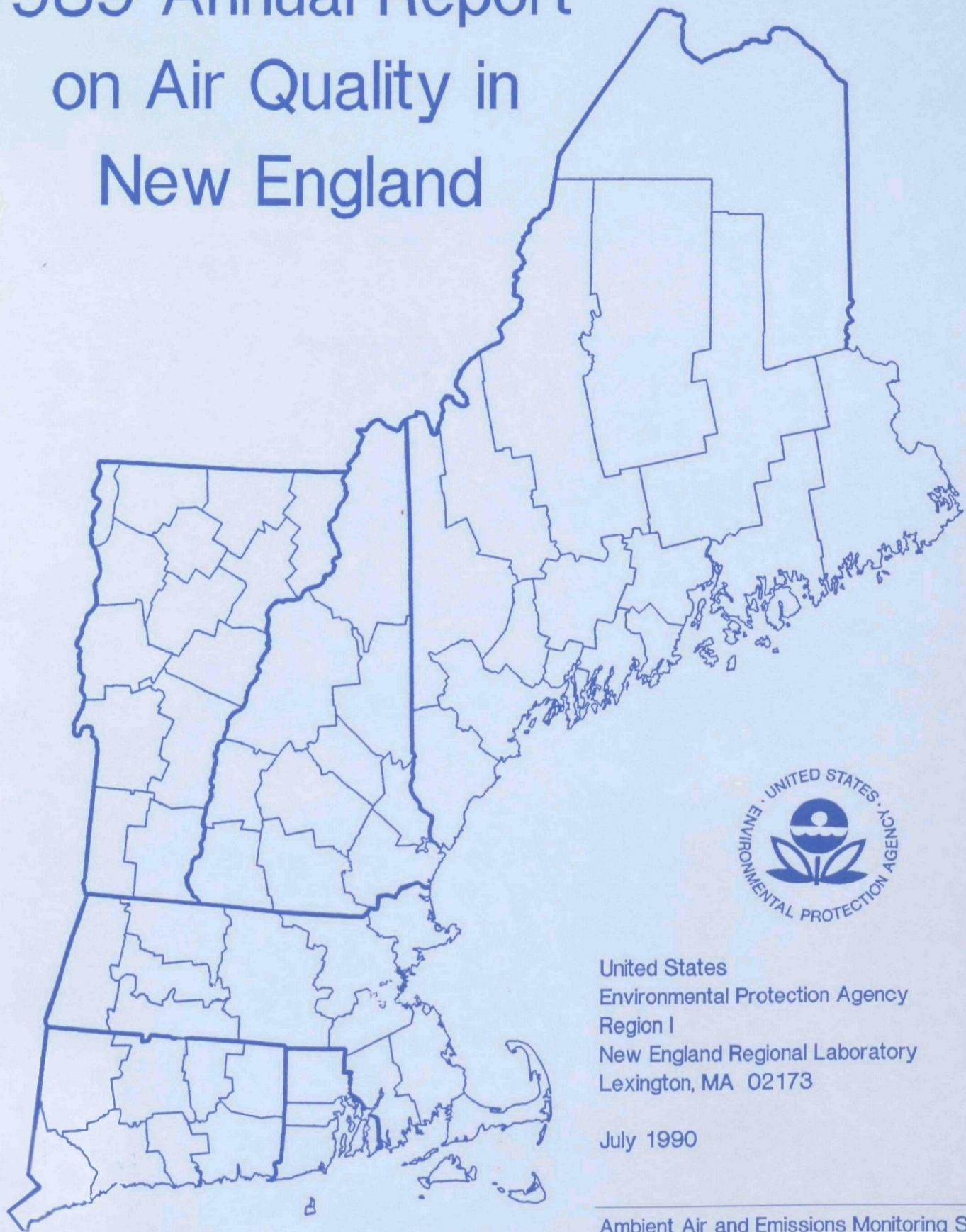


# 1989 Annual Report on Air Quality in New England



United States  
Environmental Protection Agency  
Region I  
New England Regional Laboratory  
Lexington, MA 02173

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Ambient Air and Emissions Monitoring Section

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## 1989 ANNUAL REPORT ON AIR QUALITY IN NEW ENGLAND

This report represents 1989 annual air quality information for all states in New England. The majority of the data included in this report were submitted to EPA by the states from their ambient monitoring networks in accordance with 40 CFR 58. The only data from industrial monitors which have been included are from EPA-required networks in New Hampshire and from Maine's licensing program which supplements the state network.

This report is intended to list potential nonattainment areas for planning purposes. The majority of data used have been evaluated and verified by EPA; however, for the areas listed as nonattainment, the data may require further evaluation by both EPA and the states. This report reflects the status of the AIRS database as of 4/30/90.

Table 1 is a summary of the status of the National Air Monitoring Sites (NAMS) and the State/Local Air Monitoring Sites (SLAMS) submitting data to Region I. This table lists the number of sites operating, the required number of sites, the number of sites reporting precision and accuracy data, and the number of sites not meeting EPA minimum data capture requirements. Following Table 1 is a list of health effects of the criteria pollutants.

Table 2 shows the number of stations violating the National Ambient Air Quality Standards (NAAQS) and the total number of stations reporting data during 1989.

Table 3 lists, by pollutant, the sites in every state in New England, and industrial sites from New Hampshire and Maine. The information presented compares the measured values to each NAAQS. The information included is the number of exceedences, the maximum and second high values, and the annual means (arithmetic mean or average for  $\text{SO}_2$ ,  $\text{PM}_{10}$  and  $\text{NO}_2$ ). For intermittent data, an annual mean is not valid unless there are four valid quarters. For  $\text{PM}_{10}$ , 75% of the scheduled samples must be available for a quarter to be considered valid. For continuous data, 75 percent of the year must be available to calculate a valid annual average.

This table includes several charts of selected air quality monitoring sites which show a linear regression for TSP, Pb, CO,  $\text{SO}_2$ , and  $\text{NO}_2$  during the last five years. For ozone, a chart of the number of days exceeding the standard each year for the last five years are used.

Table 4 shows the number of stations violating the NAAQS by Air Quality Control Region (AQCR), as well as the total number of monitors in each AQCR. A map delineating the AQCRs in Region I is included at the end of this table.

Table 5 has been developed to point out areas where air quality levels have exceeded the emergency, warning, or alert episode levels. An air pollution alert, warning or emergency will be called when specified pollutant concentrations are reached provided that meteorological conditions are such that these levels can be expected to persist for 12 hours or more. In the case of ozone, an alert, warning or emergency will be called if the situation is likely to recur within the next 24 hours. Episode levels were reached or exceeded for O<sub>3</sub>, in Connecticut, during 1989.

Tables 6 and 7 list the precision and accuracy data submitted by the six New England states. The 95% probability limits for six criteria pollutants are given as a network average for each state.

Figure 8 lists the results from the Region I audit program for Particulates, SO<sub>2</sub>, and O<sub>3</sub>. The results presented on a state-by-state basis give the number of satisfactory, marginal, and unsatisfactory audits.

Table 9 and 10, respectively, list the nonattainment areas in New England with the last reported violation and the attainment and unclassified areas in which there were recent violations of the NAAQS.

Following Table 10 is a discussion of air quality in New England for the criteria pollutants.

Appendix A is a list of AIRS/Air Quality Regional Contacts, their addresses and phone numbers.

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NATIONAL AIR QUALITY STANDARDS<sup>a</sup>

<u>Pollutant</u>	<u>Averaging Time</u>	<u>Primary Standards<sup>b</sup></u>	<u>Secondary Standards<sup>c</sup></u>
SO <sub>2</sub>	Annual Arithmetic Mean	80 ug/m <sup>3</sup> (0.03 ppm)	
	24 hours (0.14 ppm)	365 ug/m <sup>3</sup>	
	3 hours (0.5 ppm)	--	1300 ug/m <sup>3</sup>
PM <sub>10</sub> <sup>d</sup>	Annual Arithmetic Mean	50 ug/m <sup>3</sup>	Same as Primary Standard
	24 hours <sup>e</sup>	150 ug/m <sup>3</sup>	Same as Primary Standard
CO	8 hours	9 ppm	Same as Primary Standard
	1 hour	35 ppm	Same as Primary Standard
O <sub>3</sub>	1 hour <sup>e</sup>	0.12 ppm	Same as Primary Standard
NO <sub>2</sub>	Annual Arithmetic Mean	100 ug/m <sup>3</sup> (0.05 ppm)	Same as Primary Standard
Pb	Calendar Quarter Arithmetic Mean	1.5 ug/m <sup>3</sup>	Same as Primary Standard

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<sup>a</sup> National standards other than those based on annual arithmetic means are not to be exceeded more than once a year.

