

MACT Check-up

Tips for Addressing Compliance with an Aging MACT Program

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Indiana Environmental
Conference
October 9, 2019



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Compliance Audits for MACT - Introduction

Check-up - deeper dive than a routine compliance audit

Detail of compliance program are outside of air permit

Tips for doing the audits and lessons learned

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Compliance Audits for MACT - Terms

Maximum Achievable Control Technology (MACT)
Startup Shutdown Malfunction (SSM) Plans
Leak Detection and Repair (LDAR)
Notification of Compliance Status Reports (NOCSR)
Periodic Reports (PR)
Hazardous Organic NESAP (HON)
National Emission Standard for Hazardous Air Pollutants (NESHAP)
Residual Risk and Technology Review (RTR)

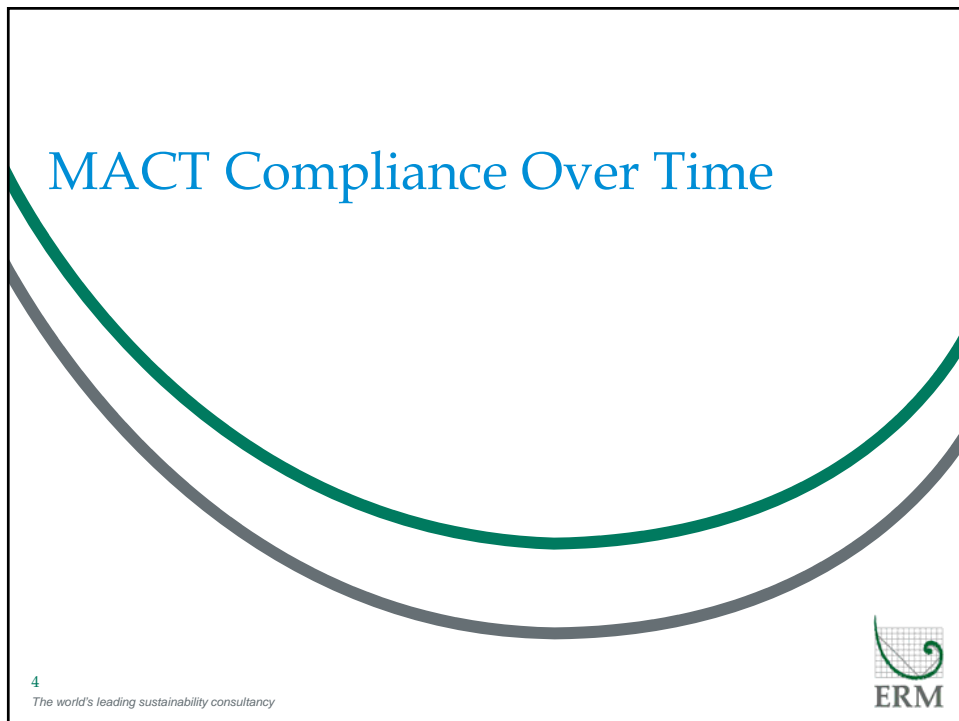
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MACT Compliance Over Time



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Focused MACT Assessments

- Revisit Applicability and Document Group Determinations for Process Vents, Storage Tanks, Loading Racks, Heat Exchanger Systems and Wastewater PODs
- Assess Adequacy of SSM plans and Malfunction Reporting
- Revisit LDAR Program for adequacy, current with regulation changes
- Updated Notification of Compliance Status Reports and Periodic Reports

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Aging MACT Compliance Programs

What We're Finding During MACT Assessments:

- Forgotten or Out of Date Start-up, Shutdown, Malfunction (SSM) Plans
- Failure to update defunct SSM Plan provisions for those MACTs now with only the Malfunction Recordkeeping and Reporting provision
- Failure to Assess MACT Applicability to New Processes or New Products from Existing MACT Affected Processes
- Lack of Evaluation of Prior MACT Group Determinations following Modifications/Production Changes

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Aging MACT Compliance Programs

What We're Finding During MACT Assessments (Cont'd):

- Equipment Components in LDAR Program Not Inclusive of All Affected Components
- Periodic Reporting on Processes Shut Down for Extended Periods
- Dated Periodic Report Content
- Lost Notification of Compliance Status Reports (NOCSR), Lost Updates to NOCSRs, Failure to make notifications of changes to prior documents

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Aging MACT Compliance Programs

Some Causes of Aging MACT Programs:

- Original Compliance Dates Were Decades Ago (First MACT Bin -1994)
- Changes in Plant Personnel
- Changes in Outside Consulting Firms
- Management of Change (MOC) program addresses permit requirements, not MACT Implications and/or Excludes LDAR Review

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Aging MACT Compliance Programs

Some Causes of Aging MACT Programs (Cont'd):

- Lack of State/Local Agency Actions
- Some Title V Permits only Reference MACT Requirements and Annual Compliance Certifications Address Compliance with a Single Statement
- Revisions to the Original Final MACT
- Promulgation of New MACTs

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Aging MACT Compliance Programs

Check Up on Your MACT Programs and Keep Them Fresh!

