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Background Document on Proposed Amendments to:

310 CMR 7.00 Air Pollution Control

December 13, 2019

Regulatory Authority:

**M.G.L. c. 21A, §§ 2, 8 and 16, M.G.L. c. 21N, and
M.G.L. c. 111, §§ 2C and 142A – 142E**

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I. SUMMARY

Pursuant to M.G.L. c. 21A, §§ 2 and 8, M.G.L. c. 21N and M.G.L. c. 111, §§ 2C and 142A through 142E, the Massachusetts Department of Environmental Protection (MassDEP) proposes to amend 310 CMR 7.00, *Air Pollution Control*. On March 9, 2018, MassDEP promulgated amendments to 310 CMR 7.00 as part of a comprehensive review of the regulations. These amendments related primarily to provisions for attaining and maintaining National Ambient Air Quality Standards (NAAQS). Since that time, MassDEP has identified a number of additional amendments that would improve the air pollution control regulations. MassDEP proposes the following amendments to 310 CMR 7.00:

- Add definition of “Aerospace Manufacturing and Rework Operations” and add exemptions for these operations from metal and plastic parts coatings and industrial cleaning solvents requirements to align with U.S. Environmental Protection Agency (EPA) provisions, and add quality assurance / quality control cleaning activities to the list of exemptions from Industrial Cleaning Solvents.
- Require electronic publication, instead of newspaper publication, of public notices of proposed permit decisions to align with EPA provisions.
- Clarify provisions for alternative volatile organic compounds (VOC) emissions standards for surface coatings.
- Revise the definition of Paper, Film and Foil Coating to align with EPA provisions.
- Allow implementation of approved operational changes prior to modifying a facility’s operating permit to align with EPA provisions.
- Allow boiler installation under the Environmental Results Program (ERP) at operating permit facilities.
- Update incorporation-by-reference of EPA’s test method for wood-fired heaters.
- Delete obsolete exemption criteria for plan approvals.
- Add a definition of Ozone Season.
- Eliminate obsolete citations and correct budget allocations under the CO₂ Budget Trading program.
- Clarify procedures for appealing Prevention of Significant Deterioration (PSD) permit decisions.

In addition, pursuant to M.G.L. c. 21A, §§ 2, 8 and 16, M.G.L. c. 21N and M.G.L. c. 111, §§ 2C and 142A through 142E, the Massachusetts Executive Office of Energy and Environmental Affairs (EEA) and MassDEP propose amendments to 310 CMR 7.74 *Reducing CO₂ Emissions from Electricity Generating Facilities* to simplify and improve implementation of this regulation based on implementation experience since promulgation of this regulation in 2017. EEA and MassDEP propose the following amendments to 310 CMR 7.74:

- Simplify reporting provisions for the power plant CO₂ cap regulation and clean energy standard regulation.

- Revise auction provisions to minimize impacts of “emergency deferred compliance” on allowance supply.

II. DESCRIPTION OF THE MASSDEP PROPOSED AMENDMENTS

A. Aerospace and QA/QC VOC Exemptions

1. Aerospace Manufacturing and Rework Operations

As a state in the Ozone Transport Region, Massachusetts must implement Reasonably Available Control Technology (RACT) requirements, including Control Technique Guidelines (CTG) published by EPA. In 1997, EPA published a CTG entitled “Control of VOC emissions from Coating Operations at Aerospace Manufacturing and Rework Operations”¹ for aerospace manufacturing and rework facilities with the potential to emit 25 tons or more per year of VOC (the aerospace CTG). MassDEP submitted a RACT certification that identified two aerospace facilities and determined they were subject to and complying with MassDEP’s RACT regulations for miscellaneous metal parts coating and solvent metal degreasing, which were at least as stringent as the aerospace CTG. EPA subsequently approved MassDEP’s RACT certification.

In March 2018, MassDEP amended its VOC RACT regulations under 310 CMR 7.18 to meet several EPA non-aerospace CTGs. These amendments significantly lowered applicability thresholds and increased the stringency of emissions limits for source categories already regulated under RACT, including miscellaneous metal parts coating and plastic parts coating. The applicability threshold for miscellaneous metal parts was lowered from 10 tons per year to 3 tons per year of VOC emissions, and the threshold for plastic parts coating was lowered from 50 tons per year to 3 tons per year. The amendments also created a new category for industrial cleaning solvents with an applicability threshold of 3 tons per year. The new lower thresholds and more stringent emissions limits take effect in March 2020.