<sup>b</sup> National Primary Standards: The levels of air quality necessary, with an adequate margin of safety, to protect the public health.

<sup>c</sup> National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

<sup>d</sup> PM<sub>10</sub> replaced TSP as the ambient particulate standard effective July 31, 1987, and includes only those particles with an aerodynamic diameter of less than or equal to a nominal 10 microns.

<sup>e</sup> Standard based upon an expected exceedance calculation.

TABLE 1

1989 SUMMARY OF NEW ENGLAND NAMS/SLAMS

	CT	ME	MA	NH	RI	VT	TOTALS
<u>NAMS - National Air Monitoring Sites</u>							
<u>Number Operating</u> <sup>a</sup>	26/20	3/3	34/34	3/3	10/10	2/2	78/72
Number NOT meet- ing EPA's minimum data capture <u>requirements</u> <sup>b</sup>	0	0	3	0	0	0	3
Ave. comp. all monitors	95%	91%	91%	97%	88%	84%	
<u>SLAMS - State/Local Air Monitoring Sites</u>							
<u>Number Operating</u> <sup>a</sup>	57/60	27/27	38/38	33/33	14/14	15/15	184/187
Number NOT meet- ing EPA's minimum data capture <u>requirements</u> <sup>b</sup>	0	9	3	6	1	2	21
<u>NAMS/SLAMS</u>							
Percent of required:							
<u>Precision Data</u>	80	85	85	57	100	100	
<u>Accuracy Data</u>	92	95	96	89	86	89	

a x/y - x is the number of sites operating

y is the total number of sites required to be operated

b Adjusted for seasonal monitoring and site start-ups and termination

## **Health Effects of Criteria Pollutants**

### **Lead (Pb)**

Lead causes retardation and brain damage, especially in children. Lead also causes liver disease, interferes with blood formation, the nervous system and the renal system and can affect the normal functions of the reproduction and cardiovascular systems. The sources of lead pollution are motor-vehicle exhaust, lead smelters and battery manufacturing plants.

### **Ozone (O<sub>3</sub>)**

Respiratory tract problems such as difficult breathing and reduced lung function may be caused by high ozone levels. Ozone also causes asthma, eye irritation, nasal congestion, reduced resistance to infection and premature aging of lung tissue. It injures vegetation, and has adverse effects on materials. Ozone is generally highest on sultry summer afternoons. Ozone is formed in the atmosphere by the reaction of nitrogen oxides, and hydrocarbons in the presence of sunlight.

### **Nitrogen Oxides (NO<sub>x</sub>)**

The health effects of this pollutant include respiratory illness, lung damage, and increased airway resistance. It may make one more susceptible to respiratory infection. Nitrogen oxides can cause edema (in concentrations of 10ppm for 8 hours); concentrations of 20-30 ppm for 8 hours can produce fatal lung damage. NO<sub>x</sub> also reacts with hydrocarbons to form photochemical oxidants. The sources of nitrogen oxides are: Motor-vehicle exhaust, heat and power generation, nitric acid, explosives, fertilizer plants, and combustion of fuels.

### **Carbon Monoxide (CO)**

Carbon Monoxide acts in the bloodstream to deprive the heart and brain of oxygen. It impairs ability of the blood to carry oxygen, and affects the cardiovascular, nervous, and pulmonary system. Moderate concentrations significantly reduce brain functions, and can cause angina. Carbon Monoxide is caused by the incomplete combustion of carbon, which occurs in motor-vehicles, and some industrial processes.



**Sulfur Dioxide (SO<sub>2</sub>)**

This pollutant causes respiratory tract problems, eye irritation, and permanent harm to lung tissue. It combines with water to form acid aerosols and sulfuric acid mist which falls to earth as acid rain, causing plant and structural damage, and acidifying bodies of water. Sources of sulfur dioxide include heat and power generation facilities, combustion processes that use oil or coal containing sulfur, sulfuric acid plants, petroleum refineries and smelters of sulfur-containing ore.

**Suspended Particulate Matter (PM<sub>10</sub>)**

This pollutant causes eye and throat irritation, bronchitis, lung damage, and impaired visibility. It soils materials, causes corrosion, and acts as a carrier of toxics adsorbed or absorbed in it. Motor vehicle exhaust, industrial processes, incinerators, heat and power generation, steel mills, smelters, demolition, wood burning stoves, fugitive dust, and plants are sources of suspended particulate matter.

TABLE 2  
NUMBER OF STATIONS VIOLATING  
NATIONAL AMBIENT AIR QUALITY STANDARDS

<u>Standard</u>			<u>CT</u>	<u>ME</u>	<u>MA</u>	<u>NH</u>	<u>RI</u>	<u>VT</u>
<u>SO<sub>2</sub></u>	Annual Primary	80 ug/m <sup>3</sup>	0/18	0/15	0/11	0/13	0/3	0/2
	24-hour Primary*	365 ug/m <sup>3</sup>	0/18	0/15	0/11	0/13	0/3	0/2
	3-hour Secondary*	1300 ug/m <sup>3</sup>	0/18	0/15	0/11	0/13	0/3	0/2
<u>PM<sub>10</sub></u>	Annual Primary	50 ug/m <sup>3</sup>	0/46	0/33	0/14	0/8	0/2	0/5
	24-hour Primary*	150 ug/m <sup>3</sup>	0/46	0/33	0/14	0/8	0/2	0/5
<u>CO</u>	8-hour Primary*	9 ppm	0/5	0/1	0/7	0/3	0/2	0/1
	1-hour Primary*	35 ppm	0/5	0/1	0/7	0/3	0/2	0/1
<u>O<sub>3</sub></u>	1-hour Primary*	0.12 ppm	10/10	2/8	4/15	1/5	1/2	0/2
<u>NO<sub>2</sub></u>	Annual Primary	100 ug/m <sup>3</sup>	0/3	---	0/6	0/1	0/1	0/2
<u>Pb</u>	Quarterly Mean	1.5 ug/m <sup>3</sup>	0/2	0/6	0/4	0/7	0/4	0/4

\*Unless the second highest average exceeds the NAAQS, there is no violation.

x/y - x is the number of stations in violation.  
y is the total number of stations.

--- This pollutant is not monitored in the state.

# ABBREVIATIONS AND SYMBOLS USED IN TABLE 3

This table is arranged by parameter. Within each section, there is a map of site locations, a data table, and a 5-year trend graph.

SITE ID	Site Identification number
POC	Parameter Occurrence Code - differentiates between monitors for a given pollutant
MT	Monitor type (1=NAMS, 2=SLAMS, 3=Other, 0=Unknown)
YR	Year
REP ORG	Reporting Organization
#OBS	Number of Observations
MAX 24-HR:	
1ST	Highest 24-hour value recorded in the year
2ND	Second highest 24-hour value for the year
3RD	Third highest 24-hour value for the year
4TH	Fourth highest 24-hour value for the year
ARITH MEAN	Arithmetic mean
WTD ARITH MEAN	Weighted arithmetic mean
GEO MEAN	Geometric mean
GEO STD	Geometric standard deviation
QUARTERLY ARITH MEANS:	
1ST	First quarter arithmetic mean
2ND	Second quarter arithmetic mean
3RD	Third quarter arithmetic mean
4TH	Fourth quarter arithmetic mean
MEANS > 1.5	Number of quarterly means greater than 1.5 ug/m <sup>3</sup> for lead
MAX VALUES:	
1ST	Highest 24-hour value recorded for the year (except Pb for Connecticut and New Hampshire, which are monthly values).
2ND	Second highest 24-hour value recorded for the year (except Pb for Connecticut and New Hampshire, which are monthly values).
METH	Method

MAX 1-HR:

1ST	Highest 1-hour value recorded in the year
2ND	Second highest 1-hour value recorded in the year

OBS > 35                      Number of observations greater than 35 ppm for CO

MAX 8-HR

1ST	Highest 8-hour value recorded in the year
2ND	Second highest 8-hour value recorded in the year

OBS > 9                      Number of 8-hour ave. greater than 9 ppm for CO

OBS > 365                      Number of 24-hour ave. greater than 365 ug/m<sup>3</sup> for SO<sub>2</sub>

MAX 3-HR:

1ST	Highest 3-hour value recorded in the year
2ND	Second highest 3-hour value recorded in the year

Obs > 1300                      Number of 3-hour ave. greater than 1300 ug/m<sup>3</sup> for SO<sub>2</sub>

NUM MEAS                      The valid number of days measured

NUM REQ                      The valid number of days in the ozone season

NUM OBS                      Number of Observations

SCHEDULED NUM OBS  
                                    Number of observations scheduled

% OBS  
scheduled                      Percent completed of number of observations

VALID DAILY 1-HR MAXIMUM:

1ST	Maximum hourly value for the highest day
2ND	Maximum hourly value for the second highest day
3RD	Maximum hourly value for the third highest day
4TH	Maximum hourly value for the fourth highest day

VALS > .125:

MEAS	Number of measured daily maximum greater than or equal to 0.125 ppm
EST	Number of expected violations

MISS DAYS ASSUMED < STANDARD

                                    Number of missing days assumed to be less than the standard

THE DATA IN TABLE 3 CONSISTS OF BOTH STATE AND PRIVATE NETWORKS.

