



LNG Storage Lifecycle Services

Inspection & Upgrade

For more than half a century, CB&I has focused on delivering superior solutions for liquefied natural gas (LNG) storage. We designed and constructed our first peak shaver in 1965 and have built more than 200 LNG storage tanks across the globe.

Unparalleled LNG Storage Experience

Customers draw on our rich knowledge and extensive LNG experience early in a project's development, allowing us to provide input, recommendations and project-specific solutions that deliver greater long-term value. The same level of collaboration and consultation is available to existing facilities and operators as their structures reach maturity or require upgrade.

Our full suite of LNG storage lifecycle services includes:

- Code Compliance Updates
- General Repair for Operational Life Extension
- Inspection and Re-Baselining for Operational Resilience
- Risk Profile Modernization & Mitigation
- Upgrade Opportunities



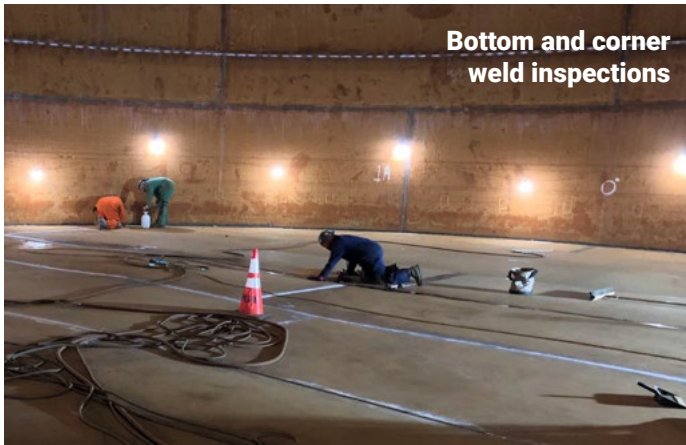
Addition of top guardrail on handrail to meet current OSHA requirements

Storage Tank Inspection

In-service inspections are the first step to identifying lifecycle services for each unique storage facility. CB&I conducts in-service inspections of LNG tanks to identify potential areas for update, repair or maintenance. Next, we engage with plant management, operators and/or owners to discuss which LNG storage lifecycle services are best suited to meet current and future needs.



New nozzle installation with roof platform extension



Lifecycle Services

We provide solutions to accommodate the unique needs of any existing structure. Typical lifecycle services to existing LNG storage tanks may include:

- **In-Service Inspections:** Identify the in-situ conditions of the structure and potential areas for rehabilitation
- **Out-of-Service Inspections:** Visual and specific component non-destructive testing to reestablish baseline of tank integrity
- **In-Tank Valve Installation:** Mitigate potential of full product loss and reduce plant HAZID risk profile
- **Upgrade Opportunities:** Installation of new instruments for level detection, may include: radar, enraf and their associated stilling wells
- **Code Compliance:** Updates to meet current OSHA code requirements, such as top guardrail on handrails
- **Safe Access:** Installation of tie-off points, additional roof platform and roof perimeter handrails
- **General Repairs:**
 - Rehabilitation of foundations
 - Tank chime replacement
 - Tank foundation heating upgrades
 - Thinned or corroded nozzle replacement
 - Bellows replacement
 - Abandonment of disused penetrations
 - Insulation top-up

CB&I also provides assistance with decommissioning and commissioning activities associated with any of our lifecycle services.

LNG Storage Solutions

CB&I also provides comprehensive design-build services for LNG storage tanks and LNG facilities. We deliver projects on a lump sum, turnkey basis, using our own resources to provide engineering, conceptual design, detailed design, facility optimization, project planning and management, procurement, fabrication, construction, commissioning and operator training.

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