STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

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February 11, 2013

Mr. Curtis Spalding, Regional Administrator
U.S. EPA Region I-NE
5 Post Office Square-Suite 100
Boston, MA 02109-3912

Re: Maine State Implementation Plan (SIP) - New Source Review Requirements, Ozone Transport Region Restructuring

Dear Mr. Spalding:

The Department is requesting that EPA withdraw limited provisions of the Nonattainment New Source Review (NNSR) control requirements (Lowest Achievable Emission Rate Controls and Offsets) from the SIP-approved Chapter 113 Growth Offset Regulation and Chapter 115 Major and Minor Source Air Emission License Regulations. These requirements present a significant impediment to new economic development and the flexibility of existing sources to expand in Maine, yet have absolutely no effect on Maine's ability to maintain its attainment status for ozone, or on the ability of any other area outside the state of Maine to attain and maintain the National Ambient Air Quality Standards (NAAQS) for ozone. This request is for the entire State of Maine, and is in the form of a "limited opt-out" or "restructuring" of the Ozone Transport Region (OTR) requirements. This request is in addition to our request for an oxides of nitrogen waiver for the 2008 ozone standard dated October 13, 2012.

Background

The 1990 Clean Air Act Amendments (CAA) incorporated the entire state of Maine in the OTR, which is comprised of the six New England States, New York, New Jersey, Pennsylvania, Delaware, Maryland, and the Consolidated Metropolitan Statistical Area that includes the District of Columbia. The purpose of creating this region was to require regional control strategies on ozone precursor emissions to address the problem of regional transport across state boundaries within the context of the SIP process. All areas in the OTR became subject to a number of additional control requirements[1], applicable in varying degrees, depending on whether the area was designated as "nonattainment" for ozone and the severity of nonattainment status. For Maine, inclusion in the OTR meant that all new major sources and major modifications of existing sources of both volatile organic compounds (VOC) and nitrogen

[1] The requirements include both mobile and stationary sources emission control strategies.

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oxides (NOx) throughout the state are subject to the same NSR requirements that are applicable to moderate nonattainment areas, even if they are located in an attainment area.[2]

Section 182 of the CAA prescribes the NSR requirements for stationary sources of VOC and NOx in nonattainment areas, which consist of both Lowest Achievable Emission Rate (LAER) controls and Offsets for new major stationary sources and major modifications. For nonattainment areas classified as "moderate" and above, a state is also required to adopt reasonably available control technology (RACT) controls for existing major stationary sources[3].

As previously noted, major stationary sources of VOC and NOx in Maine are subject to the same NSR requirements as a major stationary source located in a "moderate" non-attainment area by virtue of Maine's incorporation in the OTR (see CAA Section 184(b)(2)). Major new or modified stationary sources of VOCs and NOx desiring to construct anywhere in Maine are therefore subject to a 1.15:1 emission offset requirement and must apply Lowest Achievable Emission Rate (LAER) in order to obtain an air emission license- even though the entire state of Maine is meeting the 2008 ozone NAAQS[4].

The State of Maine supports this regional approach to controlling the emissions which are precursors to ground-level ozone formation, particularly the regional control of nitrogen oxides in those states and regions that have been shown to contribute significantly to downwind nonattainment and/or interfere with maintenance of the NAAQS. Unfortunately, Maine is faced with a basic equity problem in that its major sources are subject to the same 1.15:1 emission offset and Lowest Achievable Emission Rate control technology requirements as sources in upwind nonattainment areas and states that contribute significantly to downwind air pollution, even though Maine is meeting all NAAQS and has repeatedly demonstrated that emissions from Maine sources do not cause or contribute to nonattainment in any other area.

Although Maine has previously been issued waivers of NSR requirements for NOx under section 184(c) of the CAA[5], the NOx waiver process can only partially address this inequity. The Department believes that withdrawing OTR-specific NSR requirements for new major sources

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[2] Under the 1990 Clean Air Act Amendments (CAAA) nine Maine counties were designated as nonattainment of the 1-hour National Ambient Air Quality Standard (NAAQS) for ozone. On July 16, 1997, EPA finalized a revised NAAQS for ozone, with EPA issuing designations on April 15, 2004. In 2007, both nonattainment areas were redesignated to attainment. The entire state of Maine is in attainment of the 2008 8-hour ozone NAAQS. Maine is currently attaining the 2008 ozone NAAQS on a statewide basis.

[3] Section 182(f)(1) specifies that plan provisions of Subpart I under Part D which pertain to "major stationary sources of volatile organic compounds" shall also apply to "major stationary sources (as defined in section 302 and subsections (c), (d), and (e) of this section) of oxides of nitrogen". As defined in the referenced sections, major stationary sources of oxides of nitrogen are sources with the potential to emit 100 tons per year of this pollutant.

[4] Existing major stationary sources located anywhere in Maine were also required to retrofit, if necessary, Reasonably Available Control technology (RACT) to control emissions of VOCs and NOx.

[5] See 60 FR 66748 and 71 FR 5791.

and major modifications of existing sources from Maine's SIP provides a more comprehensive and reasonable approach to addressing Maine's unique situation, while continuing to preserve the integrity of the OTR. Appendix A of the Restructure Request Technical Analysis identifies the provisions in Chapter 113 and Chapter 115 that we request EPA remove from Maine's federally-approved SIP. Subsequently, the Department will make formal revisions to both Chapters 113 and 115 and submit those as a revision to the SIP.

Legal Authority

The Department is requesting EPA withdraw the provisions identified in Appendix A from the Maine State Implementation Plan (SIP) pursuant to the authority provided in Section 176A of the CAA, which provides that the Administrator may "remove any State or portion of a State from the region whenever the Administrator has reason to believe that the control of emissions in that State or portion of the State pursuant to this section will not significantly contribute to the attainment of the standard in any area in the region." The authority to eliminate or "restructure" specific control requirements for States that remain in the OTR is implicit in this authority, provided that controlling these emissions will not significantly contribute to attainment of the ozone standard anywhere in the OTR.

EPA established precedence for this action in 2001 (66 FR 1871), when it similarly restructured the vehicle inspection and maintenance (I/M) requirements for Maine in light of Maine's air quality status. In this action, EPA made a determination that emission reductions from I/M under section 184 of the CAA would not significantly contribute to attainment anywhere in the OTR, thereby allowing restructuring of the I/M requirements.

Scope of Exemptions

Although Maine believes that it would be eligible to remove the entire state from the OTR under section 176A of the CAA (and all other OTR requirements pursuant to section 184 of the CAA), we are only requesting to partially opt-out of some NNSR requirements by withdrawing portions of Maine's Chapter 113 Growth Offset regulation and the Chapter 115 Major and Minor Source Air Emission License regulations from the Maine State Implementation Plan (see Appendix A). If the US EPA concurs that additional reductions of volatile organic compounds and nitrogen oxides in Maine will not significantly contribute to the attainment of the ozone NAAQS in any portion of the OTR, major new stationary sources and major modifications of existing stationary sources in Maine will be exempt from Offsets and LAER requirements. Maine is not seeking a waiver from any other obligations established pursuant to Section 184 of the CAA, and will continue to implement all other existing and newly promulgated control requirements.

Technical Basis

Maine is basing its request on a demonstration that VOC and NOx emissions in the state of Maine do not contribute significantly to nonattainment of the current ozone NAAQS in any area of the region, and NSR Offsets and LAER in Maine do not contribute significantly to attainment

of the 2008 ozone standard in any area in the OTR. This conclusion is supported by the accompanying technical materials, including: (1) trajectory analyses; (2) emission trends; (3) CALGRID modeling; (4) EPA modeling and (5) PAMS monitoring data analysis.

Thank you for your assistance in helping us to understand the requirements and supporting documentation necessary for an acceptable opt-out request. Please consider this request as expeditiously as possible, so that Maine can proceed with revisions to its State Implementation Plan and Chapter 113 Growth Offset Regulation and Chapter 115 Major and Minor Source Air Emission License Regulations. If you should have any questions, please feel free to contact Marc Cone, Director, Bureau of Air Quality at 287-2437.

Sincerely,

Patricia W. Aho
Commissioner

Cc: Marc Cone, DEP
Heather Parent, DEP
Dave Conroy, EPA Region 1
Enclosure

State of Maine
Department of Environmental Protection
Clean Air Act Section 176A
VOC Nonattainment New Source Review
OTR "Restructure" Request
Technical Analysis

BUREAU OF AIR QUALITY

February 11, 2013

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I. Executive Summary

The entire State of Maine is in attainment for the 2008 8-hr Ozone National Ambient Air Quality Standards (NAAQS). Maine is in the Ozone Transport Region (OTR), New Source Review (NSR) requirements for major sources in the OTR are as if the state were classified as a Moderate nonattainment area unless EPA has approved a NO_x Waiver or an OTR "restructuring". EPA previously granted to the State of Maine, Clean Air Act (CAA) §182(f) NO_x Waivers for nine counties under the 1-hour and 8-hour 1997 Ozone NAAQS (U.S. EPA, 1995a and U.S. EPA, 2006a). EPA also previously granted the State of Maine an OTR "restructure" for the Vehicle Inspection and Maintenance program requirements (U.S. EPA, 2001). A new 8-hr Ozone NAAQS was promulgated in 2008, and Maine submitted a NO_x Waiver Petition for the entire state of Maine on October 13, 2012. This request is for the entire State of Maine, and is in the form of a "limited opt-out" or "restructuring" of OTR Nonattainment NSR requirements.

Technical analyses in this request include Maine's point source volatile organic compounds (VOC) and oxides of nitrogen (NO_x) emission trends, a comparison with other OTR state VOC and NO_x emissions, ozone modeling for the New England portion of the OTR without any emissions in Maine, back trajectories for ozone exceedance days in the nearest OTR nonattainment areas and an analysis to determine if moderate Air Quality Index or worse ozone events in Maine were VOC-limited, NO_x-limited or transitional, as well as a discussion of recent EPA modeling for the NOx SIP Call, CAIR and the CSAPR programs.

The analyses demonstrate that Maine does not contribute to nonattainment of ozone in the 8-hour Ozone NAAQS nonattainment areas within the OTR. The analyses also show that VOC and NO_x emissions do not significantly contribute to ozone formation in Maine and ozone events in Maine are primarily transitional. Thus, reductions of VOC or NO_x emissions in Maine are not necessary to bring the ozone non-attainment areas in the OTR into attainment and are excess to attainment.

MEDEP is therefore requesting a "limited opt-out" or "restructuring" to exempt the entire State of Maine from some of the OTR nonattainment NSR requirements for the 2008 8-hour Ozone NAAQS in Title 1, Part D, Section 182(b)(2) of the CAA.

II. Background Information

In 2004, the US Environmental Protection Agency (EPA) designated and classified 8-hour Ozone NAAQS nonattainment areas in Maine based on the 1997 Ozone NAAQS of an 8-hour average of 0.08 parts per million. Those areas were Portland, ME – Subpart 2 marginal nonattainment (includes: Sagadahoc county and parts of Cumberland, York and Androscoggin counties) and Hancock, Knox, Lincoln and Waldo Counties – Subpart 1 nonattainment (includes parts of each of the counties listed in the name). These 8-hour ozone nonattainment areas were later re-designated as attainment which was posted as a final rule in the Federal Register on December 11, 2006.

In 2008, the new 8-hour Ozone NAAQS was promulgated at 0.075 parts per million which is equivalent to 75 parts per billion (ppb). Designations for the 2008 8-hour Ozone NAAQS were

finalized on April 30, 2012. All areas in the State of Maine are currently in monitored attainment for the 2008 8-hr Ozone NAAQS. Consequently, all of Maine has been designated as unclassifiable/attainment for the 2008 Ozone NAAQS.

Pursuant to the Clean Air Act Amendments of 1990 (CAAA), the entire State of Maine is part of the OTR. The OTR is a portion of the northeastern U.S. comprised of the six New England states; New York, New Jersey, Pennsylvania, Maryland, Delaware, and the Consolidated Metropolitan Statistical Area that includes the District of Columbia and part of northern Virginia (see CAAA Section 184(a)). The purpose of creating this region was to require regional control strategies on ozone precursor emissions to address the problem of regional transport across state boundaries within the context of the State Implementation Planning process. All areas within the OTR became subject to a number of additional requirements as if they were classified as moderate nonattainment areas.

Existing major sources of VOC and NO_x in the OTR are required to reduce emissions through Reasonably Available Control Technology (RACT). In addition, emissions of VOC and NO_x from new major stationary sources and major modifications in the OTR are subject to a 1.15 emission offset requirement (see CAA Sections 182 (b) (5), 184 (b) (2), 182 (f) and MEDEP Regulations Chapter 113 (2) (C)). The RACT, Lowest Achievable Emissions Rate (LAER) and 1.15 VOC and NO_x emission offset requirements hinder economic sustainability and development in Maine.

For NO_x sources Maine submitted a NO_x Waiver Petition for the entire state of Maine on October 13, 2012 for the 2008 8-hour NAAQS. EPA previously granted the State of Maine, Clean Air Act (CAA) §182(f) NO_x Waivers for nine counties under the 1-hour and 1997 8-hour Ozone NAAQS (U.S. EPA, 1995a and U.S. EPA, 2006a). This request is for an OTR "limited opt-out" or "restructuring" for an exemption of major VOC sources from some Nonattainment NSR requirements for the entire State of Maine similar to what is being requested for major NO_x sources in Maine.

