

# RELIEF SYSTEM ANALYSIS: MITIGATION OF FLARE NETWORK CONSTRAINTS TO ACHIEVE SAVINGS



#### WHERE?

Refinery in North-East USA

#### WHY?

Challenges Addressed

• Flare network capacity issues

#### Goal

 Resolve flare network capacity issues with minimal field modifications

#### Engagement

• Dynamic Analysis, Safety Instrumented Solution and Quantitative Risk Analysis

### **RESULT**

#### **Benefits Realized**

Multi-million dollars in CAPEX savings by minimizing flare network modifications

Improved performance of relief valves

Drastic reduction in likelihood of release using safety instrumented solution

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Houston 🕸 Mumbai 🕸 Doha 🕸 Jubail

Houston +1-713-223-9942 Mumbai +91-22-6176-4500

#### TECHNIQUES AND EXPERTISE EMPLOYED

 Dynamic models for major relieving systems and rigorous flare model developed which accounts for reliability levels of safety instrumented systems