# 1989 SUSPENDED PARTICULATE MONITORING SITES

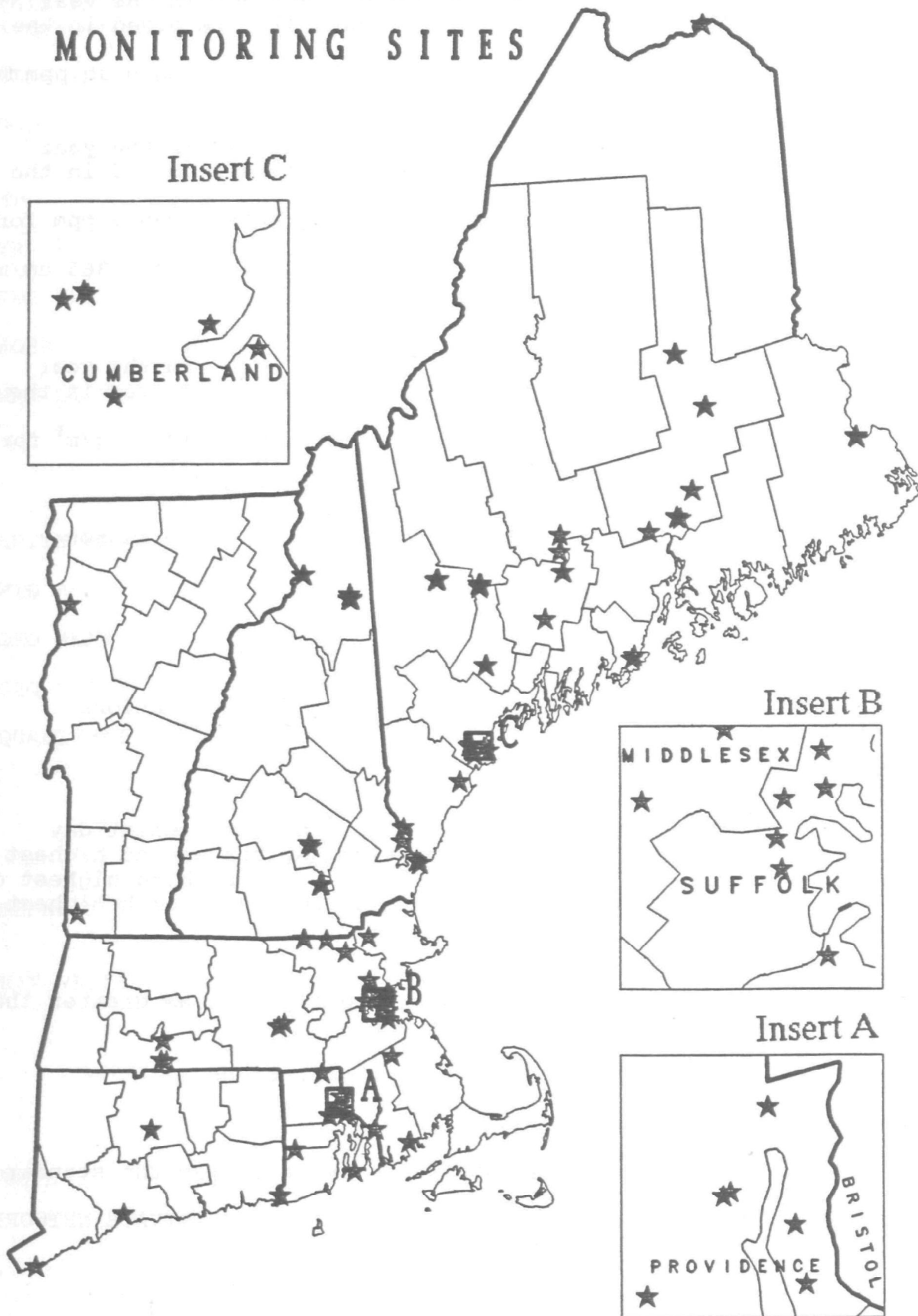


TABLE 3

SUSPENDED PARTICULATE (11101)				CONNECTICUT	UNITS: 001 UG/CU METER (25 C)									
P														
O M					REP	--MAXIMUM 24-HR VALUES--					ARITH	GEO	GEO	
SITE ID	C	T	CITY	COUNTY	ADDRESS	YR ORG	#OBS	1ST	2ND	3RD	4TH	MEAN	MEAN	STD
09-003-0013	1	2	HARTFORD	HARTFORD CO	401 FLATBUSH AVENUE	89 001	27	104	84	68	63	45?	41?	1.6
09-009-0013	1	2	NEW HAVEN	NEW HAVEN CO	FIRE HEADQUARTERS, GRAND AV	89 001	27	104	88	82	80	52?	47?	1.6
09-001-0021	1	2	STAMFORD	FAIRFIELD CO	COMMUNITY CENTER, HENRY ST	89 001	29	96	93	85	84	48?	43?	1.7
? INDICATES THAT THE MEAN DOES NOT SATISFY SUMMARY CRITERIA														
SUSPENDED PARTICULATE (11101)				MAINE	UNITS: 001 UG/CU METER (25 C)									
P														
O M					REP	--MAXIMUM 24-HR VALUES--					ARITH	GEO	GEO	
SITE ID	C	T	CITY	COUNTY	ADDRESS	YR ORG	#OBS	1ST	2ND	3RD	4TH	MEAN	MEAN	STD
23-019-4005	1	3		PENOBSCOT CO	NEWBURGH CONSOLIDATED SCH	89 001	271	103	72	69	64	23	19	1.7
23-029-0008	1	4		WASHINGTON CO	WOODLAND HIGH SCHOOL	89 112	162	146	121	119	107	32	26	1.9
23-029-0018	1	4		WASHINGTON CO	PIPELINE WEST OF RT. 1 - W	89 000	56	45	37	34	34	16	14	1.6
23-001-0008	1	2	AUBURN	ANDROSCOGGIN CO	LEPAGE BAKERY-60 SECOND ST	89 001	43	115	111	80	79	46?	42?	1.6
23-011-0005	1	3	AUGUSTA	KENNEBEC CO	FIRE HOUSE-HARTFORD SQUARE	89 001	20	159	132	92	81	63?	55?	1.7
23-029-0007	1	4	BAILEYVILLE	WASHINGTON CO	SEC. TREAT, PIPELINE-WOODLA	89 112	55	108	57	52	52	26	22	1.7
23-019-0001	1	3	BANGOR	PENOBSCOT CO	BANGOR OFFICE-31 CENTRAL ST	89 001	19	143	125	125	113	70?	61?	1.7
23-019-0002	1	3	BANGOR	PENOBSCOT CO	PUMP STATION-WASHINGTON ST.	89 001	61	177	164	150	133	65	56	1.8
23-031-0001	1	3	BERWICK	YORK CO	SCHOOL STREET	89 001	25	128	118	118	116	78?	73?	1.5
23-031-0002	1	2	BIDDEFORD	YORK CO	TREATMENT PLANT-WATER ST.	89 001	61	83	78	68	65	35	32	1.6
23-019-1002	1	2	BREWER	PENOBSCOT CO	JUNIOR HIGH SCH-SOMERSET ST	89 001	59	92	82	80	75	41	37	1.6
23-007-0003	1	3	JAY	FRANKLIN CO	JEWELL PROPERTY-CRASH ROAD	89 103	153	78	60	59	57	24	20	2.0
23-007-0004	1	3	JAY	FRANKLIN CO	BOMASTER PROPERTY-JAY HILL	89 103	148	105	97	86	86	31	25	1.9
23-007-0008	1	3	JAY	FRANKLIN CO	IP - BURNHAM SITE	89 103	146	106	105	96	89	40	33	1.9
23-007-2001	1	3	JAY	FRANKLIN CO	INT. PAPER CO.-LAGOON HILL	89 103	142	144	112	109	90	41	35	1.8
23-001-0011	1	3	LEWISTON	ANDROSCOGGIN CO	COUNTRY KITCHEN LOT	89 001	30	114	107	96	93	55?	51?	1.5
23-019-1007	1	0	LINCOLN	PENOBSCOT CO	THOMAS MOT. TRA. PRK.	89 109	283	374	157	154	116	41	34	1.9

