



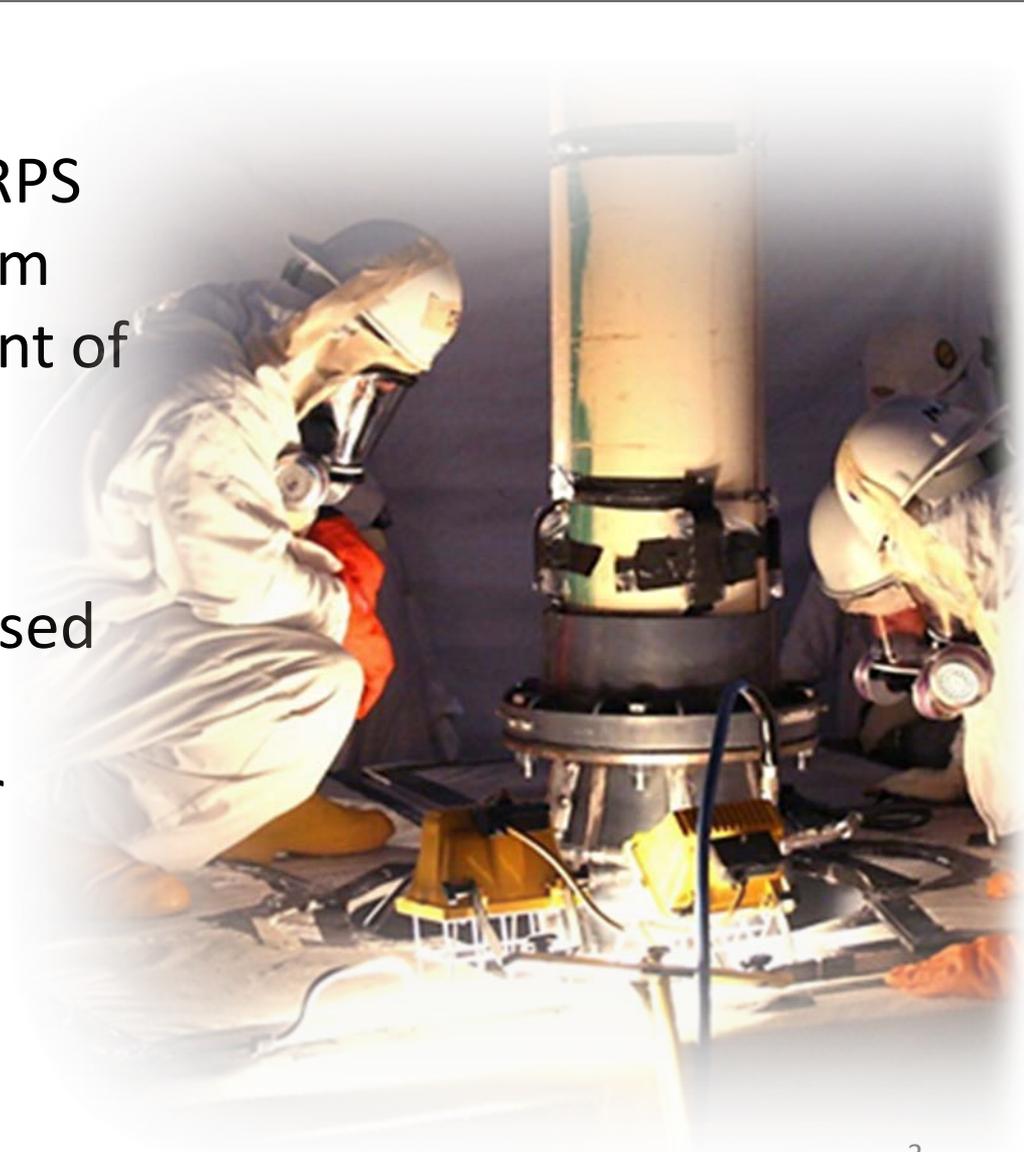
INDEPENDENT ASSESSMENT OF TANK FARM SAFETY SYSTEM

November 2013

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 - Safety System Feedback / Improvements
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- HSS reviewed the documented ORP and WRPS processes for safety system oversight and management of safety systems.
- Where possible, HSS focused on portions of the safety significant Waste Transfer System involved in C-101 retrieval.