An unintended consequence of these amendments was that, because aerospace operations include coating and cleaning of metal and plastic parts, they became subject to the new requirements, which are not appropriate for this sector given the very exacting performance standards that aerospace products must meet to ensure airworthiness and safety, as required by the Federal Aviation Administration, the Department of Defense, and specific customer requirements. It was not EPA’s intent for its non-aerospace CTGs to apply to the aerospace sector, nor MassDEP’s intent. For example, EPA’s 2008 Control Techniques Guidelines for Miscellaneous Metal and Plastic Parts Coatings² states:

Miscellaneous metal products and plastic parts coatings do not include coatings that are a part of other product categories listed under Section 183(e) of the Act for which CTGs have been published and/or addressed by other CTGs. These other categories that are not part of the miscellaneous metal product and plastic parts coatings categories include aerospace coatings...

¹ https://www3.epa.gov/airquality/ctg_act/199712_voc_epa453_r-97-004_aerospace_rework.pdf

² https://www3.epa.gov/airquality/ctg_act/200809_voc_epa453_r-08-003_misc_metal_plasticparts_coating.pdf

In addition, EPA's 2006 Control Techniques Guidelines for Industrial Cleaning Solvents³ states:

Some industries with solvent cleaning operations are presently covered by an existing CTG (e.g., aerospace)... States should also consider the structure of the [California] Bay Area cleaning solvent rule, which ensures that particular cleaning activities are only subject to one set of requirements, as opposed to duplicative requirements...

Since MassDEP's 2018 amendments were based on EPA non-aerospace CTGs that are not intended or appropriate for the aerospace sector, and it was not MassDEP's intent to apply these non-aerospace requirements to the aerospace sector, MassDEP proposes to:

- add a definition for "aerospace manufacturing and rework operations" to 310 CMR 7.00; and
- add exemptions to the miscellaneous metal parts and products coating, plastic parts coating, and industrial cleaning solvents requirements for aerospace manufacturing and rework operations.

Aerospace facilities would continue to be regulated under air quality plan approvals MassDEP has issued to existing aerospace facilities that require Best Available Control Technology VOC emission limits that are at least as stringent as the VOC emissions standards in the aerospace CTG. Aerospace facilities also would continue to be regulated under EPA's National Emissions Standards for Hazardous Air Pollutants for Aerospace Manufacturing and Rework Facilities, 40 CFR part 63, Subpart GG, as applicable.

2. Quality Assurance / Quality Control Cleaning

MassDEP proposes to add quality assurance /quality control (QA/QC) cleaning in manufacturing processes to the list of exemptions from Industrial Cleaning Solvents, since emissions from QA/QC cleaning activities are negligible and are similar to existing laboratory QA/QC cleaning activities that already are exempt from the regulation.

B. Electronic Notice of Proposed Permit Decisions

MassDEP proposes to replace the requirement to publish notices of public hearing and comment on draft air permits in newspapers with a requirement to provide electronic notice to align with EPA public notice rule revisions adopted in October 2016 and to promote MassDEP's goal of delivering more efficient, convenient, and interactive e-government services.

Prior to the electronic media age, EPA's air regulations required states to publish a notice of availability and public hearing and comment for draft air permits in a newspaper. To meet EPA's requirements, MassDEP's regulations at 310 CMR 7.00 required notices of public hearing and comment on draft air permits to be published in a newspaper.

³ https://www3.epa.gov/airquality/ctg_act/200609_voc_epa453_r-06-001_ind_cleaning_solvents.pdf

In 2016, EPA amended its air regulations to allow publication of notices of public hearing and comment on draft air permits electronically in lieu of newspaper publication.⁴ Under EPA's rules, state agencies with federally approved New Source Review (NSR) and Title V Operating Permit (Title V) programs have the option to publish notices of public hearing and comment using electronic notice (e-notice) and electronic access to all accompanying materials (e-access) via a publicly available website (which can be the state agency's own website). If a state agency adopts e-notice and e-access methods under a program, the agency must use these methods for issuance of all notices under that program (referred to as "consistent noticing method"), but other forms of publication in other media may be used as supplemental notice if needed.

In March 2018, MassDEP adopted e-notice and e-access in 310 CMR 7.02(3) to provide notice of Plan Approval applications and final MassDEP decisions for its state minor NSR Program. The vast majority of MassDEP air permits are minor NSR Plan Approvals. MassDEP's experience with using the new e-notice provisions for the NSR program is working well. In addition to posting notice on its website, MassDEP sends notice via email to local officials and other interested parties, which has improved prompt notice to interested communities and parties. In cases where MassDEP determines supplemental notice is needed, MassDEP may use additional notice methods, including newspapers and other local media. MassDEP also considers language translation needs in accordance with EEA's Environmental Justice Policy and project-specific needs.