Nonattainment NSR applies to new major sources or major modifications at existing sources for pollutants where the area the source is located is not in attainment with the NAAQS. Nonattainment NSR requirements are customized for the nonattainment area. All Nonattainment NSR programs have to require (1) the installation of the lowest achievable emission rate (LAER), (2) emission offsets, and (3) opportunity for public involvement. Title I, Part D, Section 184(b)(2) of the CAA states the following for OTR Nonattainment VOC NSR requirements: "For purposes of this section any stationary source that emits or has the potential to emit at least 50 tons per year of volatile organic compounds shall be considered a major stationary source and subject to the requirements which would be applicable to major stationary sources if the area were classified as a Moderate nonattainment area."

LAER is the most stringent emission limitation derived from either of the following: the most stringent emission limitation contained in the implementation plan of any State for such class or category of source; or the most stringent emission limitation achieved in practice by such class or category of source. The emissions rate may result from a combination of emissions-limiting measures such as (1) a change in the raw material processed, (2) a process modification, and (3)

add-on controls. The RACT/BACT/LAER Clearinghouse (RBLC) database contains information on what has been required as LAER in air permits.

Emission Offsets are emission reductions, generally obtained from existing sources located in the vicinity of a proposed source which must (1) offset the emissions increase from the new source or modification and (2) provide a net air quality benefit. The purpose for requiring offsetting emissions decreases is to allow an area to move towards attainment of the NAAQS while still allowing some industrial growth.

If EPA agrees with Maine's request for a "restructuring" of the OTR provisions for VOC NSR in Maine, MEDEP asks EPA to temporarily remove the regulatory provisions that implement the NSR nonattainment requirements for VOC in Maine from the federally approved SIP version of both CMR Chapters 113 and 115. The provisions that MEDEP would like removed from the SIP are shown in the mark-up included in Appendix A. Subsequently, MEDEP will make formal revisions to both CMR Chapters 113 and 115 and submit those as a revision to the SIP.

III. Basis of this Request

Title I, Part D, Section 176A of the Clean Air Act (CAA) "Interstate Transport Commissions" discusses the criteria used to add or remove areas from transport regions. Section 176A(a)(2) states that the "Administrator...may remove any State...from the [OTR] whenever the Administrator has reson to believe that control of emissions in that State...pursuant to [the Act's requirements for the OTR] will not significantly contribute to attainment of the standard in the region." Implicit in EPA's authority to remove a State from the OTR entirely is the authority to eliminate or "restructure" specific control requirements for States that remain in the OTR, provided the State demonstrates that the control of emissions from such requirement will not significantly contribute to attainment of the ozone standard anywhere in the OTR. EPA has issued Guidance on removing an area from the OTR (Technical Guidance for Removing Areas from the Northeast Ozone Transport Region (OTR), John S. Seitz, Director Office of Air Quality Planning and Standards (MD-10), May 25, 1995b). Maine followed this guidance in preparing this request.

Maine DEP bases its petition on demonstrations that Maine is currently in attainment of the 2008 Ozone NAAQS, VOC emissions in the State are not significantly impacting nonattainment areas in the OTR during times when elevated ozone levels are monitored in those areas and that ozone episodes in Maine are not dominated by either VOC-limited or NO_x-limited conditions. These conclusions are derived from the supporting analyses. As such, reductions in VOC emissions from Maine are not necessary for ozone attainment in these upwind areas. Maine has also requested a NOx waiver for the entire State for the 2008 ozone NAAQS. This "restructuring" request is separate from the NOx waiver, and is limited to VOC requirements as stated above.

IV. Technical Documentation

The State of Maine will use a trajectory analysis, emissions and ozone design value trends, previous SIP modeling analyses and Maine's Photochemical Assessment Monitoring Stations (PAMS) monitoring data analyses to demonstrate that major source nonattainment requirements under CAA Section 184 for VOC major new sources and major modifications including LAER, and offsets requirements in the State are not necessary to attain the NAAQS for ozone in the nonattainment areas in the OTR. The purpose of this technical documentation is to support a demonstration that stationary source VOC emissions from Maine do not contribute to ambient ozone in excess of the NAAQS. Thus, reductions of VOC emissions in Maine are not necessary to bring nonattainment areas in the OTR into attainment.

A. OZONE BACK TRAJECTORY ANALYSIS

Figure 1 shows areas in the OTR that have been designated nonattainment by EPA for the 75 parts per billion (ppb) 2008 8-hour Ozone NAAQS using 2008-10 quality assurred (QA'd) data. The closest nonattainment areas are in Connecticut and Martha's Vineyard in Massachusetts. The highest 2008-10 design value in Maine was 74 ppb and continues to be 74 ppb for the most current QA'd 2009-11 period and preliminary 2010-12 period. Thus, Maine continues to be in attainment of the 2008 8-hour Ozone NAAQS.

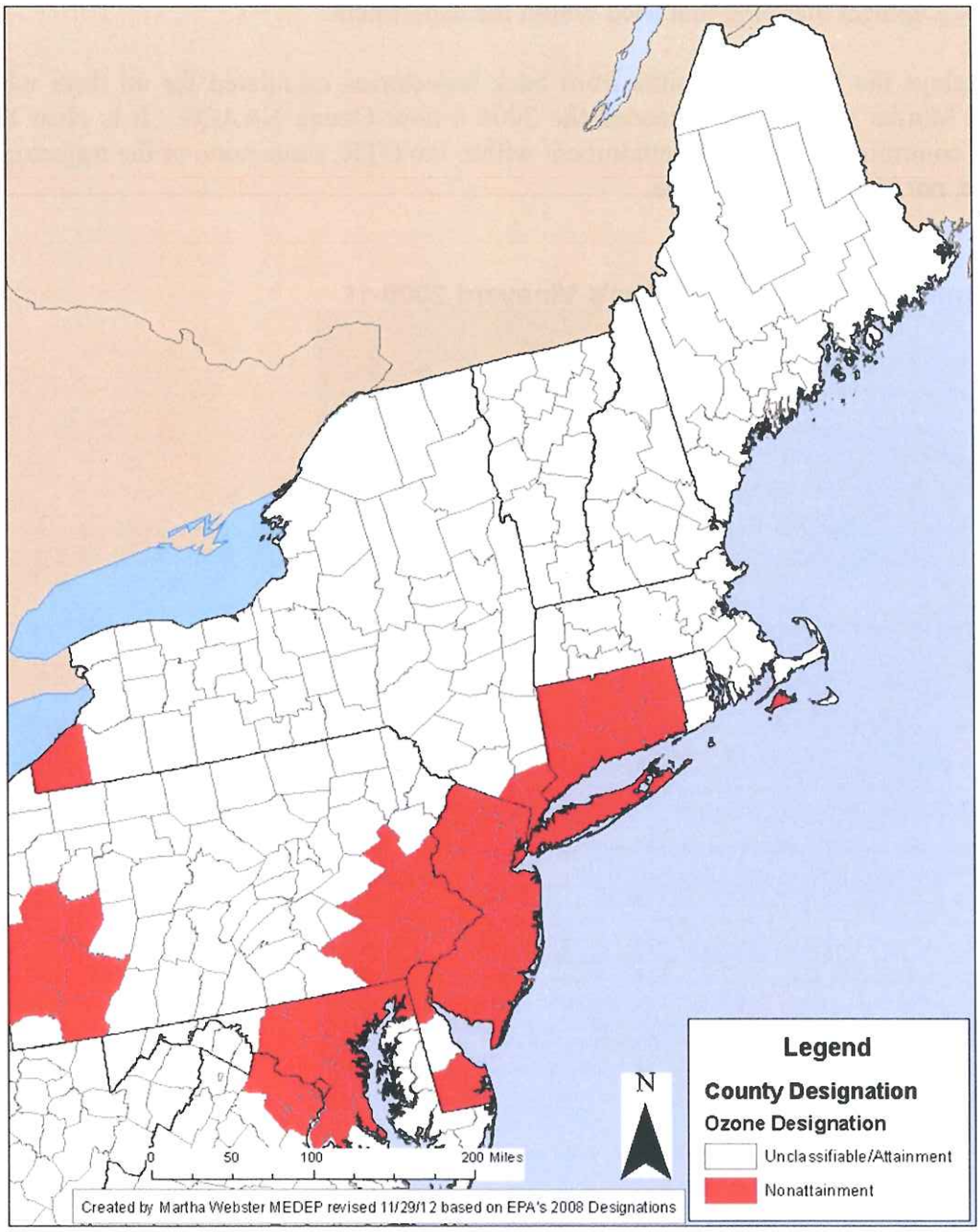
MEDEP Air Quality Meteorologists conducted trajectory analyses of ozone exceedance days for the 2009 through 2011 ozone seasons. The analyses were conducted for monitoring sites in the nearest 2008 8-hour Ozone NAAQS nonattainment areas in Connecticut and Martha's Vineyard in Massachusetts.

A trajectory is a three dimensional representation of the path an air parcel followed based on forecast or archived meteorological data. A back trajectory is the path the parcel took to reach a specific point in time and space. A trajectory was created for each hour that ozone levels were equal to or greater than 75 ppb for every day that an 8-hour ozone exceedance was recorded. 24-hour back trajectories from 10, 150 and 250 meters (m) above ground level (AGL) were created.

The National Oceanic and Atmospheric Administration (NOAA) Air Resources Laboratory's HYSPLIT is a computer model used to create and map trajectories. The model uses gridded meteorological data, which is selected within the online model's graphical user interface (GUI). For more information about HYSPLIT please refer to the following document: Description of the HYSPLIT 4 Modeling System by Draxler and Hess (http://www.arl.noaa.gov/documents/reports/arl-224.pdf).

HYSPLIT is available for use online and also on a local computer (PC). MEDEP staff meteorologists used the online version to create the trajectories included in this analysis. To insure the hour of ozone matches with the hour of meteorology, the time of the ozone value was converted from Eastern Standard Time (EST) to Universal Time Code (UTC) by adding 5 hours. Archived ETA Data Assimilation System (EDAS) meteorological data at 40 km was used because this data set had the best resolution and had an excellent data recovery rate. The model was set to include vertical velocity.

Figure 1: Northeastern U.S. Counties Ozone Designation

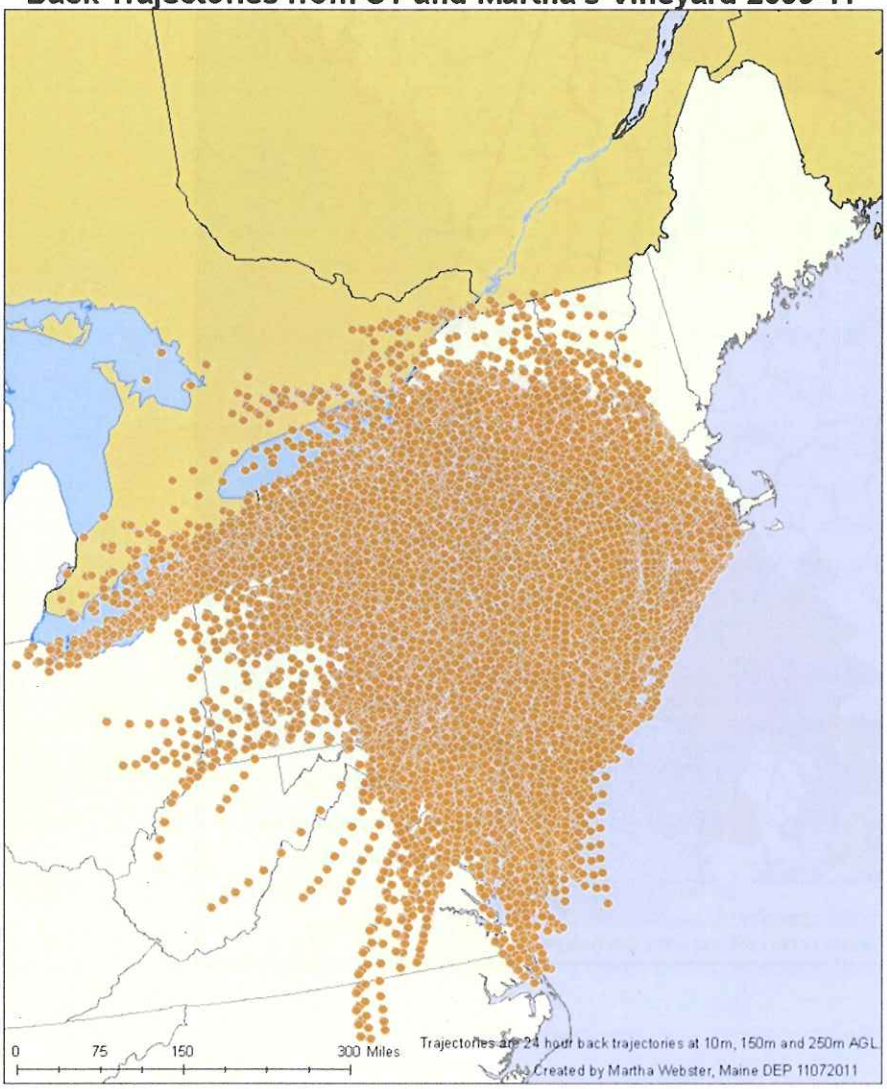


For each run, the HYSPLIT model generates both a graphical presentation of the trajectories and a text file. The text file contains information about the hourly endpoints along each

trajectory path including the location in time and space. Hundreds of endpoint text files were subsequently loaded into an Access database for each analysis, which was then mapped in ARCMAP, a geographical mapping tool used within the department.

Figure 2 displays the hourly endpoints from back trajectories calculated for all days when sites in CT and Martha's Vineyard exceeded the 2008 8-hour Ozone NAAQS. It is clear that Maine does not contribute to ozone nonattainment within the OTR, since none of the trajectories neither originate, nor traverse over Maine.

