A Basic Understanding of Air Emissions Compliance Obligations

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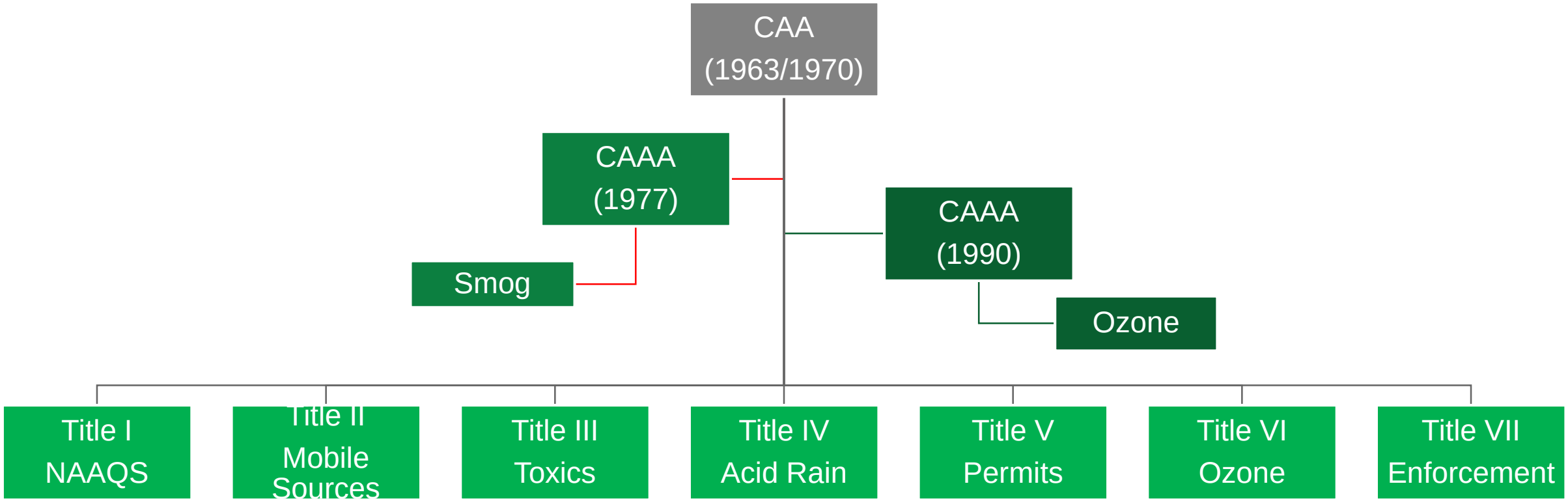
Baseline for the rules



