



**2013 AWMA Conference & Exhibition**  
**June 27<sup>th</sup>, 2013**

# **DAHS Emissions Compliance and Regulatory Audit Recipe for Large Combustion Units Equipped with CEMS and/or COMS**

**Please come visit us  
at BOOTH 1040**

**[www.dsgsol.com](http://www.dsgsol.com)**

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## About Us

DSG Solutions, LLC supports the energy industry with air management services focusing on air emissions monitoring, testing, recordkeeping and reporting requirements related to 40 CFR 60/63/64/75/98 and State air regulations.

- Audits
- Training
- Report Preparation
- New Regulations
- As-Needed Support

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## INTRODUCTION

# Overview

- CEMS & DAHS Introduction
- 4 Types of DAHS Audits
  - Formality & Scope
  - Why?
- Type 4 DAHS Audit Recipe
  - Pre-Audit Activities
  - Audit Activities
  - Post-Audit Activities
- Common Findings
- Review



## INTRODUCTION

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# Continuous Monitoring

- Dry Extractive/Dilution/  
In-Situ
  - NO<sub>x</sub>, SO<sub>2</sub>, CO, NH<sub>3</sub>, VOC, Hg, PM, CO<sub>2</sub> or O<sub>2</sub>, Opacity
- Process Parameters
  - Stack flow, fuel flow, load, etc.
- Air Pollution Controls
  - T and DP
  - Injection rates
  - etc.
- Site specific monitoring
- Complex DAHS implementations



# DAHS

## INTRODUCTION

- Data Acquisition & Handling System
- Numerous Vendors
- Real Time
- Alarms
- CEMS/COMS Data Repository
- Recordkeeping
- Reporting
- Complex Site Specific Configuration



# DAHS Review/Audit Classifications

**TYPE 1**

**TYPE 2**

**TYPE 3**

**TYPE 4**



**Scope**



Comprehensive  
Informal  
DAHS Review

Comprehensive  
Formal  
DAHS Audit

3

4

1

2

Focused Informal  
DAHS Review

Focused Formal  
DAHS Audit



**Formality**



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**Formality**



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**Formality**





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## Type 4 DAHS Audit

- Formal & Comp. Scope
- Perform As Needed
- Examples
  - New Combustion Unit
  - Change DAHS Vendor
  - Personnel Changes
  - Known Config. Problems
  - Generally Uncomfortable,...
- Most Preparation
- Most Performance Time
- Most Deliverables
- Most Complex



**TYPE 4 Pre-Audit**

**TYPE 4 Audit**

**TYPE 4 Post-Audit**

**TYPE 4 Follow-Up**

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# Scope Development

- Identify Qualified Individual(s)
  - DAHS vendor
  - Facility personnel
  - 3<sup>rd</sup> party consultant
- Meeting(s) to Develop Scope
  - Too narrow, too broad...
- Just Right
  - Address known/suspected concerns
  - Available resources





**TYPE 4 Pre-Audit**

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## **RFI & Documents Prep**

- Request for Information
  - DAHS configuration summaries
  - Air permits
  - Compliance reports
  - Logbook(s)
  - QA/QC & Monitoring Plans
- Documentation Preparation
  - Air regulatory summary
  - Audit checklist
  - DAHS alarms list
  - DAHS channel summary
  - DAHS data flow diagram