Figure 2:
Back Trajectories from CT and Martha's Vineyard 2009-11



B. VOC AND NO_x EMISSIONS INVENTORY ANALYSIS

The latest available periodic inventory at the time of writing this request is the 2008 National Emission Inventory (NEI) Version 2 (U.S. EPA 2008). Table 1 summarizes the total (point, area and mobile) annual 2008 NEI VOC and NO_x emissions for all states in the OTR. Emissions for the entire State of Maine are only 3.6% and 4.1% of the OTR for VOC and NO_x, respectively, thus any emission changes in Maine will be insignificant when compared with the more populous regions in the OTR.

The State of Maine keeps annual records (MEDEP, EMIS) of point source emissions. Table 2 shows the trends of point source VOC and NO_x emissions since 1990. Table 2 also shows ozone design value trends. Ozone design values are the 3-year average of the 4th highest maximum daily 8-hour ozone concentrations at a monitoring site. VOC and NO_x emissions have decreased by 62% and 57%, respectively from 1990 to 2011 with ozone design values decreasing by 36%.

Table 1: 2008 NEI Version 2 VOC and NO_x Emissions (all Sectors) by State:

OTR State	Annual VOC Emissions (TPY)	Annual NO_x Emissions (TPY)
Connecticut	84,564	91,359
Delaware	28,686	42,750
District of Columbia	10,783	13,583
Maryland	154,328	214,471
Massachusetts	167,978	173,466
New Hampshire	54,355	51,151
New Jersey	231,789	279,368
New York	532,096	459,221
Pennsylvania	431,275	629,825
Rhode Island	24,341	21,935
Vermont	27,887	21,427
Virginia (OTR portion only)	59,574	64,286
Maine	**76,763**	**76,735**
OTR Total	**1,884,421**	**2,139,575**
Maine's Contribution	**3.6%**	**4.1%**

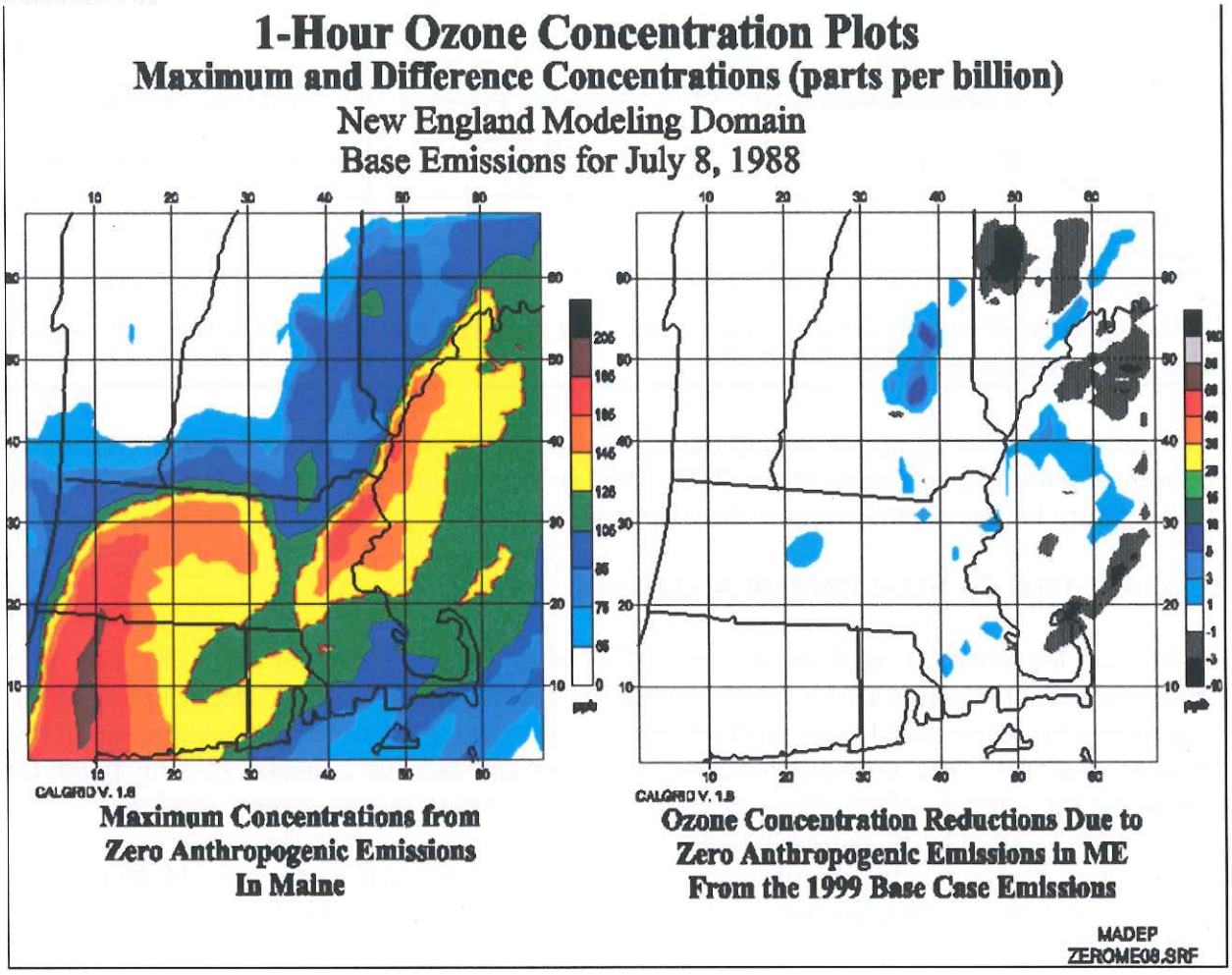
Table 2: Maine VOC and NO_x Point Source Emissions and Ozone Trends:

Year	Annual VOC Emissions (TPY)	Annual NO_x Emissions (TPY)	Maximum 8-hr Ozone Design Value (ppb)
1990	9,183	30,712	115
1995	5,857	24,273	96
2000	6,540	23,523	87
2001	5,969	21,662	89
2002	5,232	20,232	93
2003	4,937	19,414	94
2004	5,045	17,918	88
2005	4,789	19,980	82
2006	4,783	18,020	81
2007	5,022	17,743	83
2008	4,253	16,557	80
2009	3,267	13,359	78
2010	3,811	14,364	74
2011	3,445	13,328	74
2012	na	na	74
na = not available			

C. PREVIOUS OZONE MODELING FOR MAINE

In the historical ozone modeling that has been performed for Maine, Maine has never been shown to contribute to nonattainment in the upwind areas of the OTR. For example, as part of the 1998 Massachusetts 1-Hour Ozone Standard Attainment Submittal (MADEP, 1998) which obtained final EPA approval, anthropogenic emissions in the model for both VOC and NOx for all of Maine were purposely turn off, or set to "zero". Figure 3 which is located in the Episode Maximum Plot files (Zerome08.gif) of that submittal shows that the State of Maine 1-hour ozone contribution is insignificant in nonattainment areas of Connecticut and Martha's Vineyard in Massachusetts.

FIGURE 3:



In addition, EPA has performed several ozone modeling analyses for the eastern United States. EPA ran ozone photochemical models for the NOx SIP call (63 FR 57356: October 27, 1998), the Clean Air Interstate Program (CAIR) (70 FR 25162; May 12, 2005) and most recently the Cross State Air Pollution Regulation (CSAPR) (76 FR 48208; August 8, 2011). Table 3 contains a summary of the modeling results. The conclusion from the modeling for all three programs was that Maine does not contribute to nonattainment in Massachusetts and Connecticut. Although the CSAPR rule was vacated (*See EME Homer City Generation, L.P.* v. *EPA,* No. 11–1302 (D.C. Cir.August 21, 2012), nothing in the opinion disturbs or calls into question that conclusion or the validity of the air quality modeling on which the conclusion is based.

Table 3: Maine's Modeled Impacts (ppb) on Massachusetts and Connecticut 8-hour Ozone Nonattainment Areas:

State	1998 Massachusetts SIP	1998 NO_x SIP CALL	2005 Clean Air Interstate Program (CAIR)	2011Cross State Air Pollution Regulation (CASPR)
Connecticut	0	0	0.1	0.141
Massachusetts (Dukes County)	0	0#	0.3#	0.015

nm = not modeled
# = The impact to Rhode Island was used because it is more representative of the Massachusetts Dukes Co. nonattainment area.

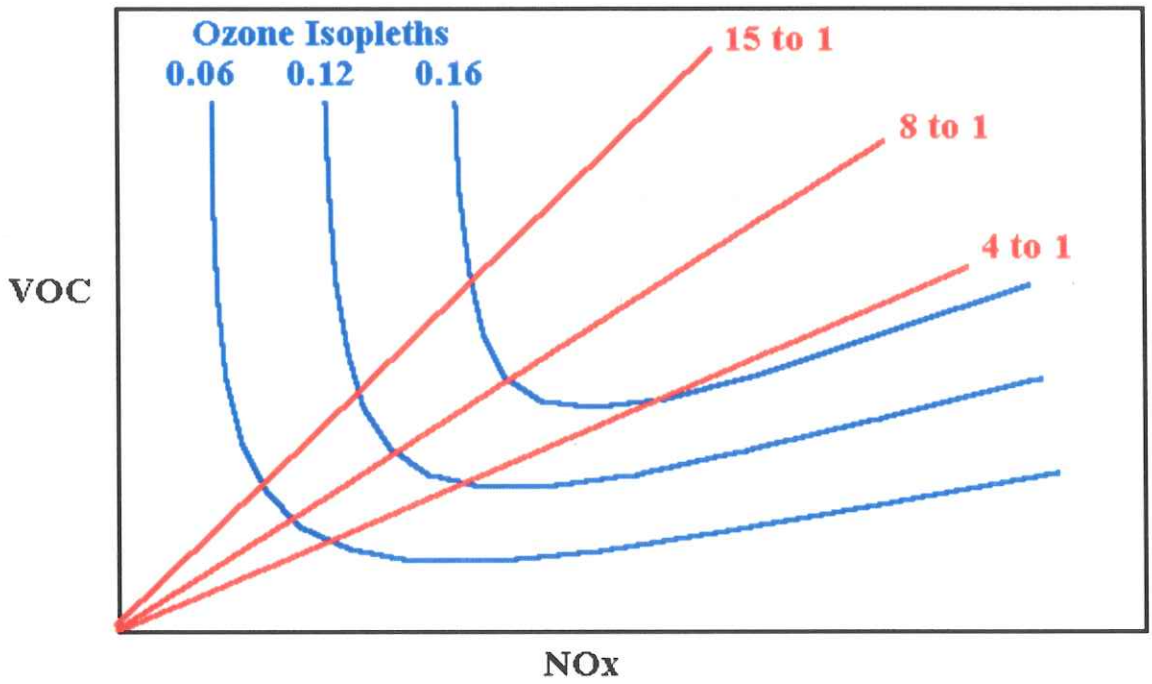
From the analysis of emissions and modeling results, Maine's emissions do not contribute to the nearest nonattainment areas in the OTR. Thus, reductions in VOC emissions from Maine are not necessary for ozone attainment in these upwind areas.

D. VOC-LIMITED NO_x-LIMITED ANALYSIS

One of the simplest applications of PAMS data is a comparison of VOC and NO_x concentrations. Following EPA's Empirical Kinetic Modeling Approach (EKMA), see Figure 4, maximum afternoon ozone levels are dependent on the morning concentrations and mixing ratios of VOC and NO_x. The morning VOC to NO_x ratio can provide a useful starting point for evaluating the relative effectiveness of cost-efficient ozone precursor control strategies. The time period of 6 to 9 AM is traditionally considered most appropriate for assessing precursor levels which lead to production of peak ozone concentrations later in the day. Mobile source emissions of VOC and NO_x are high, and photochemical activity is minimal.

A VOC to NO_x ratio of 8 to 1 is often cited as an approximate decision point for determining the relative benefits of NO_x vs. VOC controls. At low VOC to NO_x ratios (< about 5 to 1), an area is considered to be VOC-limited; VOC reductions will be most effective in reducing ozone, and NO_x controls may lead to ozone increases. At high VOC to NO_x ratios (> about 15 to 1), an area is considered NO_x-limited, and VOC controls may be ineffective. When VOC to NO_x ratios are at intermediate levels (5 to 15), a combination of VOC and NO_x reductions may be warranted.

Figure 4: EKMA Conceptual Diagram



To estimate if NO_x or VOC offset credits from new or modified major stationary sources will provide similar ozone reductions as compared to VOC credits, Cape Elizabeth and Cadillac Mountain Summit PAMS 2004-2011 ozone season data were analyzed to find out if ozone levels were VOC-limited or NO_x-limited during moderate and unhealthy Air Qualty Index (AQI) events (8-hr ozone levels greater than 59 ppb) in Maine. Data used for this analysis included the maximum daily 8-hour ozone concentrations and 6am to 9am average concentrations of NO_x, NO_y, VOC's (using the PAMS total non methane organic compounds (TNMOC) parameter) and wind direction.

Results of the analyses are shown in Figures 5 and 6. For the Cape Elizabeth PAMS site (see Figure 5), most of the 2004-2010 ozone events along the southwest Maine coastline were transitional. For the Cadillac Mountain Summit PAMS site (see Figure 6), there were more NO_x-limited events during 2004-2011, however, most of them occurred with long range trajectories (wind directions from the south, southeast and east) over the Gulf of Maine. For trajectories from the interior of Maine most of the 2004-2011 ozone events were transitional where both VOC and NO_x controls may be effective.