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

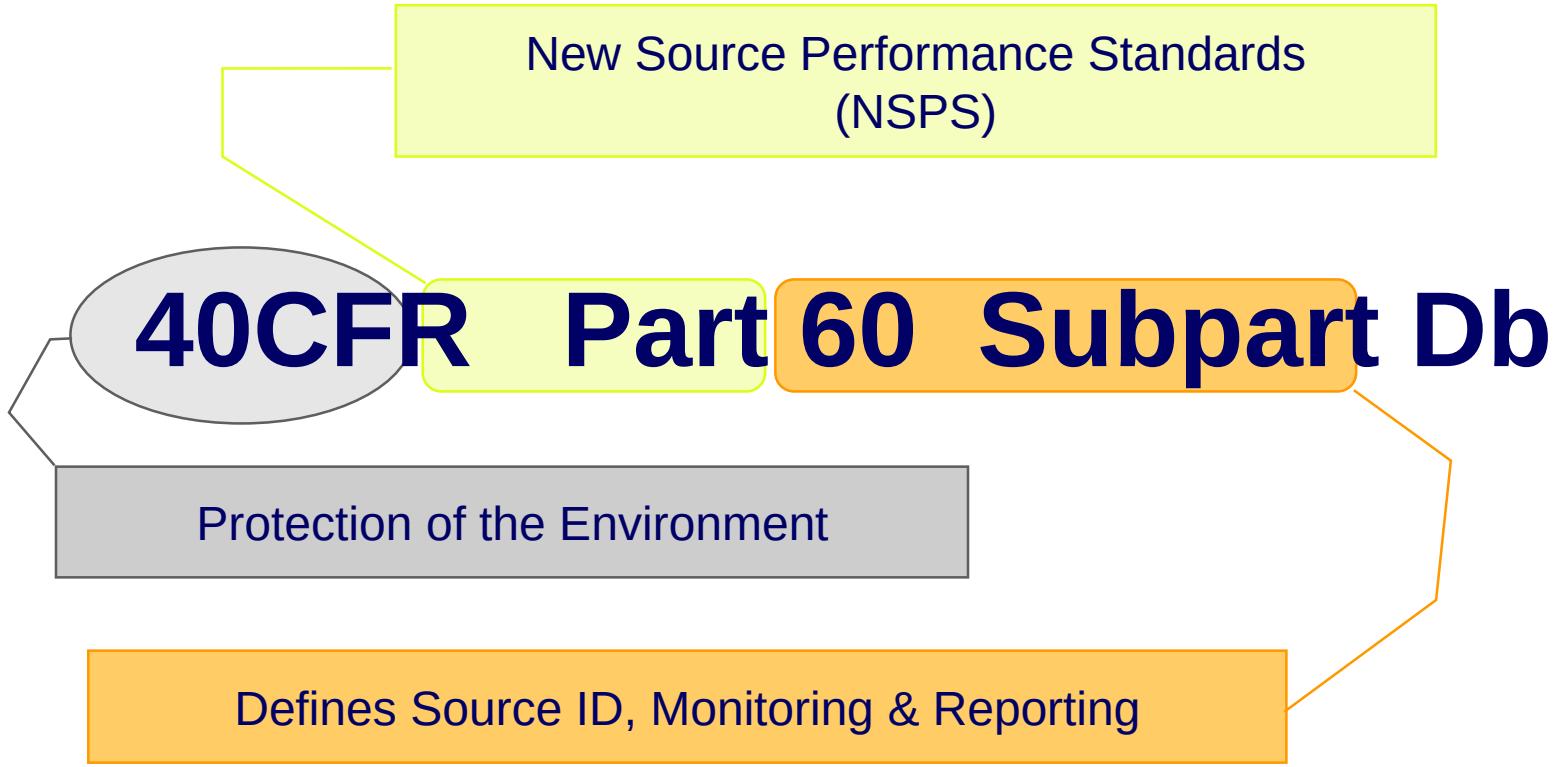
Primary Source Identification within the rules driven by:

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

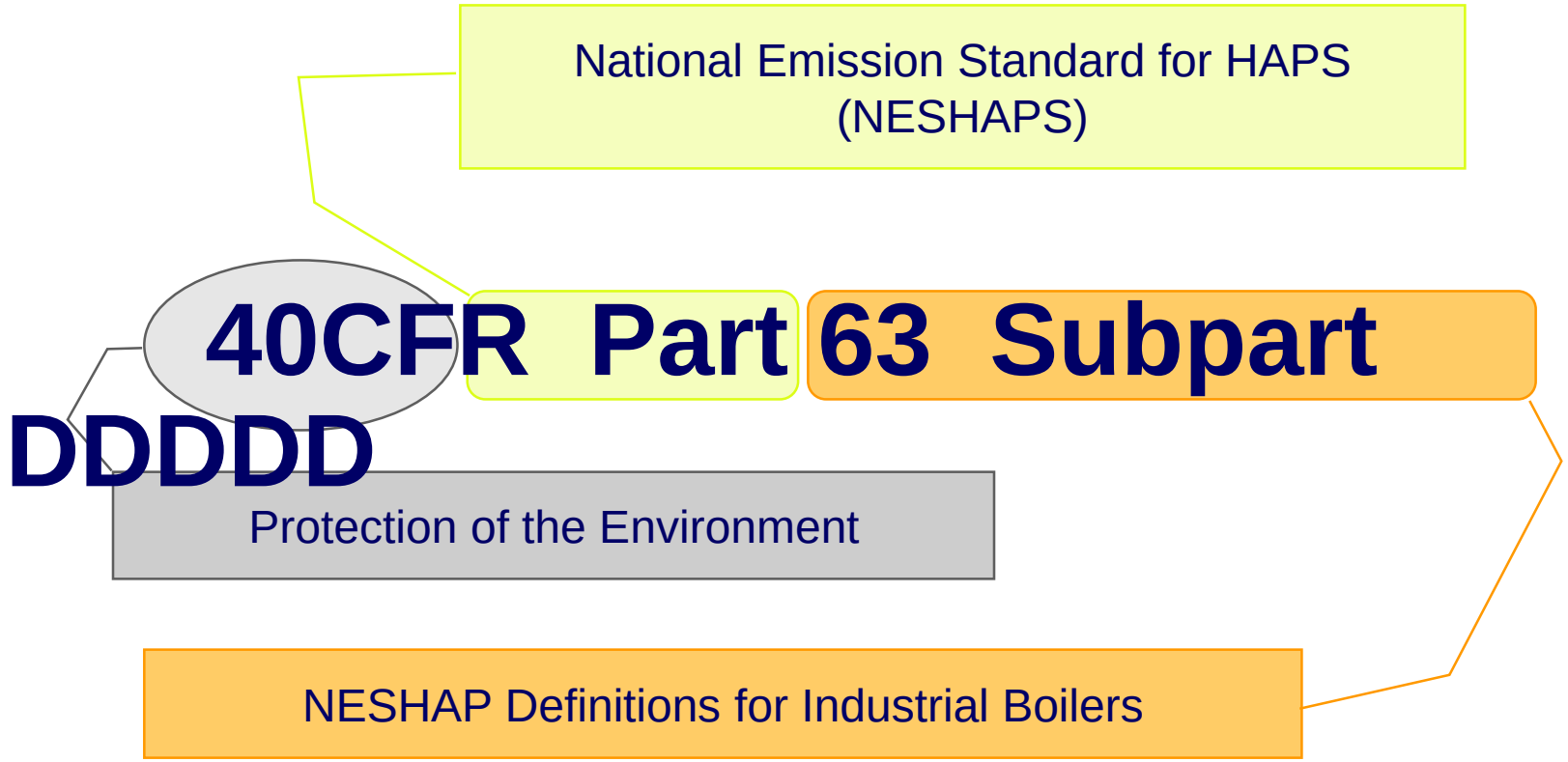
Secondary Source Identification within the rules driven by:

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

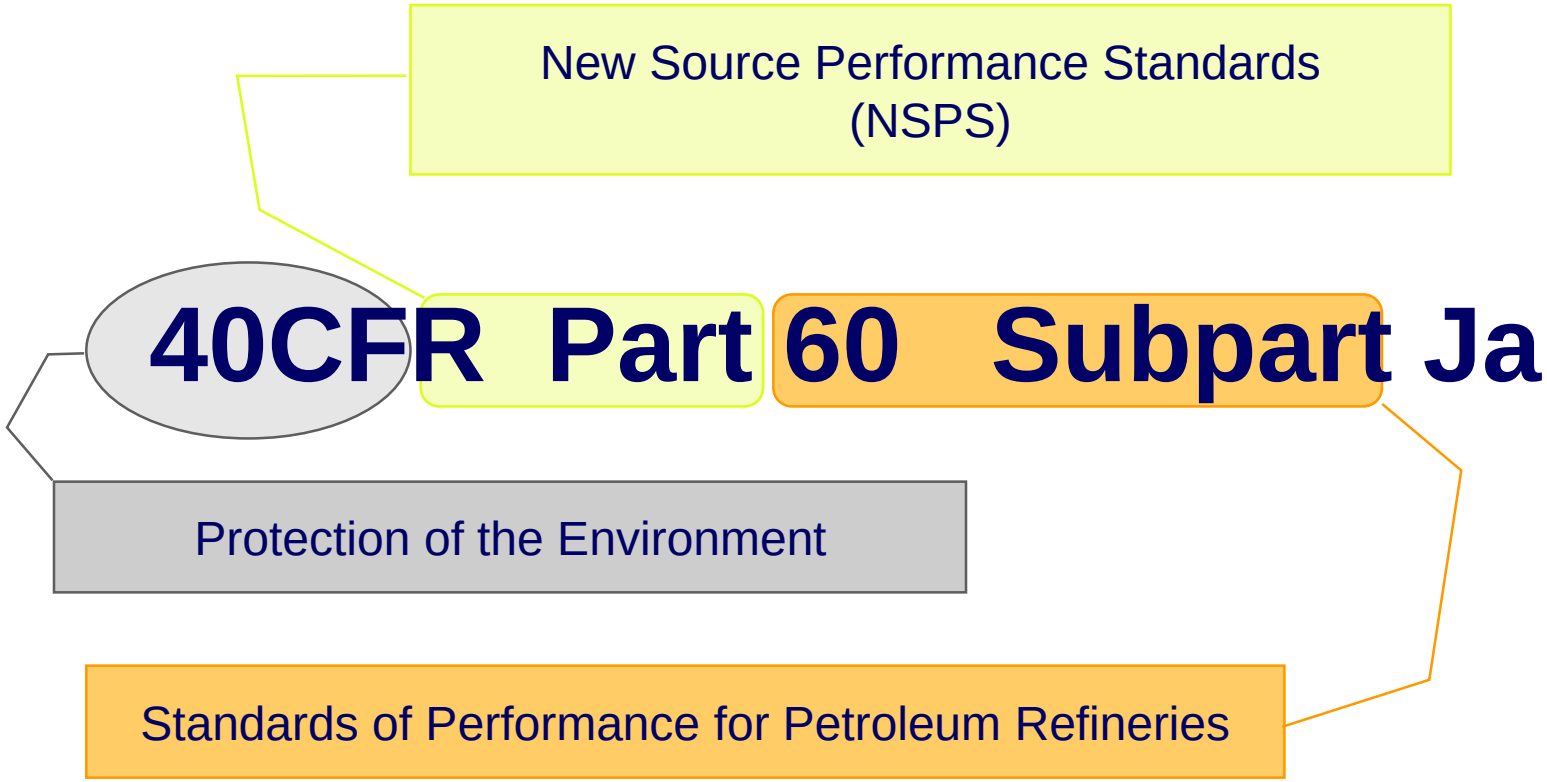
Breaking the code



Breaking the code



Breaking the code



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_2 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

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

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

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 3rd Party Solutions

NOx

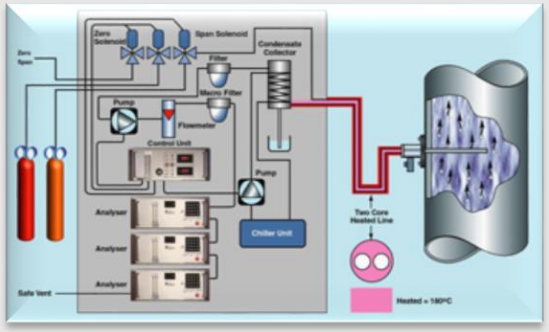
Flow

CO

PM

O2

COMS



DCS

Plant I/O & non-CEMS

Modbus TCP/IP

Modbus TCP/IP or OPC

10-sec

1-min

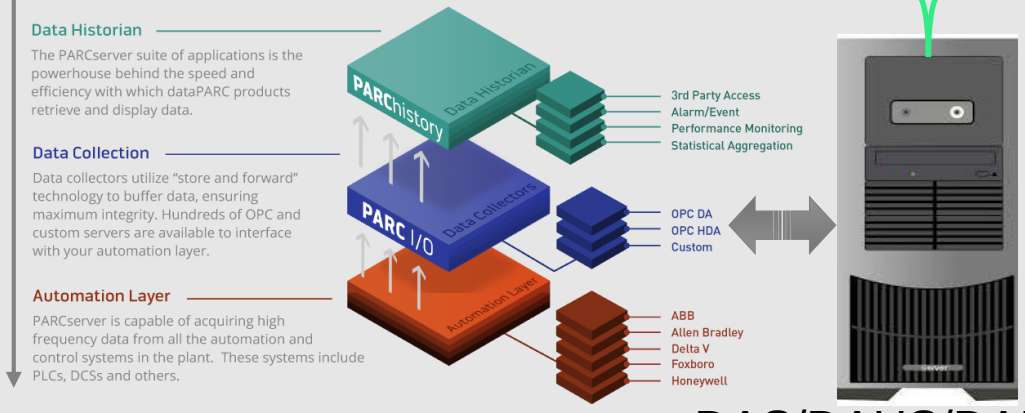
6-min

15-min

1-hour

Initial Data

Validations



DAS/DAHS/DARS

Database

Complex Calcs

Audit Logs

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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