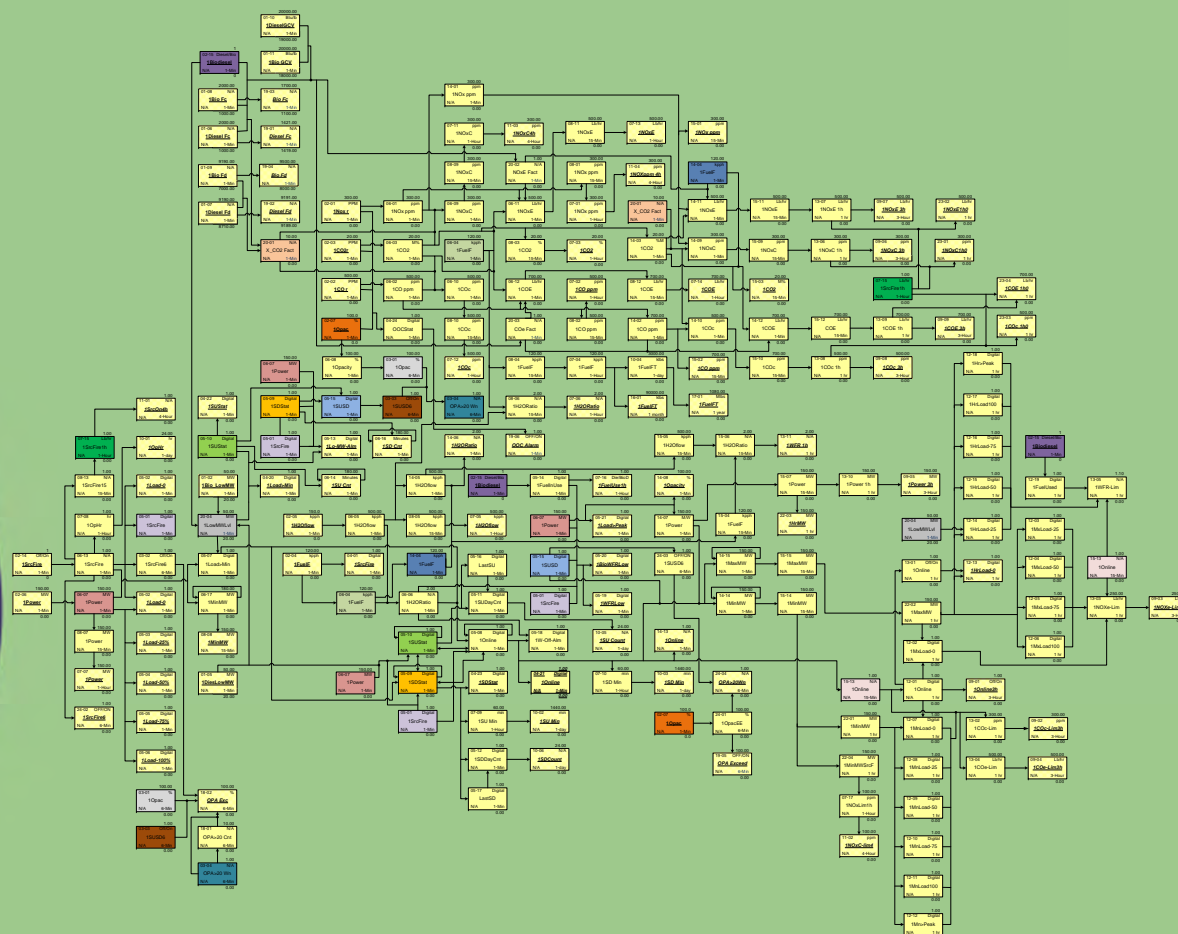
# Example DAHS Data Flow Diagram

TYPE 4 Pre-Audit

TYPE 4 Audit

TYPE 4 Post-Audit

TYPE 4 Follow-Up





TYPE 4 Pre-Audit

TYPE 4 Audit

TYPE 4 Post-Audit

TYPE 4 Follow-Up

## DAHS Audit Activities

- Ideally perform onsite
- Follow audit checklist
- Documentation
  - DAHS portions reviewed
  - Configuration problems
  - Screen shots
  - DAHS reports



**TYPE 4 Pre-Audit**

**TYPE 4 Audit**

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# What to Review?

- Review real time screens
- Review daily calibrations
- Review compliance limits
  - Compliance channel(s)
  - Early warning alarms
  - Compliance alarms
  - Compliance reports
- Review data aggregation
  - 6-min, hourly, daily, 30-day, 365 day, 12 month roll
  - Startup & Shutdown & POH
- Review data validation
  - 40 CFR 60/75/etc.





**TYPE 4 Pre-Audit**

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# What to Review?

- Review missing data routines
- Review QA test configurations
- Site specific configurations
  - QA/QC plan
  - Monitoring plan(s)
  - Alternative monitoring approval(s)
- Review federal reports
  - 40 CFR 75 EDRs
  - 40 CFR 60 EEMPRs
  - 40 CFR 63/64/etc.
- Review state reports



**TYPE 4 Pre-Audit**

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# Findings Report

- Compliance findings
- Efficiency recommendations
- All documentation
  - Preparation materials
  - Completed checklist
  - DAHS screen shots/reports



**TYPE 4 Pre-Audit**

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## Common Findings

- Misconfigured compliance channels and alarms
- Configuration discrepancies between identical units
- Misconfigured daily calibration passing criteria
- Part 75 missing data excluding add-on controls
- Efficiency recommendations



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## Follow-Up Activities

- Substantial resources
- Prioritize and address findings
- DAHS specification(s)
  - Communicate compliance/efficiency concerns to DAHS vendor
- Always QA DAHS updates
- Update DAHS summary documents as needed
- Maintain a high quality DAHS configuration over time





## REVIEW

# Review

- Complex DAHS configurations
- 4 Types of DAHS reviews/audits
  - Scope & Formality
- Type 4 is most complex
  - Develop appropriate scope
  - Preparation activities
  - Perform Audit
  - Develop findings report
  - Address findings & QA
  - Maintain high quality DAHS



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## **Questions?**

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