- Review MOC Environmental Content and Make Sure MACT Review is Included
- In addition to submitting MACT changes in Periodic Reports, Revise the NOCSR - Make it a Living Document!
- During Annual ACC Reviews, Include a review of your MACT compliance provisions and use this tickler to address updates

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Aging MACT Compliance Programs

Check Up on Your MACT Programs and Keep Them Fresh!

- Conduct Annual Refresher Training of Operators/Supervisors on MACT Requirements for recordkeeping, reporting and SSM / Malfunction Actions
- Meet at least annually with your LDAR team to review changes to the program and assure effective communications on MOC program
- Track/Be Active in USEPA Revisions to your MACT and forthcoming Risk and Technology Review (RTR)

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Case Study - Chemical Plant

- Operating under an early MACT standard
- NOCSR not maintained over years
- Misunderstanding of vent/control scenarios

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Case Study – Chemical Plant

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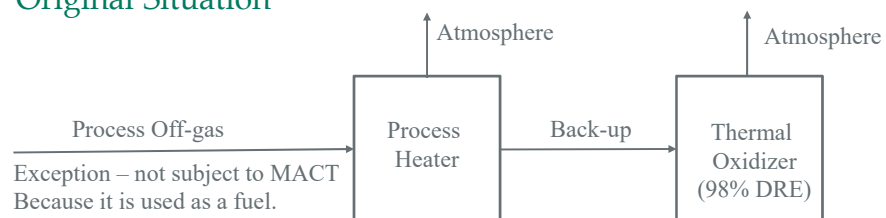
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Case Study – Chemical Plant

Original Situation



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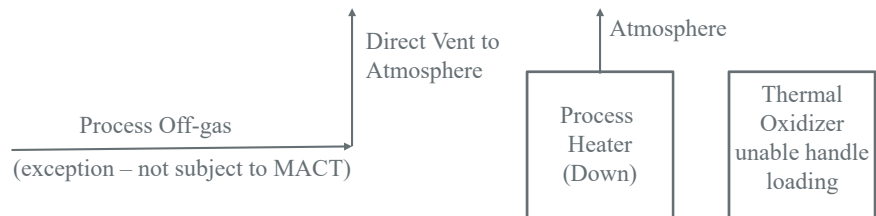
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Case Study – Chemical Plant

Evolved to Over Time



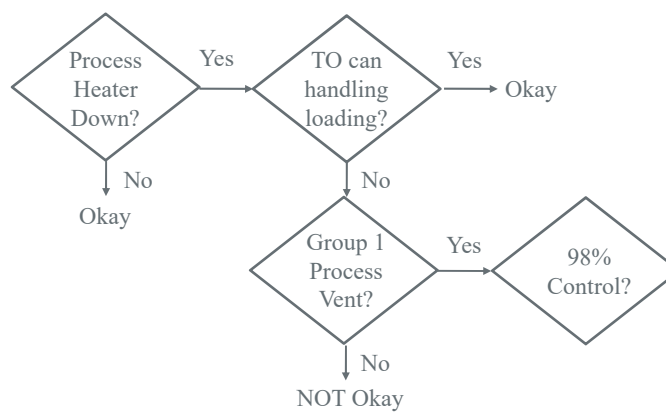
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Case Study – Chemical Plant

Compliance Logic



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New and Reconstructed Processes/Process Changes

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New Processes/Modifications

40 CFR 63.5 Preconstruction Review And Notification Requirements

You are required to obtain written approval in advance from the Administrator to do any of the following:

- Construct a new affected source that is major-emitting and subject to such standard;
- Reconstruct an affected source that is major-emitting and subject to such standard; or
- Reconstruct a major source such that the source becomes an affected source that is major-emitting and subject to the standard

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New Processes/Modifications

New Sources under the MACT

- Construction or reconstruction after the Administrator first proposes a relevant emission standard

Reconstructed Sources

- Reconstruction means the replacement of components of an affected or a previously nonaffected source to such an extent that the fixed capital cost of the new components exceeds 50 percent of the fixed capital cost that would be required to construct a comparable new source
- Upon reconstruction, an affected source, or a stationary source that becomes an affected source, is subject to relevant standards for new sources irrespective of any change in emissions of hazardous air pollutants from that source.

