the fundamentals curriculum.

"WRPS and HAMMER have partnered to build an Industrial Hygiene program to keep our workers safe by training them to identify, avoid, and mitigate potential exposure to chemical vapors from Hanford's waste tanks."



Mark Lindholm,
WRPS President and Program Manager

Constructive feedback is being collected and the HAMMER development team continues proactively incorporating changes to the training materials. WRPS requested preliminary scheduling of two more cohorts from January-May, 2018.

HAMMER held its annual Worker Trainer Instructional Development Program Day November 13. Worker trainers and instructors were provided with instructional development opportunities through several presentations and four breakout sessions focused on the theme "Handling Change." Mission Support Alliance President, Bob Wilkinson, welcomed the participants and provided opening remarks. He addressed the past processes and lessons learned regarding contract transition. Breakout sessions were presented by Joe Estey, Sr.; Dr. Janice Kusch, HPMC; Vivid Learning Systems; and Audrey Wright (HPMC).

Karen McGinnis, HAMMER Director; Pat Aldridge, HAMMER Information, Technology, and Training Services Manager and founder of the Worker Trainer Program; Jeff McDaniel, Hanford Atomic Metal Trades Council (HAMTC) President; Steve Maiuri, HAMTC Training Director; and several HAMMER managers recognized the worker trainers and instructors for their value to site training and its overall safety culture.



Worker trainers and instructors at the Instructor Development Program Day

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12.0 AWARDS AND RECOGNITION



Jennifer Goulet, a technical editor at HAMMER, recently received the Mission Support Alliance President's Lifesaving Award for saving a man's life.

Jennifer was at a holiday party a restaurant banquet room speaking to the guests with a microphone. A man who was sitting close by, began to choke on his food. Jennifer dropped the microphone and sprang into action. He stopped coughing and began to turn bright red and put his hands to his throat. Jennifer immediately got on the bench behind him and put her arms around him to do the Heimlich maneuver. Shortly after Jennifer began, he passed out in her arms. Jennifer kept trying and the piece of food finally came up and he was able to breathe again. It is likely the gentleman would not have survived long enough for an ambulance to arrive.

Jennifer's heroic actions are an astounding representation of applying safety training in all aspects of life. She credited HAMMER's first aid training and instructors for teaching her the skills necessary to save a life and encouraged everyone to take advantage of the training.

Pam Williamson, HAMMER Training Program Coordinator, received a President's Lifesaving Award during the Mission Support Alliance President's Zero Accident Council meeting on September 21.

During a recent camping trip, Pam witnessed an accident in which the driver of a four-wheeler sustained significant injuries requiring stitches. She immediately drove the injured man and his wife from the top of the mountain toward the hospital. During the drive, the man started losing consciousness and an ambulance was called to meet them. Pam then drove the wife to the hospital, approximately 50 miles away, where the man received medical attention.



Pam's heroic actions and safety mindset are an example of the superior safety culture HAMMER strives to maintain and implement across the DOE enterprise and community.

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John Jeskey, Lead Hanford Atomic Metal Trades Council (HAMTC) Safety Representative for Mission Support Alliance, recently received the 2016 Kathryn A. Wheeler Safety Leadership Award.

The award is named for the late Ms. Wheeler who was a longtime Hanford employee dedicated to safety. It is presented each year to a member of the MSA workforce who demonstrates support of safety through collaborative worker engagement.

Jeskey has been a safety advocate at the Hanford Site for nearly 40 years and helped start the HAMTC Safety Representative Program 20 years ago. He served as HAMMER's safety representative for several years and supported many key safety initiatives such as ensuring each facility has a safety representative, improving safety communication, and promoting employee involvement in the safety improvement process.



HAMMER's Emergency Management team was awarded the Mission Support Alliance (MSA) President's Safety Team Award during the President's Zero Accident Council meeting November 16, in recognition of their continued support throughout one of our nation's most devastating hurricane seasons. The team's efforts represent HAMMER's commitment to safety and its mission to save lives and avert disasters.

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HAMMER staff was awarded with the Voluntary Protection Programs Participants' Association (VPPPA) Star of Excellence in the fall of 2017 during an MSA President's Zero Accident Council meeting.



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**VPP ANNUAL REPORT
SUPPLEMENTAL WORKSHEET**

Review: 1/1, 2017 – 12/31,
2017

Site Contractor Name/Acronym: Mission Support Alliance / HAMMER

Site Name: Hanford

Company President/Manager: Bob Wilkinson

Company Address: MSA

PO Box 650

Richland, Washington 99352

**Injury Incidence/Lost Workdays Case Rate (contractor (participant) employees and staff
augmentments)**

Calendar Year	Hours Worked	TRC Cases	TRC Rate	DART*Cases	DART*Rate
(Year-1) 2015	211,703	0	0.00	0	0.00
(Year -2)2016	234,256	0	0.00	0	0.00
(Year -3)2017	282,515	0	0.00	0	0.00
3-Year Total	728,474	0	0.00	0	0.00

Injury Incidence/Lost Workdays Case Rate (subcontractors)

Calendar Year	Hours Worked	TRC Cases	TRC Rate	DART*Cases	DART*Rate
(Year-1) 2015	30,102	0	0	0	0
(Year-2) 2016	18,558	0	0	0	0
(Year-3) 2017	15,357	0	0	0	0
3-Year Total	64,017	0	0.00	0	0.00

Total Contractor & Subcontractors for 3 Years:

Hours = 792,491 TRC Cases = 0 TRC Rate = 0.00 DART Cases = 0 DART Rate = 0.00
BLS for NAICS** # 611 TRC Rate = 2.0 DART Rate = 0.9

* Days Away, Restricted or Transferred ** North American Industry Classification System

HAMMER's TRC Rate, and DART rate is 0.00 over 3 years

Number of Contractor Employees: 129

Union Representative

Email: Kenneth_W_Gray@rl.gov

Contractor VPP POC

Email: Joseph_B_Estey@rl.gov

DOE/RL VPP POC

Email: Larry.Yearsley@rl.doe.gov

Number of Subcontractor Employees: Varies

Name: Ken Gray

Contact # 509-373-4729

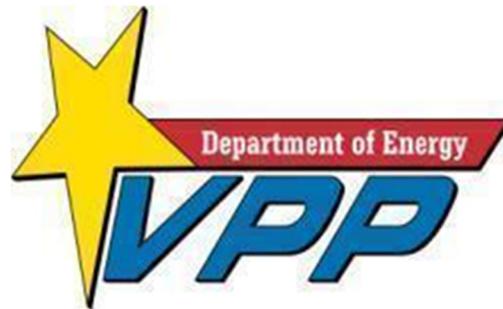
Name: Joe Estey

Contact # 509-376-3419

Name: Larry Yearsley

Contact # 509-376-5104

Appendix B
Safeguards and Security
VPP Annual Self-Assessment Report 2017



DEPARTMENT OF ENERGY

MISSION SUPPORT ALLIANCE, LLC

SAFEGUARDS AND SECURITY (SAS)

VOLUNTARY PROTECTION PROGRAM ANNUAL REPORT

CALENDAR-YEAR 2017

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VPP Annual Self-Assessment 2017



1.0 SUMMARY

The Mission Support Alliance, LLC (MSA), Safeguards and Security (SAS) organization includes the following elements: protective forces, physical security systems, information security, personnel security, nuclear material control and accountability, cyber security, and program management. These elements ensure the safeguarding of special nuclear material, classified, government sensitive information, and government property. This organization ensures the reduction of Hanford Site quantities of special nuclear material and classified information retain the level of protection required for the remaining security interest.

Critical attributes of SAS's successful processes are as follows:

- Incorporation of Voluntary Protection Program (VPP) tenets, Human Performance Improvement (HPI) concepts, and elements of Safety Conscious Work Environment (SCWE) programs to ensure organizational and personnel aspects of safety and health performance are addressed, and a self-sustaining, just culture is fostered.
- Implementation of Integrated Safety Management System (ISMS) ensures safety and health will be reflected in every plan and decision.
- Elevation of assessment-driven continuous improvement in all phases of work planning and execution, ensuring weaknesses are found and fixed before problems occur.

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- Pursuit of the MSA Goals: Target Zero and Do Work Safely through tracking and communication of safety-related metrics.
- In 2017, SAS participated with the development of and adopted the MSA Safety Improvement Plan (SIP) which is in place and describes specific organizational and personal activities needed to meet Safety Vision and Safety Goals. The objective of the MSA SIP is to increase management and employee teaming to promote safe work conditions and practices. Increase Bargaining Unit participation in safety improvement activities. Increase attention to hazard identification and mitigation and implementation of adequate controls by utilizing MSA Annual Injury Reviews. Improve management/employee communication and feedback of safety programs, initiatives and corrective actions. Demonstrate continuous improvement of organizational practices to assure ISMS and VPP performance are adopted and utilized.

An on-site review by the Office of Health, Safety, and Security was conducted on May 22-25, 2017. The review reconfirmed SAS Star Status.

VALUE OF VPP AT SAS

The primary value of the SAS VPP is the ongoing partnership between management and staff committed to maintain the highest level of the safety culture. VPP enables the SAS's safety and health program to transcend a top-down, by-the-book approach to safety, and it also raises grassroots safety consciousness by promoting a commitment to safety and health 24 hours a day, 7 days a week. The SAS VPP is a dynamic, evolving program that fosters innovative approaches to continuous improvement in safety and health performance.

VPP is not another layer of requirements of new tasks, it is an approach by which safety and health-related activities can be more efficiently promoted through the joint support of staff and management. VPP principles foster communication, creativity, and innovation and are helping to improve the way SAS employees view safety and health as an ever-present value.

Some of the benefits SAS realizes from VPP programs include:

- Fewer injuries and illnesses. In addition to the ethical and quality of life issues associated with preventing employee injuries and illnesses, maintaining injury/illness rates as low as possible results in significant savings to SAS.
 - Increase in output, productivity, completed work on schedule. Occupational injuries, illnesses and other accidents can cost a substantial amount in terms of down-time and staff- management hours spent on investigation and corrective action that could have been put to more productive uses.
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- Better safety performance results in greater customer satisfaction, which can bring more business to support the SAS's growth agenda.

2.0 INTRODUCTION

During 2017, the annual self-assessment was again sub divided into three separate VPP self-assessments referred to as “trimesters.” SAS along with the other organizations within the MSA continue to utilize the trimester approach to provide three data points instead of the single annual assessment. During the self-assessments an overall grade was assigned as the 5 tenets of VPP were examined through an interview process. The overall score was on a 0 – 5 scale, with 5 being the best possible implementation of the VPP. Each of the 5 tenets and sub elements were validated with questions or lines of inquiry which included employee interviews, and document/information reviews.

