

MACT Monitoring, Recordkeeping and Reporting - The Hidden Requirements

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ABSTRACT

The maximum achievable control technology (MACT) standards established under the national emission standards for hazardous air pollutants (NESHAPs) of 40 CFR 63 may include easily overlooked, sometimes onerous and questionably appropriate requirements incorporated by reference to the MACT General Provisions of 40 CFR 63, Subpart A. These requirements are easily overlooked during the comment periods because they do not appear important, if they are recognized at all, and review time is usually limited. Therefore, these “hidden” requirements may be rarely commented on regarding their practical implementation and value. Similarly, these requirements are also easily overlooked when a compliance strategy is being developed. The General Provisions, understandably, were apparently developed with large and complex sources and control devices in mind. However, the same provisions are often incorporated by reference into standards regulating much simpler sources and control devices. The potential problems are accentuated because of the limited time available both in standards development and in comment periods that make it difficult to address these incorporations by reference for practical implications and appropriateness. This paper outlines some of the consequences of this situation and suggests a more detailed and realistic assessment and awareness of these requirements.

INTRODUCTION

The National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Source Categories were mandated by the Clean Air Act Amendments of 1990 (CAAA) in order to speed the development and promulgation of NESHAPs by requiring that the standards be based on technology - the maximum achievable control technology (MACT), rather than based on risk of emissions from a narrowly defined pollutant and source type as were the previous NESHAPs of 40 CFR Part 61. These MACT standards for source categories are being promulgated under 40 CFR Part 63. More than 30 MACT standards have been promulgated. In addition, the General Provisions of 40 CFR 63, Subpart A were promulgated in order to make standard elements that would apply to all MACT standards regardless of the source category. Both the New Source Performance Standards (NSPS) of 40 CFR Part 60 and the NESHAPs of 40 CFR Part 61 also included General Provisions; however, the scope of these provisions has been substantially broadened for Part 63. Although the section headings are similar for the three parts and some of the content is similar, Part 63 adds substantial provisions, such as the startup, shutdown, and malfunction plan (SSMP), as well as relying on far from obvious references to

the General Provisions to a much greater extent than do the other parts. This paper will outline some of the reasons, implications and drawbacks of this approach.

REASONS FOR EXPANSION OF GENERAL PROVISIONS

The major reason for the expanded scope and increased use of the General Provisions in Part 63 is the accelerated time schedule and quotas for standards development that were mandated by the CAAA. The intention of the General Provisions is to put all the requirements that are common to all or many standards in one regulatory citation that does not have to be repeatedly developed, proposed, and revised by incorporating comments before promulgation of each individual standard. Indeed, this is a worthy goal that was well utilized in the General Provisions for Parts 60 and 61. Similarly, many of the provisions regarding the requirements for continuous monitoring in the General Provisions of Part 63 are quite appropriate as they establish uniform requirements for assuring the quality of the monitoring data. However, in Part 63 MACT standards there are a number of requirements that are not obvious or even readily evident that they would be found in the General Provisions. These references to “hidden” requirements make the use of these expanded scope General Provisions much easier to miss by oversight.

IMPLICATIONS AND DRAWBACKS

The Congressionally-mandated schedule and quota for MACT standards makes it easier for two factors to enter into the standards development process that may generate impractical or questionable references to the General Provisions. First, because there is even less slack in the standards development process and the General Provision references usually get pushed to the end of the process, there is little time for the developers to explore the full ramifications and suitability of those references. Second, these requirements are easily overlooked by an interested party during the comment period. Many commenters, especially those from smaller industrial companies, have limited time available to fully digest the intricacies of a proposed regulation, especially since the comment period is generally limited to 30 to 60 days. Therefore, a reviewer will focus on the emission standards and applicability criteria since these rightly appear to be most important. If a reviewer has lots of time available, they may look at the emission testing and monitoring requirements since those are also requirements that it is fairly obvious that they will have to live with. If they have even more time they may look at some of the direct recordkeeping and reporting requirements in the regulation itself. However, it is rare that any reviewer would have the time and awareness to check the appendix reference table that incorporates portions of the General Provisions. Therefore, not only are these hidden requirements subject to minimal attention by standards developers but they are also rarely commented on by industry regarding their practical implementation and value. This shortcoming in reviewer awareness is accentuated by the fact that many industries are subject to only one MACT standard so that they are not aware of potential problems when reviewing a standard. In addition, smaller companies, which are most susceptible to having the least review time, are among the most likely to have practical problems with the requirements of the General Provisions.

Just as these hidden requirements may be overlooked during review, they may also be easily overlooked by facilities doing their best to develop compliance strategies. Even if they are discovered before the final compliance deadline, they may be discovered long after the time needed for optimum inclusion in the compliance strategy. They may even be discovered only after the required monitoring and recordkeeping should have already commenced.

