# A Basic Understanding of Air Emissions Compliance Obligations

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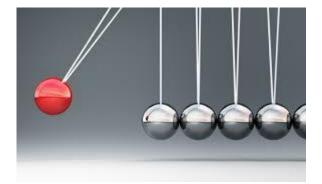


## Baseline for the Rules









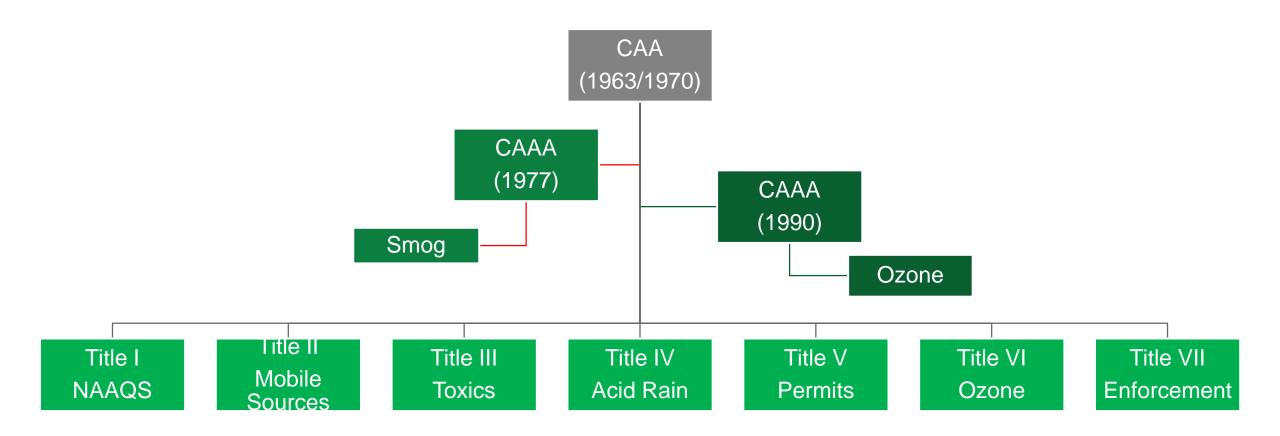








## Baseline for the rules







## Baseline for the rules

- Air programs are defined at the Federal Level
- "Rules" are organized & found within the Code of Federal Regulations (CFR)
- The CFR is made up of various Titles representing regulations defined by various departments & agencies of the Federal Government
- Title 40 covers the USEPA mission for the protection of the environment
- Source obligations are defined under Parts and Subparts of Title 40



## BREAKING THE CODE

Primary Source Identification within the rules driven by:

- Industry Type
- Unit Type
- Fuel Type(s)

Secondary Source Identification within the rules driven by:

- Construction Date
- Commencement of commercial operation
- Unit Operating Conditions/Unit Capacity



## Breaking the code

New Source Performance Standards (NSPS)

40CFR Part 60 Subpart Db

Protection of the Environment

Defines Source ID, Monitoring & Reporting





## Breaking the code

National Emission Standard for HAPS (NESHAPS)

40CFR Part 63 Subpart

Protection of the Environment

**NESHAP Definitions for Industrial Boilers** 



## Breaking the code

New Source Performance Standards (NSPS)

40CFR Part 60 Subpart Ja

Protection of the Environment

Standards of Performance for Petroleum Refineries



# Q Breaking the code

Compliance complexity driven by applicable rules

40CFR Part 60: Criteria Pollutants

• 40CFR Part 63: NESHAPS/MACT Standards

40CFR Part 75: XML EDR Reporting/MDS

• 40CFR Part 98: GHG/CO<sub>2</sub> Mass Emissions

• Title V Permit: SU/SD Conditions/Limits

Consent Decree: Settlement Conditions



## BREAKING THE CODE

- Minimum requirements are set out in the Federal Codes
- States can make the requirements more stringent than the Feds
- State regulators are responsible for enforcement of the "Rules"
- Enforcement is managed through the Title V Operating Permit process
- Local regulators can add additional requirements
- Corporate commitments through consent decrees can add even more



# <u>....</u>

# Controls & monitoring

#### Air Permit:

- Puts real requirements on the Federal Guidance
- Sets limits based on fuel type(s) & operating conditions
- Establishes SU/SD criteria and grace periods
- Defines monitoring & reporting criteria



# <u>....</u>

# Controls & monitoring

#### Controls:

- Devices designed to reduce emissions
- One or more devices may be needed to meet your obligation
- Once the controls are in place you have to demonstrate compliance



# <u>....</u>

# Controls & monitoring

#### Monitoring:

- Periodic, Continuous or Predictive
- Opportunity to optimize your monitoring methodology
- Minimize the introduction of errors





# Data collection & reporting

- Real Time Data Collection
- Data Validity & Data Calculations Consistent with Rules
- Averages in Reportable Format(s)
- Historical Database Supporting Quarterly Reporting
- Home Grown vs 3<sup>rd</sup> Party Solutions



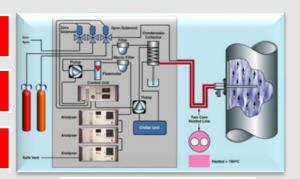
NOx

CO

Flow

PM

O2 COMS



DCS



Modbus TCP/IP or OPC



Plant I/O & non-CEMS

Modbus TCP/IP



10-sec

1-min

6-min

15-min

1-hour

Initial Data

Validations

#### Data Historian

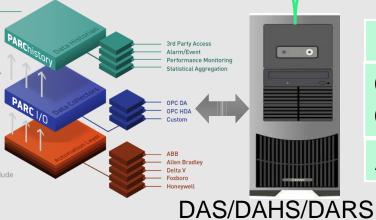
The PARCserver suite of applications is the powerhouse behind the speed and efficiency with which dataPARC products retrieve and display data.

#### Data Collection

Data collectors utilize "store and forward" technology to buffer data, ensuring maximum integrity. Hundreds of OPC and custom servers are available to interface with your automation layer.

#### Automation Layer -

PARCserver is capable of acquiring high frequency data from all the automation and control systems in the plant. These systems include PLCs, DCSs and others.



Database

Complex Calcs

Audit

ogs

Agency Reports



# Summary

#### Avoiding pitfalls, pratfalls and dangerous situations

- Use the Rules to find your source baseline
- Optimize your site-specific advantages allowed within the Rules
- Due diligence when evaluating control technologies & monitoring methodologies
- Talk to "like-kind" sources with similar environmental challenges
- Conduct thorough risk assessment associated with compliance investments
- Ask for help where needed





# Questions?





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