CASE STUDY

Delivering Continuous Flow Assurance Across a Distributed Field Network

CHALLENGES

The operator runs a midstream gathering system feeding a refinery through remote, geographically dispersed locations with variable draw rates and crude conditions. Limited site access, intermittent pump or control issues, and shifting operating conditions created risk of tanks drifting below operating minimums and treatment rates falling out of range.

Without strong visibility and rapid exception handling, minor inventory or equipment issues could escalate into emergency refills, additional field intervention, or flow assurance risk.

SOLUTIONS

Guardian operated the program end-to-end: monitoring tank levels, adjusting pump rates, and coordinating top-ups through a contracted delivery service. As seasonal, flow, and crude conditions shifted, rates were tuned to maintain treatment targets and improve cost efficiency.

When pump or control issues occurred, Guardian restored dosing within hours to maintain treatment continuity and protect flow assurance performance.

RESULTS

Exceptions resolved within hours: Pump and control issues were restored quickly to maintain dosing continuity.

Treatment continuity maintained: Top-ups and pump rates were managed to keep dosing on target across sites.

Rates adjusted to match conditions: Treatment rates were tuned to seasonal, flow, and crude variability while maintaining targets.

AT A GLANCE

A large North American energy producer relied on Guardian to run its remote chemical program—managing tank levels, coordinating top-ups, and adjusting pump rates as conditions changed. When pump or control issues occurred, Guardian restored dosing within hours to maintain treatment continuity and avoid interruptions.

KEY METRICS

FLOW ASSURANCE PROTECTED

PRODUCTION RELIABILITY SUPPORTED

CHEMICAL EFFICIENCY OPTIMIZED

CASE STUDY

GUARDIAN CHEMICALS

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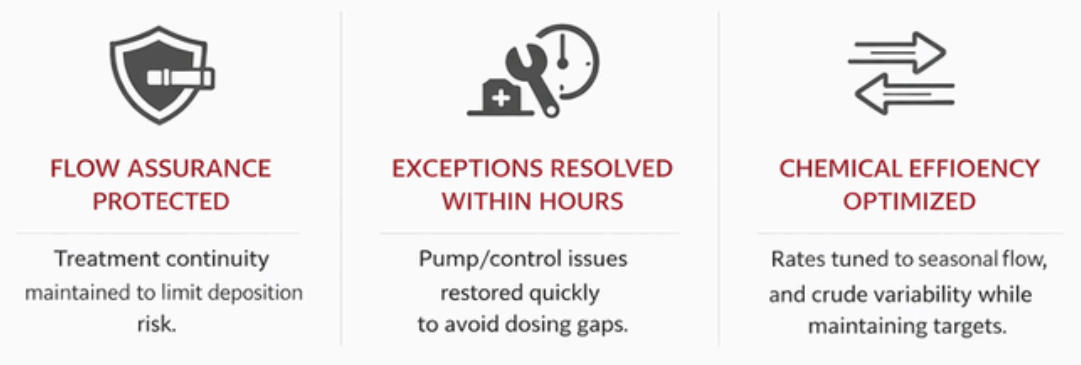
DATA

The following data represents chemical consumption, refill activity, and disruption tracking across a multi-site field operation over several reporting periods. The data illustrates how inventory levels, average daily consumption, and exception response were managed over time to maintain predictable chemical availability and reduce operational risk across geographically dispersed field assets.

PROGRAM CONTROL AND FLOW ASSURANCE CONTINUITY

Metric Category	Observation	Operational Relevance
Average Daily Consumption	Site-specific draw rates remained consistent period over period	Supported predictable dosing plans and avoided over/under treatment
Tank Refill Volumes	Frequent, moderate top-offs rather than emergency bulk refills	Reduced depletion risk and limited dosing interruptions
Min / Max Tank Levels	Levels stayed within defined operating ranges	Reduced low-level events that can interrupt dosing and compromise treatment continuity
Disruption Events	Pump/control issues were identified and corrected	Protected treatment continuity through rapid exception handling
Recovery Timing	Exceptions resolved within hours	Limited dosing gaps to protect flow assurance performance