211' JET A1 TANK | MIDSTREAM TERMINAL

JET FUEL | TERMINAL

OVERVIEW

A large fuel terminal in Guam required an online API 653 inspection of a 211-foot diameter jet fuel tank, combined with a full tank calibration survey. The terminal's critical operational role meant that any downtime would have far-reaching consequences.

SOLUTION

Square Robot performed an API 653 compliant in-service inspection over 13 days, concurrently executing a tank calibration survey. Internal robot data was merged with external sensor measurements to produce an accurate and comprehensive calibration table. Adaptive navigation strategies were employed to navigate the tank's extensive column infrastructure.

OUTCOME

The inspection achieved 85% floor plate coverage and delivered a complete tank calibration. The client avoided over $1.8 million in out-of-service costs and gained a long-term inspection interval, keeping the terminal fully operational throughout the process. With an inspection interval of 4 years following the inspection, the client now has enough time to budget and resource plan to take the tank down in the future.

KEY IMPACT METRICS
✓ Eliminated > 2,797 confined space entry hours
✓ $1,800,000 in documented cost savings
✓ 49,232 lbs of CO_2 emissions contained
✓ 85% floor plate coverage achieved
✓ Full tank calibration delivered simultaneously
✓ API 653 inspection interval of 4 years