Table 4 shows a breakdown for all wind directions and wind directions from the interior of Maine to the PAMS site. The Cadillac Mountain Summit PAMS site best represents the emission mix for sources in Maine and the Cape Elizabeth PAMS site best represents the 'regional' emissions mix. As you can see most of the hours had a mix that fit into the transitional category where either NO_x or VOC controls may be simularly effective.

Figure 5:

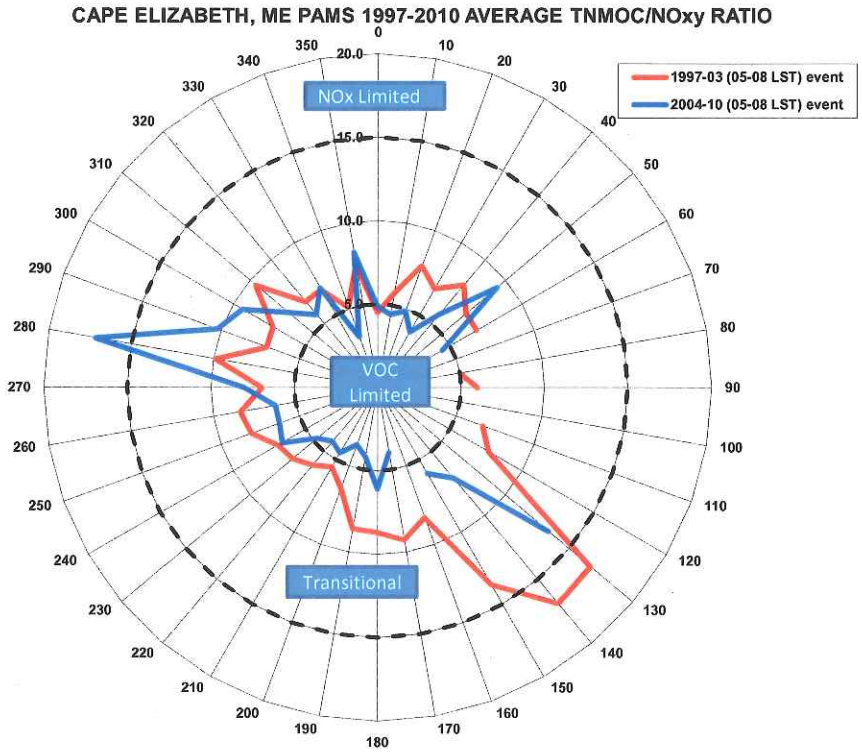


Figure 6:

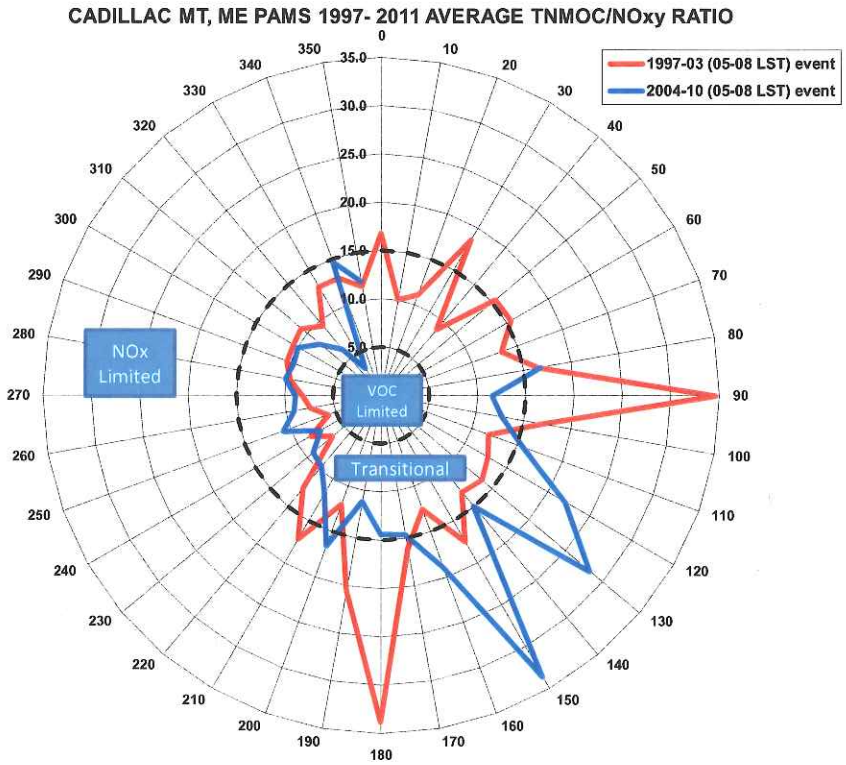


Table 4: 1997-2011 VOC-Limited and NO_x-Limited Analysis Summary:

VOC (TNMOC)/NO_{xy} Ratio		Cape Elizabeth PAMS site (1997-2010)	Summit of Cadillac Mt. PAMS site (1997-2011)
		ALL DIRECTIONS	
<5	VOC-Limited	43.5%	17.5%
5-15	Transitional	53.6%	62.0%
>15	NO_x-Limited	2.9%	20.5%
AVERAGE RATIO		**6.5**	**11.1**
		230-40 degrees (Inland)	
<5	VOC-Limited	33.4%	-
5-15	Transitional	62.8%	-
>15	NO_x-Limited	3.8%	-
AVERAGE RATIO		**7.1**	-
		250-50 degrees (Inland)	
<5	VOC-Limited	-	19.6%
5-15	Transitional	-	65.7%
>15	NO_x-Limited	-	14.7%
AVERAGE RATIO		-	**9.7**

V. ANALYSIS OF MOBILE SOURCES

The EPA guidance on removing areas from the OTR also requires an analysis of mobile source emissions. Since Maine is not seeking relief from all the requirements of the OTR, but is only requesting a limiting or restructuring of the NSR requirements and is not seeking relief from the mobile source provisions of the OTR, this type of analysis is not necessary.

VI. SUMMARY OF RESULTS AND CONCLUSIONS FOR THIS REQUEST

The entire State of Maine is attainment/unclassifiable for the 2008 8-hour Ozone NAAQS. Technical analyses document that:

- Examination of HYSPLIT back trajectories, for sites in the nearest nonattainment areas within the OTR, clearly illustrates that VOC emissions from Maine do not cause or contribute to ozone transport or production in any nonattainment areas within the OTR. Thus, reductions of VOC emissions in Maine are not necessary to bring the non-attainment areas in the OTR into attainment.

- Previous photochemical ozone modeling for the nearest 8-hour Ozone NAAQS nonattainment areas show no significant contribution from Maine.

- VOC emissions from Maine are much smaller than emissions emanating from sources in states to the south and west and do not contribute significantly to existing nonattainment areas in the OTR. This disparity in total stationary source VOC emissions is readily apparent from the information presented in Table 1.

- Ozone events are neither VOC-limited nor NO_x-limited and that emission reductions in Maine are not necessary for ozone attainment in the OTR and are excess to attainment.

The State of Maine is therefore requesting for the entire state, an OTR "limited opt-out" or "restructuring" of some Nonattainment NSR requirements for VOC for the 2008 8-hour Ozone NAAQS, as reductions in VOC emissions for Maine are not necessary for ozone attainment in the OTR. The specific changes to Maine's Nonattainment NSR program are shown in Appendix A.

VII. REFERENCES:

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http://www.epa.gov/fedrgstr/EPA-AIR/2006/December/Day-11/a20901.htm

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http://www.epa.gov/ttn/chief/net/2008inventory.html

U.S. EPA, 2011: Federal Implementation Plans: Interstate Transport of Fine Particulate Matter and Ozone and Correction of SIP Approvals. Federal Register (76 FR 48208), August 8, 2011.
http://www.gpo.gov/fdsys/pkg/FR-2011-08-08/pdf/2011-17600.pdf

Appendix A Mark-up of CMR 113 and 115.

06- DEPARTMENT OF ENVIRONMENTAL PROTECTION

096 BUREAU OF AIR QUALITY CONTROL

CHAPTER 113: GROWTH OFFSET REGULATION

SUMMARY: This regulation defines how ambient air quality standards will be maintained and how additional sources of emissions will be licensed in areas where standards are violated. In the Ozone Transport Region (OTR) and nonattainment areas, new sources of emissions are required to obtain offsets. Generally, this is done by finding other emissions within the area that will offset the emissions or reduce the impact from the new source to the previous level.

1. Applicability

This regulation shall apply to the following stationary sources which seek to locate or expand within the geographical bounds of or significant impact a nonattainment area ~~or the OTR~~:

Comment [A1]: Remove from federally approved SIP

A. Any new source whose allowable emissions of the nonattainment pollutant results in a significant emission increase that exceeds the significant emission rates after application of Lowest Achievable Emission Rate (LAER);

B. Any modification which results in a significant emissions increase of the nonattainment pollutant after application of LAER; and

C. Any source for which a significant emissions increase of the nonattainment pollutant occurs by virtue of a relaxation after August 7, 1977, of any enforceable limitation or license condition.

LAER and offsets for NO_x shall not apply in those areas which have received a waiver from the Environmental Protection Agency (EPA) under Section 182(f) of the Clean Air Act (CAA).

2. Offsets

A. General

The applicant for a new source or modification subject to this Chapter shall demonstrate that emission reductions of the nonattainment pollutant were obtained. By the time the source or modification subject to this Chapter is to commence operation,

sufficient offsetting emissions reduction of any applicable pollutant(s) shall be in effect such that the total emissions from existing sources in the area, from new sources or modifications which are not major stationary sources, and from the source or modification subject to this Chapter, will be sufficiently less than total emissions from existing sources prior to the application for such air emission license to construct or modify, so as to represent (when considered together with the plan provisions required under §172 of the CAA) reasonable further progress. Before the operation of the source or modification commences, emission reductions of the nonattainment pollutant must have occurred.

When quantifying the amount of emission reduction credits generated by reducing actual emissions from existing sources that are out of compliance, only those emission reductions below the allowable emissions for the existing source are creditable as emission reduction credits. The determination of total emissions at the time prior to submittal of an application for an air emission license and prior to operation commencement shall be made in a manner consistent with the assumptions in the applicable State Implementation Plan approved by the EPA. These assumptions pertain to baseline emissions for the demonstration of reasonable further progress and attainment of the national ambient air quality standards for the particular nonattainment pollutant subject to review under this Chapter.

The emission reduction credit must provide a greater than 1 to 1 emission reduction, including minor growth and secondary emissions (except where superseded by higher ratios in Section 2(C) below), and shall provide a positive net air quality benefit.

B. SO_2, PM_{10}, NO_2, CO Lead or Chromium Nonattainment Areas

1. Demonstration of a net air quality benefit. When the new source or modification subject to this Chapter is located in an SO_2, NO_2, PM_{10}, CO, Lead or Chromium nonattainment area or attainment area, if the emission offsets are not obtained from an existing stationary source on the same premises or in the immediate vicinity (i.e., within 250 meters) and the pollutants are not emitted from substantially the same effective stack height of the new source or modification, the demonstration of a net air quality benefit shall be on the basis of atmospheric dispersion modeling.

NOTE: Except as provided in Subsection 2(C) below, atmospheric dispersion modeling shall not be required to demonstrate that VOC and NO_x reduction will result in a reduction of ozone (photochemical oxidants).

2. Location of offsets. Offsets for SO_2, PM_{10}, NO_2, CO, Lead and Chromium shall be obtained from sources in the SO_2, PM_{10}, NO_2, CO, Lead or Chromium nonattainment area.

C. Ozone Nonattainment Areas

1. Volatile Organic Compounds (VOC). For a new source or modification subject to this Chapter, the offset ratio for VOC is a function of the nonattainment area classification or other designation for the area in which the new source or modification will locate, as specified below. If the location of a new source or modification is subject to more than one classification, the more restrictive offset shall apply.

Classification Type	**Offset Ratio**
Serious ozone nonattainment area	1.2 to 1
Moderate nonattainment area	1.15 to 1
Marginal nonattainment area	1.1 to 1
Nonclassified nonattainment area	>1 to 1
~~OTR~~	~~1.15 to 1~~

Comment [A2]: Remove from federally approved SIP

In the case of emission offset involving VOC, negligibly photochemically reactive VOC shall not be used as offsets for VOC of higher photochemically reactivity, nor shall an offset be required for negligibly photochemically reactive VOC.

2. NO_x. For a new source or modification subject to this Chapter, the offset ratio for NO_x is a function of the nonattainment area classification or other designation for the area in which the new source or modification will locate, as specified below. If the location of a new source or modification is subject to more than one classification, the more restrictive offset ratio shall apply.

NOTE: For the purpose of this section, any NO_x reductions must result in the control of ozone.