3.0 SAS VPP ACCOMPLISHMENTS

- SAS is currently meeting all Department of Energy (DOE)-VPP Star attributes.
 - SAS has earned the Star of Excellence award for five consecutive years and received the Legacy of Stars award in 2016.
 - Technical Security surpassed 31 years without a days away, restricted, or transferred (DART) classified injury.
 - Safety and Health hazard baselines have been upgraded for all SAS facilities using the integrated process that incorporates inputs from management assessments, Industrial Hygiene monitoring, facility inspections, arising operational events/issues, and employee/management input.
 - Safety Inspection process utilizes a computer based training module for each section to aid those assigned to conducting the inspection. This SAS process was shared with MSA and has been implemented for use throughout MSA.
 - Conducted 2017 Hanford Patrol (HP) Safety Summit. Twenty six items were raised with 11 being placed in the Emergency Services Electronic Safety Logbook as opportunities for improvement. Fifteen items were deemed “operational issues” and were added to the HP Steering Committee.
 - SAS conducted Annual Injury Review and mentored other MSA groups to improve injury analysis meetings.
 - SAS implemented a pilot program in 2017 which takes Basic Security Police Officers students and introduces them to the managers within the SAS group. This aids the SPOs understanding of operations, auditing, safety and other services within the group. The program introduces the working culture at Hanford while expressing the expectation of managers and employees alike, while promoting SAS commitment to increased employee understanding as well as transparency and relationship building between management and the Hanford Guards Union (HGU).
 - SAS member earned the Certified Laser Safety Officer designation.
 - Continued to mentor Hanford Fire Department (HFD) Safety Summit.
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- Conducting Emergency Services Safety Representative monthly meetings.
- SAS is operating three successful Employee Zero Accident Councils.
- SAS Safety has continued to offer Safety & Health related merit badge opportunities to local Boy and Girl Scouts in eastern Washington. To date, SAS employees have worked with over 400 Boy & Girl Scouts to earn safety, health and environmental related merit badges.
- SAS employees attended the 2017 Voluntary Protection Program Participants Association (VPPPA) National Conference and brought back information to share with all of MSA.
- SAS employees presented presentations at the 2017 National VPPPA Symposium. The two presentations were the “Unique Role of a Union Safety Representative” and the “MSA VPP Trimester Evaluation Process”.
- A SAS employee submitted the “MSA Safety Inspection Module Campaign” presentation for the 2018 VPPPA National Safety Symposium.
- Four SAS members attended the Voluntary Protection Program Participants Association (VPPPA) Region X Conference and brought back information to share with all MSA employees.
- SAS has two employees that maintain Special Government Employee (SGE) status.
- SAS SGE’s supported six offsite Occupational Safety and Health Administrative (OSHA) VPP assessments in 2017. The following assessments were completed: Navy Integrated Maintenance Facility - Bangor WA, Marine Corps Logistics Base -Barstow CA, 3M Plant – Aberdeen SD, U.S. Army Rocky Mountain Arsenal – Denver CO, Navarro Inc. Rocky Mountain Arsenal – Denver CO and AECOM Rocky Mountain Arsenal – Denver CO.
- SAS provides one member to the VPPPA Region X Communications Committee.
- A SAS employee assisted OSHA Region VIII and reviewed three VPP annual reports submitted to OSHA: Delta Airlines – Denver Technical Operations (Denver CO), Talen Energy – Colstrip Power Plant (Colstrip MT) and RK Mechanical, Inc. (Denver CO).
- SAS has arranged for the OSHA Region 10 Program Manager to hold a SGE course at the Patrol Training Academy February 6-8th. Thirteen Emergency Services employees (9 SAS employees) have been approved to participate in the upcoming course. Two SAS employees have been added as instructors to support OSHA in teaching the course.

4.0 IMPLEMENTED EMERGENCY SERVICES ELECTRONIC DATABASE. (ESED)CONTINUOUS IMPROVEMENT

HP Safety Summit

SAS conducted the 2017 HP Safety Summit. Nineteen safety items were raised and placed in the ESED. SAS mentored other Mission Support Services (MSS) groups to improve injury analysis meetings and the HFD Safety Summit. Positive notes that came from the 2017 Safety Summit include:

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- There continues to be genuine caring about each other.
- Good communication between all attendees.
- Having two HFD attendees again this year was appreciated by HP attendees.
- The Summit remained an open forum for reporting issues needing resolution and this was done in a respectful and professional manner.
- HFD invited SAS representatives to attend the HFD Safety Summit.
- There were new Security Police Officers (SPOs) participating.
- HP participation was good but more representation by exempt employees is needed.
- Patrol Training Academy Colonel's participation was appreciated and assisted in providing details on training issues that was lacking in the past.

The 11 safety items brought forth in the 2017 SAS Safety Summit are as follows:

- 1. Increased Potential for Heat-Related Safety Conditions (34 votes)
- 2. Mitigate Hearing Loss Conditions (34 votes)
- 3. Respiratory and Health Issues (20 votes)
- 4. Unsafe Driving Conditions for Essential Personnel due to Inclement Weather (15 votes)
- 5. Reduce Preventable Injuries from Long-Term Chronic Activity (14 votes)
- 6. Lack of Turn-Around Offices Leading to Static/Posture Injuries (6 votes)
- 7. Roadway Issues Not Resolved Across Site (5 votes)
- 8. Increase in Potential Heat-Related Issues to Inadequate Climate Control (4 votes)
- 9. Data Rad Incidents (Event Reporting) (4 votes)
- 10. Safety Database -- Issues Being Closed Prematurely (3 votes)
- 11. Wye Barricade Track (3 votes)

SAS 2017 Headquarters VPP Review

The DOE-VPP Team performed an assessment from May 22-25, 2017, and SAS was approved to continue to participate in DOE-VPP at the Star level.

MSA SAS at Hanford maintains a standardized program for all Project Hanford Management contractors relating to safeguards and security functions, and physically protects special nuclear material, classified material, government property, and the personnel located within the confines of the Hanford Site. The HGU represents the uniformed SPOs, although the Hanford Atomic Metal Trades Council (HAMTC) represents a few workers.

Since the previous assessment in 2012, MSA-SAS' total recordable case rate (TRC) and DART case rate have dropped from 3.0 and 1.6 cases per 200,000 work hours, respectively to 1.1 and 1.0. MSA SAS TRC and DART rates are significantly below the averages for the comparable industry.

MSA SAS managers are committed to maintaining an effective security profile for the Hanford site while minimizing or preventing injuries. Their efforts over the past year to

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reach out to HGU are paying dividends; however, those efforts are also causing some unintended consequences among middle managers. MSA SAS should ensure its outreach actions include middle managers and continue working with HGU personnel to establish collaborative working relationships along the entire chain of command. MSA SAS should also identify more opportunities to reinforce correct behaviors, not just punish incorrect behaviors as a means of fostering further improvements.

MSA SAS continues to improve upon its employee involvement program. The MSA president and senior leaders initiated monthly meetings with the HGU Executive Board to improve communications with the HGU and directly address HGU worker concerns. MSA SAS continues to participate in the MSA Employee Zero Accident Council (EZAC) and President's Zero Accident Council (PZAC) committees. It has added two additional "ad hoc" committees to focus on improving communications with the Emergency Services safety representatives and administrative employees. While employees are comfortable raising safety issues, observations indicate workers do not always recognize or question at-risk practices during their normal activities.

MSA SAS has adequate worksite analysis processes and procedures in place. Hazard identification is thorough, and exceptional housekeeping was evident throughout the facilities. The conversion from the MSA automated job hazard analysis (AJHA) to a graded work planning process based on hazard analysis promises to produce appropriate, high-quality, detailed work plans and instructions. This move addresses the vulnerability identified in the 2012 VPP onsite evaluation.

MSA SAS follows the hierarchy of controls using engineered controls, administrative controls, and personal protective equipment (PPE) to minimize its workers' exposure to hazards. MSA SAS has implemented employees' suggestions to mitigate hazards.

MSA SAS continues to maintain an effective Safety and Health Training Program. It uses the training program developed and maintained by MSA. Managers and employees are properly trained and aware of the hazards present in the workplace.

MSA has concentrated on the relationship between senior managers and HGU Executive Board members in the wake of the contract negotiations. MSA senior managers' outreach efforts to the union leaders, however, have bypassed middle managers within the protective force. These middle managers remain dedicated to the mission, but need additional opportunities to work with senior managers to ensure they understand the basis for decisions and can act in a manner consistent with senior managers' expectations. MSA should also work with the SAS managers to convince them that all injuries are preventable and continue seeking training methods that meet mission requirements while reducing the risk of injury.

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Improvement opportunities

Opportunity for Improvement
MSA SAS should seek an authoritative interpretation from DOE' s Office of the General Counsel to validate its practice of defining mandatory versus voluntary physical training and exercise for SPOs and using that definition to exclude some injuries as "not work related."
MSA SAS should begin holding regular face-to-face meetings between MSA SAS senior managers and uniformed middle managers on a frequency consistent with its meetings with the HGU.
MSA SAS should identify a set of core leadership expectations and recurring training opportunities that reinforce those expectations, including approaches to identify, admit, and correct leadership errors in ways that reinforce rather than degrade the professional relationships between exempt and nonexempt personnel.
MSA SAS should continue working to develop and implement tactical response training that optimizes the ability to neutralize an adversary while reinforcing behavioral actions that minimize risk of injury.
MSA SAS should review its process for reporting results of its annual assessment and ensure personnel preparing the report include recommendations for improvements and goals in the coming year.
MSA SAS managers should identify approaches that reinforce correct behaviors and resist normalized deviations from requirements.
MSA SAS should consider formalizing the new committees and documenting the committees' purposes in a charter to ensure the continued successes of those groups.

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SAS VPP Trimester Process

The self-assessment for 2017 utilized a trimester approach to gather information. A trimester review cycle was used to provide three data points during the year versus the single assessment used in the past. A combined team of bargaining unit, exempt and management employees conducted interviews with a cross-section of SAS personnel at remote work locations. During this year’s evaluations, the team made an effort to focus heavily on comments from the employees rather than solely concentrate on grading numbers. A 1-5 scale is utilized with 5 being a positive response.

The results were discussed with the Emergency Services Vice President and SAS Points of Contact (POC’s) which consisted of a team of bargaining unit workers and management. This team determined the significance of the results and documented opportunities for improvement. Opportunities for improvement were communicated to the work force at shift change, safety meetings and all employee messages. Items of concern were incorporated into the ESED and are being worked to closure.

2017 1ST TRIMESTER - SAS TENET SCORES

Overall Average	4.52
Management Leadership	3.93
Employee Involvement	4.63
Worksite Analysis	4.80
Hazard Prevention & Control	4.33
Safety & Health Training	4.93

2017 2ND TRIMESTER - SAS TENET SCORES

Overall Average	4.56
Management Leadership	4.23
Employee Involvement	4.93
Worksite Analysis	4.57
Hazard Prevention & Control	4.70
Safety & Health Training	4.37

2017 3RD TRIMESTER - SAS TENET SCORES

Overall Average	4.70
Management Leadership	4.50
Employee Involvement	4.90
Worksite Analysis	4.70
Hazard Prevention & Control	4.80
Safety & Health Training	4.60

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SAS PARTICIPATION IN MSA INITIATIVES

- Safety Focus meetings
- Led SAS, Emergency Services & 2017 MSA Annual Injury Review meetings
- Target Zero / SAS Situational Awareness Briefings
- Boy Scouts of America HP Explorer Post
- SAS Safety staff has organized and supported over 400 Boy and Girl Scouts in earning Safety, Health and Environmental related merit badges over the last four years. *Safety, Traffic Safety, Fire Safety, Public Health, Environmental Science, Signs Signals and Codes, American Labor and First Aid* merit badges were offered and completed. This was a collaborative effort with MSS, Emergency Services, SAS, HGU, HAMTC, Kennewick Police Department and the Benton Franklin Health District.