## SUSPENDED PARTICULATE (11101)

MAINE (continued)

UNITS: 001 UG/CU METER (25 C)

SITE ID	P O M C T CITY	COUNTY	ADDRESS	REP	--MAXIMUM 24-HR VALUES--				ARITH	GEO	GEO	
	YR ORG			#OBS	1ST	2ND	3RD	4TH	MEAN	MEAN	STD	
23-019-2003	1 0 LINCOLN	PENOBSCOT CO	POST OFFICE-50 FLEMING ST.	89 109	318	284	213	210	142	44	38	1.8
23-019-3002	1 0 LINCOLN	PENOBSCOT CO	VOCA. EDU. BLDG-W. BROADWAY	89 001	295	197	141	122	119	41	35	1.8
23-003-0011	1 2 MADAWASKA	AROOSTOOK CO	11TH AVE - MADAWASKA	89 001	93	268	166	136	121	55?	48?	1.7
23-017-0008	1 4 MEXICO	OXFORD CO	LABONVILLE'S-ROUTE#2	89 104	121	176	154	142	122	55	47	1.8
23-019-2009	1 4 MILLINOCKET	PENOBSCOT CO	YORK STREET-MILLINOCKET	89 110	112	130	109	87	84	37	32	1.8
23-019-4002	1 4 MILLINOCKET	PENOBSCOT CO	AIRPORT-MEDWAY ROAD	89 000	29	56	51	43	35	21?	19?	1.6
23-019-4003	1 2 OLD TOWN	PENOBSCOT CO	MARSH ISLAND APTS-S. MAIN S	89 001	77	212	167	88	82	37?	31?	1.8
23-005-0014	1 3 PORTLAND	CUMBERLAND CO	SHELTER SITE-OXFORD & ELM S	89 001	45	105	97	91	90	56?	52?	1.5
23-017-2005	1 4 RUMFORD	OXFORD CO	TAYLOR MOUNTAIN-1	89 104	158	118	108	98	95	39	34	1.8
23-017-2006	1 4 RUMFORD	OXFORD CO	TAYLOR MOUNTAIN-2	89 104	143	111	85	76	70	28	24	1.8
23-017-2007	1 4 RUMFORD	OXFORD CO	VILLAGE GREEN-ROUTE#108	89 001	174	89	81	78	74	34	30	1.7
23-017-2008	1 4 RUMFORD	OXFORD CO	TAYLOR HILL 3	89 104	171	110	98	77	71	29	25	1.8
23-017-2009	1 4 RUMFORD	OXFORD CO	TAYLOR HILL 4	89 104	174	122	109	94	84	36	30	1.8
23-025-2001	1 4 SKOWHEGAN	SOMERSET CO	HINKLEY FARM SCHOOL	89 107	60	48	42	41	40	20	17	1.9
23-025-2002	1 4 SKOWHEGAN	SOMERSET CO	EATON RIDGE-SCOTT PAPER CO.	89 107	46	49	38	38	38	20?	18?	1.7
23-005-0021	1 3 SOUTH PORTLAND	CUMBERLAND CO	100 MAINE MALL RD	89 001	37	256	196	97	86	54?	44?	1.8
23-005-6002	1 2 SOUTH PORTLAND	CUMBERLAND CO	SMVTI-HILDRETH HALL-FORT RD	89 001	63	69	67	62	56	30	27	1.5
23-013-1007	1 4 THOMASTON	KNOX CO	MARSH ROAD, THOMASTON	89 017	119	73	67	61	59	26	23	1.6
23-013-2001	1 4 THOMASTON	KNOX CO	MITCHELL PROP.-2 DEXTER AVE	89 000	122	99	94	92	89	31	25	1.9
23-011-1003	1 2 WATERVILLE	KENNEBEC CO	STERN'S DEPT. STORE-93 MAIN	89 001	54	167	143	118	105	47?	41?	1.7
23-005-1008	1 4 WESTBROOK	CUMBERLAND CO	RESEARCH BUILDING-WARREN AV	89 101	104	196	187	182	179	70	62	1.7
23-005-1012	1 4 WESTBROOK	CUMBERLAND CO	WAREHOUSE NO. 5, MAIN ST	89 101	56	201	136	133	105	64	59	1.5
23-005-7002	1 4 WESTBROOK	CUMBERLAND CO	N.E.T.&T. CO.-ASH STREET	89 001	57	101	94	94	89	50	46	1.5
23-011-2003	1 3 WINSLOW	KENNEBEC CO	(GHR) GULLEY HILL ROAD	89 107	131	195	162	161	160	59	52	1.6

? INDICATES THAT THE MEAN DOES NOT SATISFY SUMMARY CRITERIA

SUSPENDED PARTICULATE (11101)				MASSACHUSETTS		UNITS: 001 UG/CU METER (25 C)									
P						--MAXIMUM 24-HR VALUES--					ARITH	GEO	GEO		
O M						REP									
SITE ID	C	T	CITY	COUNTY	ADDRESS	YR	ORG	#OBS	1ST	2ND	3RD	4TH	MEAN	MEAN	STD
25-025-0012	1	1	BOSTON	SUFFOLK CO	115 SOUTHAMPTON STREET	89	001	59	176	124	109	109	66	62	1.4
25-025-0021	1	1	BOSTON	SUFFOLK CO	340 BREMAN STREET	89	001	60	111	86	78	77	53	50	1.4
25-025-0024	1	2	BOSTON	SUFFOLK CO	200 COLUMBUS AVENUE	89	001	56	140	93	91	88	58	55	1.4
25-025-0027	1	2	BOSTON	SUFFOLK CO	ONE CITY SQUARE, CHARLESTOW	89	001	61	187	158	157	150	84	76	1.5
25-023-0003	1	2	BROCKTON	PLYMOUTH CO	CRESCENT STREET (ROUTE 27)	89	001	60	92	71	62	62	39	36	1.5
25-025-1003	1	2	CHELSEA	SUFFOLK CO	POWDER HORN HILL	89	001	60	96	96	79	75	42	40	1.5
25-013-0006	1	0	CHICOPEE	HAMPDEN CO	CORNER OF GRATTAN AND MEAD	89	000	4	73	67	42	29	53?	49?	1.5
25-005-3001	1	2	FALL RIVER	BRISTOL CO	CENTRAL FIRE STATION	89	001	16	72	57	53	53	44?	42?	1.5
25-005-3001	2	2	FALL RIVER	BRISTOL CO	CENTRAL FIRE STATION	89	001	56	92	72	69	63	42	39	1.5
25-013-1007	1	2	HOLYOKE	HAMPDEN CO	ONE COURT SQUARE	89	001	60	112	110	101	92	49	44	1.6
25-009-0005	1	2	LAWRENCE	ESSEX CO	HIGH STREET, STORROW PARK	89	001	60	114	78	72	65	40	37	1.5
25-017-0006	1	2	LOWELL	MIDDLESEX CO	LOWELL YMCA, 35 YMCA DRIVE	89	001	61	120	77	74	69	44	41	1.5
25-017-3002	1	2	MEDFORD	MIDDLESEX CO	100 TO 120 MAIN STREET	89	001	57	336	243	215	164	63	52	1.7
25-005-2004	1	2	NEW BEDFORD	BRISTOL CO	YMCA, 25 WATER STREET	89	001	58	143	83	67	66	42	39	1.5
25-015-0003	1	3	NORTHAMPTON	HAMPSHIRE CO	ZISKIND HALL, SMITH COLLEGE	89	000	5	70	59	51	28	47?	44?	1.5
25-021-0007	1	1	QUINCY	NORFOLK CO	HANCOCK STREET	89	001	60	117	75	62	60	41	38	1.5
25-013-0011	1	2	SPRINGFIELD	HAMPDEN CO	59 HOWARD STREET	89	001	58	111	110	99	88	52	47	1.5
25-013-0012	1	0	SPRINGFIELD	HAMPDEN CO	CIVIC CENTER	89	000	5	91	68	60	50	61?	58?	1.4
25-013-0013	1	0	SPRINGFIELD	HAMPDEN CO	ROSE STREET	89	000	5	127	94	88	51	78?	69?	1.8
25-013-1009	1	0	SPRINGFIELD	HAMPDEN CO	LONGHILL STREET SUBSTATION	89	000	5	99	85	75	69	74?	71?	1.4
25-017-1005	1	2	WATERTOWN	MIDDLESEX CO	VICTORY FIELD	89	001	60	153	118	66	60	42	38	1.5
25-013-5003	1	2	WEST SPRINGFIELD	HAMPDEN CO	W. SPRINGFIELD FIRE DEPT	89	001	56	113	103	98	80	49	46	1.5
25-017-7002	1	1	WOBURN	MIDDLESEX CO	WOBURN STREET AND MONTVALE	89	001	57	94	86	66	66	40	37	1.5
25-027-0013	1	2	WORCESTER	WORCESTER CO	419 BELMONT STREET	89	001	58	123	88	82	81	44	39	1.7
25-027-0016	1	2	WORCESTER	WORCESTER CO	2 WASHINGTON STREET	89	001	60	127	107	106	96	55	50	1.6
? INDICATES THAT THE MEAN DOES NOT SATISFY SUMMARY CRITERIA															