Summary

- Maintenance activities were conducted in a manner that ensures system integrity, operability, and reliability.
- Corrective and Planned Maintenance processes for safety significant waste transfer activities at C- and AN-Farms are effectively implemented.
- Pre-job briefings were thorough and addressed the work to be conducted, the hazards associated with the job, and the controls that would be used to control those hazards.
- Spare parts are established in inventory to maintain continuity of facility operations and to reduce system and facility downtime.

Areas of Improvement

- While post job feedback was frequently recorded in work documents, no evidence existed showing how it was reviewed or addressed.
Status – Revised procedures to identify post review and feedback requirements including documentation. (Fall 2013)
- Half of the employees who should have taken suspect/counterfeit items (S/CI) training had actually completed the course.
Status – Revised procedures to clarify training requirements and frequency of training. Training on-going (Summer 2013)

Conclusion

- Maintenance activities were properly planned, scheduled, and performed. Program and Procedures were adequate to ensure the successful accomplishment of safety system maintenance and an acceptable level of safety system reliability.



Summary

- For Technical Safety Requirements/Documented Safety Analysis, no technical deficiencies were observed in the procedures and/or checklists, the criteria matched the TSR/DSA requirements, and the results were documented and within specified criteria and frequencies.
- Surveillance and testing activities for the selected portions of the Waste Transfer System were properly performed in accordance with TSR surveillance requirements and SAC.

Areas of Improvement (Findings)

- None identified

Conclusion

- Surveillance and testing of safety systems demonstrate ability to accomplish the safety functions while meeting applicable system requirements and performance criteria.



Summary

- Operations were conducted in a manner that ensures the safety systems are available to perform the intended safety functions were required.
- Walkthroughs showed that adequate processes are in place to ensure the proper configuration and operation of the selected safety system components.

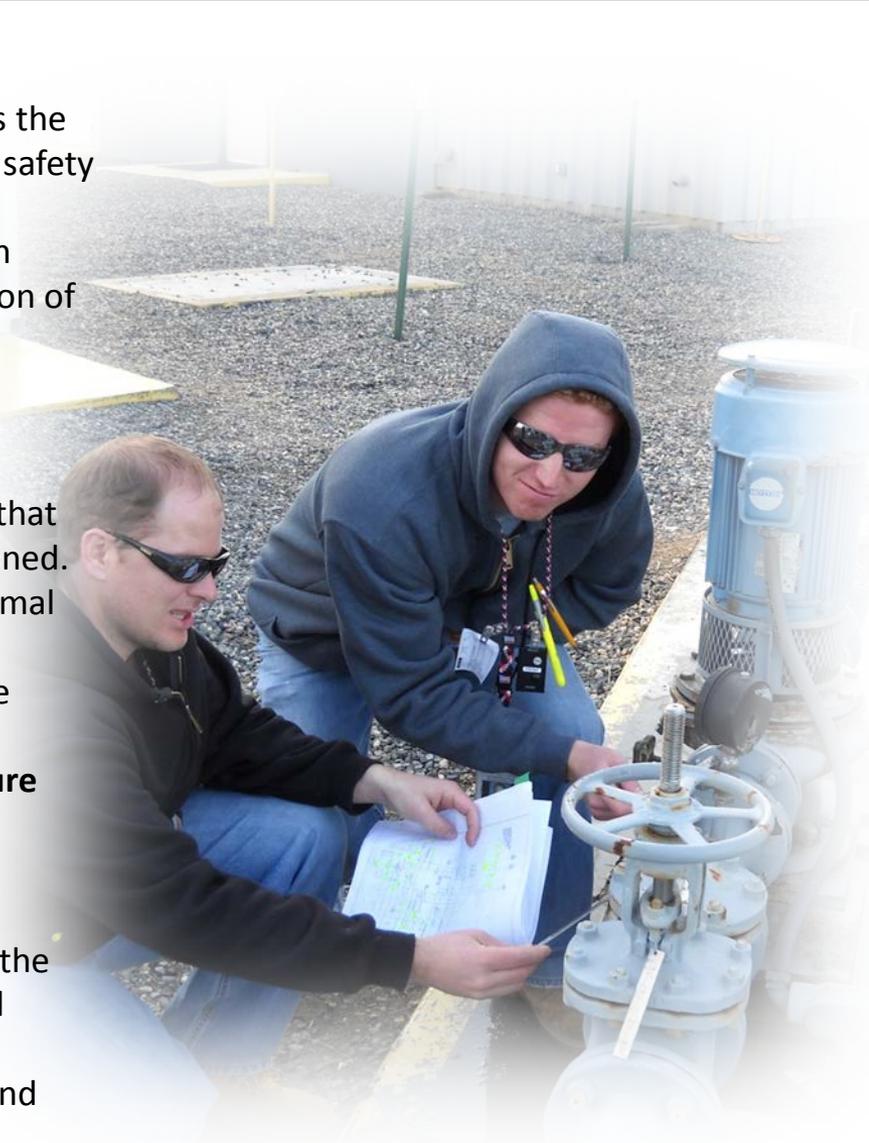
Areas of Improvement (Findings)