SAS employees were key participants in the following MSA/Hanford committees

- Hanford Site-wide Fall Protection Standards Committee – 1 member
 - MSA VPP Core Team – 2 members
 - PZAC Planning Team – 2 members
 - Hanford Site Traffic Safety Committee – 4 members
 - Safety Expo Planning Team – 1 member
 - MSA Case Management Team -2 members
-

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SAS employees assigned as MSA Subject Matter Experts

- Adverse Weather
- Aviation Safety
- Compressed Gases
- Fall Protection
- Industrial Safety (IS)/Industrial Hygiene (IH) Selection, Qualification and Training
- Laser Safety
- Biological Hazards (Including Bloodborne Pathogens)
- First Aid and Automated External Defibrillators (AED)
- MSA Expectations for Worker Involvement
- Mission Support Alliance Policy for Environment, Safety, Health and Quality
- Safety and Health Compliance
- Selection, Training, and Qualification of Industrial Safety and Industrial Hygiene Professionals
- Storing, Using and Handling Compressed Gases
- Steam Generation and Distribution System Safety
- Occupational Medical Qualification and Monitoring using EJTA
- Industrial Hygiene Baseline Hazard Assessments
- Safety Inspection Program
- Recreation Policy
- Radiofrequency (RF) Radiation Safety
- Control of Working Hours
- Portable and Fixed Ladders
- Motor Vehicle Safety
- Hanford Site Respiratory Protection Program (HSRPP)
- Working Alone

5.0 VPP OUTREACH

SAS continues to seek opportunities for VPP mentoring and outreach. The following items are a summary of the activities:

In 2017, SAS participated in the Hanford VPP Champions that represents every major Hanford contractor and several sub-contractors. The purpose of the group is to share and help each other plan and conduct activities supporting VPP. Several safety program and practices in regard to Chemical Management and implementation of the Global Harmonization Initiative were shared with Bechtel National in 2017. SAS participates in Centerra Safety monthly conference calls.

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The Patrol Training Academy's staff is providing specialized driver safety training on the Emergency Vehicle Operations Course (EVOC) to CH2M Hill Plateau Remediation Company (CHPRC), Washington River Protection Solutions (WRPS) and Pacific Northwest National Laboratory (PNNL) personnel and others who drive government vehicles as part of a Hanford Traffic Safety Committee initiative.

SAS was involved in the planning and conduct of the 21st annual Safety Connect (EXPO). Safety Connect is an exhibition of information, equipment, supplies, and success stories from vendors and organizations that promote the health and safety of workers both at home and at work, which was attended by over 35,000 people of all ages. Safety Connect is one way to foster safety as a value in employees' lives is to provide ways to share safety and health related lessons learned and success stories.

6.0 MANAGEMENT LEADERSHIP

The SAS Management Team continues to emphasize that work must be performed safely and that there is no need to hurry to complete a task. This is further emphasized through MSA-wide goals *Zero Accidents* and *Do Work Safely*.

The MSA commitment to safety is set forth in MSC-PLN-WP-003, *Integrated Environment, Safety Management System Description* and MSC-PLN-WP-32219, *10CFR851 Worker Safety and Health Program Description*. SAS management formally set forth safety expectations in SAS-5874, *Environmental, Safety, and Health Program* and HNF-IP-1292, Section 1.14 *Patrol Safety*. Management demonstrates their commitment through recognition of employees for safe acts in daily work activities, monitoring of site safety performance, and committing resources to safety committees. Above all, management empowers employees with Stop Work responsibility when a question is raised prior to or during work activities regarding safety. Every Stop Work event resulted in improvements to the activities/processes where the concerns were raised.

7.0 EMPLOYEE INVOLVEMENT

Workers and supervisors from the responsible work groups are actively involved in the development and review of work packages, Standard Operating Procedures, etc. As part of the enhanced work planning process, line personnel involvement in development of work instructions is essential to ensure that work can be performed as written and performed safely. In accordance with MSC-PRO-WC-12115, *Work Management*, jobs must be walked down by the work group(s) prior to having the document approved by the hazard controls

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specialists.

SAS personnel are actively involved in MSA safety committees and task teams that include:

- SAS Employee Zero Accident Council
- Hanford Guards Union Zero Accident Council
- Emergency Services Safety Representative Monthly Meeting
- HP Safety Summit
- Hanford Fire Department Safety Summit
- SAS Annual Injury Review
- Presidents Zero Accident Council
- Presidents Zero Accident Council Planning Committee
- MSA VPP Core Team
- Hanford Site Respiratory Protection Program Committee
- Case Management Committee
- Hanford Site Case Management Committee
- Hanford Occupational Health Provider (HOHP) Quarterly Meeting
- Hanford Site Case Management Committee
- MSA Industrial Hygiene Huddle
- MSA All Chair Employee Zero Accident Council Meeting
- HPMC Occupational Medical Services Interface Meeting
- MSA Ergonomics Committee

SAS personnel are actively involved in Hanford site multi-contractor safety committees that include:

- Hanford VPP Champions
- Hanford Traffic Safety Committee
- Hanford Aviation Safety Committee
- Chronic Beryllium Disease Prevention Program (CBDPP)
- Hanford Site Fall Protection Committee
- Hanford EXPO Development Team
- Hazardous Energy Control Board

8.0 WORKSITE ANALYSIS

Analysis of new facilities and planned work

Analysis of hazards for new facilities occur at various stages of the process. The activities are driven by the following procedures: MSC-PRO-SEC-396, *Planning Construction Projects in Security Areas*, and MSC-PRO-CONST-14990, *Construction Management*.

MSC-PRO-WC-12115, *Work Management* continues to be used for planned work which includes specific hazard analysis steps addressed in MSC-PRO-WP-079, *Job*

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Hazard Analysis.

Safety & Health surveys by Safety & Health professionals

The baseline surveys are updated through annual completion of monthly hazard assessments documented in accordance with SAS-5874, *Environmental, Safety & Health Program* by the SAS Safety and Health staff. MSC-PRO-WP-17916, *Industrial Hygiene Baseline Hazard Assessments* documents the process used for identifying potential hazards, analyzing these hazards, and implementing hazard mitigation. Data from individual area hazard assessments is entered into both the SAS Hazard Baselines, and a site-wide industrial hygiene database to ensure that baseline information is maintained current to area conditions and/or operations. SAS Hazard Baselines are also utilized to create the Craft Specific Hazard Analysis (CSHA) with accompanying Chemical Use Attachments (CUA). The baseline hazard assessment is posted on the SAS Safety Central for easy access by facility management in establishing hazard control measures for hazards identified.

System for employee to give notification of hazards to management

A number of avenues are available for employee reporting of hazards which include the management chain of command, open door policy, HGU Safety Representatives, the formal Employee Concerns Program, SAS ES&H group, and the Issue Identification Form (IIF) which is part of MSA's corrective action management system (CAMS). SAS encourages workers including subcontractors to implement a stop work culture which is reinforced by work instructions and line management. SAS management embraces the site-wide DOE-0343, *Stop Work* procedure where work is stopped when there is an unsafe condition or unexpected event occurs that requires the need to step back, re-evaluate the situation, and make necessary adjustments.

Accident/incident investigation

MSC-PRO-WP-077, *Reporting, Investigating, and Managing Health, Safety and Property/Vehicle Events* is in place and guides us through the process for reporting, investigating, and managing Occupational Injury/Illness (OII) cases or events that have safety or health significance and for complying with U.S. DOE Directive DOE O 231.1B, *Environment, Safety and Health Reporting Requirements*. This procedure also includes documenting vehicle and property damage incidents. Line management is responsible for preparing and investigating all injury, vehicle accident and property damage case reports. Corrective actions based on injury/accident investigations are tracked and discussed at the Safety Council meeting. Feedback is provided to employees through EZAC meetings, Annual injury reviews and Safety Start meetings.

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Trend Analysis

MSA Safety Culture and Analysis tracks occupational injury cases, such as first aid, recordable, restricted, and day's away injury cases, in order to identify adverse trends. Trend analysis of the cases are used to develop areas for increased awareness activities, required Weekly Safety Start discussions, and determine where an increased SAS Environmental Safety & Health (ES&H) presence may be appropriate. Other indicators as to the strength of the safety and health culture are also tracked, such as employee achievements in completing voluntary safety training courses or certifications, number of and types of first aid injuries, and number of safe work hours achieved.

Effectiveness of VPP is also demonstrated through trend analysis which continually evaluates the performance of the VPP and ISMS Programs. Safety performance is also discussed at the quarterly MSA Safety, Security & Emergency Board of Directors meeting.

SAS also utilizes a process for analyzing injury & vehicle accident data to incorporate in the SIP and other corrective action plans. The injury database is utilized and allows SAS to perform an analysis on the group's annual injuries and also allows us to consider other MSA injuries that may have a potential of occurring within SAS. The annual injury review occurs in January of each year and allows SAS to tap into front-line employees' field experience to develop new or improve existing safety initiatives and controls. This approach fosters authentic involvement through employees' creation of an action plan to eliminate injuries. This process has worked very well and is now utilized by the HFD and was pushed out to other groups in MSA this year.

9.0 HAZARD PREVENTION AND CONTROL

Access to Certified Professionals

SAS has a broad range of professional expertise, both full-time and contract resources, to draw upon within the support and operations organizations. Continuing professional development is supported to maintain areas of expertise. Currently there is a Certified Safety Professional (CSP), Certified Industrial Hygienist (CIH) and a Certified Laser Safety Officer directly supporting SAS. Other Certified Safety Professionals and Certified Industrial Hygienists are readily available within other MSA organizations. In addition, 24 HGU Safety Council members completed the OSHA 511 Safety course and one member maintains their OSHA 10 Hour Trainer Certification.

Eliminating/controlling hazards

SAS continues to develop controls for hazards in the following order:

- Elimination of process *and/or* material substitution
 - Engineering controls
 - Administrative controls
 - Personal Protective Equipment
-

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Internal lessons learned are discussed daily at the Line-ups, Plan of the Day meetings and lessons learned are disseminated across operational and support organizations. External lessons learned are regularly received from both the DOE Lessons Learned system, as well as from outside sources. Both internal lessons learned and key lessons learned from outside the SAS were evaluated and discussed at all-hands meetings.

Procedures for positive reinforcement and disciplinary action

Positive reinforcement is provided through department celebrations of achieving project performance based incentives, the Safety Recognition Award program and site safety goal achievements. Employees who do not comply with safety requirements are disciplined based on a graded approach as defined in MSA Standards of Conduct. Subcontract documents address SAS oversight and requirements when non-compliances are identified. Formal actions taken to enforce subcontractor compliance to MSA and SAS safety and health requirements are fully documented by SAS.

Preventive Maintenance

SAS equipment is cataloged in an electronic database and preventive maintenance is conducted and tracked on a monthly trend chart which is reviewed monthly by management.

Based on a review of the metrics maintained by Maintenance, it is evident that Preventive Maintenance (PMs) has a scheduling priority and employees are encouraged to complete their assigned PMs each month. PMs are an essential and vital element of the maintenance program and keeps equipment that is essential to site mission running smoothly without frequent breakdowns and catastrophic failures. No major changes have occurred in the program this past year.

Emergency Response Procedures

Drills and exercises continued to focus on demonstrating the readiness of Emergency and Protective Force Response Teams. A debriefing followed each event, drill or exercise to verify that the objectives were met and to identify any issues that need to be addressed. Quarterly emergency exercises have been conducted for personnel who staff the Emergency Operations and Technical Support Centers during emergency events.

Other organizations within MSA ensure the site hazards survey and hazards assessments are updated annually to reflect changes in the sites operations and hazards. Associated site procedures are modified accordingly.

Medical Program that provided timely response

The medical program provides employee pre-employment and termination physicals and annual assessments as required by job duties. The program continues to be effective in noting tasks or conditions where there is a risk of injury and providing mechanisms for

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employees to improve their working conditions. The medical program is performed by HPMC, under a separate contract with DOE-RL.

10.0 SAFETY AND HEALTH TRAINING

Employees

SAS continues to require employees and subcontractor personnel to complete training requirements commensurate with their positions or work activities and as required by contract and regulatory requirements. SAS utilizes the Enterprise Learning Management (ELM) system to notify managers and employees when refresher and requalification training is due. Lessons learned from internal and external events or issues typically provide opportunities to re-evaluate the adequacy of personnel training and are used to improve training packages. When necessary, briefings on specific health and safety concerns are developed and presented to the affected personnel. SAS training program for Protective Force is governed by the DOE National Training Center to ensure that the level of training and the necessary peer-mentoring in the field is implemented to ensure work can be performed safely.

