Achieving Shell’s ‘Goal Zero’ alarm target

DYNAMO: PROJECT ALARM ZERO

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- Technical Custodian for the EPF Control System at Shell Upstream Argentina

- Based in Sierras Blancas – Neuquen

- Supervised installations of the DCS, SIS, F&G, CCTV and Field RTU’s

- Joined Shell in 2017 with a goal to improve the alarm system in-line with global expectations
GOAL ZERO
Achieving Shell’s 2019 Alarm Management Targets
Target Requirements

• Risk Normalization
  – When there are nuisance alarms operators tend to shelve them and forget about them
  – If a stale alarm doesn’t cause any abnormal situation in the short term, it can be forgotten forever

• Dilemmas
  – Operators have to deal with hard decisions when they have too many Alarms to acknowledge
  – Encourage people to ask for help when they don’t know what to do

• Care
  – I care about the people, the asset and the environment
  – From my position, I can collaborate to have no harms, increasing the performance of alarm system
Program Development

• Investigation Phase
  – Observe current alarm performance
  – Gather alarm history
  – Talk to board operators
  – Determine a baseline for improvement

  – Identify needs
    ▪ Tools, resources, time, money, etc.

  – Identify goals
    ▪ Alarm rates, standing alarms, responsibilities, informative documents, etc.
Program Development

• Plan Development Phase
  – Implement DynAMo® Alarm Suite
  – Track Alarm KPI Performance
  – Develop Alarm Philosophy
  – Rationalize Alarms
  – Train Operators
  – Drive Continuous Improvement
During the Implementation

• Leverage DynAMo’s reporting and analysis capabilities

• Implement weekly meetings to review alarm behavior
  – Input: Operator logbooks, Metrics & Reporting KPI’s, actual process states
  – Output: Actions for I&E Supervisor, Operator Lead and/or Site Engineers

• Develop and implement a process for alarm changes
  – Operations Superintendent approval for Standard Limit Changes (Hi/Low Alarms)
  – MoC for alarms that cause trips (High High/Low Low Alarms)

• Implement an internal annual audit process

Approximately 10 Months Work
BENEFITS
Quantifying Success
Benefits

• DynAMo generates reports to discover and troubleshoot alarm issues
  – Alarm Rates, Bad Actors, Standing Alarms, Fleeting Alarms, etc.

• Saves time and effort
  – Excel versus DynAMo’s Metrics & Reporting dashboards for KPI population
  – Rationalization execution using DynAMo’s Documentation & Enforcement tool, versus manual modifications straight to the DCS
  – Database Excel export for Audits, crosschecked with DynAMo’s Master Alarm Database

• Drives operator performance improvements

• Empowers leadership
  • Everybody is part of the team
  • Everybody collaborates to eliminate bad actors
Before and After

Old Spreadsheet with 2 KPI Macro

New DynAMo Metrics & Reporting KPI Dashboards with Alarm and Event history
Alarm Management

2018 – 2019 Reported KPI Evolution

- Hourly Alarm Rate
- Standing Alarm
- Override

Lifecycle Implementation

DynAMo® Suite

Alarm Management
Reducing alarm noise and operator error through effective alarm management

Operations Management
Driving informed decisions and operational compliance through safe and profitable operating practices

More Than Just Alarm Management
Questions
THANK YOU

www.hwll.co/dynamo