? INDICATES THAT THE MEAN DOES NOT SATISFY SUMMARY CRITERIA



## SUSPENDED PARTICULATE (11101)

NEW HAMPSHIRE

UNITS: 001 UG/CU METER (25 C)

SITE ID	P O M C T CITY	COUNTY	ADDRESS	REP		--MAXIMUM 24-HR VALUES--				ARITH MEAN	GEO MEAN	GEO STD
				YR	ORG #OBS	1ST	2ND	3RD	4TH			
33-007-0001	1 2 BERLIN	COOS CO	ANGEL GUARDIAN SCHOOL	89	001 17	139	127	79	75	60?	52?	1.8
33-007-0001	2 3 BERLIN	COOS CO	ANGEL GUARDIAN SCHOOL	89	902 104	135	121	109	106	51	46	1.6
33-007-0008	1 3 BERLIN	COOS CO	OFF HUTCHINS STREET	89	902 5	30	29	28	22	23?	21?	1.8
33-007-0014	1 3 BERLIN	COOS CO	LANCASTER STREET TRAILER	89	001 30	193	174	171	145	88?	75?	1.9
33-007-0014	2 3 BERLIN	COOS CO	LANCASTER STREET TRAILER	89	902 92	303	270	242	232	98?	81?	1.9
33-007-0016	1 3 BERLIN	COOS CO	200 ENMAN HILL ROAD	89	902 31	66	59	48	47	29?	26?	1.6
33-007-0019	1 3 BERLIN	COOS CO	CATES HILL RD	89	000 27	55	47	46	42	29?	27?	1.6
33-013-0003	1 2 CONCORD	MERRIMACK CO	NO. STATE HOUSE	89	001 57	85	80	75	60	35	30	1.7
33-013-0004	1 0 CONCORD	MERRIMACK CO	JUNCTION RTS. 3 AND 93	89	001 56	170	140	130	128	57	46	2.0
33-013-0004	2 0 CONCORD	MERRIMACK CO	JUNCTION RTS. 3 AND 93	89	001 56	164	161	151	131	55	40	2.6
33-017-0001	1 2 DOVER	STRAFFORD CO	CENTRAL AVE	89	001 57	270	101	99	89	49	41	1.7
33-011-0008	1 2 MANCHESTER	HILLSBOROUGH CO	NOTRE DAME AVENUE	89	001 59	110	75	64	63	41	37	1.5
33-011-0015	1 2 MANCHESTER	HILLSBOROUGH CO	351 CHESTNUT STREET	89	001 59	91	73	64	63	40	37	1.6
33-011-0015	2 3 MANCHESTER	HILLSBOROUGH CO	351 CHESTNUT STREET	89	001 58	101	63	62	60	41	38	1.5
33-011-0016	1 3 MANCHESTER	HILLSBOROUGH CO	HARNETT PARK, MUNICIPAL PK	89	001 58	100	72	64	63	42	39	1.5
33-011-0016	2 3 MANCHESTER	HILLSBOROUGH CO	HARNETT PARK, MUNICIPAL PK	89	001 55	99	92	89	73	45	41	1.5
33-011-1010	1 3 NASHUA	HILLSBOROUGH CO	SANDERS ASSOCIATES	89	001 59	95	86	71	68	36	32	1.7
33-007-1005	1 2 NORTHUMBERLAND	COOS CO	ST. FRANCIS HALL, STATE ST	89	001 37	66	58	57	46	32?	30?	1.4
33-007-2003	2 3 NORTHUMBERLAND	COOS CO	BROOKLYN STREET	89	001 44	63	59	57	55	33?	31?	1.4
33-015-0006	1 2 PORTSMOUTH	ROCKINGHAM CO	COURT STREET	89	001 50	159	93	74	70	43?	38?	1.7
33-015-0009	1 2 PORTSMOUTH	ROCKINGHAM CO	VAUGHAN STREET	89	001 57	122	98	80	80	47?	43?	1.6
33-015-0011	1 0 PORTSMOUTH	ROCKINGHAM CO	SCHILLER SUB STATION - PSCN	89	001 57	150	91	70	64	35	30	1.8