Classification Type	Offset Ratio
Serious ozone nonattainment area	1.2 to 1
Moderate nonattainment area	1.15 to 1
Marginal nonattainment area	1.1 to 1
Nonclassified nonattainment area	>1 to 1
~~OTR~~	~~1.15 to 1~~

Comment [A3]: Remove from federally approved SIP

3. Location of offsets. Offsets for VOC and NO_x shall be obtained from sources in the same ozone nonattainment area ~~or attainment area~~, except that such offsets

Comment [A4]: Remove from federally approved SIP

may be obtained from a source in another ozone nonattainment area ~~or attainment area~~ if the following conditions of either (a) or (b), whichever is relevant, are met:

Comment [A5]: Remove from federally approved SIP

a. For a new source or modification subject to this Chapter located in an ozone nonattainment area:

i. The other ozone nonattainment area has an equal or higher nonattainment classification than the ozone nonattainment area in which the new source or modification subject to this Chapter is located;

ii. Emissions from the ozone nonattainment area contribute to a violation of a national ambient air quality standard in the ozone nonattainment area in which the new source or modification subject to this Chapter would construct; and

iii. The source from which the offset is being obtained is located within the OTR; ~~or~~

~~b. For a new source or modification subject to this Chapter located in an attainment area, the source from which the offset is obtained is located within another attainment area or within an ozone nonattainment area, either of which are located in the OTR.~~

Comment [A6]: Remove from federally approved SIP

4. Demonstration of emission reductions. For new sources or modifications subject to this Chapter and located in ozone nonattainment areas, the demonstration needed to verify Section 2(C) of this Chapter may be made on the basis of Urban Airshed Model (UAM) in addition to Regional Oxidant Model (ROM) modeling results; any other EPA-approved photochemical grid modeling results; or on the basis of an independent showing on a case-by-case basis.

D. All Areas

All emission reduction credits must be quantifiable and calculated according to the same method and averaging time for the base case and future case. The base case from which to measure emission reduction credits shall be the actual emissions for the 24-month period prior to submittal of the application for an air emission license.

1. In no case shall the base case emission be greater than Reasonable Available Control Technology (RACT), New Source Performance Standards (NSPS), or any emission limitation previously required by the Department, or the allowable emissions of the emissions unit, whichever is less.

2. In no case shall emission reduction credit be allowed for reductions in emissions prior to December 31, 1990.

3. In no case shall emission reduction credit be allowed for reductions in emissions which were required by any federally enforceable license conditions developed pursuant to 40 CFR Parts 51, 52, 70, and 71, or other requirements of the CAA, particularly in demonstrating attainment or reasonable further progress. If incidental emission reductions not required under the CAA meet the applicable requirements for emission offsets, such emission reductions may be creditable as emission reduction credits.

E. Other Limitations on Emission Reduction Credits

1. Emission reduction credits for reductions in fugitive emissions shall be creditable only against increases in fugitive emissions.

2. Emission reduction credit used to offset an emission increase at a new source or modification subject to this Chapter and generated as a result of an emission reduction at another facility must be contemporaneous with the emission increase from the new source or modification. To be contemporaneous, the emission reduction that generates the emission reduction credit must take place within five (5) years before or after the date upon which the new source or modification is licensed, and in no case later than the date which the new source or modification commences operation.

3. Emission reduction credits must be federally enforceable by the time the air emission license is issued, and result in real reductions in actual emissions (i.e. not paper credits) by the time the new source or modification subject to this Chapter commences operation. The emission reduction credit must be used by the new source or modification within five (5) years of the time that the emission reduction credit was created by an emission reduction at another facility.

4. Emission reduction credits must be permanent. If an existing source proposes to switch to a cleaner fuel in order to create an emission reduction credit, such emission reduction is not creditable unless:

a. The air emission license requires the use of a specified alternative control measure which would achieve the same degree of emission reduction if the source switches back to the dirtier fuel at some later date; and

b. Before the Department grants an emission reduction credit for the fuel switch, the owner or operator of a source demonstrates that adequate long

term supplies of the cleaner fuel are available.

F. Shutdowns and Curtailments

1. Emission reduction credits achieved by the shutdown or curtailment of an existing source may be credited under the following conditions:

a. The emission reduction credits are permanent, quantifiable, and enforceable; and

b. The area where the existing source is located has an EPA-approved attainment plan; and

c. The shutdown or curtailment occurred on or after the date of the most recent emission inventory used in the EPA-approved attainment plan.

2. When the EPA-approved attainment plan does not specify a cutoff date for emission reduction credits from shutdowns, the date of the most recent emissions inventory or attainment demonstration, as the case may be, shall apply. However, in no event may credit be given for shutdowns which occurred prior to August 7, 1977.

3. For the purpose of Subsection 2(F) of this Chapter, if the emissions inventory explicitly includes as current existing emissions, the emissions from such existing sources that were previously under shutdown or curtailment, the Department may choose to consider a prior shutdown or curtailment to have occurred after the date of its most recent emissions inventory.

4. Emission reduction credits may be credited in the absence of an EPA-approved attainment demonstration under the following conditions:

a. The shutdown or curtailment occurred on or after the date the application for an air emission license for the new source or modification subject to this Chapter is filed;

b. The applicant can establish that the new source or modification subject to this Chapter is a replacement for the new source or modification that is under shutdown or curtailment: and

c. The cutoff date provisions in Subsection 2(F)(1), 2(F)(2) and 2(F)(3) of this Chapter are observed.

5. If the owner or operator of the new source or modification subject to this

Chapter plans to trade emission credits, any shutdown or curtailment shall require an amendment to the air emission license.

3. Exemptions

Temporary emission sources, including, but not limited to, pilot plants and portable facilities which will be relocated outside of the nonattainment area ~~and OTR~~ after a period of time not to exceed six (6) months, and emissions resulting from the construction phase of a new source or modification subject to this Chapter are exempt from the requirement of this Chapter.

Comment [A7]: Remove from federally approved SIP

BASIS STATEMENT : The basis of this regulation is to control the additional air pollution in areas that are at or violating the allowed air pollution levels so that the ambient air quality standards are maintained and where those standards are violated there is orderly and timely progress toward attaining and maintaining the standard.

BASIS STATEMENT FOR AMENDMENT OF MAY 11, 1983 : This regulation was amended to reflect the redesignation of the municipality of Millinocket as attainment for sulfur dioxide and the municipalities of Bangor and Lewiston as attainment for carbon monoxide.

BASIS STATEMENT FOR AMENDMENT OF JULY 13, 1988 : This regulation addresses licensing requirements, in addition to those specified in Chapter 115, for sources which are located in or which significantly impact areas which are not achieving ambient air quality standards. The amendment no longer allows nitrogen oxides to be offset for volatile organic compounds.

BASIS STATEMENT FOR AMENDMENT OF SEPTEMBER 27, 1989 : A minor change was made for consistency with the statutes. No comments on the proposed changes were received by the Department.

BASIS STATEMENT FOR AMENDMENT OF JUNE 13, 1990 : This regulation was amended to implement a federally mandated nitrogen oxide (NO_x) increment program in the State of Maine. As part of the Prevention of Significant Deterioration Program, these amendments establish maximum increases in pollution concentration. NO_x increment standards are established and the NO_x baseline concentration represents air quality existing in an area on February 8, 1988. No comments were received on the proposed amendments.

BASIS STATEMENT FOR AMENDMENT OF JUNE 22, 1994 : This regulation was amended to reflect new source review requirements contained in the Clean Air Act, as amended, 42 U.S.C. 7401, et seq.; In addition to this Basis Statement, the Department has filed with the Secretary of State the response to representative comments received during the comment period.

AUTHORITY: 38 MRSA § 585-A

EFFECTIVE DATE: May 7, 1979
Amended January 16, 1980
Amended June 27, 1983
Amended August 9, 1988
Amended October 25, 1989
Amended July 10, 1990
Amended July 11, 1994

-06- DEPARTMENT OF ENVIRONMENTAL PROTECTION

096 BUREAU OF AIR QUALITY CONTROL

CHAPTER 115: EMISSION LICENSE REGULATIONS

SUMMARY: This regulation implements Section 590 of Title 38 Maine Revised Statutes. It specifies who must obtain an air emission license, what information an applicant must submit and what standards and criteria he must comply with. Section 6(C) was amended to specify the circumstances under which the Lowest Achievable Emission Rate is required of a new major emitting source.

NOTE: The requirements of 38 M.R.S.A. Section 344 and D.E.P. Regulations, Chapter 1, as amended, shall govern the processing of applications under this Chapter.

I. Applicability

A. Geographic scope. This regulation shall be effective in all ambient air quality control regions in this State.

NOTE: Any major new source or major modification which proposes to locate within the bounds of any Indian Reservation may also need to apply to the U.S. Environmental Protection Agency (EPA) for a federal Prevention of Significant Deterioration (PSD) permit, federal nonattainment area new source review permit, and/or a federally issued operating permit.

B. Effective date. This Chapter shall be effective 90 days after the close of Legislature 1990 (April 14).

II. Prohibition

A. General. No person shall emit or cause to be emitted air contaminants from any source without an air emission license from the Department unless the source is exempt pursuant to subsection C .

B. New sources or modifications. No person shall commence construction of any source or modify an existing source without a license unless the source is exempt pursuant to subsection C. Approval to construct shall become invalid if the source has not commenced construction within 18 months after receipt of such approval or if construction is discontinued for a period of 18 months or more. The Department may

extend this time period upon a satisfactory showing that a extension is justified, but may condition such extension upon a review of either the control technology requirements or the ambient air quality impact analysis, or both. Any source or modification which results in a significant emissions increase solely by virtue of a relaxation in any enforceable limitation which was established after August 7, 1980, on the capacity of the source or modification otherwise to emit a pollutant, such as a restriction on hours of operations, shall be considered a new or modified source with respect to Sections III(B), V(B), VI(B) and VII(C) or (D) of this Chapter.

C. License exemptions. An air emission license is not required for the following sources or emissions units, except that once a source requires an air emission license, all emissions units at the source must be included. In no case shall these exemptions apply to any major source or major modification.

1. Fuel-burning equipment (or combinations thereof) whose total heat input is less than 10 million British Thermal Units;

2. Incinerators of the type Class I and lA;

3. General process sources or general process equipment whose emissions without consideration of air pollution control apparatus and under normal operation are less than 100 pounds per day, or 10 pounds per hour of any regulated pollutant, except that these numerical limitations may not apply to a source which is subject to regulation for the control of hazardous air pollutants pursuant to Title 38 M.R.S.A. Section 585-B, or New Source Performance Standards promulgated at 40 CFR Part 60 or National Emission Standards for Hazardous Air Pollutants (NESHAPS) promulgated at 40 CFR Part 61;

4. Emissions units whose sole function is to provide power for mobile sources, including vessels;

5. Bulk gasoline terminals with a daily throughput of less than 20,000 gallons;

6. Bulk petroleum storage facilities with a gasoline or crude oil stored in tanks with a capacity of less than 39,000 gallons;

7. Sources which without consideration of air pollution control apparatus and under normal operation emit less than 0.6 ton of lead per year; and

8. Any change to a source presently exempt from licensing unless that change increases the total capacity of the source to greater than the exemptions provided for in this section.

D. License exemption for pollution control projects. Pollution control projects shall be exempt from the requirements of this Chapter to the extent allowed under the Clean Air Act, as determined by the Department on a case-by-case basis. To be exempt, the applicant must demonstrate that the proposed pollution control project is consistent with and meets all requirements of applicable State and EPA rules, policies and guidelines which specifically address exemptions from New Source Review and Prevention of Significant Deterioration programs for pollution control projects.

III. Application

A. Existing sources. Applications for renewal of existing sources shall be submitted at least 90 days prior to the expiration date of the current air emission license. The application shall be on a form prescribed by the Department and shall include records to accurately document compliance, including:

1. Operating rates;

2. Use of materials that result in emission of air contaminants and the nature and amount of resulting emissions;

3. Results of instack monitoring required by the Department;

4. Results of stack testing required by the Department;

5. Results of meteorology or air quality monitoring required by the Department;

6. Results of impact analyses that have been required by the Department;

7. Operating and maintenance records of air pollution control apparatus required by the Department; and

8. Any other such information necessary to determine the efficiency of any air pollution control apparatus or otherwise identify the types and quantities of air contaminants expected to be emitted from each emissions unit.

B. New sources or modifications. In addition to the information required for an existing source, the owner or operator of a new source or modification shall submit the following:

1. A description of the nature, location (identified on an original U. S . Geological Survey Topographical map), design, construction, operation, design capacity, maximum capacity, and typical operating schedule of the source or

modification, including specifications and drawings showing design and plant layout;

2. A schedule for construction of the source or modification;

3. A detailed description of the air pollution control equipment, process control and monitor, and any other system of continuous emission reduction planned by the source or modification and such other information required to accurately establish emission estimates, document future compliance, and to determine that the control technology requirements of Section VI are satisfied;

4. The analysis and information required by the Department including meteorological and topographical data necessary to estimate the air quality impact (See Section VII); and

5. The air quality impacts and the nature and extent of emissions from all general commercial, residential, industrial, and other growth, including associated mobile sources, which has occurred since August 7, 1977, in the area the source or modification would affect.

C. Phased construction project. An applicant who intends to construct a phased construction project in which the construction phases exceed 18-months or the term of the emission license, whichever is less, shall submit an application for an amended emission license for each future phase which includes a new BACT determination for each future phase.

D. Acceptability. An application for an emission license or amendment shall not be deemed acceptable for processing until all information and data required to evaluate the application have been submitted. The fact that an application is deemed acceptable for processing does not prohibit the Commissioner from requesting further relevant information and data. No application shall be determined to be acceptable for processing until appropriate Federal Land Managers and Indian Governing Bodies have been notified as required at Sections VII and IX of this Chapter.

NOTE: It is suggested that a prospective applicant request a pre-application meeting prior to submitting an application for an air emission license or amendment. At such meeting the applicant will have an opportunity to provide the scope and importance of the project and will be advised of the license requirements, including the information, data, plans, specifications, and protocols that may be required to be furnished with the application.