Supervisors/Manager

SAS managers and supervisors continue to receive safety, environmental safety, emergency preparedness and ISMS training as part of their Hanford General Employee Training (HGET). Other training requirements may be required based on their responsibilities. MSA-wide special emphasis courses were attended by SAS management on Beryllium Work Planning and Risk Communication.

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**VPP ANNUAL REPORT
SUPPLEMENTAL
WORKSHEET**

Review: January 1 -
December 31, 2017

Site Contractor Name/Acronym: Safeguards and Security / SAS

Site Name: Hanford

Company President/Manager: Bob Wilkinson

Company Address:

MSA

PO Box 650

Richland, Washington

99352

**Injury Incidence/Lost Workdays Case Rate (contractor (participant) employees and staff
augmentments)**

Calendar Year	Hours Worked	TRC Cases	TRC Rate	DART*Cases	DART*Rate
(Year-1) 2015	603,494	2	0.66	2	0.66
(Year-2) 2016	612,021	5	1.63	4	1.31
(Year-3) 2017	614,135	4	1.30	1	0.33
3-Year Total	1,829,650	11	1.20	7	0.77

BLS for NAICS** # 92212

10.2

5.5

**Injury Incidence/Lost Workdays Case Rate (subcontractors) [No. injuries, hours included in
total above]**

Calendar Year	Hours Worked	TRC Cases	TRC Rate	DART*Cases	DART*Rate
(Year-1) 2015	0	0	0	0	0
(Year-2) 2016	0	0	0	0	0
(Year-3) 2017	0	0	0	0	0

3 Year average, SAS is at 12% of the NAICS TRC rate

3 Year average, SAS is at 14% of the NAICS DART rate

* Days Away, Restricted or Transferred ** North American Industry Classification System

Number of Contractor Employees:
319

Number of Subcontractor Employees: None

Union Representative

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Contractor VPP POC

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Appendix C
Mission Support Services
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DEPARTMENT OF ENERGY

MISSION SUPPORT ALLIANCE, LLC

MISSION SUPPORT SERVICES

VOLUNTARY PROTECTION PROGRAM ANNUAL SELF-
ASSESSMENT

CALENDAR-YEAR 2017

Appendix C--Mission Support Services
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1.0 SUMMARY

Mission Support Services (MSS) received Department of Energy (DOE) Voluntary Protection Program (VPP) Star recognition in September 2011. In September 2014, DOE Headquarters (HQ) VPP Team performed a VPP Star recertification assessment, which resulted in the recommendation that MSS continue in the DOE-VPP as a *conditional* Star participant with a number of improvement actions identified.

On March 3, 2016, the DOE-VPP Team concluded a two week onsite VPP assessment of the MSS Star site to verify the effectiveness of improvement actions. The Team recognized MSA's efforts to strengthen the partnership between managers and workers, while improving worker safety, safe work environments and communication. Therefore, the Team recommended continued participation in the DOE-VPP at the Star level, without conditions. DOE-VPP approved the VPP Star recommendation on June 16, 2016.

The MSS Star Site consists of the following MSA organizations:

- MSA President's Office
- Independent Oversight
- Communications & External Affairs
- Legal
- Human Resources
- Environmental, Safety & Health
- Fire Protection Services
- Emergency Management Program (EMP)
- Information Management
- Portfolio Management
- Business Operations
- Site Services & Interface Management
- Public Works
- Conduct of Operations
- Engineering

Critical attributes of MSS's successful processes are as follows:

- Incorporation of VPP tenets to ensure organizational and personnel aspects of safety and health performance are addressed.
- Implementation of an Integrated Safety Management System (ISMS) that ensures safety and health will be reflected in every plan and decision.
- Assessment-driven continuous improvement in all phases of work planning and execution, ensuring weaknesses are found and fixed before problems occur.
- Pursuit of the MSA goals *Target Zero* and *Do Work Safely* through tracking and communication of safety-related metrics.

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Key statistics are shown in Table 1. For more detailed discussion of statistical information, see the *VPP Annual Report Supplemental Worksheet* at the end of this report.

Table 1. Key MSS Statistics for 2017

Category	Statistic
Average number of employees during the year	1,810
Total man hours worked	3,308,279
NAICS Code / Rate for Year	561
Total Recordable Case (TCR) Rate	2.2
Days Away, Restricted, Transferred (DART) Rate	1.3
MSS Number of OSHA TRC Injuries	10
TRC Rate	0.68
MSS Number of DART Injuries	6
DART Rate	0.44

2.0 CONTINUOUS IMPROVEMENT

Analysis of Injuries Becomes Employee Communications

Injuries that occur within MSS organizations are analyzed, and trends are noted. Safety performance metrics (Attachment 1) are published monthly and available for all employees to access through MSA’s online Contractor Assurance System (CAS), Conduct of Operations’ dashboard, and Presidents’ Zero Accident Council (PZAC) meeting minutes. These statistical charts are often topics for Monday morning back-to-work safety discussions and agenda items for safety meetings. They are also posted on Employee Zero Accident Council (EZAC) safety boards located throughout MSA facilities.

Other means for injury/vehicle incident-related communication include the MSA Notification System (MSANS) and the Daily Ops Report; both methods are available to employees at their request. MSANS sends a text message followed up by an email notifying subscribers of injuries and events on a real-time basis. The Daily Ops Report provides brief details of work related injuries/vehicle accidents that occurred the prior day, active stop works, and other Hanford contractor events that have the potential to affect onsite activities, such as planned road closures, drills, restricted access to areas, etc. This information is intended to be shared daily at plan-of-the-day or other meetings.

Weekly Safety Starts are prepared and distributed through a general distribution message to all employees. Topics for these documents are typically derived from company safety initiatives, safety focus areas that need increased employee awareness, emerging injury trends, lessons learned, or 24/7 safety practices. The intent is to stimulate Monday morning conversations that prompt employees to refocus on situational awareness for the upcoming week. Attachment 2 contains two examples of Weekly Safety Starts that were distributed and discussed at all employee back-to-work meetings.

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Safety & Health Improvement Plan (SIP)

The calendar year (CY) 2017 Safety Improvement Plan (SIP) was developed at the company level to address cross-cutting safety and health (S&H) safety initiatives that apply to all MSA organizations. These global items were identified earlier in the MSA SIP section of this report.

Two MSS workgroups expanded their SIP actions by analyzing results of their own trimester VPP self-assessments, Integrated Safety Management System (ISMS) Surveillance Team observations, S&H management assessments performed during the year, and injury trends.

Specific activities and progress toward achievement of these initiatives within MSS organizations are described below:

Management/Leadership Commitment

Improve mitigation of hazards in the work area, office environment and utility vehicles.

Increase management's engagement in steady communications with safety leaders.

Result: These SIP goals were met within MSS organizations. The MSA Office of the President maintains expectations of senior management visibility and safety communications within the workforce. Management was invited to monthly safety meetings, conducted Weekly Safety Starts, and attended meetings with group safety leaders and EZAC Chairpersons. During the year, senior management actively participated in PZAC and organizational safety meetings, Weekly Safety Starts, work area inspections, safety lunches, Employee Job Task Analysis (EJTA) updates, and safety log status. Safety was a primary topic of discussion led by the MSA President and/or Chief Operations Officer (COO) at the quarterly all-manager and all-employee meetings.

MSS actions for this improvement item included the following:

- VPs and management leading discussions on safety hazards in the work place (e.g., ongoing construction in Federal Building parking lot, weather related issues, office safety inspections, etc.) at safety meetings, PZAC and EZAC, and all-employee meetings
- Increased management participation in safety recognition events
- Scheduling all EMP managers to lead one quarterly safety inspection in 2017
- VPs and Deputy VPs attending EZAC meetings and trimester safety luncheons
- Rotating group participants when conducting monthly office inspections
- EZAC Chairs and personnel performing regular safety and health inspections to mitigate hazards in the workplace and including safety professionals
- Cleaning and inspecting government vehicles at the end of every shift

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Employee Involvement

Improve work area conditions and increase employee participation by incorporating effective housekeeping practices as an ongoing operation: not just a “hit-and-miss” activity or only done at the end of a shift.

Result: This SIP goal was met within MSS organizations. Management encouraged employees to attend EZAC meetings, as well as to participate in the Performance Incentives Program for Safety (PIPS). PIPS includes conducting work area inspections, attending safety meetings, providing safety topics, participating in campaigns, and participating in all levels of safety. Several employees conducted safety and health inspection module presentations during EZAC meetings or Weekly Safety Starts.

MSS actions for this improvement item included the following:

- Utilizing a Weekly Safety Start e-mail as required reading (enforced by e-mail voting feature) for pertinent safety topics or lessons learned
- Employees presenting Weekly Safety Starts and safety topics at other meetings
- Including a housekeeping checklist with the trimester PIPS tracking sheet
- Facilitating Weekly Safety Start discussions on performing safety and health inspections using safety inspection modules
- Integrating housekeeping practices into daily activities as reflected in inspection reports, Weekly Safety Start discussions, and VPP trimester evaluations
- Inspecting work areas to identify deficiencies for correction or elimination of hazards and documenting on inspection reports and/or safety logs
- Incorporating housekeeping practices into daily routine during both janitorial shifts, including completion of the janitorial closet quarterly inspection

Worksite Analysis

Improve overall understanding of implementation of MSC-OTHER-SP-1200369, MSA General Hazard Analysis (GHA)

Result: This SIP goal was met within MSS organizations. During the 2016 holiday season, MSA engaged in a company-wide ‘Safety Reset.’ This event was an opportunity for all to take a step back, evaluate how to perform work as safely as possible, and provide feedback for improvement areas. As a result of the ‘Reset,’ many work groups kicked-off CY 2017 by focusing on specific activities that helped them work even more safely. Common actions included reviewing the GHA and their EJTA to better understand the hazards and hazard controls for their respective work assignments. Situational awareness was the focus on several communications, which encouraged employees to maintain a questioning attitude and think about the task and the hazards, as well as to be constantly aware of their environment and any changes to it. Some groups enlisted the support of safety professionals when leading discussions on hazard analysis and how to determine appropriate hazard controls.

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MSS actions for this improvement item included the following:

- Incorporating knowledge and understanding of GHA lines of inquiry (LOIs) into the third trimester interview questions. Results demonstrated goal achievement by improved scores during the third VPP trimester evaluation.
- Completing ergonomic assessments within specific work groups and addressing concerns in a timely manner (i.e., ordering ergonomic equipment).
- Scheduling safety professional(s) to present GHA to work group as a safety topic.
- Initiating meetings with a 'GHA Moment.'
- Discussing GHA during monthly EZAC meetings, which includes a signed roster and meeting minutes.

Hazard Prevention and Control:

Continue to improve knowledge and implementation of Hierarchy of Controls (HOC)

Result: This SIP goal was met within MSS organizations. A number of communications were made available and delivered to employees and EZAC Chairpersons, including HOC posters, Monday Morning Safety Starts, Safety Sleuth challenge questions, and communications at EZAC meetings.

MSS actions for this improvement item included the following:

- Incorporating HOC LOIs into the third trimester interview questions. Results demonstrated goal achievement by improved scores during the third VPP trimester evaluation.
- Distributing the HOC poster for displaying on Safety Boards.
- Ordering ergonomic desks, mats, keyboards, and monitors, etc. when a concern was brought to attention.
- Reviewing HOC at Monday morning back-to-work meetings and displaying posters in conference rooms to stimulate HOC conversations.

Safety and Health Training:

Increase employee awareness of the safety inspection process to improve attention to hazard identification and mitigation.

