

13th Chemical Process Safety Sharing (CPSS) **Topic: Temporary Repair Management System**

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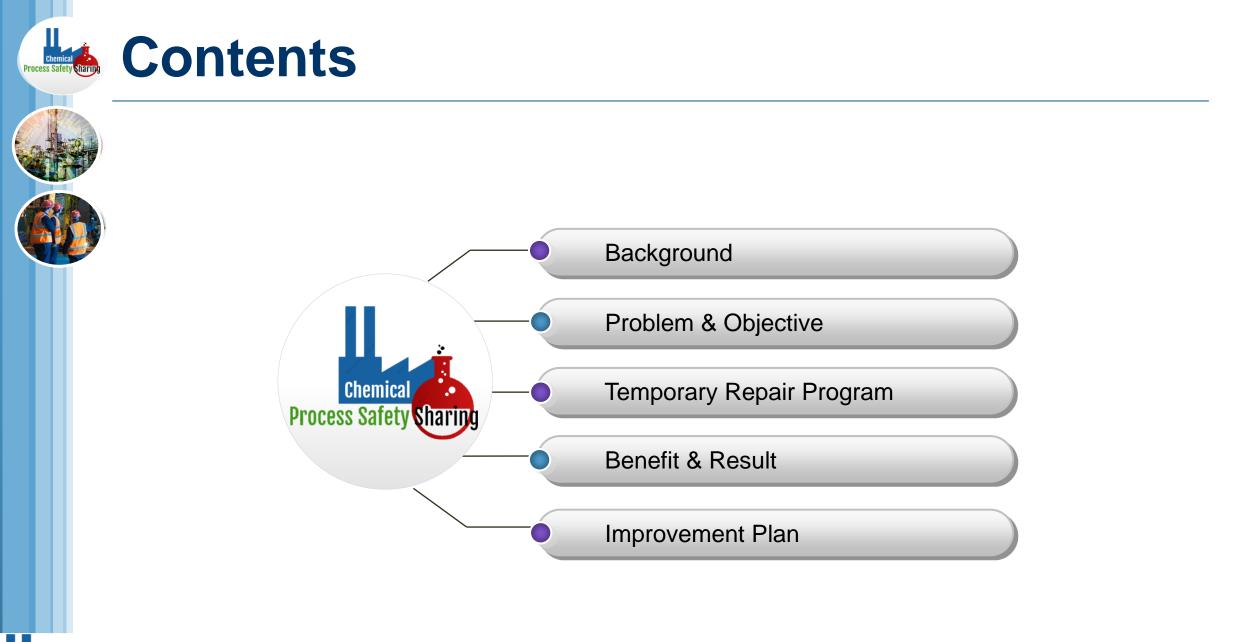


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Reference: Wake Up Call: Refinery Disaster in Philadelphia https://www.csb.gov/wake-up-callrefinery-disaster-in-philadelphia/



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- There are 29 plants under the IRPC company.
- Temporary repairs are not systematic recorded or monitored.
- Most of temporary repairs must be permanently repaired during the turnaround period.
 - Some of temporary repairs may not be tracked.

- Create a system that can record and monitor temporary repairs on a single platform.
- Ensure that 100% of temporary repairs are permanently repaired.
- Integrate this system with the legacy program (SAP) to automatically generate tasks for each responsible person.



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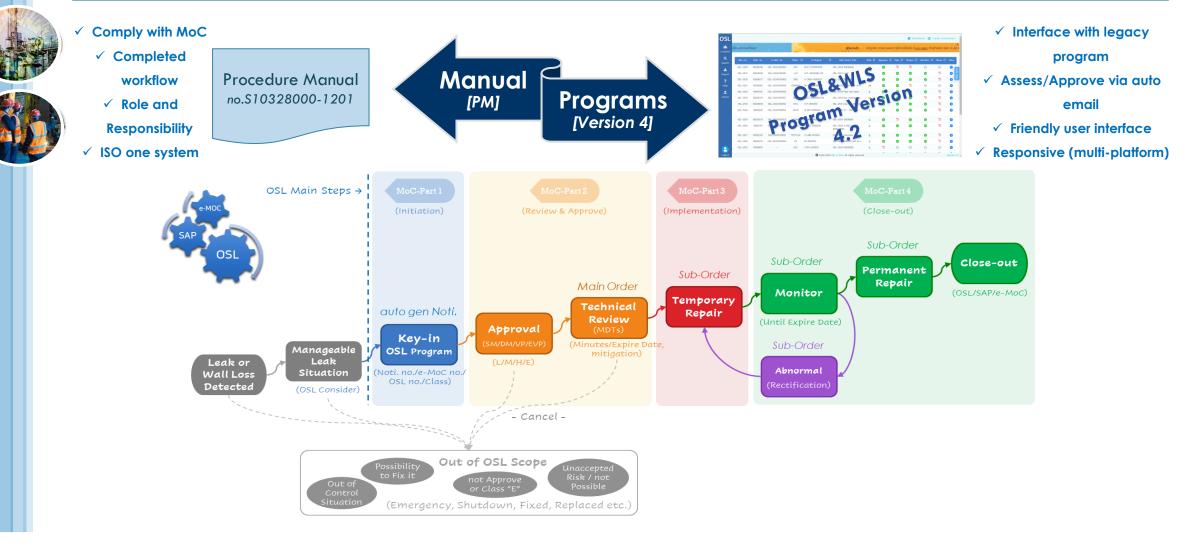