Several portions of the General Provisions are especially susceptible to creating problems in practical implementation. The references to a number of these sections are summarized for the various MACT standards in Table 1. The particular sections shown have to do with startup, shutdown, and malfunction plans (SSMP); monitoring; notification; and recordkeeping and reporting. The potentially most problematical requirements relate to the SSMP. The monitoring requirements generally relate to the operation, maintenance, quality control and evaluation of continuous monitoring systems. These types of requirements are appropriately put in the General Provisions as is consistent with the precedents of Parts 60 and 61, although perhaps with some broadening of scope for Part 63. The notification requirements are also arguably appropriate; however, the initial notification requirement in the General Provisions could be easily overlooked within the allowed 120 days by someone earnestly seeking to comply with the regulations. The recordkeeping and reporting provisions of greatest concern also relate to the SSMP, in particular the requirements to notify the EPA within two days by telephone and within seven days by letter in the event of an action inconsistent with the SSMP.

The major concern with the SSMP provisions is that the provisions seem to have been developed, understandably, for large, complex, continuous processes and control devices. The hazardous organic NESHAP (HON) was one of the first MACT standards and the General Provisions appear to have been designed to complement them in particular. However, the same provisions are incorporated by reference into standards developed for much smaller, simpler and/or batch processes and control devices. Batch process by nature result in frequent startups and shutdowns. For example, Subpart GG, the Aerospace Manufacturing and Rework NESHAP, involves batch surface coating operations that may be controlled by relatively simple and reliable control devices on paint booths or abrasive blasting. As currently incorporated, the General Provisions require an SSMP for a waterwash paint booth or a baghouse controlling an abrasive blasting operation. Thankfully, Subpart GG does exempt paint booth dry particulate filter systems from the SSMP requirement. However, the status of an abrasive blasting baghouse is unclear from the regulation or guidance. Moreover, a departure from the SSMP, which is required for the source as well as the control device, must be reported within two days. One wonders if this is really necessary for a waterwash paint booth or abrasive blasting operation and baghouse. Even if there are no variations from the SSMP, records must be kept demonstrating compliance.

Table 1. MACT Standard References to Selected General Provision Sections

MACT Standard	63.6 Compliance with Standards and Maintenance Requirements	63.8 Monitoring Requirements			63.9 Notification Requirements		63.10 Recordkeeping and Reporting Requirements	
	(e) (3) Startup, Shutdown, and Malfunction Plan	(c) Operation and Maintenance of Continuous Monitoring Systems	(d) Quality Control Program	(e) Performance Evaluation of Continuous Monitoring Systems	(b) Initial Notifications	(h) Notification of Compliance Status	(d)(5)(i) Periodic Startup, Shutdown, and Malfunction Reports	(d)(5)(ii) Immediate Startup, Shutdown, and Malfunction Reports
Subpart F - SOCMIHON	Yes, except (i)(A),(iii),(iv)	Yes, except (1)(ii),(4)-(8)	No	No	Yes, except (1)-(3)	No	Yes	Yes
Subpart G - SOCMIP Process Vents, Storage Vessels, Transfer Operations, and Wastewater	Yes, except (i)(A),(iii),(iv)	Yes, except (1)(ii),(4)-(8); submit as part of periodic report	No	No	Yes, except (1)-(3)	No	Yes	Yes
Subpart H - Equipment Leaks	Yes, except (i)(A),(iii),(iv); (i) SSMP limited to control devices	Yes, except (1)(ii),(4)-(8); CMS not required	No	No	Yes, except (1)-(3)	No	Yes	Yes
Subpart I - Negotiated Regulation for Equipment Leaks	Yes, except SSMP limited to Subpart H control devices	No	No	No	Yes only (1)(i),(4),(5)	No	No	No
Subpart L - Coke Oven Batteries	Predated Subpart A							

Table 1. (continued)

	63.6 Compliance with Standards and Maintenance Requirements	63.8 Monitoring Requirements			63.9 Notification Requirements		63.10 Recordkeeping and Reporting Requirements	
MACT Standard	(e) (3) Startup, Shutdown, and Malfunction Plan	(c) Operation and Maintenance of Continuous Monitoring Systems	(d) Quality Control Program	(e) Performance Evaluation of Continuous Monitoring Systems	(b) Initial Notifications	(h) Notification of Compliance Status	(d)(5)(i) Periodic Startup, Shutdown, and Malfunction Reports	(d)(5)(ii) Immediate Startup, Shutdown, and Malfunction Reports
Subpart M - Dry Cleaning Facilities	Pretated Subpart A							
Subpart N - Chromium Electroplating and Anodizing	No	No	No	No	No	No, except (6)	No	No
Subpart O - Sterilization Facilities	No	No, except ((1)(iii),(2)-(3))	Yes if using 10 tons in Subpart O	Yes, except (3) if using 1-10 tons, (5)(ii) as no COM required	Yes, except (1)(ii)-(iii), (4)-(5)	Yes, except (4)-(6)	No	No
Subpart Q - Industrial Process Cooling Towers	No	No	No	No	Yes, except (4)-(6)	Yes, except (2),(4)-(5)	Yes	Yes
Subpart R - Gasoline Distribution Facilities	Yes	Yes, except (5) as no COMS required	Yes	Yes	Yes, except (2)	Yes, except (4)	Yes	Yes
Subpart S - Pulp and Paper Industry	Yes	Yes, except (4)-(5)	Yes	Yes	Yes	Yes	Yes	Yes