E. New source review requirements

1. Any application for a new source or modification deemed acceptable for processing before November 15, 1992, shall be subject to the new source review requirements in effect, as of November 15, 1992 under Department regulations under the following conditions:

a. The Department and new source or modification move expeditiously towards final issuance of the air emission license;

b. Construction of the new source or modification, or a construction phase begins no later than eighteen (18) months from the date of issuance of the air emission license pursuant to Subsection III(C);

c. Construction of the new source or modification, or construction phase is not discontinued for a period of eighteen (18) months or more; and

d. Construction of the new source or modification, or construction phase is completed within five (5) years unless extended in writing by the Department.

2. Any application for a new source or modification deemed acceptable for processing after November 15, 1992, shall be subject to the new source review requirements pursuant to Title I, Part D of the Clean Air Act, as amended, 42 U.S.C. 7401, et seq. and Chapter 115 and Chapter 113 of the Department's regulations.

IV. Terms of Emission License

A. Period. The term of air emission licenses is 5 years except that the following sources will have a license term of 2 years:

1. Sources designed to bum municipal solid waste;

2. Sources utilizing innovative air pollution control technology; and

3. New sources which have not previously received an air emission license.

The Department may, on a case-by-case basis, establish a term shorter than five years for a major modification which has not previously been included in an air emission license if the Department determines that a need exists to utilize a shorter term in order to establish license conditions for such modification.

B. Source obligation. Approval to construct a new source or modify an existing source

or an exemption pursuant to Section II(C) shall not relieve any owner or operator of the responsibility to comply fully with applicable provisions of the State Implementation Plan and any other requirements under local, state, or federal law.

V. Criteria for Granting a License

A. General

1. Pursuant to the requirements of Title I, Part D of the CAA, the Department shall not issue an air emission license if the EPA has determined that implementation of its State Implementation Plan is inadequate for the nonattainment area in which the proposed source or modification will be constructed.

2. The Department shall grant the license if the applicant, owner or operator demonstrates that the following criteria will be met:

a. The emissions will be receiving best practical treatment, including where appropriate the technology requirements specified at Section VI;

b. The emissions will not violate applicable emissions standards adopted by the Department pursuant to Title 38, M.R.S.A. Section 585, and 585-B or can be controlled so as not to violate the same;

c. The emissions either alone or in conjunction with existing emissions will not violate or can be controlled so as not to violate applicable ambient air quality standards including increments as adopted by the Department pursuant to Title 38 M.R.S.A. Section 584; or for those sources locating within or significantly impacting a nonattainment area, the impact from the emissions is consistent with any plan demonstrating Reasonable Further Progress as defined by Section 171 of the Clean Air Act;

d. The emissions from an existing source which has been determined by the Board to be reasonably attributable to impairment to visibility in any Class I area or integral vista (which impairment has been certified by a Federal Land Manager in the case of Federal Lands) shall meet Best Available Retrofit Technology as defined at Chapter 100. Whenever an existing source is required to install and operate additional air pollution control apparatus to achieve BART, it shall do so as expeditiously as practicable but in no case later than 5 years after the Board identifies BART; and

e. The conditions of the air emission license assure compliance with all relevant requirements of this Chapter and any other applicable requirements.

B. New sources or modifications. In addition to the provisions of Subsection A, the Department shall grant the license for a new source or modification, if the applicant, owner or operator demonstrates that the following criteria will be met:

1. With respect to any major new source or major modification, the emissions would not have an adverse impact on the air quality related values (including visibility) of any Class I area or integral vista;

2. With respect to any major new source or major modification which results in a significant emissions increase of a nonattainment pollutant which seeks to locate or modify within the geographical boundaries of a nonattainment area ~~or Ozone Transport Region~~, or which increased emissions will significantly impact a nonattainment area, the applicant shall demonstrate:

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a. All sources owned or operated by the applicant (or by any entity controlling, controlled by, or under common control with such person) in this State shall be in compliance, or on an federally enforceable schedule for compliance, with all applicable emission limitations and standards under the Clean Air Act, including the terms of any emission license with the terms of any emission license, including applicable emission standards and ambient air quality standards;

b. The owner or operator has complied with the applicable provisions of the Offset Regulation, Chapter 113; and

c. The owner or operator has conducted an analysis of alternative sites, sizes, production processes, and environmental control techniques for such proposed source which demonstrates that benefits of the proposed source significantly outweigh the environmental and social costs imposed as a result of its location, construction, or modification; and

3. With respect to any new source or modification which results in emissions of hazardous air pollutants, for which standards have not yet been adopted pursuant to 38 M.R.S.A. 585 - B, the emissions will not exceed the interim guideline values calculated according to procedures developed by the Bureau of Health and approved by the Scientific Advisory Panel.

C. Renewals

1. All license renewals must include all control technology requirements, including BACT, LAER, and other operating limitations, imposed on the air emission license originally granted for any emissions unit originally subject to new source review. In no case shall the conditions of the renewed license lessen the stringency of the emission limits upon which the air quality impact assessment was based unless a new impact analysis is provided.

2. Existing sources (other than those associated with new sources or modifications subject to Section II(B)) which cannot demonstrate compliance with one or more of the above criteria, may be granted a renewed air emission license if:

a. The emission reduction measures necessary to meet the applicable criteria are required by the license and are implemented and operational as soon as practicable, but no later than 24 months. If the applicant demonstrates that it cannot comply with the term of the license due to factors beyond his control, a later date may be established by the Board; and

b. During the period prior to installation and operation of the emission reduction measures required by Section V(C)(I), the actual emissions of the source shall not increase.

VI. Control Technology

The air pollution control apparatus and equipment, if any, relied upon by an emissions unit in order to achieve the applicable emission limitations and best practical treatment shall be both reliable in conforming to design specifications and expected operating characteristics and dependable in performance.

A. Existing sources

1. General. The applicant shall demonstrate that its emissions comply with the emission standards adopted by the Department and in effect at the time of the submission of a renewal application. The source shall demonstrate that all emissions are receiving Best Practical Treatment (BPT), as defined at Chapter 100. The BPT analysis shall consider the emission limit for which the air pollution control apparatus was designed, its age and life expectancy. The requirement should not force replacement of existing equipment on the basis of more efficient or reliable equipment being available at the time of renewal, but would require replacement with that more efficient or reliable equipment when;

a. The existing air pollution control apparatus is replaced;

b. When the emissions unit is found to violate the applicable emission standard;

c. Additional reductions are necessary to achieve or maintain ambient air quality standards;

d. Whenever the Board determines that previously uncontrolled emissions should be controlled;

e. Whenever the Board determines that previously controlled emissions should be controlled to a greater efficiency considering the toxicity of constituents; or

f. Whenever additional reductions are necessary to restore increment even if that increment has been previously authorized to the applicant.

The BPT provision may require the use of additional instrumentation, operating practices, automated process controls (e.g. viscosity controls for fuel-burning sources), upgrading of component parts (e.g. improved fabric filter materials when old bags are replaced), emission testing including requirements for continuous emission monitors, equipment maintenance programs, or record keeping to demonstrate in-use performance of air pollution control apparatus or other mitigating measures.

Whenever an air pollution control apparatus is replaced, a new BPT finding is necessary to support a license amendment, even if there is no increase in affected pollutants and no increase in ambient air impact of affected pollutants. Such replacement shall conform to the provisions of Section VI regarding reliability.

2. Nonattainment areas. An existing source located in or whose emissions significantly impact a nonattainment area shall demonstrate that all emissions of the nonattainment pollutant are receiving Reasonably Available Control Technology (RACT), as defined at Chapter 100. An existing source located within an ozone nonattainment area and whose emissions are significant for ozone (40 tpy VOC) shall demonstrate that all emissions of the nonattainment pollutant are receiving RACT, as defined at Chapter 100.

3. Visibility impairment. An existing source whose emissions are determined by the Board of Environmental Protection to be reasonably attributable to impairment to visibility (as certified by the Federal Land Manager for federal lands) in any Class I area or integral vista, defined at Chapter 114, shall

demonstrate that all emissions contributing to the visibility impairment are receiving Best Available Retrofit Technology (BART) as defined at Chapter 100, within 5 years of a BART determination by the Board.

B. New sources and modifications

1. General. Any new source or modification of an existing source, not exempted from the licensing requirement pursuant to Section II(C), shall demonstrate that its emissions from any new emissions unit or modification are receiving Best Available Control Technology (BACT), as defined at Chapter 100. Any major new source or major modification for a nonattainment pollutant, which is located within, or significantly impacts, a nonattainment area shall comply with the requirements of Section VI(B)(2).

a. In every case, the applicant is responsible for the submission of the following information as part of the air emissions license application to the degree necessary as determined by the Department to process the application to make the BACT determination:

i. Proposal of a control system representing BACT. BACT is required on each emissions unit, including fugitive as well as stack emissions. Technology selection should consider application of flue gas treatment, fuel treatment and processes and techniques which are inherently low polluting and are economically feasible to this source. In cases where technological or economic limitations on the application of measurement techniques would make the imposition of an emission standard infeasible, a design, operating, equipment standard or work practice can be established;

ii. Presentation of all alternative systems considered that could achieve a higher degree of emission control. All technically viable alternatives which have greater control capabilities than the system proposed as BACT and which have been used for the same or similar applications should be considered. However, the Department recognizes that the BACT decision may require a trade-off of control among pollutants and sources. If no better control alternative is technically and economically feasible for an emission point, then such finding should be stated and documented in writing. In some cases, a better control technology may be available for a general type of operation. However, unique processing equipment or procedures may create a valid technical reason which would preclude its use. Such situations should be fully supported; and

iii. For alternative systems not selected. An applicant must explain why the more stringent level of control is inappropriate for BACT in terms of energy, economic and environmental impacts. The rationale should be presented in the form of an incremental analysis of the impacts of each rejected alternative relative to the proposed BACT system.

b. Innovative control technology waiver. An owner or operator of a proposed new source or modification subject to this section may request the Department to grant a waiver from any or all such requirements and to approve a system of innovative control technology in order to encourage the use of such technology. The Department may, with the consent of the Governors of other affected states, grant a waiver necessary for the employment of innovative control technology and determine that the source or modification may employ such system if:

i. The proposed control system would not cause or contribute to an unreasonable risk to public health, welfare or safety in its operation or function;

ii. The owner or operator agrees to achieve a level of continuous emissions reduction greater than or equivalent to that which would have been required by this section by a date approved by the Department, such date no later than 4 years from the time of startup or 7 years from license issuance;

iii. The source or modification would meet the requirements of Section VI and VII based on the emissions rate that the source employing the system of innovative control technology would be required to meet on the date specified by the Department;

iv. The source or modification would not, prior to the date specified under Section B(I)(b)(2) of this section;

(a) Cause or contribute to any violation of any applicable ambient air quality standard;

(b) Impact any area where an applicable ambient increment is known to be violated; or

(c) Impact any Class I area;

v. All other applicable requirements, including those for public

participation, have been met;

vi. The Department shall withdraw any approval to employ a system of innovative control technology if:

(a) The proposed system fails by the specified date to achieve the required continuous emissions reduction rate;

(b) the proposed system fails before the specified date so as to contribute to an unreasonable risk to public health, welfare, or safety; or

(c) The Department decides at any time that the proposed system is unlikely to achieve the required level of control or to protect the public health, welfare, or safety; and

vii. If a source or modification fails to meet the required level of continuous emissions reduction within the specified time period, or if the approval is withdrawn in accordance with Section B(1)(b)(6), the Department may allow the source or modification an additional period, not to exceed 3 years, to meet the requirement for the application of BACT through use of a demonstrated system of control.

2. Nonattainment areas. Any new source with significant emissions of a nonattainment pollutant which seeks to locate within the geographical boundaries of a nonattainment area ~~or the Ozone Transport Region~~, or whose emissions will significantly impact, a nonattainment area, shall demonstrate that the emissions of the nonattainment pollutant are receiving Lowest Achievable Emission Rate (LAER) as defined at Chapter 100. Any emissions from a modification of an existing source which results in a significant emissions increase of a nonattainment pollutant must be shown by the source to be meeting LAER if the source is located within the geographical bounds of a nonattainment area ~~or the Ozone Transport Region~~ or if the emissions of the nonattainment pollutant from the modification significantly impact a nonattainment area. Any source or modification not covered by this section shall comply with the requirements of Section VI(B)(1).

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~~NOTE: For the purposes of this section, sources of VOC and NO_x located outside the bounds of the nonattainment area for ozone or the Ozone Transport Region are presumed to not have a significant impact.~~

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In those cases where the Department has completed redesignation procedures

from nonattainment to attainment but for which the U.S. Environmental Protection Agency (EPA) has not taken final action, EPA's applicability criteria shall apply (Sections 172(b)(6) and 173 of the Clean Air Act).

NOTE: LAER is therefore required when Maine designates to nonattainment before EPA action. LAER is required if EPA takes a lead action and designates an area nonattainment. LAER is based on Maine's applicability criteria in all cases except where DEP has amended the attainment status from nonattainment at Chapter 114 in which case EPA's procedures apply.

VII. Air Quality Impact Analyses

A. General. It shall be the burden of any applicant to provide an affirmative demonstration that its emissions in conjunction with all other sources will not violate ambient air quality standards, established pursuant to Chapter 110 of Department Regulations, except that sources in nonattainment areas or which significantly impact a nonattainment area shall be required to demonstrate that the source's emissions are consistent with Reasonable Further Progress provisions of the State Implementation Plan. An applicant may use ambient air monitoring, modeling, or other assessment techniques as approved by the Department. The analyses shall include all emissions units at the source, meteorological and topographical data necessary to estimate such impacts, and shall consider the impact of fugitive emissions, to the extent quantifiable, secondary emissions, and emissions from other existing sources including increases in mobile and area source emissions impacting the same area. The level of analysis shall depend upon the size of the source, the air contaminants emitted, existing air quality, proximity to Class I or nonattainment areas, or areas where increment has been substantially consumed. The air quality impact analysis, in general, will not be required of the applicant for those regulated pollutants which are not listed under "significant emissions" at Chapter 100. The analysis shall be conducted in accordance with the provisions of Chapter 116, Section VII(E) and Appendix A of this Chapter.