Result: This SIP goal was met within MSS organizations. MSA implemented a safety inspection initiative by developing a series of modules that describe the process for conducting safety and health inspections. Each month, an inspection topic was highlighted in the Weekly Safety Start, in conjunction with a presentation and indepth discussion with EZAC Chairpersons at the monthly All-Chair meeting. All inspection modules are located on the VPP website for further use and distribution, as applicable.

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MSS actions for this improvement item included the following:

- Ensuring personnel attended safety and health inspections presentations, participated in work group discussions, and signed rosters.
- Attending a safety and health inspection session presentations for each of the eight modules and signing an attendance roster.
- Incorporating knowledge and understanding of safety inspection LOIs into the third trimester interview questions. Results demonstrated goal achievement during the third VPP trimester evaluation.
- Continuing quarterly building inspections that include employees on the inspection team.

VOLUNTARY PROTECTION PROGRAM (VPP) ANNUAL SELF-ASSESSMENT

During CY 2017, MSS organizations performed their annual VPP self-assessments by conducting three trimester evaluations. LOIs derived from the five tenets of VPP were used to interview a cross-section of employees within all MSS organizations. Approximately 25% of the MSS employees were interviewed. Documents and associated information were also reviewed to support verification of VPP implementation. An overall rate was determined based on a 0 – 5 scale, with 5 indicative of the highest level of implementation of the VPP. Results for the year are as shown in Table 2:

Table 2. CY 2017 VPP Trimester Evaluation Results

Trimester	Rate
First Trimester	4.6/5.0
Second Trimester	4.7/5.0
Third Trimester	4.7/5.0
AVERAGE	4.7/5.0

The scope of the annual VPP review included all functions, facilities, and activities managed by MSS organizations. The set of tailored criteria included SIP action items and the MSA integrated evaluation plan (IEP) schedule, which were used to evaluate the S&H system and effectively assess the elements and tenets of VPP.

Assessment data indicated excellent employee participation in VPP that was sustained throughout the year. Assessment results, including “good practices” and lessons learned data, were discussed with both MSA senior leadership, the individual vice presidents with their respective VPP points of contact (POCs), and EZAC leadership.

The feedback, which was provided three times during the year, allowed organizations to recognize strengths and weaknesses immediately, thus prompting revision of safety improvement plans or development of corrective action plans as needed for sustainability or enhancement of program implementation. Assessment data for MSS organizations was posted on the MSA VPP website and is accessible by all employees.

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3.0 MSS VPP ACCOMPLISHMENTS

The following accomplishments within MSS organizations were recognized during CY 2017:

- Sustained over 70% employee participation in the VPP/SIP/safety inspection word search campaign. Identified exceptional and good practices during ISMS Surveillance in the areas of worker involvement, feedback and improvement, worksite analysis, and work control.
- Demonstration of management's clear understanding of staff training/qualifications requirements. Also, management ensured personnel training requirements were current.
- Maintained training records readily available for review and communication to the other Hanford contractors (OHCs).
- Kept training records and documentation up to date, and recognized posting information on the facility training status board as a noteworthy practice.
- Updated and implemented "*MSA Custodial Services Work Assignment*", Rev 3, for Floor Services skill-based work assignments, to provide clear direction and information required for safe work performance.
- Successfully implemented new technologies and engineering controls to improve safe work performance of radiological control technicians (RCTs).
- Implemented the use of personal global positioning system (GPS) trackers for Public Safety and Resource Protection (PSRP) personnel performing remote work assignments, enhancing the safety of the worker.
- Improved the Industrial Hygiene Equipment Services Organization's recordkeeping practices, to ensure consistent retrieval of records by all personnel.
- Conduct of a two-day safety summit at Hanford Fire Department, which included delivery of job-specific safety presentations, as-well-as breakout sessions to discuss potential safety improvements.
- Provided immediate feedback to senior management about VPP trimester evaluations.
- Self-identified 892 issues and/or opportunities for improvement (OFIs) and tracked them until completion through MSA's corrective action management system (CAMS).
- Reported 287 safety ideas/issues in the safety logs.
- Coordinated 600+ employees participating in 523 S&H inspections.
- Fixed safety issues on-the-spot, either recording on the applicable safety log, or documenting on an Issue Identification Form (IIF) for further processing in CAMS.

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- Sponsored 10 MSS employees' attendance at the Voluntary Protection Program Participants' Association (VPPPA) Region X Northwest S&H Summit in Spokane, Washington.
- Sponsored 10 MSS employees' attendance at the National VPPPA S&H Conference in New Orleans, Louisiana.
- Sponsored MSS employee presentations—twice at the VPPPA Region X Northwest S&H Summit and four times at the National VPPPA S&H Conference.
- Sponsored an MSS Bargaining Unit individual serving as the Committee Chairman on VPPPA Region X Board.

4.0 VPP APPLICATION

Work scope changes since the submittal of the original VPP application include the following:

Workgroup added in 2011 – 2012:

- Public Safety and Resource Protection
 - Meteorology & Climatology Services
 - Seismic
 - Ecological Monitoring
 - Environmental Surveillance
 - Cultural & Historic Resource Program
 - Radiological Site Services

One workgroup eliminated during CY 2014:

- Waste Sampling and Characterization Facility (WSCF) - Sample analysis scope removed from MSC
- Closure transition plan initiated April 2014
 - 60 subcontracted staff augmentation (RJ Lee) bargaining unit personnel dispositioned effective September 30, 2014

Organizational changes that occurred during CY 2016:

- Work Scope Realignment
 - Reorganization of workgroups at the Senior Leadership level
 - EZACs realigned, as applicable
 - Effective October 1, 2016, Lockheed Martin sold managing direction to Leidos Corporation

Organizational changes that occurred during CY 2017:

- MSA President Bill Johnson was replaced by Robert Wilkinson
- COO Bob Wilkinson was replaced by Amy Basche

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5.0 GOALS AND OBJECTIVES

CY 2017 goals and objectives were developed to continuously improve programs and foster new initiatives for both management and employees to achieve the desired goal of zero injuries and illnesses and continuously improve the safety culture. The following is a brief summary of each goal and the results obtained:

- The TRC and DART rates for MSS organizations continued trending downward during the past year after slightly increasing during CY 2016. The downward trend could be attributed to the following efforts:
 - Increased heat stress monitoring during record-high temperature conditions
 - Emphasis on, and increased participation in, voluntary “stretch and flex” activities
 - Increased communications regarding environmental hazards and changing weather conditions
 - Increased emphasis on training prior to conducting facility inspections
 - More stringent facility inspections conducted
 - Engaged safety professionals, Hanford Atomic Metals Trade Council (HAMTC) Safety Reps, and EZACs to evaluate and continually encourage safe work of peers in work groups
 - Conducted company-wide campaigns (organized by VPP Core Team) to increase knowledge and safety awareness of workers
- DOE/EM TRC Goal: Rate of <1.1 was achieved as MSS TRC rate for CY 2017 was 0.68.
- DOE/EM DART Goal: Rate of <0.60 was achieved as the MSS DART rate for CY 2017 was 0.44
- MSS organizations were successful in achieving the above goals established for CY 2017
- Safety performance within most of the areas has been strong. There was a reduction in TRC and DART rates between CY 2016 and CY2017

CY 2018 Goals and Objectives include the following:

- With the objectives of *Zero Accidents* and *Do Work Safely*, MSS organizations’ goal is to continue to reduce TRC and DART rates.
- MSA is developing a CY 2018 company-level SIP based on opportunities for improvement observed during the DOE-VPP Team evaluation, trimester VPP self-assessments, management assessments, and independent oversight assessments. The safety vision and goals, along with the SIP actions, will be applicable to all MSA organizations. MSS organizations will be encouraged to supplement any or all of the improvement actions with focus on their specific workgroups.

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6.0 MENTORING AND OUTREACH

Employees within MSS organizations participated in the following mentoring and outreach activities during the calendar year:

- Provided executive management and support of the planning and execution of 2017 Safety Connect, a community event held at the Trade, Recreational & Agricultural Center in Pasco, Washington. The two-day event attracted over 30,000 attendees and was comprised of community residents and Hanford contractor employees.
 - MSS employees managed the vehicle accident demonstration, bicycle rodeo, and transportation of radioactive waste demonstration.
 - MSS employees designed and manned several safety-related interactive booths.
- Served as guides for public tours of historical areas and present day clean-up activities of the Hanford Site
- Attended the Region X and National VPPPA Conferences (10 employees to Region X, 10 at National)
- Delivered presentations and led discussions at VPPPA Conferences
- Sponsored an MSS employee as the VPPPA Region X Chairman
- Actively participated in the Energy Facility Contractors Group (EFCOG) Safety Culture sub workgroup
- Sponsored two Special Government Employees (SGEs) from MSS organizations to assist Occupational Safety & Health Administration (OSHA) with VPP onsite reviews and three MSS SGEs to perform annual report reviews.
- Chaired and served on several Hanford site wide committees including:
 - Traffic Safety Committee
 - Hanford Chronic Beryllium Disease Prevention Program Committee
 - Hanford Site Fall Protection Committee
 - Hanford Electrical Safety Committee
 - Hanford Ergonomics Committee
 - Hanford VPP Champions Committee
- Participating in several community activities
 - Junior Achievement Mentorship
 - 4-H
 - Boy & Girl Scouts Leadership
 - March-of-Dimes fundraisers
 - United Way
 - Strides for Dance
 - Presenting and conducting hands-on activities while visiting at-risk students as part of the After School Matters Program

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7.0 MANAGEMENT LEADERSHIP

The management team within MSS organizations continues to emphasize that work must be performed safely by placing emphasis on meeting the primary goals of *Zero Accidents* and *Do Work Safely*. Their commitment to safety is set forth in multiple documents, including:

- MSC-POL-WP-5053, *Mission Support Alliance Policy for Environment, Safety, Health and Quality*
- MSC-PLN-MP-003, *Integrated Environment, Safety, and Health Management System Description*
- MSC-PLN-WP-32219, *MSA Worker Safety and Health Program*

Safety professionals, including those with certified safety professional (CSP) and certified industrial hygiene (CIH) certifications, are matrixed from the central Worker Protection Group and aligned with management teams and workgroups they support. They have been effective in providing assistance when performing safety inspections, addressing safety log and emerging safety issues in a timely manner, and maintaining a partnering relationship between workers and safety staff. Subject matter experts (SME), who serve as an authority for a particular safety area, are also provided by the Worker Protection Group, as needed.

Vice Presidents and management within MSS organizations were regularly on the agenda and participated in the monthly PZAC and EZAC meetings by presenting safety topics, reporting on their organizations' safety efforts, sharing "good news" stories, and/or leading discussions on injuries and subsequent lessons learned to prevent recurrence.

Various organizations within MSS conducted "safety summits" or "focus days." These forums were led by the organizations' vice president and included, at a minimum, employees from the bargaining unit, safety professionals aligned with the organization, HAMTC safety representatives, supervisors, and the Environmental Safety & Health (ES&H) vice president. Emerging safety concerns, injury rates and trends, and aging safety log items were among some of the topics discussed. Actions and/or resolutions were collectively determined during these 1 to 2-day events.

MSS organizations' management encouraged and allowed employees to participate in various safety-focused activities, such as safety committees, safety meetings, and safety training/assessments, as well as support of the OSHA SGE Program.

MSS organizations' management demonstrated recognition to their employees by participating in PIPS, awarding of "on-the-spot" safety tokens, and hosting safety lunch celebrations. Both the awarding of tokens and holding safety lunches are a means for employees to receive recognition of safe behaviors and/or performance.

First-line managers maintain the responsibility for conducting pre-job briefings to ensure those involved with a work activity are aware of the hazards and the controls required to

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prevent or mitigate the hazards. Facility managers are responsible for the safety of work in their facilities and are accountable for investigation of events and development of corrective actions aimed at preventing recurrence.