Table 1. (continued)

	63.6 Compliance with Standards and Maintenance Requirements	63.8 Monitoring Requirements			63.9 Notification Requirements		63.10 Recordkeeping and Reporting Requirements	
	(e) (3) Startup, Shutdown, and Malfunction Plan	(c) Operation and Maintenance of Continuous Monitoring Systems	(d) Quality Control Program	(e) Performance Evaluation of Continuous Monitoring Systems	(b) Initial Notifications	(h) Notification of Compliance Status	(d)(5)(i) Periodic Startup, Shutdown, and Malfunction Reports	(d)(5)(ii) Immediate Startup, Shutdown, and Malfunction Reports
Subpart T - Halogenated Solvent Cleaning	No	No as no CMS required	No as no CMS required	No as no CMS required	Yes, except (4)	No	NA	NA
Subpart U - Group I Polymers and Resins	Yes, except for Group 2 emission points not in emissions average	Yes, except (1)(ii),(4)-(8)	No	No	No	No	Yes, except submitted at same time as periodic reports	Yes
Subpart W - Epoxy resins and Non-Nylon Polyamides Production	Yes	Yes, except (4)-(8)	No	No	Yes	Yes, except (4) NA, (5)-(6) for specified standards	Yes	Yes
Subpart X - Secondary Lead Smelting	No	No	No	No	Yes	Yes	Yes	Yes
Subpart Y - Marine Tank Vessel Loading Operations	No	Yes, except (4),(7)(i)(C),(8)	No	Yes, except (5)(ii)	No, except (1)(i),(1)(iii)	Yes, except (4) reserved	No	No

Table 1. (continued)

	63.6 Compliance with Standards and Maintenance Requirements	63.8 Monitoring Requirements			63.9 Notification Requirements		63.10 Recordkeeping and Reporting Requirements	
	(e) (3) Startup, Shutdown, and Malfunction Plan	(c) Operation and Maintenance of Continuous Monitoring Systems	(d) Quality Control Program	(e) Performance Evaluation of Continuous Monitoring Systems	(b) Initial Notifications	(h) Notification of Compliance Status	(d)(5)(i) Periodic Startup, Shutdown, and Malfunction Reports	(d)(5)(ii) Immediate Startup, Shutdown, and Malfunction Reports
Subpart CC - Petroleum Refineries	Yes, except for Group 2 emission points	Yes, except (1)(ii),(4)-(8)	No	No	No, except (4)-(5)	No	Yes, except for Group 2 emission points	Yes, except for Group 2 emission points
Subpart DD - Off-Site Waste and Recovery Operations	Yes	Yes, except (4)-(8)	No	No	Yes, except (1)(ii),(3)	Yes	Yes	Yes
Subpart EE - Magnetic Tape Manufacturing	Yes, except startups and shutdowns as emission limits apply	Yes, except (5)	Yes	Yes	Yes	Yes	Yes, except startups and shutdowns as emission limits apply	Yes, except startups and shutdowns as emission limits apply
Subpart GG - Aerospace Manufacturing and Rework	Yes; 63.743(b) specifies that dry particulate filter systems operated per the manufacturer's instructions are exempt from SSMP	Yes	No	Yes, except (5)(ii)	Yes	Yes, except (4) reserved	Yes	Yes

Table 1. (continued)