1. Monitoring. Monitoring done by the owner or operator shall conform to the requirements of 40 CFR Part 58, Appendix B and the Department's Quality Assurance Plan (or other plan approved by the Department) during the operation of monitoring stations.

NOTE: It is recommended that a written protocol be developed by the owner or operator and the Department when a source is required to conduct either pre-construction or post-construction monitoring. The protocol shall, at a minimum, specify the monitoring sites, frequency of sampling, data recovery, pollutants, and monitoring method.

2. Modeling

a. All estimates of ambient concentrations required by an ambient or increment impact analysis shall be based on the applicable air quality models, data bases, and other requirements specified in the current Appendix W of 40 CFR Part 51, "Guideline on Air Quality Models" (Revised), and in accordance with Section VII(E) and Appendix A of this Chapter. Fugitive emissions, to the extent quantifiable, shall be considered.

NOTE: These guidelines require evaluation of the effect of terrain on ambient concentrations.

b. All preprocessed meteorological data used in refined modeling analyses shall be submitted to the Department on 3½" diskettes formatted for use by computer software which the Department uses (see Appendix A) unless otherwise approved by the Commissioner.

c. Where an air quality impact model specified in the Appendix W of 40 CFR Part 51, "Guideline on Air Quality Models" (Revised), is inappropriate, the model may be changed or another model substituted; such change or substitution shall be subject to public comment and the written approval of the Department and the Regional Administrator of the U.S. Environmental Protection Agency or his designee. Methods like those outlined in the Protocol for Determining the Best Performing Model (EPA- 454/R-92-025) and the Interim Procedures for Evaluating Air Quality Models: Experience with Implementation (EPA-450/4~85-006) should be used to determine the comparability of air quality models.

B. Renewals

1. A previously submitted impact analysis shall be acceptable unless:

a. It has been found to be deficient with respect to requirements set forth in Section VII(A);

b. The impact analysis fails to reflect available information with respect to ambient air quality levels in the area, which, based upon the Department's expertise, may reasonably be expected to be significantly impacted by the source;

c. The source emits an air contaminant for which an ambient air quality standard has been adopted and whose impact was not addressed in the original impact analysis; or

d. The renewal is in conjunction with a modification (Section VII(C) or (D)).

2. Continuation of an ambient air monitoring or meteorological monitoring program shall be made on a case-by-case basis at the time of the renewal. It shall be the burden of the applicant to demonstrate the adequacy of existing data, its relationship to past, present, and future facility operating conditions, and the adequacy of other means to document continuing compliance.

3. An existing source shall be exempt from an impact analysis with respect to an air contaminant whose allowable emissions, after the application of control technology requirements specified in Section VI, do not exceed the following, unless the source is located in or near a Class I area or all area where the available air quality is limited, or other extenuating circumstances exist:

a. 50 tons per year (tpy) for Sulfur dioxide;

b. 250 tpy for VOC, or CO;

c. 25 tpy for PM_{10}; or

d. 100 tpy for NO_x (measured as NO_2).

C. New sources and modifications. The level of air quality analyses and monitoring for any new source or modification, which is not a major new source or major modification, shall be determined on a case-by-case basis considering:

1. Air quality data available in or representative of the area;

2. Similarity with other licensed sources in terms of size, emissions, and local topography;

3. Location, including proximity to Class I areas, integral vistas, nonattainment areas or areas where increment has been substantially consumed; and

4. The results of previous air quality analyses.

An analysis may be required, even in cases resulting in no increases in emissions, if a stack height is less than Good Engineering Practice or if there are changes in stack or building configurations or other factors which are determined to alter the dispersion characteristics of the source.

NOTE: If a source of NO_x is subject to both the Prevention of Significant Deterioration

(PSD) and New Source Review (NSR) thresholds, the source must comply with the nonattainment area NSR provisions for ozone as well as modeling requirements for the NO_2 National Ambient Air Quality Standard, NO_2 increment, and Class I areas analyses, etc.

D. Major new sources and major modifications. This section shall be applicable to any major new source or major modification.

1. Pre-construction monitoring

a. For those pollutants for which there is an ambient air quality standard (except nonmethane Hydrocarbons) the analysis shall consist of continuous air quality monitoring data gathered over a period of one year and shall represent the year preceding the application. If the Department determines that a complete and adequate analysis can be accomplished with monitoring data gathered over a period shorter than one year the application may be deemed acceptable for processing based on the data gathered over that shorter period. The period shall not be less than 4 months. The applicant must demonstrate that such shorter period, or period other than the preceding year, is representative of ambient concentrations under the seasonal conditions expected to record the highest concentrations.

b. For those pollutants for which no ambient air quality standard exists, the analysis shall contain such air quality monitoring data as the Department determines is necessary and feasible in light of methods available to monitor such pollutants.

c. In areas where meteorological monitoring data are not available or the Department deems that the available data are inadequate or not representative, the new source or modification shall be required to collect preconstruction meteorological data sufficient for air quality modeling. At least one year of data is required to be used in the modeling to support the application.

d. A source or modification shall be exempt from the preconstruction monitoring requirements of this subsection if the emissions increase of a pollutant would cause, in every area, air quality impacts less than the following amounts:

i. Carbon monoxide – 575 $\mu g/m^3$, 8-hr. average;

ii. Nitrogen dioxide– 14 $\mu g/m^3$, annual average;

iii. Sulfur dioxide – 13 $\mu g/m^3$, 24-hr. average;

iv. Ozone--No de minimus air quality level is provided for ozone. Any sources having a net emissions increase of l00 tpy or more of Volatile Organic Compounds (excluding negligibly photochemically reactive VOC) shall conduct ambient air monitoring except that when such source satisfies the condition of 40 CFR Part 51, Appendix S, Section IV, post-approval monitoring data for ozone may be substituted for preconstruction data;

v. Lead--0.1 $\mu g/m^3$, 24-hr. average;

vi. Mercury – 0.25 $\mu g/m^3$ 24-hr. average;

vii. Beryllium – 0.0005 $\mu g/m^3$, 24-hr. average;

viii. Fluorides--0.25 $\mu g/m^3$ 24-hr. average;

ix. Vinyl chloride – 15 $\mu g/m^3$ 24-hr. average;

x. Total reduced sulfur – 10 $\mu g/m^3$, 1-hr. average;

xi. Hydrogen sulfide – 0.04 $\mu g/m^3$, 1-hr. average;

xii. Reduced sulfur compounds – 10 $\mu g/m^3$ 1-hr;

xiii. Chromium – 0.02 $\mu g/m^3$, 24 hr. average; and

xiv. PM_{10} – 10 $\mu g/m^3$, 24 hr. average.

2. Ambient air quality standards analysis. An ambient air quality standards analysis shall be submitted which includes dispersion modeling for each pollutant for which there is an ambient standard (except nonmethane hydrocarbons) adopted pursuant to Chapter 110 of the Department's regulations. The analysis also shall include ambient air monitoring, meteorological and topographic data necessary to estimate such impact, as well as an analysis of the impact of all other sources in the area with actual emissions of 100 tpy or more of the same pollutant. At a minimum, this analysis shall include all such sources that emit more than 100 tpy of a given regulated pollutant located within the lesser of 10 km or the area, which, based upon the Department's expertise, may reasonably be expected to be significantly impacted by the proposed source or modification.

NOTE: The impact of sources not included in the modeling analysis will be

obtained through an analysis of ambient monitoring data as outlined in the Departments guidelines for the determination of background concentrations.

3. Ambient increment analysis. An increment analysis shall be submitted for each pollutant for which there is an ambient increment adopted pursuant to Chapter 110 of the Department's regulations. The analysis shall include meteorological and topographical data necessary to estimate such impact, as well as an analysis of the air quality impacts and nature and extent of any or all general, commercial, residential, industrial and other growth including increases in mobile source and area source emissions which has occurred since the baseline date, and therefore have consumed increment in the area the source or modification will significantly impact. This analysis shall be conducted in accordance with the modeling provisions of this section.

NOTE: All emissions not included in baseline year emissions consume increment, even though an analysis may not have been required. The Department will track increment-consuming emissions and provide the data to the applicant for inclusion in the increment analysis.

4. Additional impact analysis. The proposed new source or modification shall provide an additional impact analysis of:

a. The impairment to visibility, soils and vegetation that would occur as a result of the source or modification and general, commercial, residential, industrial and other growth associated with the source or modification, except that an analysis of the impact on vegetation having no significant commercial or recreational value is not required;

b. The air quality impact projected for the area as a result of general commercial, residential, industrial and other growth associated with the facility or modification; and

c. The impact, including visibility impairment, on any Class I area or integral vista.

5. Class I areas

a. The applicant shall provide a copy of the application for a proposed new source or modification to the affected Federal Land Manager and notification that it has done so to the Department, prior to the acceptance of the application if:

i. The new source or modification seeks to locate or is located

within 10 kilometers of the boundaries of a Class I area;

ii. The new source or modification seeks to locate or is located within 100 km of the boundaries of a Class I area and has the potential to emit more than 100 tpy of any air contaminant;

iii. The new source or modification seeks to locate anywhere in the State and has the potential to emit in excess of 100 tpy of either volatile organic compounds, excluding negligibly photochemically reactive VOC, or NO_x;

iv. The allowable emissions of a pollutant by a new source or modification whose increased emissions will have a significant impact on the Class I area; or

v. The new facility or modification may affect visibility in any Class I area, including any integral vistas for that Class I area, designated by the Department. Notification, in this case, must be made in writing and include a copy of all information relevant to the application including an analysis of the anticipated impacts on visibility.

NOTE: The appropriate contacts for Federal Lands are:

1) Roosevelt Campobello International Park

Chairman, Roosevelt Campobello International Park Commission
P.O. Box 97
Lubec, Maine 04652

2) Moosehorn National Wildlife Refuge

Local:

Refuge Manager
Moosehorn National Wildlife Refuge
Box X
Calais, Maine 04619

National:

Chief, Air Quality Division
National Park Service
P.O. Box 25287
Denver, Colorado 80225

3) Acadia National Park

Local:

National:

Superintendent
Acadia National Park, and
Regional Director
North Atlantic Region
National Park Service
15 State Street
Boston, MA 02109

Chief
Air Quality Division
National Park Service
P.O. Box 25287
Denver, CO 80225

4) Great Gulf and Presidential Range, New Hampshire

Local:

Director
White Mountain National Forest
P.O. Box 638
Laconia, New Hampshire 03246

Regional Office:

Director
U. S. Forest Service
Department of Agriculture
310 West Wisconsin Avenue
Milwaukee, Wisconsin 53203

5) Indian Nations

Indian Township
Tribal Office, P.O. 301
Princeton, Maine 04668

Penobscot Indian Nation
Community Building
Indian Island
Old Town, Maine 04468

Pleasant Point Reservation
P.O. Box 343
Perry , Maine 04667

b. For the purposes of this section, the Class I area shall include any conservation easements under the jurisdiction of an appropriate federal land manager as of August 7, 1977.

c. Where the Department receives advance notification (e.g. early consultation with the source prior to submission of the application or notification of intent to monitor) of an application of a source that may affect visibility, the Department shall notify all affected Federal Land Managers within 30 days of such notification.

d. The Department shall notify the appropriate Federal Land Manager at least 60 days prior to any public hearing on a proposed new source or modification which affects a Class I area or integral vista. Such notification shall include an analysis of the anticipated impacts on visibility.

e. The Department shall consider any analysis and comment by the affected Federal Land manager received during the public comment period with respect to the impact of the new source or modification on the ambient increments and air quality related values, including visibility, of the Class I area and any affected integral vista. If the Department does not concur with the analysis of the Federal Land Manager concerning adverse impacts, if any, a public hearing shall be held. At the public hearing, the owner or operator of the major new source or major modification shall have an opportunity to demonstrate that particulate matter, nitrogen dioxide and sulfur dioxide emissions will not cause or contribute to impacts that exceed the maximum allowable impacts for a Class I area or an integral vista for that Class I area. The public notice for such hearing shall explain the nature of the disagreement or state where the explanation may be obtained. If the Board concurs with the demonstration of the Federal Land Manager, that there will be a significant adverse impact on air quality related values, not withstanding that the change in emissions would not cause or contribute to concentrations which would exceed the ambient increments for a Class I area, the emission license shall be denied. The Department may require conditions for an emission license so as to mitigate or prevent adverse impacts, including visibility impacts.

NOTE: A proposed new source or modification may apply for a variance to ambient increments applicable to Class I areas pursuant to Title 38 M.R.S.A. Section 587, last paragraph, which incorporates the variances authorized by Section 165(d) of the U.S. Clean Air Act, 42 U.S.C.A. Section 7475(d).

f. In addition to the impact analysis required in Sections VII(D)(2), (3), and (4) proposed new source or modification subject to this section may be required to conduct monitoring to establish the condition of and impact on air quality related values (including visibility) in an affected Class I area(s) or integral vistas both prior to completing an application for an emission license and during construction and operation of such source.

6. Post-construction monitoring. The owner or operator, shall after construction of the new source or modification, conduct such ambient monitoring or meteorological monitoring as the Department determines is necessary to

determine the effect emissions from the new source or modification may have, or are having, on air quality in any area.