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New Processes/Modifications

Application for Approval of Construction

- Spelled out in 40 CFR §63.5(d)
- The type and quantity of HAPs emitted, reported in units and averaging times and in accordance with the test methods specified in the relevant standard
- If actual emissions data are not yet available, an estimate of the type and quantity of HAPs expected to be emitted, reported in units and averaging times specified in the relevant standard
- Percent reduction information if a relevant standard is established in terms of percent reduction. Include operating parameters, such as flow rate to the extent that they demonstrate performance and compliance
- If estimates or preliminary information are submitted in place of the actual emissions data, submit the actual measured emissions data with the NOCSR

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New Processes/Modifications

Application for Approval of Reconstruction

- A brief description of the affected source and the components that are to be replaced
- An estimate of the fixed capital cost of the replacements and of constructing a comparable entirely new source
- The estimated life of the affected source after the replacements
- Supporting technical information if declaring that there are no economic or technical limitations to prevent the source from complying with all relevant standards or other requirements
- The application for approval of construction or reconstruction satisfies the initial notification requirements of §63.9(b)(5).

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New Processes/Modifications

Process Changes

- Examples of process changes include changes in production capacity, production rate; feedstock type; or catalyst type; replacement, removal, or addition of recovery equipment.
- For Notification Requirements, Check the "Notification of Process Change" in Your Specific MACT
- HON - Whenever a process change is made that causes a Group 2 process vent to become a Group 1 process vent, the owner or operator shall submit a report within 180 calendar days after the process change
- HON - Whenever a process change is made that causes a Group 2 process vent with a TRE greater than 4.0 to become a Group 2 process vent with a TRE less than 4.0, the owner or operator shall submit a report within 180 calendar days after the process change. The report may be submitted as part of the next periodic report.

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EPA's Risk and Technology Review and Possible Forthcoming Requirements

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Residual Risk and Technology Review

- EPA is required to evaluate whether the MACT technology-based emission standards provide an ample margin of safety to protect public health and prevent adverse environmental effects
- Within 8 years of the promulgation of a MACT standard for the source category, EPA is mandated to assess the risks to determine whether additional standards are needed.
- EPA developed a Risk and Technology Review (RTR) Assessment Plan for the risk assessments to evaluate the potential risks to human health and the environment that remain after sources come into compliance with MACT

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Residual Risk and Technology Review

- To Date, EPA has completed 53 of +180 MACT RTRs
 - Surface Coating of Large Appliances, Surface Coating of Metal Furniture, and Printing, Coating, and Dyeing of Fabrics (3/15/2019)
 - Surface Coating of Wood Building Products (3/4/2019)
 - Surface Coating of Wood Building Products (3/4/2019)
 - Friction Materials Manufacturing (2/8/2019)
 - Wet-Formed Fiberglass Mat Production (2/28/2019)
 - Leather Finishing (2/12/2019)
 - Surface Coating of Wood Building Products (3/4/2019)
 - Pulp and Paper Combustion Sources (10/11/2017)
 - Portland Cement (7/17/18)
 - Pulp and Paper Combustion Sources (10/11/17)
 - Nutritional Yeast Manufacturing (10/16/17)
 - Publicly-Owned Treatment Works (10/18/17)

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Residual Risk and Technology Review

Forthcoming Changes?

- Revised Control Requirements?
- SSM Provisions replaced with Malfunction Recordkeeping & Reporting?
- Monitoring/Recordkeeping/Reporting of Pressure Release Devices ?
- Fenceline Monitoring for Fugitives?

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Summary and Lessons Learned

Routinely Revisit your MACT Compliance programs

Make the NOCSR a “living document” by keeping it up to date (not just part of a Periodic Report)

Document events covered under SSM plans

Incorporate elements of MACT into MOC process

During Annual ACC Reviews, Include a review of your MACT compliance provisions and use this tickler to address updates

Conduct Annual Refresher Training of Operators/Supervisors on MACT Requirements for recordkeeping, reporting and SSM / Malfunction Actions

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Summary and Lessons Learned (continued)

Meet at least annually with your LDAR team to review changes to the program and assure effective communications on MOC program

Track/Be Active in USEPA Revisions to your MACT and forthcoming Risk and Technology Review (RTR)

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Questions/Discussion

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