MassDEP proposes to amend the remaining air permit programs within 310 CMR 7.00 to require e-notices and e-access for notice of public hearing and comment on air permits in place of newspaper notices. The air permits included are for:

- Restricted Emissions Status under 310 CMR 7.02(9),
- Municipal Waste Combustors under 310 CMR 7.08(2),
- VOC and NO_x RACT under 310 CMR 7.18 and 7.19,
- Emissions Standards for Power Plants under 310 CMR 7.29,
- Emission Offsets and Non-attainment Review under 310 CMR 7.00: Appendix A,
- Emission Banking, Trading and Averaging under 310 CMR 7.00: Appendix B, and
- [Title V] Operating Permit and Compliance under 310 CMR 7.00: Appendix C.

C. Surface Coating Alternative VOC Emissions Standards Clarification

MassDEP proposes to clarify two alternative, but equivalent, VOC compliance limits in its surface coating VOC Reasonably Available Control Technology (RACT) regulations to reduce confusion by regulated entities.

In March 2018, MassDEP amended its VOC RACT emissions standards in 310 CMR 7.18 for facilities in several surface coating source categories to reflect the most recent Control Technique Guidelines (CTGs) published by EPA. For each source category, EPA's CTGs and

⁴ Revisions to Public Notice Provisions in Clean Air Act Permitting Programs, 81 Fed. Reg. 71613 (October 18, 2016) (to be codified at 40 C.F.R. parts 51, 52, 70 and 124).

corresponding MassDEP regulations include two alternative, but equivalent, VOC emissions standards, expressed as either:

- mass of VOC per volume of coating, excluding water and exempt compounds, as applied (lb_{VOC} per gal or g_{VOC} per l), or
- mass of VOC per volume of coating solids, as applied (also, lb_{VOC} per gal or g_{VOC} per l).

This can be seen in the following example from 310 CMR 7.18(24), Flat Wood Paneling Surface Coating:

Surface Coatings Applied to the Following Flat Wood Paneling Categories	Mass of VOC per volume of coating less water and exempt compounds, as applied		Mass of VOC per volume of coating solids, as applied	
	lb/gal coating	grams/l coating	lb/gal solids	grams/l solids
Printed interior panels made of hardwood, plywood, or thin particleboard; Natural finish hardwood plywood panels; Class II finish on hardboard panels; Tileboard; Exterior siding	2.1	250	2.9	350

EPA's CTGs explain the purpose of each alternative form as follows:

- use mass of VOC per volume of coating, excluding water and exempt compounds, as applied, when compliance is achieved using low-VOC-content coatings exclusively, with no add-on controls,
- use mass of VOC per volume of coating solids, as applied, when compliance is achieved through the use of low-VOC coatings or a combination of coatings and add-on controls.

The Miscellaneous Metal and Plastic Parts CTG⁵ explains:

The low-VOC coatings recommendation (Option 1) consists of VOC content limits in terms of mass of VOC per volume of coating, as applied, excluding water and exempt compounds, and the use of specified application methods.

The equivalent emission rate limit recommendation (Option 2) consists of emission rate limits in terms of mass of VOC emitted per volume of coating solids, as applied, and the use of specific application methods. This option is intended only for facilities using a combination of low-VOC coatings, specific application methods, and add-on control

⁵ https://www3.epa.gov/airquality/ctg_act/200809_voc_epa453_r-08-003_misc_metal_plasticparts_coating.pdf

equipment on a coating unit to meet the recommended limits for mass of VOC emitted per volume of coating solids.

The VOC emission rate limits in Option 2 (VOC per volume solids) were converted from the VOC content limits in Option 1 using an assumed VOC density of 7.36 lb_{VOC}/gallon_{VOC} (883 g_{VOC}/liter_{VOC}). The units of VOC per volume solids are used in Option 2 instead of VOC per volume coating, less water and exempt compounds (as in Option 1), because the former units are more compatible with the use of an add-on control, which is among the control measures contemplated under Option 2. As the efficiency of the control device increases, the emission rate, expressed as VOC per volume solids, decreases in a measurable and predictable manner. The same is not true for VOC per volume coating, less water and exempt compounds, because these units cannot be directly related to VOC emissions unless the volume of water and exempt compounds is known and accounted for in each coating.

The Flat Wood Panel CTG explains further⁶:

The low-VOC materials recommendation for inks, coatings and adhesives include an emissions limit of 250 g_{VOC}/l (2.1 lb_{VOC}/gal) of material (minus water and exempt compounds). An equivalent limit, expressed as units of weight of VOC per volume of solids in all coatings, is 350 grams_{VOC} per liter_{solids} (2.9 lb_{VOC} per gal_{solids}). The default VOC density used for making this conversion was 0.88 kg_{VOC}/liter_{VOC} (7.36 lb_{VOC}/gal_{VOC}).