- Procedures were not sufficiently designed to ensure that safety-significant isolation valves are properly positioned. Management attention is needed to ensure that optimal human performance aspects are considered in the procedures and methods used for safety system valve manipulations.

Status - Valve alignment and verifications procedure revisions have been completed. (Summer 2013)

Conclusion

- Operations are conducted in a manner that ensures the safety systems are available to perform the intended safety functions when required.
- Procedures are technically accurate and complete, and operator training is comprehensive.



Summary

- The program is transitioning from a system engineer who focused primarily on day-to-day system operation/maintenance/testing to an approach where CSEs are delegated the authority from the WRPS Chief Engineer as the Design Authority for assigned areas of the Tank Farm. This allows the CSE to focus on overall system performance trends and safety basis issues.
- System Engineer functions, responsibilities, and authorities are clearly defined in the Conduct of System Engineering procedure.
- System Engineers are familiar with systems engineering documents, maintenance and procurement activities, surveillance tests, and existing system condition and performance.

Area for Improvement

- Some CSE system notebooks were not up to date, making it difficult to determine the status of the system or need for specific operational or maintenance improvements.
Status – Procedure revised (Fall 2013). Notebook updates in progress. Forecast complete – 12/2013 Effectiveness review will be performed 6 months later to ensure timely updates and expectations regarding notebook content are met.

Conclusion

- The system engineers provide adequate technical support for operations and maintenance, including reviewing design changes, ensuring effective configuration management, identifying trends in key system parameters from operations and surveillances, determining operability, performing analysis of problems, and initiating corrective actions.

Summary

- WRPS had established and implemented an adequate program to assess programs, processes, and performance related to the management of Tank Farm safety systems.
- Most of the formal assessments reviewed were well-documented, value-added evaluations of programs and/or performance.
- An independent assessment of Engineering Design Control, System Engineering, and the Engineering organization and a subsequent management assessment of the Engineering SMP, conducted in 2012, were comprehensive and thorough reviews.

Areas for Improvement (Findings)

- WRPS is not effectively implementing the initial Event Investigation process.
Status: Procedure revisions and process changes have been completed to improve Event Investigations. (Summer of 2013)
- The implementation of issues management processes by WRPS has not been fully effective in ensuring that the extent of causes of problems are fully and accurately investigated.
Status: Revised the Apparent Cause Analysis training package, developed and issued a guide to improve process consistency, and briefed personnel on expectations. (Spring 2013)

Conclusion

- Managers and subject matter experts are capable, proactive, and focused on effective performance and continuous improvement. However, attention to detail as applied in planning, performing, and documenting assessment activities has not been sufficient and issues management processes have not always been accurately and rigorously implemented to ensure that problems are effectively addressed.

Summary

- The Current SSO program is defined and/or referenced in ORP procedures.
- The two tank Farm SSO engineers have completed an appropriate qualification process and were found to be fully aware of their roles and responsibilities.
- The tank farm SSO engineers conduct adequate oversight in such areas as configuration management, maintenance and surveillance and testing.

Areas for Improvement (Findings)

- None

Conclusion

- ORP has established and implemented effective programs and processes for conducting oversight of WRPS management and operation of nuclear safety systems. ORP staff appropriately implement oversight programs and processes, and internal feedback and improvement systems are effective.

- WRPS and ORP have effectively implemented the programs and processes necessary for effective management of safety systems at Hanford Tank Farms
- Procedure, process and program improvements have been completed or will be completed by the end of the calendar year to address the Findings in the Independent Assessment of Tank Farm Safety Systems