8.0 EMPLOYEE INVOLVEMENT

Employees within MSS organizations were strongly engaged in VPP and safety initiatives, such as:

- Participating in the 2017 word-search campaign, which included questions pertaining to VPP, the SIP, and safety inspection modules. Over 70% of the employees participated in the campaign.
- Attending Monday morning back-to-work safety briefings. All employees were expected to attend a back-to-work meeting to discuss a specific safety topic selected to promote safety awareness and encourage employees to refocus their efforts of safety consciousness for the upcoming work week.
- Participating in the “Safety Sleuth” challenge. This activity consisted of a weekly online safety-related quiz. Questions were typically aligned to current safety issues and answers found in MSA documents and/or procedures. On average, over 300 employees participate in the “Safety Sleuth” challenge each week.
- Reducing slips, trips and falls by using company-supplied ice and snow foot-traction devices (e.g., Yak Traks and Spare Spikes). Additionally, employees were encouraged to attend slip simulator training.
- Maintaining over 40 EZACs, led by a volunteer/elected Chair and often a Co-Chair, who are employees of that work group. EZAC meetings are open to all employees of a work group.
- Attending the monthly EZAC Chair meetings. EZAC Chairpersons and Co-Chairs are invited to attend meetings where roles and responsibilities, lessons learned, and general safety information are discussed. Information attained during these meetings can be further distributed throughout individual workgroups. This group has grown in meeting attendance during the past year
- Engaging MSS leadership at EZAC meetings. MSS vice presidents were regularly on the agenda to discuss their organization, interfaces within MSA and other Hanford contractors, structure and operation of their EZAC(s), their safety statistics, and what safety improvements and initiatives they have undertaken during the past year.
- Presenting safety topics at PZAC and EZAC Chair meetings throughout the year.

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9.0 WORK SITE ANALYSIS

Baseline surveys are updated through annual completion of monthly hazard assessments by S&H staff. Data from individual area hazard assessments are entered into a sitewide industrial hygiene database to ensure that baseline information is updated to area conditions and/or operations. The baseline hazard assessment is posted for easy access by facility management in establishing hazard control measures for hazards identified. The Work Management organization has added resources to work planning and control, releasing work documents at least a week prior to scheduling the work. Field work supervisors (FWSs) and workers have time to review and understand the instructions in the work documents. Several mechanisms for routine hazard assessment continue to be maintained by MSS organizations. The S&H Worker Protection organization performs quarterly site walkthrough inspections and annual hazard assessments, which are used to update the hazard assessment database.

The following are a number of avenues and processes that are available to employees for reporting hazards:

- Management chain-of-command
- Open Door Policy
- HAMTC Safety Representatives
- MSS Organizations' S&H Professionals
- Safety issues process (safety logs)
- Issue Identification Forms
- Stop Work
- Employee Concerns Programs

MSS strongly encourages employees to exercise their right to stop work per the approved Hanford Site Stop Work Procedure. This practice was greatly embraced and is practiced throughout MSS workgroups.

Line management is responsible for preparing and investigating all injury case reports with the assistance of Worker Protection safety professionals and HAMTC Safety Representatives.

Individual organizations track occupational injuries to identify adverse trends. Types of occupational injury cases include: first aid, recordable, restricted, and "days away from work." Trend analyses of the cases are used to develop areas for increased awareness activities, for recommended Weekly Safety Start discussions, and to determine where an increased safety and health presence may be appropriate.

Effectiveness of VPP is also demonstrated through trend analysis, which continually evaluates VPP performance. Additionally, as employees complete mandatory annual Hanford General Employee Training (HGET), an optional VPP perception survey is provided. All results are captured and monitored.

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10.0 HAZARD PREVENTION AND CONTROL

MSS organizations have a broad range of professional expertise, both full-time and contract resources, within the support and operations organizations. Continuing professional development is supported to maintain areas of expertise. Currently, CSPs and CIHs are matrixed to MSS organizations from the central Worker Protection Group. MSS organizations continue to develop controls for hazards in the following order:

- 1 Elimination
- 2 Process *and/or* Material Substitution
- 3 Engineering Controls
- 4 Administrative Controls
- 5 Personal Protective Equipment

Internal lessons learned are discussed at plan-of-the-day meetings, Monday morning back-to-work meetings, staff meetings, etc. Lessons learned are also disseminated across operational and support organizations. External lessons learned are regularly received from the DOE OPEX Share (Lessons Learned) system, as well as from outside sources. Both internal lessons learned and key lessons learned from outside MSS organizations are evaluated and discussed at all-hands meetings. Positive reinforcement is provided through celebrations of achieving organizational performance based incentives, the Safety Recognition and Awareness Program, and site safety goal achievements.

MSC-POL-HR-11385, *Standards of Conduct*, defines the disciplinary process for employees who do not comply with safety requirements. Subcontractor documents address MSA oversight and requirements when instances of non-compliance are identified. Formal actions taken to enforce subcontractor compliance to MSA safety and health requirements are fully documented.

MSS organizations' equipment is cataloged in an electronic database, and preventive maintenance is conducted and tracked on a trending chart, which is reviewed monthly by management. Preventive maintenance is an essential and vital element of the maintenance program and keeps equipment that is essential to the site mission running smoothly to avoid frequent breakdowns and catastrophic failures. No major changes have occurred in the program this past year.

Drills and exercises continue to focus on demonstrating the readiness of Emergency and Protective Force Response Teams. A debriefing follows each drill or exercise to verify that the objectives have been met and to identify issues that need to be addressed. Quarterly emergency exercises have been conducted for personnel who staff the Emergency Operations and Technical Support Centers during emergency events.

The medical monitoring program provides employee pre-employment and termination physicals, and annual assessments as required by job duties. The program continues to be effective by completion of an EJTA that notes tasks or conditions where there is a risk of injury and provides mechanisms for employees to improve their working conditions. The

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medical monitoring program is managed by HPMC, under a separate contract with DOE Richland Operations Office (RL).

11.0 HEALTH AND SAFETY TRAINING

MSS organizations continue to require employees and subcontractor personnel to complete training requirements commensurate with their positions or work activities and as required by contractual and regulatory requirements. Managers and employees are notified by training coordinators when refresher and requalification training is due. Lessons learned from internal and external events or issues typically provide opportunities to re-evaluate the adequacy of personnel training and are used to improve training packages. When necessary, briefings on specific health and safety concerns are developed and presented to the affected personnel.

Managers and supervisors continue to receive safety, environmental, emergency management, and ISMS training as part of their annual HGET. MSA also requires mandatory manager and supervisor training requirements on beryllium work planning and risk communication.

MSS organizations regularly use the “New Employee Orientation Checklist.” The checklist provides an introduction of safety culture, VPP, ISMS, and EZAC structure to new employees and informs them of safety expectations within the company.

12.0 AWARDS AND RECOGNITION

MSS Star Site has been the recipient of the DOE-VPP Superior Star Award – 2012, 2013, 2014, 2016.

Employees within MSS organizations received awards during PZAC meetings. These awards consisted of the following:

- Kathryn Wheeler Safety Leadership Award
- President’s Life Saving Award
- Safety Honor Roll Award
- President’s Safety Team Award

Employees within MSS organizations also received various individual and group awards for their safety efforts throughout the year. These awards consisted of the following:

- On-the-Spot awards
- Group safety breakfasts/luncheons (PIPS awards)
- Honors Night

VPP ANNUAL REPORT SUPPLEMENTAL WORKSHEET

Review: January 1 - December 31, 2017

Site Contractor Name/Acronym: Mission Support Services / MSS
Site Name: Hanford Company President/Manager: Bob Wilkinson

Company Address: MSA
PO Box 650
Richland, Washington 99352

Injury Incidence/Lost Workdays Case Rate (contractor [participant] employees and staff
augmentations) [NOTE: This information does not include HAMMER or SAS]

Calendar Year	Hours Worked	TRC Cases	TRC Rate	DART*Cases	DART*Rate
(Year-3) 2015	2,965,517	9	0.61	7	0.47
(Year-2) 2016	3,137,294	13	0.83	8	0.51
(Year-1) 2017	3,308,279	10	0.60	6	0.36
3-Year Total	9,411,090	32	0.68	21	0.45

Injury Incidence/Lost Workdays Case Rate (subcontractors)

Calendar Year	Hours Worked	TRC Cases	TRC Rate	DART*Cases	DART*Rate
(Year-3) 2015	20,155	0	0.00	0	0.00
(Year-2) 2016	43,704	0	0.00	0	0.00
(Year-1) 2017	31,360	0	0.00	0	0.00
3-Year Total	95,219	0	0.00	0	0.00

Total Contractor & Subcontractors for 3 Years:

Hours = 9,506,309 TRC Cases = 32 TRC Rate = 0.67 DART Cases = 21 DART Rate = 0.44
BLS for NAICS** # 561 - TRC Rate = 2.2 DART Rate = 1.3

MSS is at 30% of the NAICS TRC Rate, and at 34% of the NAICS DART Rate

Number of Contractor Employees: 1810 Number of Subcontractor Employees: Varies

Union Representative Name: Ken Gray
Email: Kenneth_W_Gray@rl.gov Contact # 509-373-4729

Contractor VPP POC Name: Lanette Adams
Email: Lanette_K_Adams@rl.gov Contact # 509-373-9669

DOE VPP POC Name: Larry Yearsley
Email: Larry.Yearsley@rl.doe.gov Contact # 509-376-5104

* Days Away, Restricted or Transferred ** North American Industry Classification System

Appendix C - Attachment 1

Objective

Monitor the days away, restricted or transferred (DART) case rate for MSA employees and subcontractors

Measure

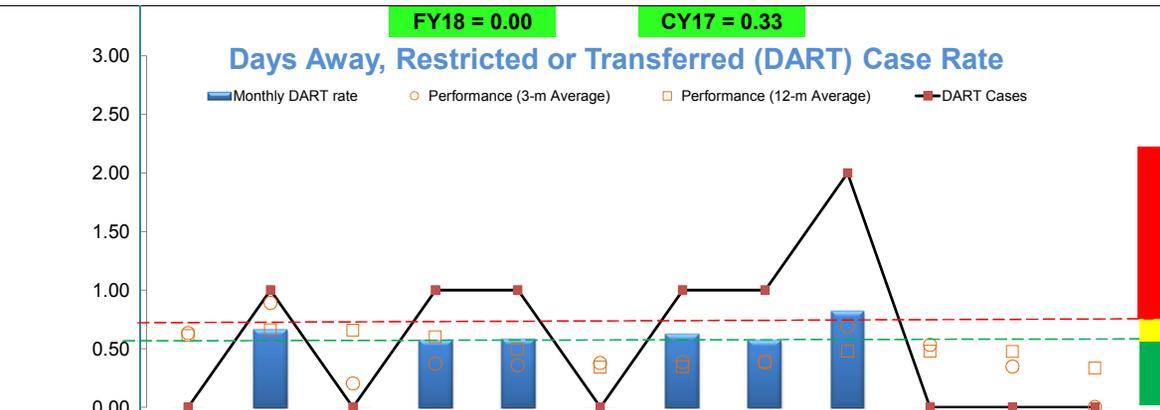
The DART rate is measured in accordance with OSHA guidelines for reporting and calculating. The rate is calculated by multiplying the number of Recordable cases by 200,000 and dividing by the total number of work hours.

Performance Thresholds

Adverse	> 0.75
Cautionary	0.6 - 0.75
Meets EM goal	< 0.6

Performance Data

	Jan-17	Feb-17	Mar-17	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17
Monthly DART Cases	0	1	0	1	1	0	1	1	2	0	0	0
Monthly DART rate	0.00	0.66	0.00	0.57	0.58	0.00	0.62	0.57	0.82	0.00	0.00	0.00
Performance (3-m Average)	0.63	0.89	0.20	0.37	0.36	0.38	0.38	0.38	0.69	0.53	0.35	0.00
Performance (12-m Average)	0.61	0.66	0.66	0.60	0.50	0.34	0.34	0.39	0.48	0.48	0.47	0.33



Specific Goal to Achieve

The MSA goal is to "do work safely" and achieve target zero by reducing injuries, accidents and incidents. The DOE-EM goal is to maintain a DART rate below 0.6.