D. Paper, Film and Foil Coating Definition Revision

MassDEP proposes to amend the definition of PAPER, FILM AND FOIL SURFACE COATING to align with EPA's September 2007 CTG for Paper, Film, and Foil Coatings, and to align with regulations in neighboring states to help businesses comply.

Please note that the 2018 definitions of COATING and COATING LINE are shown along with the proposed amendments because they complement and interact with the definition of PAPER, FILM AND FOIL SURFACE COATING.

E. CO₂ Budget Trading Program Technical Corrections

MassDEP proposes minor technical amendments to 310 CMR 7.70 to clarify CO₂ Authorized Account Representative obligations and the timing of Emission Control Plan submittals, remove obsolete cross references, correct a mathematical error in one of the allowance budget tables (so that the budgets sum correctly across tables), and make monitoring compliance timelines consistent with the compliance timelines in EPA's Acid Rain provisions at 40 CFR Part 75.4(b)(2).

F. Operating Permit Significant Modification Provision

⁶ https://www3.epa.gov/airquality/ctg_act/200609_voc_epa453_r-06-004_wood_panel_coatings.pdf

MassDEP proposes to amend 310 CMR 7.00 Appendix C(4)(b)1. and (8)(c)4. to align with EPA's current guidance and 40 CFR part 70 requirements by allowing operation of approved significant modifications (e.g., addition of a new emissions unit at the Operating Permit facility) prior to incorporation into a facility Operating Permit. When a facility proposes a change that would be a significant modification, MassDEP first completes a technical review and issues a Plan Approval to ensure compliance with air pollution control requirements. After the Plan Approval has been issued, MassDEP must incorporate the change into the facility's Operating Permit. The modification to the Operating Permit is an administrative step that does not affect air quality, and therefore MassDEP proposes to amend its regulations to allow a facility with an approved Plan Approval to implement the changes at the facility prior to finalization of the Operating Permit significant modification, consistent with EPA's Operating Permit program.

G. Boiler Installation Certification for Operating Permit Facilities

MassDEP proposes to amend 310 CMR 7.26(30) to allow boilers to be installed at Operating Permit facilities under the boiler certification regulations. 310 CMR 7.26(30) allows a facility to install a boiler that meets size limits and emissions performance standards without upfront approval and to submit a compliance certification after installation to MassDEP.

The current regulation does not apply to boilers installed at Operating Permit facilities, and these facilities must obtain a Plan Approval from MassDEP before installing a boiler that otherwise would meet the boiler certification program requirements. MassDEP believes that boilers installed at Operating Permit facilities that meet the requirements of 310 CMR 7.26(30) should be included in the certification program.

H. Test Method Reference for Wood-fired Hydronic Heaters

MassDEP proposes to amend 310 CMR 7.26(53) and (54) to update references to EPA's wood heater test method from EPA test method 28 OWHH to the newer EPA test method 28 WHH. EPA incorporated test method 28 WHH in its New Source Performance Standards Residential Wood Heater regulations promulgated in 2015.

I. Technical Correction to Exemptions from Plan Approval

In March 2018, MassDEP limited the exemptions in 310 CMR 7.02(2)(b) to only projects that would otherwise trigger a Limited Plan Approval, so that projects that would trigger a Comprehensive Plan Approval would not be eligible for the exemptions. However, some of the listed existing exemptions are for projects that only would be subject to Comprehensive Plan Approval. Therefore, MassDEP proposes to delete these exemptions from the list, since the list applies only to exemption from Limited Plan Approval.

J. Definition of "Ozone Season"

The term "ozone season" is contained in several sections of 310 CMR 7.00 but only is defined in 310 CMR 7.34(2) as "the period beginning May 1st of a calendar year and ending on September 30th of the same year." Because additional sections of the regulations use the term "ozone

season,”⁷ MassDEP proposes to add the same definition for “ozone season” used in 310 CMR 7.34(2) to the general 310 CMR 7.00 Definitions section of the regulations, which is appropriate because the definitional language was taken from the federal definition of “ozone season emissions” under the NO_x SIP call regulation found at 40 CFR 51.122. MassDEP is required to follow NO_x SIP call requirements for all of its NO_x emissions determinations and reporting to EPA.

