COMPLYING WITH FLARE VISIBLE EMISSION OBSERVATION REQUIREMENTS
Agenda

• EPA Refinery Sector Rule
• DVM Flare Watch
• Q&A
The EPA Refinery Sector Rule

• Proposed June 2014
• Signed September 2015
• Published December 2016
• Compliance required by February 1, 2019
• Is under litigation
• Proposed Amendments published February 9, 2016
• Details are on the EPA website:
  https://www3.epa.gov/airtoxics/petref.html
Background Information related to flares

- The current 40 CFR 63.11 and 40 CFR 60.18 flare rules are not sufficient to ensure flares meet 98% control requirements.

- The refinery flare rule focuses on destruction efficiency.

- Flare destruction efficiency confirmed by compliance with enhanced operational and work practice standards (§63.670).
A few key points around the rules:

- One set of operational standards for steam assisted and air assisted flares

- The regulations apply to all flares types - standby flares, emergency flares, non-conventional refinery flares (e.g., pressure-assisted, ground, enclosed, unassisted and hydrogen rich and other flare types), and temporary flares regardless of size or system design

- The regulations establish a flare work practice, a flare monitoring system, recordkeeping system and reporting requirements

- The regulations require smokeless operation over the whole operating range of the flare
Requirements for Flare Observation

• Once daily and whenever there is regulated material venting into the flare - Observe flares for visual emissions using EPA Method 22 or CCTV
• It is believed that most if not all refineries will elect to use CCTV rather that EPA method 22 in order to comply with the regulations. If using CCTV as a compliance mechanism the refiner must:

  - Record images of all flares at a minimum rate of 1 image per 15 seconds
  - Record time and date stamps with images
  - Retain video surveillance images for 3 years
  - Make the real time images available in a control room or other continuously manned location
  - These requirements are spelled out in detail in sections 60.105 and 63.670 of the rule.
The choice is yours!

• Option 1

• Option 2

DVM Flare Watch provides an automated alternative
What are the principal solution components?

• New or existing cameras
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- New or existing cameras
- Commodity PC or Virtual Machine
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• New or existing cameras
• Commodity PC or Virtual Machine
• Networking
What are the principal solution components?

- New or existing cameras
- Commodity PC or Virtual Machine
- Networking
- Monitor/Station
What are the principal solution components?

- New or existing cameras
- Commodity PC or Virtual Machine
- Networking
- Monitor/Station
- Software
What are the principal solution components?

- New or existing cameras
- Commodity PC or Virtual Machine
- Networking
- Monitor/Station
- Software
- Setup & Configure
Do the economics make sense?

- **Option 1**
  
  - 5 flares * 2 hours /day /flare * 2 observers * 365 days/year * $100 / hour / observer =
  
  - $730,000 / year

- **Option 2**
  
  - $60,000 - $200,000

DVM Flare Watch saves you money!
The Bottom Line?

DVM Flare Watch:

• Is a cost effective option for regulatory compliance
• Can be a stand alone or integrated solution
• Is expandable to a complete facility wide video solution
• Builds on years of product refinement
• Supported by Honeywell Service

You don’t have to be Einstein to recognize DVM Flare Watch as the clear choice!
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