



CAM: How does it help with your PHMSA CRM requirements?

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AGENDA

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- 1 What is CAM?
 - 2 What does PHMSA say?
 - 3 What does PHMSA say about Alarm Management?
 - 4 Industry Association Recommendations
 - 5 How can SCADA help?
 - 6 CAM Demo
-

CAM

CygNet Alarm Manager

CYGNET ALARM MANAGER (CAM)

- **What is CAM?**
 - CygNet Alarm Manager
- **Why is there CAM?**
 - To assist our pipeline customers with PHSMA reporting requirements
- **How do I get CAM?**
 - Licensed component
 - Talk to Sales
- **System Requirements**
 - CygNet 8.2.0 or later
- **I'm not a pipeline, can CAM help me?**
 - Let's talk about it



PHSMA

Pipeline and Hazardous Materials Safety Administration

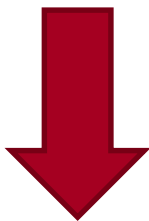
PIPELINE AND HAZARDOUS MATERIALS SAFETY ADMINISTRATION

49 CFR part 192

- Transport of natural gas, flammable gas, or toxic/corrosive gas

49 CFR part 195

- Hazardous liquids and carbon dioxide



Address human factors and other aspects of control room management for pipelines.

In a nut shell:

- Roles and responsibilities
- Provide adequate information
- Fatigue mitigation
- Alarm management
- Change management
- Operating experience
- Training
- Compliance validation



WHAT DOES PHISMA SAY ABOUT ALARM MANAGEMENT?

SECTION 195.446(E) AND 192.631(E)

- **Review SCADA safety-related alarm operations**
- **Identify points affecting safety that:**
 - Have been taken off scan
 - Have inhibited alarms
 - Generated false alarms
 - Have forced/manual values
- **Verify safety-related alarm set-point values and alarm descriptions**
- **Review alarm management plan**
- **Monitor activity directed to each controller**
- **Address deficiencies**
- **Industry associations provide guidance**



| Industry Associations

API & ISA

API & ISA

■ Publications

- ANSI/ISA 18.2-2009
 - Management of Alarm Systems for the Process Industries
- API Recommended Practice 1167
 - Pipeline SCADA Alarm Management

■ Provide recommended industry practices

■ Provide insight into key performance indicators, such as:

- Annunciated Alarms per day/hour/10-minute period
- Alarm flood
- Chattering/Fleeting alarms
- Stale alarms
- Annunciated and Configured Priority Distribution
- Etc.



| CAM

The two faces of CAM

Back End

- Calculation Engine
 - Reports
 - Counts
- HSS
 - Used to execute the engine
- MSS
 - Used to fire off the engine

Front End

- Supervisor Dashboard
- Alarm investigation workflow
- Ad-Hoc Reporting

Reports

Available Reports (11 types)

- Alarm History Distribution
- Worst Offenders (aka Top 25)
- Alarm History/Full Alarm Report
- Audit History
- Average Acknowledgment Time
- Stale
- Alarm Flood
- Average Alarms per Day of Week
- Average Alarms per Hour of Day
- Standing Alarms
- Chatter/Fleeting Alarms

Output

- Formats
 - Excel
 - PDF
 - CSV
 - XML
- Excel Reports
 - Separate
 - Combined

Demo CAM