? INDICATES THAT THE MEAN DOES NOT SATISFY SUMMARY CRITERIA

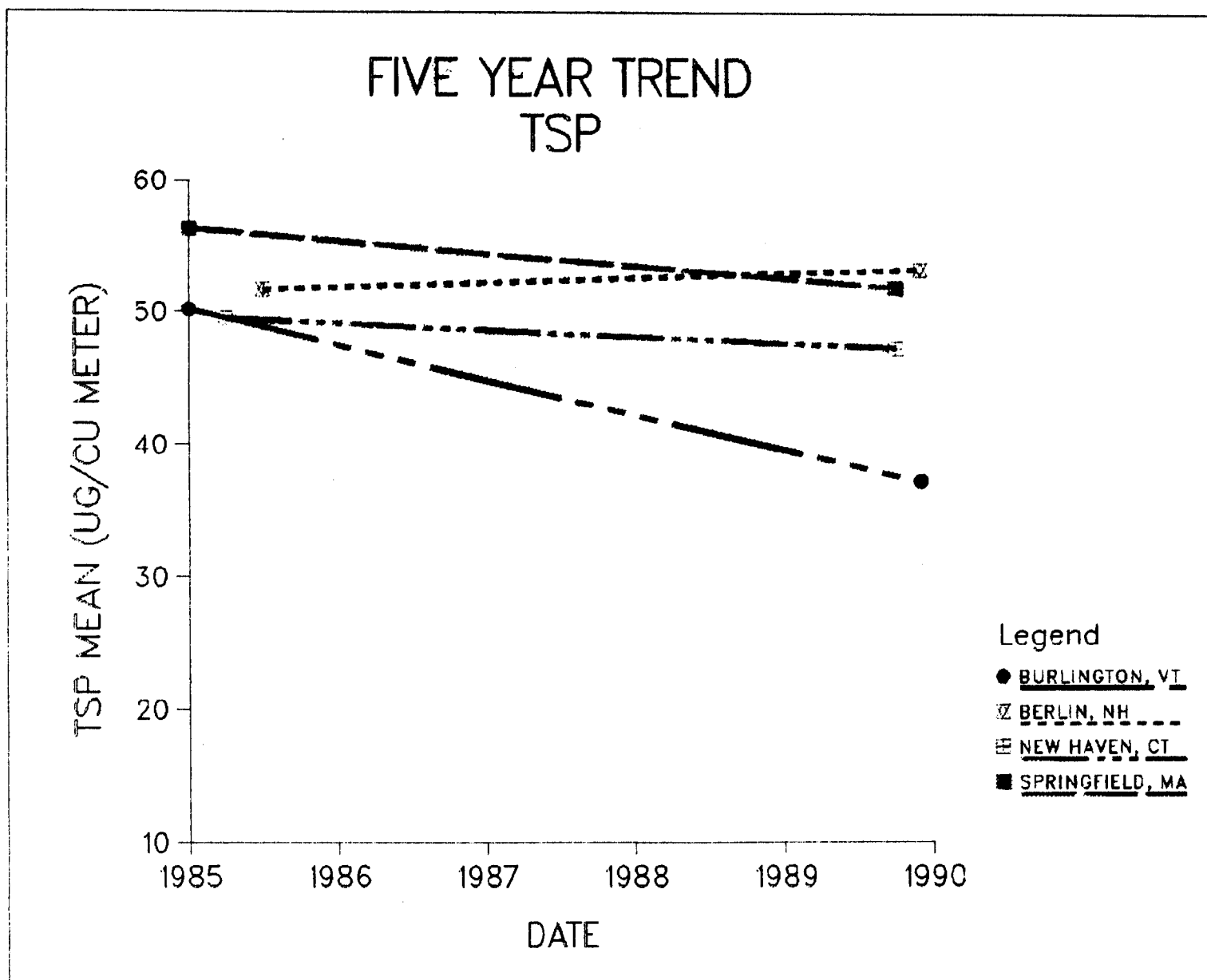
SUSPENDED PARTICULATE (11101)				RHODE ISLAND		UNITS: 001 UG/CU METER (25 C)										
P																
O M																
SITE ID	C	T	CITY	COUNTY	ADDRESS	REP	YR	ORG	#OBS	--MAXIMUM 24-HR VALUES--				ARITH	GEO	GEO
										1ST	2ND	3RD	4TH	MEAN	MEAN	STD
44-003-0002	1	2		KENT CO	W. ALTON JONES CAMPUS	URI	89	001	60	70	62	54	41	22	19	1.7
44-007-0003	1	1	CRANSTON	PROVIDENCE CO	CRANSTON FIRE DEPT		89	001	57	118	77	76	74	46	43	1.5
44-007-0008	1	1	EAST PROVIDENCE	PROVIDENCE CO	E. PROV. FIRE STATION	NORTH	89	001	59	117	84	80	79	45	41	1.6
44-007-0009	1	2	EAST PROVIDENCE	PROVIDENCE CO	PAWTUCKET AVENUE		89	001	60	109	90	85	69	40	36	1.7
44-005-2001	1	2	NEWPORT	NEWPORT CO	NEWPORT CITY HALL		89	001	60	67	63	61	59	37	34	1.5
44-007-1004	1	1	PAWTUCKET	PROVIDENCE CO	HOSPITAL TRUST 215 MAIN ST		89	001	59	119	105	89	87	50	46	1.5
44-007-0015	1	1	PROVIDENCE	PROVIDENCE CO	DEPT. OF HEALTH BUILDING		89	001	58	121	108	106	88	53	49	1.6
44-007-0017	1	1	PROVIDENCE	PROVIDENCE CO	SABIN STREET PROVIDENCE		89	001	59	118	107	94	92	55	50	1.6
44-009-4002	1	2	WESTERLY	WASHINGTON CO	WESTERLY POLICE DEPARTMENT		89	001	45	89	83	81	80	51?	47?	1.5
44-007-4002	1	2	WOONSOCKET	PROVIDENCE CO	127 SOCIAL STREET		89	001	61	139	104	100	96	50	44	1.7
? INDICATES THAT THE MEAN DOES NOT SATISFY SUMMARY CRITERIA																

? INDICATES THAT THE MEAN DOES NOT SATISFY SUMMARY CRITERIA

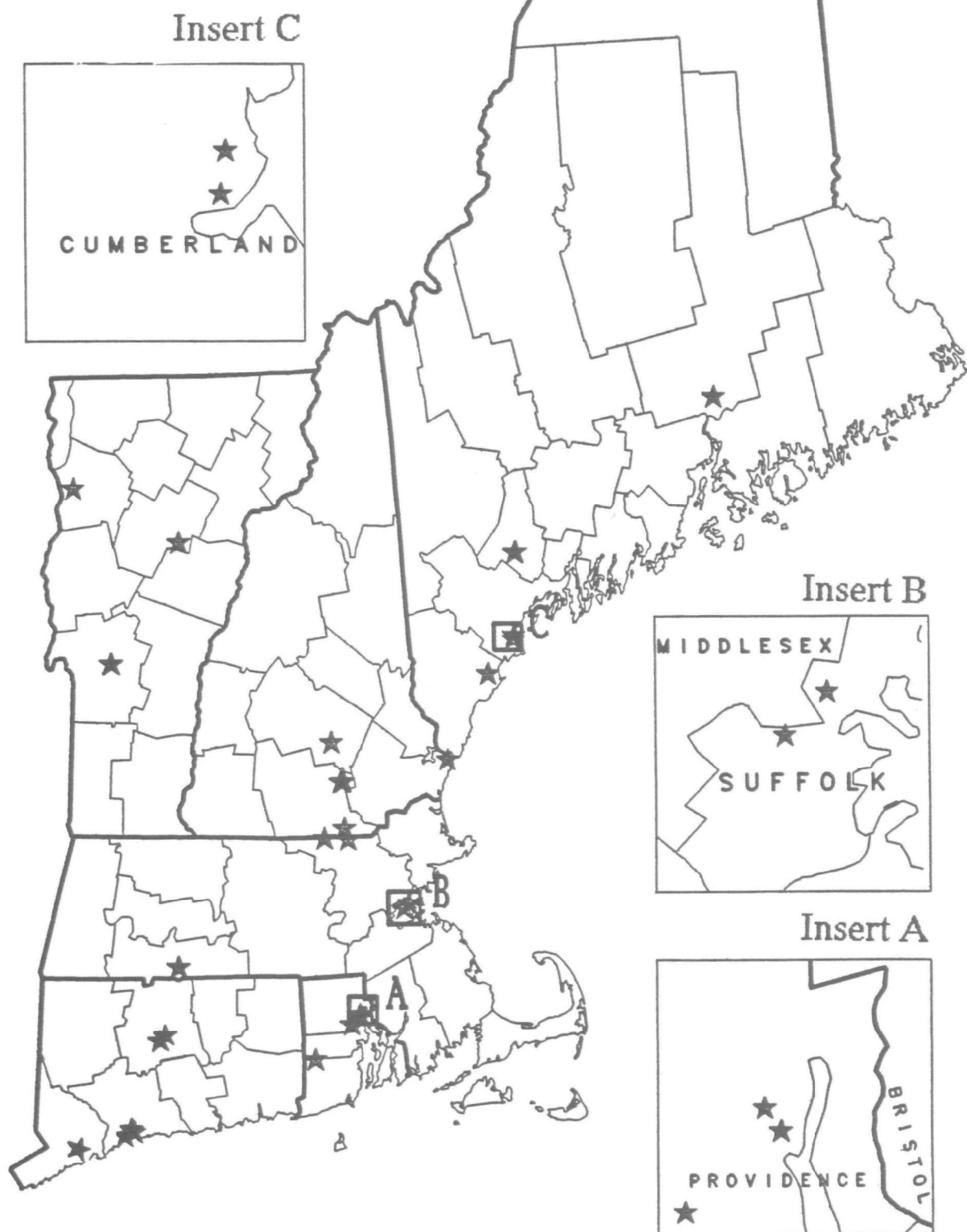
SUSPENDED PARTICULATE (11101)					VERMONT		UNITS: 001 UG/CU METER (25 C)								
P															
O M															
SITE ID	C	T	CITY	COUNTY	ADDRESS	REP	--MAXIMUM 24-HR VALUES--				ARITH	GEO	GEO		
						YR	ORG	#OBS	1ST	2ND	3RD	4TH	MEAN	MEAN	STD
50-003-0003	1	2	BENNINGTON	BENNINGTON CO	ROUTE 7, BENNINGTON	89	001	19	69	63	62	59	40?	37?	1.6
50-007-0005	1	2	BURLINGTON	CHITTENDEN CO	39 PEARL STREET	89	001	60	84	81	79	68	40	37	1.5
? INDICATES THAT THE MEAN DOES NOT SATISFY SUMMARY CRITERIA															