Lagging Indicator Description

A lagging indicator is a record of past events. DART rate is a lagging indicator that may show a trend in serious injuries.

Performance Indicator Information

PI Owner:	Lanette Adams
Data Analyst:	Ron Wight
Data Source:	MSMET
PI Basis:	MSC-PLN-WP-003, Section 4.0
Date	1/11/2018

Analysis

During the month of December, there were no MSA injuries classified as DART.

2018 FYTD DART Cases: 0
2017 FY DART Cases: 10
2016 FY DART Cases: 13

Types of injuries MSA has experienced during FY 2018 that were classified as DART: N/A

FY18 (with 0 DART cases) continues to indicate an improving trend over the last 2 years. FY 2017 was an improvement over FY 2016, with 3 fewer DART cases. The DART rate for FY 2017 was 0.48, while the DART rate for FY 2016 was 0.62.

Action

Injury Prevention Actions:

- Monitoring First Aid cases to determine emerging trends and implementing awareness activities, as warranted.
- Communicating proactive injury prevention measures for winter related incidents, such as slips/trips/falls, issuing PPE, staging ice melt, etc.
- December PZAC meeting stressed vehicle safety and 24/7 winter driving conditions.
- Continuation of the safety inspection campaign to meet an MSA 2017 SIP goal of improving work area conditions and increasing employee participation in safety & health inspections. Weekly Safety Starts, videos, safety meeting topics and guidance opportunities have been and will continue to be provided to employees to expand knowledge and understanding of safety inspections.

Additional Info

None

Appendix C - Attachment 1

Objective

Monitor the number of First Aid cases and rate as a leading indicator to days away, restricted, or transferred (DART) and Total Recordable Case (TRC) rates for MSA and subcontractor employees.

Measure

The metric is a count of the number of First Aid cases per month, and the rate of cases. The rate is calculated by multiplying the number of First Aid cases by 200,000 and dividing by the total number of work hours for a given period.

Performance Thresholds

Adverse	n/a
Declining	n/a
Meets	n/a

Performance Data

	Jan-17	Feb-17	Mar-17	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17
First Aid Cases	6	11	7	8	9	14	8	11	11	17	10	8
Monthly First Aid Rate	4.66	7.27	3.25	4.60	5.25	7.45	4.97	6.22	4.51	11.76	5.23	4.78
Performance (3 month Average)	4.84	5.78	4.84	4.81	4.28	5.81	5.96	6.28	5.16	6.90	6.56	6.95
Performance (12 month Average)	5.64	5.89	5.65	5.34	5.20	5.26	4.99	5.09	5.23	5.66	5.72	5.68

Specific Goal to Achieve

The goal is to "do work safely" and achieve target zero by reducing injuries, accidents and incidents while encouraging reporting of all minor injuries.

Leading Indicator Description

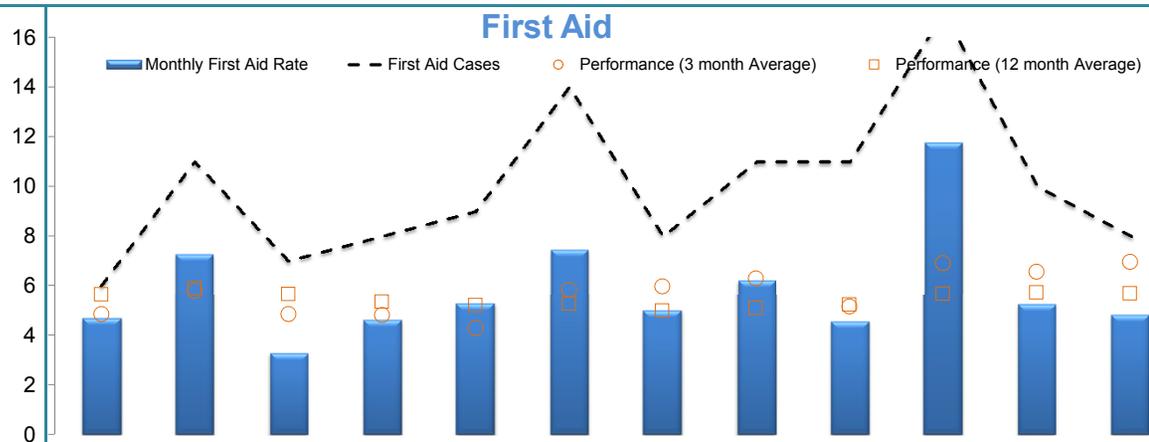
Non-reportable precursors are a leading indicator to reportable events. An increase in the number of First Aid cases could indicate a potential increase of more significant events.

Performance Indicator Information

PI Owner:	Lanette Adams
Data Analyst:	Ron Wight
Data Source:	MSMET
PI Basis:	MSC-PLN-WP-003 Sect. 4.0
Date	1/11/2018

FY18 = 6.95

CY17 = 5.68



Analysis

MSA experienced 8 First aid cases in December. The injuries were caused by the following incidents: struck against an object (3); contact [allergen] (2); contact [rub, abrade] (1); slip/trip/fall (1); and, struck by (1).

Primary types of First Aid injuries and their affected body parts that occurred during FY 2018:

- 23% by a slip/trip/fall, 20% from being struck against, 17% by body motion, 14% by overexertion, 14% from being struck by, 6% caught in
- 54% arm/hand injuries; 20% leg/foot injuries; head (includes eyes, ears) 14%, Note: 0 back injuries for FY 18 TD.

FY 2017 First Aid Cases: 110, rate = 5.23

Actions

Injury Prevention Actions:

- Monitoring First Aid cases to determine emerging trends and implementing awareness activities, as warranted.
- Communicating proactive injury prevention measures for winter related incidents, such as slips/trips/falls, issuing PPE, staging ice melt, etc.
- December PZAC meeting stressed vehicle safety and 24/7 winter driving conditions.
- Continuation of the safety inspection campaign to meet an MSA 2017 SIP goal of improving work area conditions and increasing employee participation in safety & health inspections. Weekly Safety Starts, videos, safety meeting topics and guidance opportunities have been and will continue to be provided to employees to expand knowledge and understanding of safety inspections.

Appendix C - Attachment 1

Objective

Monitor the Total Recordable Case (TRC) rate for MSA employees and subcontractors (Note: does not include independent subcontractors)

Measure

The TRC is measured in accordance with OSHA guidelines for reporting and calculating. The rate is calculated by multiplying the number of Recordable cases by 200,000 and dividing by the total number of work hours.

Performance Thresholds

Adverse	> 1.3
Cautionary	1.1 - 1.3
Meets	< 1.1

Performance Data

	Jan-17	Feb-17	Mar-17	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17
Monthly Recordable Cases	0	1	1	1	1	1	1	2	3	1	1	1
Monthly TRC Rate	0.00	0.66	0.46	0.57	0.58	0.53	0.62	1.13	1.23	0.69	0.52	0.60
Performance (3-m Average)	0.63	0.89	0.40	0.55	0.54	0.56	0.58	0.76	1.03	1.06	0.86	0.60
Performance (12-m Average)	0.81	0.86	0.91	0.85	0.69	0.58	0.54	0.58	0.67	0.71	0.76	0.66

Specific Goal to Achieve

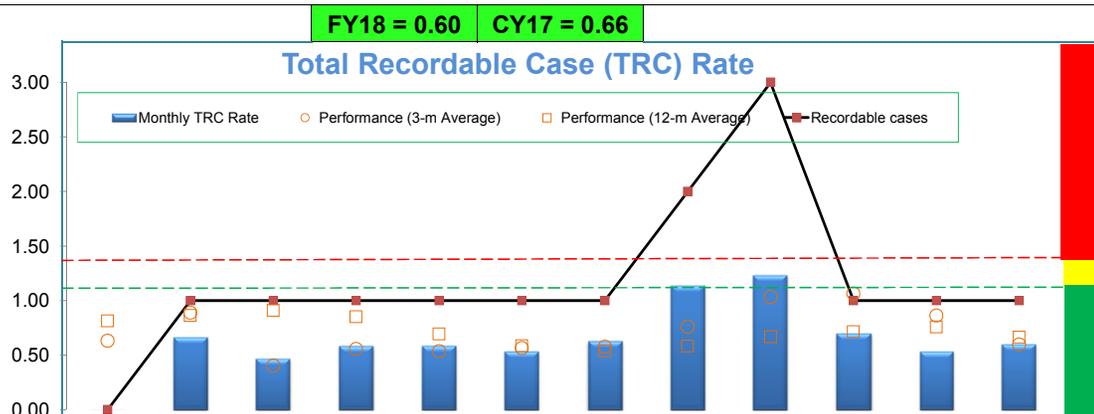
The MSA goal is to "do work safely" and achieve target zero by reducing injuries, accidents and incidents. The DOE-EM goal is to maintain a TRC rate below 1.1.

Leading Indicator Description

TRC is a lagging indicator.

Performance Indicator Information

PI Owner:	Lanette Adams
Data Analyst:	Ron Wight
Data Source:	MSMET
PI Basis:	MSC-PLN-WP-003, Sect. 4.0
Date:	1/11/2018



Analysis

During the month of December, MSA experienced one injury that was classified as "Recordable". The injury occurred when an employee was cutting a "zip" tie off a piece of equipment; the knife slipped and injured the individual's hand. Additionally, a case from November was reclassified as "recordable" when additional information became available; the case was a "Standard Threshold Shift" (STS) or hearing loss.

2018 FYTD Recordable Cases: 3
2017 FY Recordable Cases: 14 (TRC = 0.67)

- Types of injuries MSA has experienced during FY 2018 that were classified as Recordable:
 - Slip/trip/fall (1), Hearing loss (1), Struck by Object (1)
- Body parts that have been affected:
 - Back (1), Hearing (1), Hand (1)

Action

Injury Prevention Actions:

- Monitoring First Aid cases to determine emerging trends and implementing awareness activities, as warranted.
- Communicating proactive injury prevention measures for winter related incidents, such as slips/trips/falls, issuing PPE, staging ice melt, etc.
- December PZAC meeting stressed vehicle safety and 24/7 winter driving conditions.
- Continuation of the safety inspection campaign to meet an MSA 2017 SIP goal of improving work area conditions and increasing employee participation in safety & health inspections. Weekly Safety Starts, videos, safety meeting topics and guidance opportunities have been and will continue to be provided to employees to expand knowledge and understanding of safety inspections.

Additional Info

None

Health & Safety Inspections

Housekeeping...

This is the first of eight monthly safety starts that will focus on safety and health inspections.

Poor housekeeping frequently contributes to workplace accidents by hiding hazards that may cause injuries. Effective housekeeping is a continuous responsibility that will eliminate these hazards to get the job done safely and correctly.

Things to look for during the housekeeping portion of your inspection:

- Are floors clean and dry?
- Are aisles and passageways unobstructed?
- Are material control practices used to keep work areas in safe configuration?
- Is work area lighting adequate?
- Are floor loading limits posted, understood, and not exceeded for material storage on structurally supported surfaces?
- Are combustibles controlled in the work area?
- Are recycling containers present, used and emptied on a regular basis?

To identify satisfactory and unsatisfactory housekeeping, review Section F of the Safety and Health Hazard Inspection Program Checklist ([Site Form A-6004-299](#)).

Safety & Health Inspections, Module 1: Housekeeping presentation is attached. Please review with your staff and coworkers.

