Preparing for Regulatory Inspection; Gap Assessment & recovery plan with a Petrochemical Storage Company

RTL Global Engineering Consultants Case Study

Overview

A European petrochemical storage company had recently added a new terminal to their portfolio.

The site, which had been acquired for its strategic riverside location did not operate for a significant period and while some assets had been returned to service, the majority of Bulk Storage Tanks were not available due to missing or incomplete inspection data.

While the riverside location offered excellent distribution opportunities, regulations pertaining to the Control Of Major Accident Hazard (COMAH) required adequate steps be taken to prevent any hazardous material finding its way into the river.

Demonstrating the mechanical integrity of the bulk storage tanks to gain Regulatory Approval was a critical milestone in their plans to expand and increase operations.

To address and overcome this challenge, our Subject Matter Experts were tasked to develop, manage and co-ordinate the assessment & remediation plan from concept to completion.

Collaboration & Teamwork: Identifying gaps & Solving the problem

Delivery of this project would require a proactive approach to utilize the limited time that was available.

Our dedicated Project Manager was responsible for coordinating all stakeholders and subcontractors, ensuring all schedules were aligned while managing simultaneous operations.

After collecting the historical Inspection reports which were made available by the terminal, our consultants performed an on site review and gap assessment to identify missing data and existing defects, while our partners began to design repairs in line with the applicable design codes and standards.

In parallel to the desktop activity which was underway, the inspection activities were planned & scheduled with another of our third party contractors.

Safe, Successful Execution

By working closely with the site operators and the subcontractors involved with tank preparation, safety & Non Destructive Testing (NDT), over 30 carbon steel storage tanks were inspected and repaired in a 60 day period.

With the terminal operating 24 hours, it was important that this project caused no disruption to daily operations.

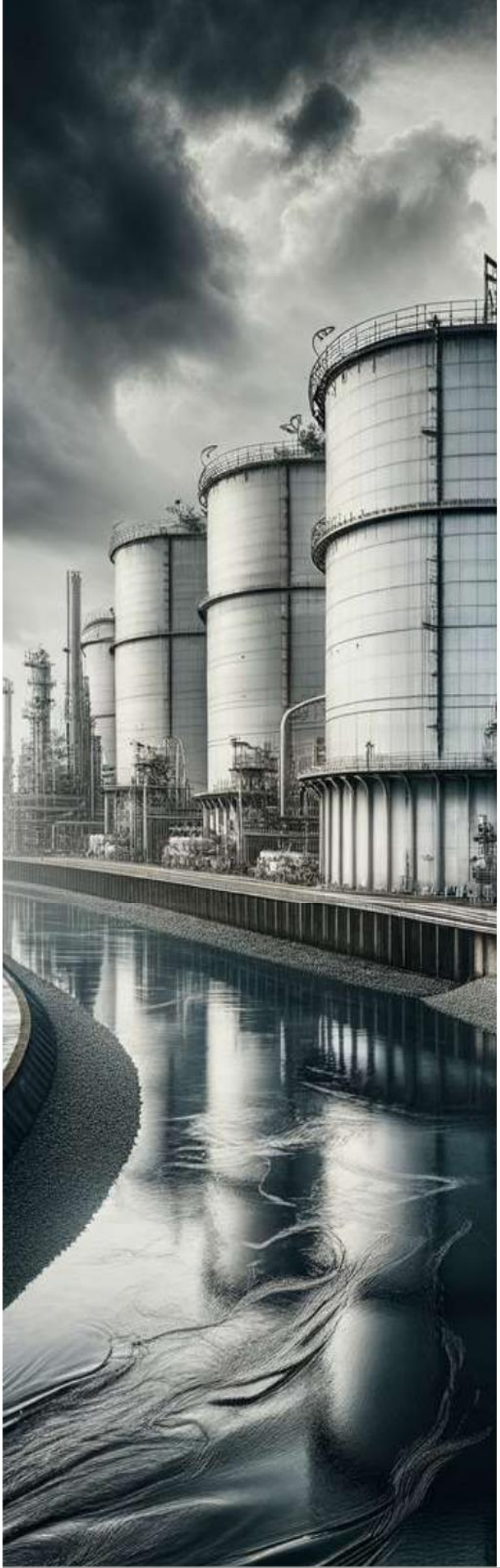
Pragmatic scheduling ensured that routine loading / offloading operations continued, while inspection activities were carried out at a safe distance.

The use of Permit To Work (PTW), pre work risk assessments and toolbox talks ensured that all risks were managed to be As Low As Reasonably Practicable (ALARP) with anyone having the authority to “Stop The Job” if they felt the risk level had changed.

Once an inspection was complete, reports were issued and the repairs that were previously designed were reviewed, recalculated if necessary and implemented.

There were a number of high risk activities taking place during this project, particularly Welding / Use of NDT equipment (Hot Work), Confined Space Entry (CSE), Simultaneous Operations (SimOps) in a high traffic environment.

Completing this assignment on time, within budget and with zero safety incidents was an exceptional achievement, made possible through teamwork,



effective communication and safe working practices.

What Happened Next....

With external painting, internal patches, liners and tank seals installed by our trusted subcontractors, the next step was to qualify the repairs.

After collecting the appropriate material certifications and supporting documentation, our inspection & Integrity partners thoroughly reviewed the contents, carried out additional NDT and issued fitness for service certificates for 32 out of 33 bulk storage tanks.

Only a single tank could not be returned to service due to excessive material loss from the tank shell and tank floor.

Designs and remedial plans to replace the lower tank strake were provided to the customer and a CAPEX project was put in place to carry out this major repair.

Defining Success: Long term future from aging assets

At the time of our initial engagement, the facility was operating with only 19% of their capacity, with only 8 storage tanks in service from a potential 41.

Through the pre purchase feasibility study, the company had determined a minimum operating capacity of 27 tanks would be required to deliver on their product expansion plan, meaning 60% of the mothballed storage tanks would need to be returned to service.

By engaging with our trusted partners and third party contractors, we were able to reinstate 97% of the bulk storage tanks, adding additional capacity and contingency.

Significant value was created by increasing capacity beyond the target of 27 tanks. Not only will it make future inspections easier to manage by allowing product to be moved, making tanks available without reducing operations, it offers an opportunity for additional products to be introduced in the future.

We are proud to say this project exceeded expectations! the 27 tank minimum availability was increased to 40, costs were 22% under budget and the handover to the next phase was completed on schedule.

If you would like to discuss your challenges with us, or find out more about the services we offer, please email us at: Solutions@RTL-Global.com.