? INDICATES THAT THE MEAN DOES NOT SATISFY SUMMARY CRITERIA

SUSPENDED PARTICULATE (11101)			
METHODS:	CODE	COLLECTION METHOD	ANALYSIS METHOD
	====	=====	=====
	000	MULTIPLE METHODS	MULTIPLE METHODS
	091	HI-VOL	GRAVIMETRIC



# 1989 LEAD MONITORING SITES



LEAD (12128)

CONNECTICUT

UNITS: 001 UG/CU METER (25 C)

SITE ID	P O M C T CITY		COUNTY	ADDRESS	REP		----QUARTERLY ARITH MEANS----				MEANS MAX VALUES		
					YR	ORG #OBS	1ST	2ND	3RD	4TH	>1.5	1ST	2ND METH
09-003-0013	1	2	HARTFORD	HARTFORD CO 401 FLATBUSH AVE	89	001 6	.03	.02			0	.04	.03 092
09-009-0013	1	2	NEW HAVEN	NEW HAVEN CO FIRE HEADQUARTERS	89	001 6	.02	.03			0	.03	.03 092
09-001-0010	1	2	BRIDGEPORT	ROOSEVELT SCH PARK AVE.	89	001 12	.06	.04	.07	.03	0	.14	.09 094
09-003-0015	1	2	HARTFORD	HELCO, 400 SHELTON ST	89	001 5	.01	.03			0	.04	.03 094
09-003-0016	1	1	HARTFORD	AETNA GARAGE	89	001 12	.03	.04	.09	.03	0	.12	.10 094
09-003-1004	1	1	E HARTFORD	CITY HALL, 740 MAIN ST	89	001 3				.01	0	.02	.01 094
09-009-0018	1	2	NEW HAVEN	STILES STREET	89	001 11	.08	.06	.04	.06	0	.09	.09 094
09-009-0018	2	2	NEW HAVEN	STILES STREET	89	001 12	.08	.05	.05	.06	0	.09	.09 094
09-009-2123	2	2	WATERBURY	MEADOW ST OFF RAMP	89	001 11	.04	.04	.05	.06	0	.10	.06 094

LEAD (12128)

MAINE

UNITS: 001 UG/CU METER (25 C)

SITE ID	P O M C T CITY		COUNTY	ADDRESS	REP		----QUARTERLY ARITH MEANS----				MEANS MAX VALUES		
					YR	ORG #OBS	1ST	2ND	3RD	4TH	>1.5	1ST	2ND METH
23-001-0008	1	0	AUBURN	ANDROSCOGGIN LEPAGE BAKERY-60 S	89	000 44	.03	.02	.02		0	.06	.05 092
23-019-0002	1	0	BANGOR	PENOBSCOT CO PUMP STATION-WASHI	89	001 61	.04	.02	.01	.02	0	.09	.08 092
23-031-0002	1	3	BIDDEFORD	YORK CO TREATMENT PLANT	89	001 41	.02?	.12	.04	.02?	0	.82	.74 092
23-001-0011	1	2	LEWISTON	ANDROSCOGGIN COUNTRY KITCHEN	89	001 32		.09?	.02	.02	0	.12	.06 092
23-005-0014	2	2	PORTLAND	CUMBERLAND C SHELTER SITE-OXFOR	89	001 51	.05	.04	.04	.05?	0	.10	.07 092
23-005-0015	1	2	PORTLAND	CUMBERLAND C TUKEY'S BRIDGE	89	001 35		.05	.03	.07?	0	.31	.14 092

? INDICATES THAT THE MEAN DOES NOT SATISFY SUMMARY CRITERIA

LEAD (12128)				MASSACHUSETTS		UNITS: 001 UG/CU METER (25 C)									
P				REP		----QUARTERLY ARITH MEANS----				MEANS MAX VALUES					
O M				YR ORG #OBS		1ST	2ND	3RD	4TH	>1.5	1ST	2ND	METH		
SITE ID	C	T	CITY	COUNTY	ADDRESS										
25-025-0002	1	1	BOSTON	SUFFOLK CO	KENMORE SQUARE	89 001	56	.08	.05	.06	.03	0	.30	.13	092
25-025-0027	2	1	BOSTON	SUFFOLK CO	ONE CITY SQUARE	89 001	61	.06	.04	.04	.04	0	.23	.09	092
25-013-0011	2	1	SPRINGFIELD	HAMPDEN CO	59 HOWARD STREET	89 001	56	.05	.03	.04	.03?	0	.08	.07	092
25-013-2007	1	1	SPRINGFIELD	HAMPDEN CO	EAST COLUMBUS AVE	89 001	52	.06	.05	.05	.04	0	.13	.09	092