K. Clarify Air Appeal Regulation Applicability

MassDEP proposes to amend 310 CMR 7.51(1) to clarify that the appeal procedures apply only to MassDEP permit decisions for applications filed after March 9, 2018, and to clarify an exemption for Prevention of Significant Determination (PSD) permits.

On March 9, 2018, MassDEP created new procedures in 310 CMR 7.51(1) for appealing MassDEP air permit decisions. MassDEP intended for the new procedures to apply to permit decisions for applications filed after March 9, 2018, the date the new regulation took effect. There has been some confusion regarding this issue, and therefore MassDEP proposes to clarify that 310 CMR 7.51(1) applies only to permit decisions for applications filed after adoption of the regulation.

On March 9, 2018, an amendment to 310 CMR 7.51(1)(c)4. was finalized to create an exemption from MassDEP’s appeal process for the Federal Prevention of Significant Deterioration (PSD) regulation, 40 CFR 52.21. The PSD regulation requires all appeals of PSD permits to be filed with EPA, not through the MassDEP adjudicatory hearing process. However, the 2018 amendment to implement this exemption was worded too broadly, exempting any MassDEP decisions “issued by the Department pursuant to federal law.” Since many of MassDEP’s air permitting regulations were adopted pursuant to federal law, MassDEP proposes to clarify that the exemption in this section applies only to PSD permits.

L. Typographical Error Corrections

MassDEP proposes to amend 310 CMR 7.00 to correct various typographical and reference errors.

III. DESCRIPTION OF THE EEA AND MASSDEP PROPOSED AMENDMENTS

A. Power Plant CO₂ Emissions Cap Streamlining

EEA and MassDEP propose to amend 310 CMR 7.74 to simplify program implementation by streamlining electronic reporting requirements and removing sources of uncertainty regarding future allowance supply:

- clarifying that, once a designated representative submits a Certificate of Representation for a facility, the designated representative can make changes to information in the allowance registry without re-submitting a revised Certificate of Representation;

⁷ See 310 CMR 7.00 Definitions in “actual emissions” and “emission statement,” 310 CMR 7.12(3)(a), and 310 CMR Appendix B(3)(d) - (f).

- removing a duplicative and unnecessary requirement to report annual emissions twice each year, and moving reporting requirements related to “emergency deferred compliance” to the annual compliance report;
- allowing facilities to initiate allowance deductions for compliance by submitting notices of transfer in the allowance registry;
- allowing MassDEP to allocate allowances any time during the month of March, instead of on April 1st. This change would allow additional time for MassDEP and facilities to verify the allocations before trading begins;
- adding a mechanism to adjust the number of allowances auctioned upward to compensate for the use of emergency deferred compliance. The 2:1 compliance penalty included in the emergency deferred compliance option is necessary to deter unnecessary use. However, the 2:1 penalty also has the unintended consequence of reducing the overall number of allowances available for compliance over time. This change would retain the deterrent effect of the 2:1 penalty without affecting aggregate allowance supply; and
- deleting a provision related to allowance banking that was inadvertently retained when the regulations were last amended.

IV. IMPACTS OF PROPOSED AMENDMENTS

A. Economic Impacts

Most of the amendments are technical corrections or minor amendments that will have no negative economic impacts may have slight positive economic impacts due to increased efficiency in program implementation. Adding two additional exemptions to the VOC requirements for aerospace facilities and laboratory QA/QC activities will have a positive economic impact for those sectors that take advantage of the exemptions.

B. Impacts on Massachusetts Municipalities

Pursuant to Executive Order 145, state agencies must assess the fiscal impact of new regulations on the Commonwealth’s municipalities. The proposed amendments are technical corrections and other minor changes that will not negatively affect cities or towns.

C. Massachusetts Environmental Policy Act (MEPA)

Pursuant to 301 CMR 11.03(12) (MEPA Regulations), MassDEP is not required to file an Environmental Notification Form (ENF) regarding the proposed amendments. The proposed amendments will not reduce standards for environmental protection, nor do they reduce opportunities for public participation in review processes or public access to information generated or provided in accordance with these regulations.

V. PUBLIC HEARING AND COMMENT

MassDEP will hold a public hearing on the proposed amendments in accordance with M.G.L c. 30A and will publish a notice of the hearing and comment period at least 30 days before the public hearing. MassDEP will accept written comments for 10 days after the public hearing.

The public hearing notice and proposed amendments are available on MassDEP's website at:

<https://www.mass.gov/service-details/massdep-public-hearings-comment-opportunities>.

MassDEP will submit the final amendments to EPA for approval as a revision to the Massachusetts State Implementation Plan. For further information, please contact Marc Wolman by phone at 617-292-5515 or by email at marc.wolman@mass.gov.