A new source or modification shall be exempt from the requirements of this section if its emissions do not significantly impact a Class I area or an area where the increment is known to be violated or substantially consumed, and

a. The allowable emissions increase will be temporary, not to exceed 2 years; and

b. Any licensed portable source shall not increase, nor exceed, the allowable emissions and reasonable notice of not less than 10 working days prior to the relocation shall be given to the Department concerning its proposed location and probable duration of operation at the new location.

E. Modeling/data collection protocol

Any air quality dispersion modeling or data collection program shall be developed consistent with the following requirements:

1. Guidance. All air quality dispersion modeling and meteorological data collection shall be conducted consistent with Appendix A.

2. Variance from guidance. Upon an applicant's written request, the Department may grant a variance from any of the requirements set forth in Appendix A when the Department finds that the alternative proposed by the applicant will not significantly affect the accuracy of the modeling, and/or when data collection results or compliance with the requirements specified in Appendix A is technically infeasible or economically unreasonable for the applicant. For any source subject to PSD review, the variance shall be subject to EPA review and written approval. Any modeling variance shall be subject to notice and opportunity for public comment pursuant to 40 CFR Parts 51.160(f)(2) and 51.116(1)(2).

3. Significant impact modeling protocol for SO_2, NO_2, CO and PM_{10}. Prior to undertaking significant impact modeling for SO_2, NO_2, CO and PM_{10}, the applicant shall provide in writing to the Department a description of the following factors that the applicant proposes to use in the significant impact modeling demonstration:

a. Operating scenarios and emission units;

b. Air contaminants;

c. Model(s) and methodologies;

d. Origin of meteorological data;

e. Period of meteorological record;

f. Receptor grid and, if necessary, related terrain information;

g. Any special (e.g., fenceline, air intake or flagpole) receptors;

h. Identity of emissions which are included in baseline; and

i. Building dimension and Good Engineering Practice (GEP) analysis techniques;

As expeditiously as possible and within thirty (30) calendar days of receipt of this information, the Department shall notify the applicant in writing that such information is complete and acceptable for modeling or notify the applicant in writing of the reason(s) why the information is not complete or not consistent with Appendix A. If the information is not complete or not consistent with Appendix A, the Department shall clearly identify the changes or additional information that must be submitted to meet the requirements of Appendix A.

4. Submittal of significant impact modeling. Prior to undertaking the final air quality dispersion modeling demonstration, the applicant shall submit the following for review:

a. Significant impact modeling results (If all modeled impacts of any regulated pollutant are below the significant impact levels for all averaging periods, then no further analysis is necessary for that pollutant);

b. Emissions data for air contaminants not in the significant impact modeling protocol;

c. A preliminary analysis of nearby sources that will not be included in the background concentration analysis;

d. Background concentration data; and

e. Preprocessed meteorological data base (if required by the Department).

Within thirty (30) calendar days of receipt of this information, the Department shall notify the applicant of the following in writing:

a. The submitted information is complete and acceptable for modeling or the reason(s) why the information is not complete or not consistent with Appendix A. If the information is not complete or not consistent with Appendix A, the Department shall clearly identify the changes or additional information that must be submitted to meet the requirements of Appendix A; and

b. For each regulated pollutant for which there are significant impacts, the Department shall specify which operating scenarios and other nearby sources, if any, needs to be further modeled.

If the applicant requests in writing information in the possession of the Department that is required for modeling (for example, emissions which are included in baseline emissions, background data or other emissions data from nearby sources), the Department shall attempt to provide such information to the applicant within thirty (30) calendar days.

5. Air quality dispersion modeling protocol. If impacts from SO_2, NO_2, CO or PM_{10} are above significance or if there are other regulated pollutants to be modeled, then the applicant must provide in writing to the Department, a description of the following factors (if different from previously submitted data) that the applicant proposes to use in the air quality dispersion modeling:

a. Operating scenarios and emission units (including other nearby sources, if necessary);

b. Air contaminants;

c. Model(s) and methodologies;

d. Origin of meteorological data;

e. Period of meteorological record;

f. Receptor grid and, if necessary, related terrain information;

g. Any special (e.g., fenceline, air intake or flagpole) receptors;

h. Identity of emissions which are included in baseline emissions;

i. Building dimension and Good Engineering Practice (GEP) analysis techniques; and

j. Background concentration data.

Within thirty (30) calendar days of receipt of this information, the Department shall notify the applicant in writing that such information is complete and acceptable for modeling or notify the applicant in writing of the reason(s) why the information is not complete or not consistent with Appendix A. If the information is not complete or not consistent with Appendix A, the Department shall clearly identify the changes or additional information that must be submitted to meet the requirements of Appendix A.

When all submitted information is considered complete and acceptable for modeling; the applicant shall perform air quality dispersion modeling and submit for review the air quality dispersion modeling analysis as part of the final application submittal.

NOTE: The Department recommends that any applicant likely to be required to conduct and submit an air quality dispersion modeling analysis meet once with the Department staff prior to submitting the information specified in Subsection 7(E)(5). A failure by the Department to notify or provide information to the applicant as specified in this subsection does not constitute an approval of the proposed protocol and modeling.

VIII. License Conditions

The Department may impose any appropriate and reasonable condition to insure or maintain compliance with emission standards, ambient air quality standards, regulations, orders or to impose emission limitations on previously unregulated air contaminants.

A. Every license shall be subject to the following standard conditions:

1. Employees and authorized representatives of the Department shall be allowed access to the premises of the licensee during business hours, or any time during which any of the licensed emissions units are in operation, and at such other times as the Commissioner deems necessary for the purpose of performing tests, collecting samples, conducting inspections or examining records relating to emissions;

2. The licensee shall acquire a new or amended emission license prior to commencing construction of a modification;

3. The licensee shall comply with all applicable ambient air quality standards, emission standards, Department regulations and orders;

4. The licensee shall maintain sufficient records to accurately document compliance with emission standards, including visible emissions, and license conditions and shall maintain such records for a minimum of 6 years. The records shall be submitted to the Department upon written request;

5. The licensee shall maintain records of malfunctions, failures, downtime, and any other change in operation of air pollution control apparatus or the emissions unit itself that would affect emissions. The licensee shall notify the Department within two working days (48 hours) of such occasions. Within 5 working days, the licensee shall submit a written report describing the cause, duration, remedial action, and steps to be taken to prevent recurrence of such malfunctions, failures or downtimes;

6. Approval to construct shall become invalid if the source has not commenced construction within 18 months after receipt of such approval or if construction is discontinued for a period of 18 months or more. The Department may extend this time period upon a satisfactory showing that an extension if justified, but may condition such extension upon a review of either the control technology requirements or the ambient air quality impact analysis, or both;

7. The licensee shall perform stack testing and submit a written report within 90 days of receipt of notice to test from the Department, if visible emissions, equipment operating parameters, staff inspection, air monitoring or other cause indicate to the Department that equipment may be operating out of compliance with emission standards or license conditions. Such testing shall be conducted in accordance with 40 CFR Part 60 or other method approved or required by the Department and in accordance with protocols established by the Department. The licensee shall install or make provisions to install test ports that meet the criteria of 40 CFR Part 60, Appendix A, and test platforms, if necessary, and other accommodations necessary to allow emission testing;

8. The licensee shall establish and maintain a continuing program for best management practices for suppression of fugitive particulate matter during any periods of construction, renovation, or normal operation which may result in fugitive dust and submit a description of the program upon request by the Department; and

9. The licensee shall maintain sufficient records and annually report to the Department, in a specified format, fuel use, operating rates, use of materials and other information necessary to accurately update the State's emission inventory.

IX. Procedural Requirements

A. General. Unless otherwise specified in this section, the provisions of the Maine Administrative Procedures Act, Title 5, Chapter 375 and Title 38 M.R.S.A. Section 344 and Chapter 1 of Department Regulations shall apply to the processing of any application under this Chapter.

B. Confidential and proprietary information. All information and data submitted in a license application and at the request of the Department shall be available for public disclosure. Any exception to this general rule shall be governed by the provisions of the Right to Know Law, Title 1 M.R.S.A. Section 401 et seq. Information for which the source seeks confidential status shall be conspicuously identified in a separate document and submitted to the Department for a determination that one or more of the criteria of Title 1, M.R.S.A. Section 402(3) with respect to the exemptions from the term "public records" has been met. Such information shall not be located with the Bureau's licensing files, but shall be stored separately in accordance with procedures developed by the Commissioner. The following shall not be confidential (but shall not be interpreted to be an exclusive list):

1. Information concerning the nature and extent of the emissions of any air contaminant by a source; and

2. Information submitted by the source with respect to the economic, environmental and energy impacts of various control options in the determination of the control technology requirements of Section VI.

C. Pre-application determinations. Whenever a prospective applicant submits a written protocol to be followed in collecting pre-construction ambient air monitoring or meteorological data and for preparation of the air quality impact analysis at Section VII, the Department shall respond in writing within 30 working days of receipt. Such response shall provide notice of acceptance of the proposed procedures or detail what additional monitoring, modeling, or other data should be considered and included in an application in order for such application to be found to be acceptable for processing.

D. Acceptability. The Department shall, within 10 working days of receipt of an application, determine whether the application is in a form acceptable for processing and notify the applicant in writing of the official date on which the application was accepted or the reasons why the application was not accepted.

E. Additional public participation for major new sources and major modifications. In addition to the provisions of 38 M.R.S.A. section 344, and Chapter 1 of Department Regulations for any major new or major modified source, or any source proposing a stack height which will exceed Good Engineering Practice, the Department shall provide an opportunity for public review and comment which shall include:

1. A copy of the application and supporting documentation, including any demonstration study with respect to GEP, and the Department's analysis of the effect on air quality (including the amount of increment consumed) in the form of a draft order, which shall be available at the Department's Augusta office and the DEP Regional office closest to the location of the proposed new source or modification for 30 calendar days prior to the date upon which the comment period ends;

2. Notification of the public, by advertisement in a newspaper of general circulation in the region in which the proposed source would be constructed, at least 30 calendar days prior to the date upon which the public comment period ends. The notice shall announce availability of the application, the Department's preliminary determination in the form of a draft order, the degree of increment consumption that is expected from the source or modification, as well as the opportunity for submission of written public comment. The notice shall also announce the date, place and time a public meeting will be held upon request. If the Department's Augusta office receives a written request for a public hearing within 15 calendar days from the date upon which the notice is published, a public meeting will be held on the date and time as scheduled in the public notice;

3. Submittal of a copy of the public notification and a copy of the draft order to the U.S. Environmental Protection Agency, Region I, the chief executives of the municipality and county where the source proposes to locate, any comprehensive land use planning agency, and any State, Federal Land Manager, or Indian Governing Body whose lands may be affected by emissions from the source or modification. Such submittal shall be at least 30 calendar days prior to the date upon which the public comment period ends;

4. Consideration of all written comments submitted within the time specified in the notice of public comment and all comments received at any public hearing in making a final decision on the approvability of the application. All comments shall be made available for public inspection in the same locations as specified in Section IX(E)(1); and

5. Notification of the applicant in writing of the final determination. Such notification shall be made available for public inspection at the same locations specified in Section IX(E)(1).

BASIS STATEMENT : This Chapter replaces the former Chapter 108 and deals with the air emission license program including who is required to obtain a license and the specific requirements which must be met by each applicant. The regulations address control technology requirements, air quality impact analyses requirements, license conditions, and procedural requirements for license renewals as well as for new sources and modifications of existing

sources. The changes were required in order to assure EPA approval of the State's authority to issue licenses for new sources and modifications under Title 40 Code of Federal Regulations Section 51.166.

BASIS STATEMENT FOR AMENDMENT OF SEPTEMBER 27, 1989 : This amendment incorporates minor changes needed for consistency with federal requirements and with deletion of the Total Suspended Particulate standards. No comments on the proposed changes were received by the Department.

BASIS STATEMENT FOR AMENDMENT OF JUNE 13, 1990 : This regulation was amended to implement a federally mandated nitrogen oxide (NO_x) increment program in the State of Maine. As part of the Prevention of Significant Deterioration Program, these amendments establish maximum increases in pollution concentration. NO_x increment standards are established and the NO_x baseline concentration represents air quality existing in an area on February 8, 1988. No comments were received on the proposed amendments.

BASIS STATEMENT FOR AMENDMENT OF NOVEMBER 23, 1993 : This amendment was implemented pursuant to Section 14, 1991 Public Law 384, which required the development of an ambient air quality modeling protocol that includes methodologies and information to be used in air emission licensing. A specified protocol was deemed necessary due to the number of applications that had to be resubmitted for the lack of adequate modeling information, thus resulting in delayed processing. The ambient air quality modeling protocol provides an applicant for an air emission license with clear guidance on how to submit acceptable modeling needed in support of an application. The new information, which is detailed in a new Appendix A, will also facilitate the process of reviewing the modeling by Department staff. In addition to this basis statement, the Department has filed with the Secretary of State its response to comments received during the comment period.

BASIS STATEMENT FOR AMENDMENTS OF JUNE 22, 1994 : This regulation was amended to reflect new source review requirements contained in the Clean Air Act, as amended, 42 U.S.C. 7401, et seq. and Chapter 113 of the Department's regulations (pertaining to growth offset regulations). In addition to this Basis Statement, the Department has filed with the Secretary of State the response to representative comments received during the comment period.

AUTHORITY: 38 M.R.S.A., Section 590, 585-A

EFFECTIVE DATE: August 9, 1988
Amended October 25, 1989
Amended July 10, 1990
Amended December 12, 1993
Amended JUL 11 1994