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	(e) (3) Startup, Shutdown, and Malfunction Plan	(c) Operation and Maintenance of Continuous Monitoring Systems	(d) Quality Control Program	(e) Performance Evaluation of Continuous Monitoring Systems	(b) Initial Notifications	(h) Notification of Compliance Status	(d)(5)(i) Periodic Startup, Shutdown, and Malfunction Reports	(d)(5)(ii) Immediate Startup, Shutdown, and Malfunction Reports
Subpart II Shipbuilding and Ship Repair	No, except if using an add-on control device to comply or with alternative means of limiting emissions	No, except with alternative means of limiting emissions	No, except with alternative means of limiting emissions	No, except with alternative means of limiting emissions	Yes	No, except with alternative means of limiting emissions	Yes	Yes
Subpart JJ - Wood Furniture Manufacturing	Yes, only if using a control device to comply	Yes, only if using a control device to comply	Yes, only if using a control device to comply	Yes, only if using a control device to comply	Yes	Yes, (2)(ii) only if using a control device to comply	Yes, only if using a control device to comply	Yes, only if using a control device to comply
Subpart KK - Printing and Publishing Industry	Yes, except startups, shutdowns, malfunctions, and CMS only if add-on control device is used	Yes, except (4)-(5)	Yes	Yes	Yes	Yes, except (4) reserved	Yes	Yes
Subpart LL- Primary Aluminum Reduction Plants	Yes	Yes, except (4)-(8)	No	No	Yes	Yes	Yes	Yes

Table 1. (continued)

	63.6 Compliance with Standards and Maintenance Requirements	63.8 Monitoring Requirements			63.9 Notification Requirements		63.10 Recordkeeping and Reporting Requirements	
MACT Standard	(e) (3) Startup, Shutdown, and Malfunction Plan	(c) Operation and Maintenance of Continuous Monitoring Systems	(d) Quality Control Program	(e) Performance Evaluation of Continuous Monitoring Systems	(b) Initial Notifications	(h) Notification of Compliance Status	(d)(5)(i) Periodic Startup, Shutdown, and Malfunction Reports	(d)(5)(ii) Immediate Startup, Shutdown, and Malfunction Reports
Subpart OO - Tanks - Level 1	No, except as noted in the subpart that references this subpart	No, except as noted in the subpart that references this subpart	No, except as noted in the subpart that references this subpart	No, except as noted in the subpart that references this subpart	No, except as noted in the subpart that references this subpart	No, except as noted in the subpart that references this subpart	No, except as noted in the subpart that references this subpart	No, except as noted in the subpart that references this subpart
Subpart PP - Containers	No, except as noted in the subpart that references this subpart	No, except as noted in the subpart that references this subpart	No, except as noted in the subpart that references this subpart	No, except as noted in the subpart that references this subpart	No, except as noted in the subpart that references this subpart	No, except as noted in the subpart that references this subpart	No, except as noted in the subpart that references this subpart	No, except as noted in the subpart that references this subpart
Subpart QQ - Surface Impoundments	No, except as noted in the subpart that references this subpart	No, except as noted in the subpart that references this subpart	No, except as noted in the subpart that references this subpart	No, except as noted in the subpart that references this subpart	No, except as noted in the subpart that references this subpart	No, except as noted in the subpart that references this subpart	No, except as noted in the subpart that references this subpart	No, except as noted in the subpart that references this subpart

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Subpart RR - Individual Drain Systems	No, except as noted in the subpart that references this subpart	No, except as noted in the subpart that references this subpart	No, except as noted in the subpart that references this subpart	No, except as noted in the subpart that references this subpart	No, except as noted in the subpart that references this subpart	No, except as noted in the subpart that references this subpart	No, except as noted in the subpart that references this subpart	No, except as noted in the subpart that references this subpart
Subpart VV - Oil-Water and Organic-Water Separators	No, except as noted in the subpart that references this subpart	No, except as noted in the subpart that references this subpart	No, except as noted in the subpart that references this subpart	No, except as noted in the subpart that references this subpart	No, except as noted in the subpart that references this subpart	No, except as noted in the subpart that references this subpart	No, except as noted in the subpart that references this subpart	No, except as noted in the subpart that references this subpart
Subpart EEE - Hazardous Waste Combustors	Not specified	Not specified	Not specified	Not specified	Not specified	Not specified	Not specified	Not specified
Subpart JJJ - Group IV Polymers and Resins	Yes, except for Group 2 emission points not in emissions average	Yes, except (1)(ii),(4)-(8)	No	No	No	No	Yes, except for Group 2 emission points not in emissions average	Yes, except for Group 2 emission points not in emissions average

CONCLUSIONS AND RECOMMENDATIONS

In summary, the hidden requirements of the MACT standards generated by incorporation by reference of the expanded scope of the General Provisions, may generate unnecessarily onerous requirements with limited practical benefit. These potential problems are accentuated by the limited time available both in standards development and in comment periods to thoroughly address these references for practical implications and appropriateness. Although it is recognized that the time constraints are Congressionally mandated and, thus, beyond EPA's control, efforts should be made to alleviate the schedule constraints where possible and to use public notices and preambles to draw attention to the incorporated General Provisions. Then relevant comments based on practical experience in the industry may be more readily obtained and the incorporated General Provisions will be less likely to be overlooked when developing a compliance strategy.

KEY WORDS

MACT Standards
General Provisions
Monitoring
Recordkeeping
Reporting