



RTI Delivers Turnaround Results, Drives Facility's Sustainability Through Innovative Vapor Phase Process

HOUSTON, Texas – March 2, 2022 — Refined Technologies Inc. (RTI) announced the results of a recent project with a North American energy producer to eliminate the traditional shutdown and decontamination steps at their Southwestern petroleum facility. RTI replaced this process with a vapor phase steam out to a completely closed system. This resulted in a savings of 104 hours on the shutdown timeline and reduced emissions to the atmosphere by over 85% when compared to the same activities in previous years, building momentum toward the facility's sustainability goals. Additionally, the project eliminated both pyrophoric concerns upon opening equipment and personnel exposure to draining or venting liquids and gases during shutdown activities.

RTI provided a comprehensive shutdown approach utilizing their patented Vaporganic® chemical clean process and patented cleaning chemistries QuikTurn®, QTRX2 (reactor cleaning chemistry), Quench® (pyrophoric treatment), UpperCut® (circulation additive), PTA Treat (polythionic stress corrosion cracking preventative), and CL Treat (chloride stress corrosion cracking preventative). A complete mechanical temporary facilities solution was mobilized in the field to capture and condense all steam and hydrocarbon to ensure effluent was reprocessed directly into the refinery slop system and vapors were scrubbed to remove harmful components prior to venting. RTI also utilized their expertise in shutting down and safe-ing equipment to help improve shutdown procedures by integrating industry best practices and shutdown sequencing to ensure flare gas recovery capacity and steam availability constraints were mitigated.

Traditional unit preparation for turnarounds primarily consists of steaming the equipment until gas testing shows the LEL (Lower Explosive Level) is low enough to open the equipment to atmosphere. Steam and hydrocarbon would be routed directly to the refinery flare system and burned, generating CO₂ and SO₂. This method adds time to the shutdown, excess pollutants to the atmosphere, and yields residual hydrocarbons in equipment that then must be manually cleaned upon initial entry.

RTI was proud to partner with this North American refiner. The success of the project affirms their strategic efforts to eliminate the traditional shutdown, decontamination, and chemical cleaning steps. Through the utilization of chemistry and temporary mechanical facilities, RTI improves environmental, safety, and regulatory performance for their clients. RTI's Vice President of Operations for North America, Ryan Miller, said, "For the past 20 years, RTI has specialized in assisting facilities to shut down their equipment in a manner that is safe for people and the environment. RTI is a committed partner for clients who are seeking to improve ESG performance because of our core belief that these practices are essential for communities to thrive locally and globally."

RTI is a leading global industrial solutions provider that partners with clients across industries to improve process operations all while lowering total cost. We provide products and solutions to increase efficiency gains while reducing water usage and carbon impact. Environmental stewardship, corporate responsibility, and investing in local, regional, and global communities have been in our DNA since RTI's founding in 2001. Learn how to become our ESG Partner today at www.refinedtechnologies.com.