Note: Presentations can also be accessed on the [VPP Web page](#) as they become available each month.



How Often Are Inspections Required?

All work areas are required to have a Safety and Health Inspection performed at least quarterly.

The MSA inspection program is implemented in [MSC-PRO-WP-7652](#), *Safety and Health Inspection*. This procedure directs facilities to conduct inspections using checklists that address the issues outlined in [Site Form A-6004-299](#), *MSA General Industry-Based Safety and Health Hazard Inspection Checklist*.

Each facility should work with their safety representative to tailor the Safety and Health Inspection Checklist to the specific facility.

SUPERVISOR BRIEFING POINTS

Housekeeping

The following are examples of satisfactory ratings when conducting a safety and health inspection:

Maintained Floors

- A satisfactory rating indicates there are no spills and the floor is clean and dry.

Maintained and unobstructed aisles and passageways

- A satisfactory rating indicates walkways and corridors are clear.

Material control practices used to keep work areas in safe configuration

- All materials are stacked properly in a way that they do not create a hazard.

Combustibles controlled in the work area

- No combustibles (boxes of paper/cardboard/etc.) are stored beneath horizontal surfaces. Materials that are "flammable" (such as alcohol, gasoline, etc.) must be stored in a separate, approved storage cabinet when not in use.



Ask yourself the following:

- ✓ Have I ever had the opportunity to be involved in a safety and health inspection?
- ✓ Do I know what to look for regarding proper housekeeping during an inspection? During normal work?
- ✓ Do I know what to do if I see a housekeeping hazard?

EMS TIP:

Keep your workspace clear by using aluminum, plastic and paper recycle bins.

CORE FUNCTION: 5
*Provide Feedback &
Continuous Improvement*



MSA SAFETY AND HEALTH INSPECTIONS

Module 1: Housekeeping



Housekeeping



At the completion of this unit you shall be able to:

- Utilize Section F of the *Safety and Health Hazard Inspection Program Checklist* to identify satisfactory and unsatisfactory safe behaviors/conditions.
- Identify areas of concern requiring immediate action to mitigate or prevent a possible injury.



Housekeeping



The "housekeeping" unit is found in Section F of the checklist.

MSA GENERAL INDUSTRY-BASED SAFETY AND HEALTH HAZARD INSPECTION CHECKLIST

No.	Inspection Observations	Compliant? Y/N/A	See Comments (indicate with X)
4	Materials stored in cabinets and book cases such that the heavier materials are closest to the floor.		
5	Adequate space for egress (28") from behind desk to exit.		
6	No burrs or sharp edges on office equipment or furnishings.		
7	Cords and cables properly routed to prevent tripping hazard.		
8	Sharp objects properly stored.		
9	Other.		
E REQUIRED SAFETY POSTINGS (Main Administrative Buildings Only)			
1	Approved DOE/OSHA poster informing employees of the Department of Energy/OSHA Act protections and obligations is posted.		
2	Worker Bill of Rights document is posted. ***		
3	Master Safety Rules document is posted. ***		
4	Stop Work Responsibility document is posted. ***		
5	Building emergency plan is posted and current.		
6	Other.		
F HOUSEKEEPING			
1	Employees maintain floors clean, dry, with no slippery areas.		
2	Employees maintain aisles and passageways unobstructed.		
3	Employees are using material control practices to keep work areas in safe configuration.		
4	Work area lighting appears adequate.		
5	Floor loading limits posted or understood and are not exceeded for material storage on structurally supported surfaces.		
6	Employees control combustibles in work area. (Combustibles are not collected/stored under horizontal surfaces that cannot be reached by sprinkler heads.)		
7	Recycling containers are present, used and emptied on a regular basis.		
8	Other.		
G FIXED STAIRWAYS, LANDINGS, and RAMPS			
1	Stairs unobstructed and in good repair.		
2	Railings and handrails provided on open sides and properly maintained.		
3	Riser height is uniform and steps/landings are slip resistant.		
4	Other.		
H PORTABLE and FIXED LADDERS			
1	Portable and fixed ladders are inspected and maintained in safe condition.		
2	Defective ladders are removed from service.		
3	Ladder rungs are clean and free from oils, mud, and grease.		

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Housekeeping



- Ensure floors are maintained.
- Maintain unobstructed aisles and passageways.
- Use good material control practices to keep work areas in safe configuration.
- Ensure work area lighting appears adequate.
- Ensure floor loading limits are posted or understood, and are not exceeded for material storage on structurally supported surfaces.
- Ensure combustibles are controlled in work area.
- Ensure recycling containers are present, used and emptied on a regular basis.



Housekeeping



Maintenance of floors:

- A satisfactory rating indicates there were no spills and the floor was clean and dry.
- An unsatisfactory rating indicates there were spills and the floor was not clean and dry.
 - ✓ A comment at the end of the checklist needs to be made describing the problem/actions.



Housekeeping



Unobstructed aisles and passageways:

- A satisfactory rating indicates walkways and corridors were clear.
- An unsatisfactory rating indicates the walkways and corridors were not clear.
 - ✓ A comment at the end of the checklist needs to be made describing the problem/actions including any corrective actions taken.



Housekeeping



Use of good material control practices to keep work areas in safe configuration:

- A satisfactory rating indicates all materials are stacked properly in a way that they do not create a hazard.
- An unsatisfactory rating indicates materials were not stacked properly and created a hazard.



Housekeeping



Work area lighting appears adequate:

- A satisfactory rating indicates the lighting in all areas was adequate for the type of tasks and did not create a hazard.
- An unsatisfactory rating indicates the lighting in all areas was not adequate for the type of tasks and did create a hazard.
- ✓ It may be necessary to talk with your organizations safety professional to get an indication as to what levels of lighting are necessary.



Housekeeping



Floor loading limits posted or understood and not exceeded for material storage on structurally supported surfaces:

- A satisfactory rating indicates the floor loading limit was not exceeded.
- An unsatisfactory rating indicates the floor loading limit was exceeded.
- Typically, the floors at Hanford facilities have a designed floor load adequate for their initial purpose.
 - ✓ For those locations where the mission has changed to include storage or material handling, a sign must be posted or the employees in the area must be aware of these limits.



Housekeeping



Control of combustibles in work area:

- A satisfactory rating indicates no combustibles (*boxes of paper/cardboard/etc.*) were stored beneath horizontal surfaces.
- An unsatisfactory rating indicates combustibles (*boxes of paper/cardboard/etc.*) were stored beneath horizontal surfaces.
- Materials that are “flammable” (*such as alcohol, gasoline, etc.*) must be stored in a separate, approved storage cabinet when not in use.



Housekeeping



Recycling containers are present, used and emptied on a regular basis:

- A satisfactory rating indicates the containers are present, used, well maintained and emptied on a regular basis.
- A rating of unsatisfactory indicates that the containers are not present, used, well maintained or emptied on a regular basis.



Housekeeping



**MSA GENERAL INDUSTRY-BASED SAFETY AND HEALTH
HAZARD INSPECTION CHECKLIST**

Facility: _____		Facility Representative: _____	
Date: _____		Team Member: _____	
Total Items Reviewed: _____		Team Member: _____	
Total Non-Compliant Items: _____		Team Member: _____	

No.	Inspection Observations	Compliant? Y•N•N/A	See Comments (indicate with X)
A	FIRE PROTECTION INSPECTION <i>(All issues must be observed as applicable see note 2)</i>		
1	Emergency Lights - Each unit must be operable when tested.		
2	Portable Fire Extinguishers (PFE) - Each unit is properly mounted, an inspection tag is in place and reflects through previous month, the pressure gauge is in the "green" zone (where applicable).		
3	PFE is not obstructed, is visible, and the seal is not broken.		
4	Sprinkler Clearance - Clearance between the sprinkler deflector and the top of any storage is 18 inches or greater.		
5	Fire Riser Pressure Gauge Inspection - Inspect gauges to verify pressure to the building and pressure held in the fire system. Typically both gauges will have similar pressure readings.		
6	Fire Risers - Access to fire system sprinkler risers and other system components must be unobstructed.		
7	Fire Riser Valve Inspection - Check all seals, position and supervision for broken seals or possible tampering.		
8	Post Indicating Valve Inspection - This valve will be located outside of the facility. It must be verified that the window on the side of the valve reads "OPEN".		
9	Exit Signs - Exit signs with an internal lighting source must be checked to ensure all lamps are functional. - Exit signs that use Tritium must be observed that they have not been damaged, all applicable labels are present, the sign has not expired, and it is not covered with another sign.		
10	Fire Doors - Identify that fire doors operate freely and latch securely upon closure. Fire doors must not be propped open.		
11	Ceiling Tiles - Where automatic sprinklers are installed drop ceiling tiles are in place. Missing tiles slow response of fire suppression sprinklers.		
12	Manual alarm stations are easily identified and readily accessible.		
13	Other: _____		
B	GENERAL SAFE BEHAVIORS		
1	Employees are taking the necessary safety precautions for the work being performed.		
2	Work is being performed such that collocated employees in the area are not exposed to occupational hazards or unsafe conditions.		

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For questions on how to fill out the Inspection Checklist or specific items on the form, please contact your project safety professional.



October Injuries

Over the past few months, MSA first aid cases have consistently been above our normal levels, with eighteen reported in October.

While MSA encourages workers to report all injuries no matter how minor, MSA has not experienced such a high number of first aid cases since contract transition in 2009. While first aid reporting is a positive safety culture attribute, they are also a leading indicator for increased future Total Recordable Case (TRC) rates and Days Away, Restricted or Transferred (DART) Case rates if no action is taken.

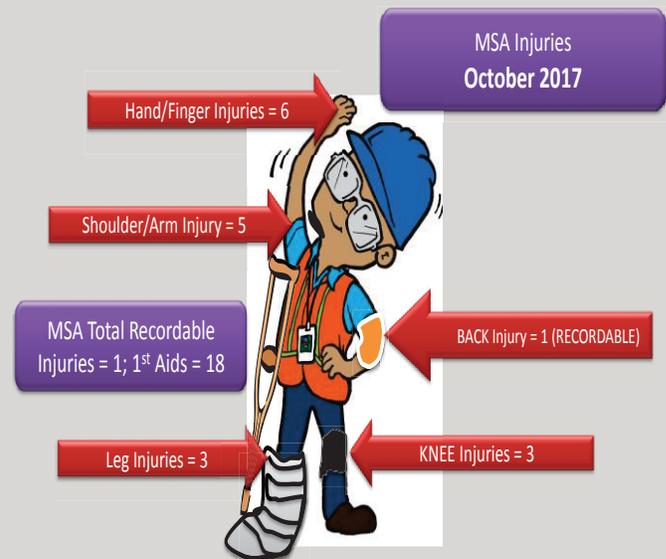
Our goal as a company is zero injuries. The good news from the high number of first aids is two-fold:

1. MSA employees are doing a great job of reporting injuries.
2. We can use the first aid information to sharpen our focus on the hazards that resulted in an injury.

The types of first aids experienced in October 2017:

- Six injuries were from **awkward body motions/overexertion**.
- Four injuries were from a **fall at the same level**.
- Four injuries were from being **struck by an object**.
- Three injuries were from **striking against an object**.
- One injury was from a body part getting **caught in an object**.

Through heightened awareness, we can avoid harms way and change the outcome of future incidents.



Keep the Conversation Going...

Please review our first aid cases and discuss among your own groups regarding the types of hazards you encounter daily and how you can control the hazards.

Ask yourself the following:

- ✓ Do I recognize hazards in my daily activities?
- ✓ Do I consistently utilize hazard controls in my daily activities?
- ✓ What can I change in my daily routine to raise my awareness and go home safely?

ISMS CORE FUNCTION: 2
Analyze Hazards

EMS is...Environmental Compliance

November 27, 2017