Temporary Repair Program





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Temporary Repair Program

Temporary Repair Monitoring Dashboard

Α В С OSL Monitoring Dashboard: Х E Remaining by area XXX ххх D (Wait for Permanent Repair) XXX XXX XXX Remaining OSL CUI/Wall loss (no leak) Valve internal leak (pass through) Leak XXX XXX XXX XXX Service Type Complex • I • D • F • G • E • A • C • B Utility Chemical Hydrocarbon 3



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- All temporary repairs are recorded and tracked through the program.



- All temporary repairs are monitored by inspectors and field operators, with feedback provided to maintenance in the event of abnormal conditions.
- Management, including asset owners, can monitor the status via the dashboard.
- This program has been integrated with the legacy system (SAP).
 - Tasks are automatically generated for each responsible person.
- 100% of temporary repairs were permanently repaired in the last turnaround (IRPC T/A 2022 & 2023).



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Improvement Plan

- Incorporate a data collection field within the temporary repair section of the program.
- **Collect temporary repairs which frequently occur.**
 - Set team and investigate possible causes. -
 - After completing the permanent repair, collect a sample and utilize NDE/DE techniques to facilitate a more precise investigation of the potential causes.
 - Give recommendations.



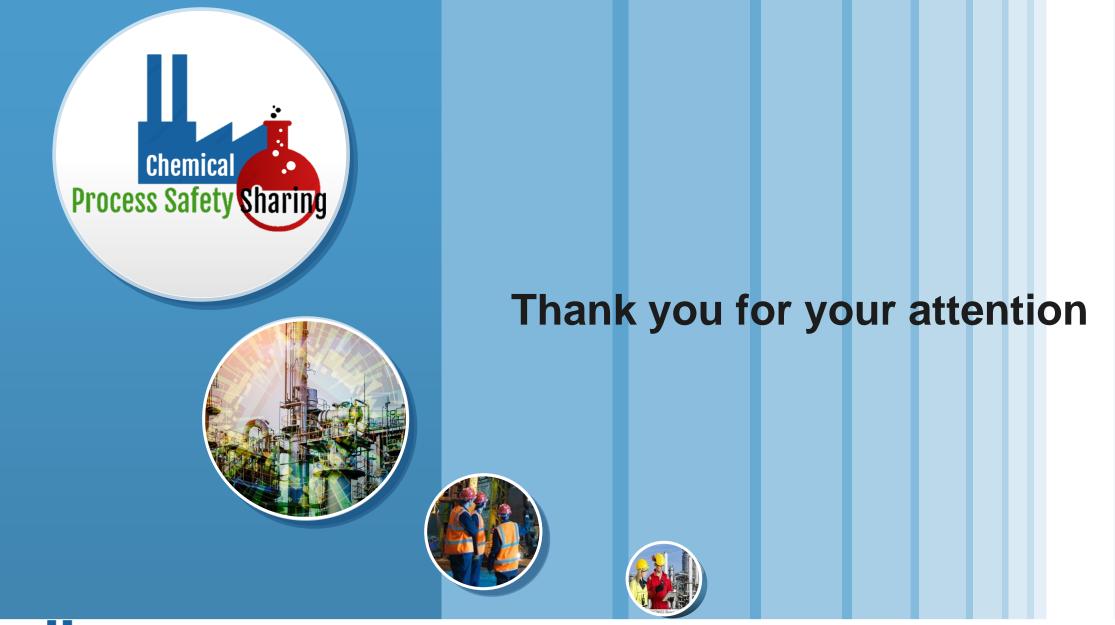
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