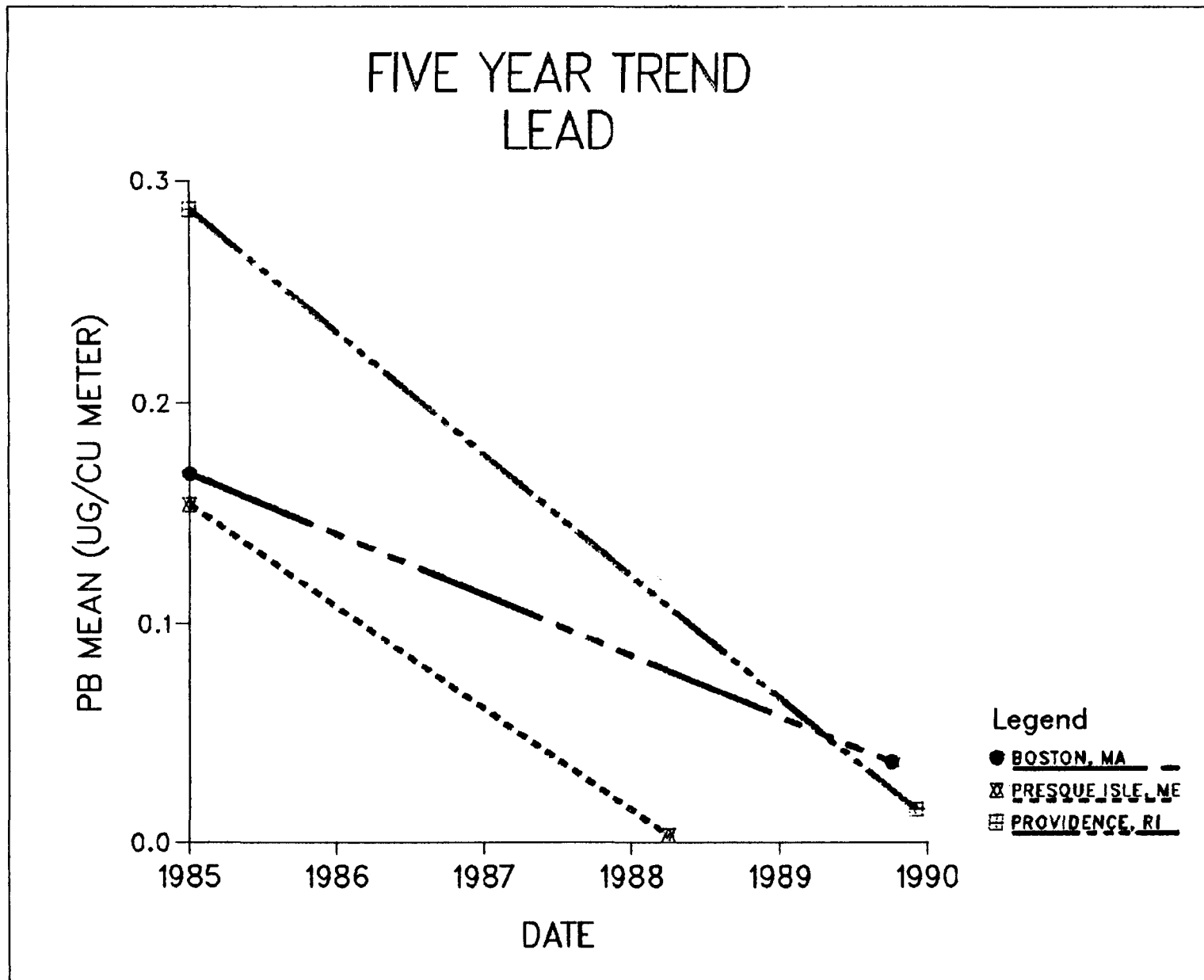
? INDICATES THAT THE MEAN DOES NOT SATISFY SUMMARY CRITERIA

LEAD (12128)				NEW HAMPSHIRE		UNITS: 001 UG/CU METER (25 C)									
P				REP		----QUARTERLY ARITH MEANS----				MEANS MAX VALUES					
O M				YR ORG #OBS		1ST	2ND	3RD	4TH	>1.5	1ST	2ND	METH		
SITE ID	C	T	CITY	COUNTY	ADDRESS										
33-013-0004	1	2	CONCORD	MERRIMACK CO	JUNCTION RTS. 3,93	89 001	12	.03	.03	.02	.03	0	.04	.04	092
33-013-0004	2	3	CONCORD	MERRIMACK CO	JUNCTION RTS. 3,93	89 001	12	.04	.03	.02	.01	0	.04	.04	092
33-011-2001	1	2	HOLLIS	HILLSBOROUGH	RTE. 122, SILVER L	89 001	12	.02	.02	.01	.01	0	.03	.02	092
33-011-0008	1	0	MANCHESTER	HILLSBOROUGH	NOTRE DAME AVENUE	89 001	12	.03	.02	.02	.02	0	.04	.03	092
33-011-0015	1	2	MANCHESTER	HILLSBOROUGH	351 CHESTNUT ST	89 001	12	.02	.03	.02	.03	0	.04	.03	092
33-011-0015	2	0	MANCHESTER	HILLSBOROUGH	351 CHESTNUT ST	89 001	12	.02	.02	.02	.02	0	.04	.04	092
33-011-1007	1	2	NASHUA	HILLSBOROUGH	MAIN STREET	89 001	12	.02	.03	.02	.01	0	.04	.03	092
33-011-1010	1	0	NASHUA	HILLSBOROUGH	SANDERS ASSOCIATES	89 001	12	.02	.02	.01	.01	0	.04	.03	092
33-015-0006	1	2	PORTSMOUTH	ROCKINGHAM C	COURT STREET	89 001	12	.04	.04	.02	.02	0	.07	.06	092

LEAD (12128)				RHODE ISLAND				UNITS: 001 UG/CU METER (25 C)						
P														
O M				REP				----QUARTERLY ARITH MEANS----				MEANS MAX VALUES		
SITE ID	C	T	CITY	COUNTY	ADDRESS	YR	ORG #OBS	1ST	2ND	3RD	4TH	>1.5	1ST	2ND METH
44-003-0002	2	2		KENT CO	W. ALTON JONES CAM	89	800 60	.02	.02	.02	.02	0	.03	.02 090
44-007-0003	1	0	CRANSTON	PROVIDENCE	CRANSTON FIRE DEPT	89	001 57	.05	.02	.03	.03	0	.36	.09 090
44-007-0017	2	1	PROVIDENCE	PROVIDENCE	SABIN STREET	89	001 59	.04	.04	.04	.04	0	.11	.08 090
44-007-1007	1	1	PROVIDENCE	PROVIDENCE	TRAILER, 120 DYER	89	001 60	.21	.06	.06	.05	0	.87	.74 090

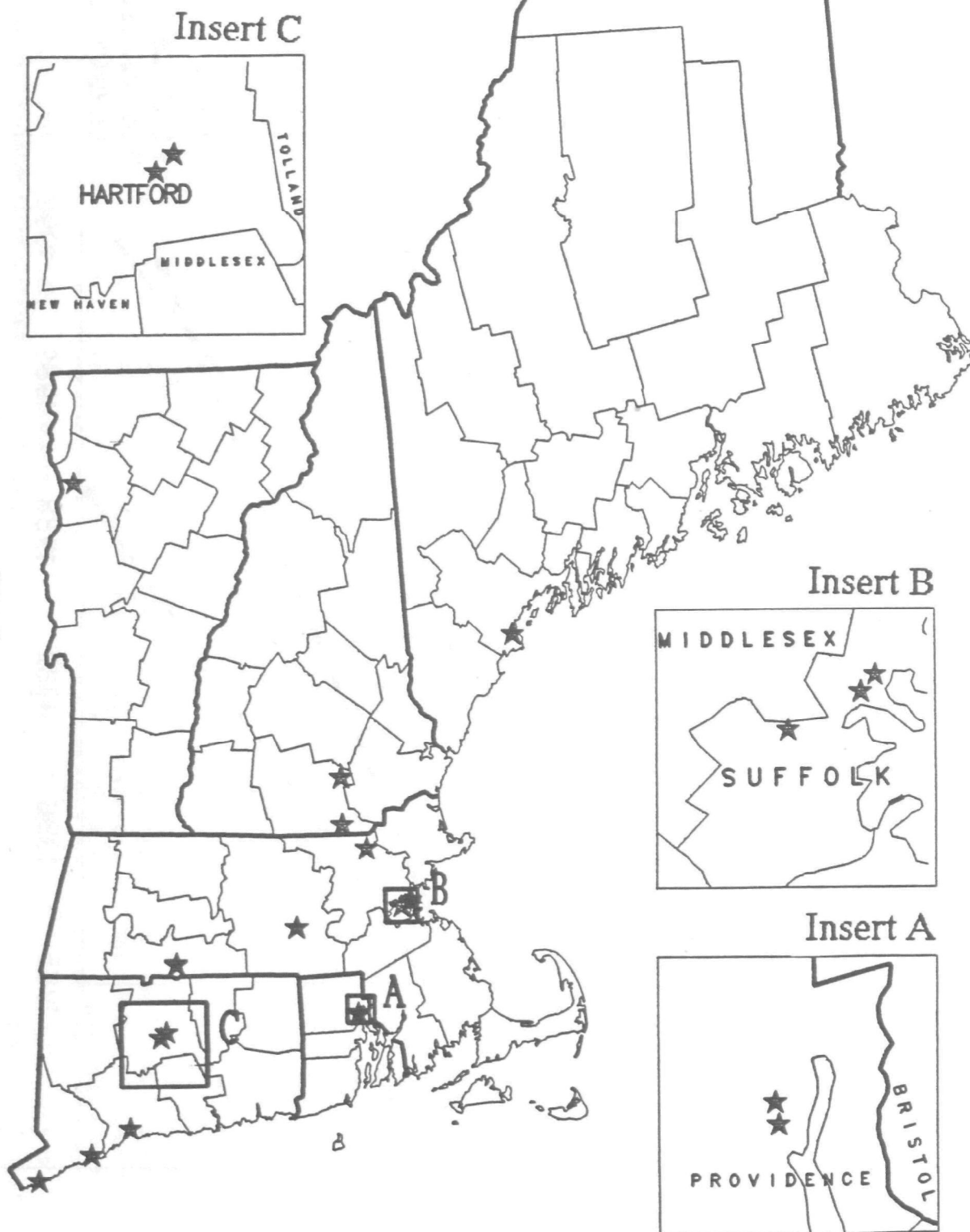
LEAD (12128)				VERMONT				UNITS: 001 UG/CU METER (25 C)						
P														
O M				REP				----QUARTERLY ARITH MEANS----				MEANS MAX VALUES		
SITE ID	C	T	CITY	COUNTY	ADDRESS	YR	ORG #OBS	1ST	2ND	3RD	4TH	>1.5	1ST	2ND METH
50-023-0003	1	3	BARRE	WASHINGTON	SOUTH SEMINARY ST	89	001 43	.02	.02?	.01?	.02?	0	.10	.04 092
50-023-0003	2	3	BARRE	WASHINGTON	SOUTH SEMINARY ST	89	001 2				.01?	0	.01	.01 092
50-007-0003	4	3	BURLINGTON	CHITTENDEN	ADJ. TO 82 S. WIND	89	001 40	.02		.01	.02	0	.05	.04 092
50-021-0002	1	2	RUTLAND	RUTLAND CO	PARKING LOT	89	001 40		.02	.02	.03	0	.08	.05 092
50-021-0004	1	3	RUTLAND	RUTLAND CO	15-19 WALES STREET	89	001 10	.03?				0	.04	.04 092
? INDICATES THAT THE MEAN DOES NOT SATISFY SUMMARY CRITERIA														

LEAD (12128)					
METHODS:	CODE	COLLECTION METHOD		ANALYSIS METHOD	
	====	=====		=====	
	090	HI-VOL		EMISSION SPECTRA ICAP	
	092	HI-VOL		ATOMIC ABSORPTION	





# 1989 CARBON MONOXIDE MONITORING SITES



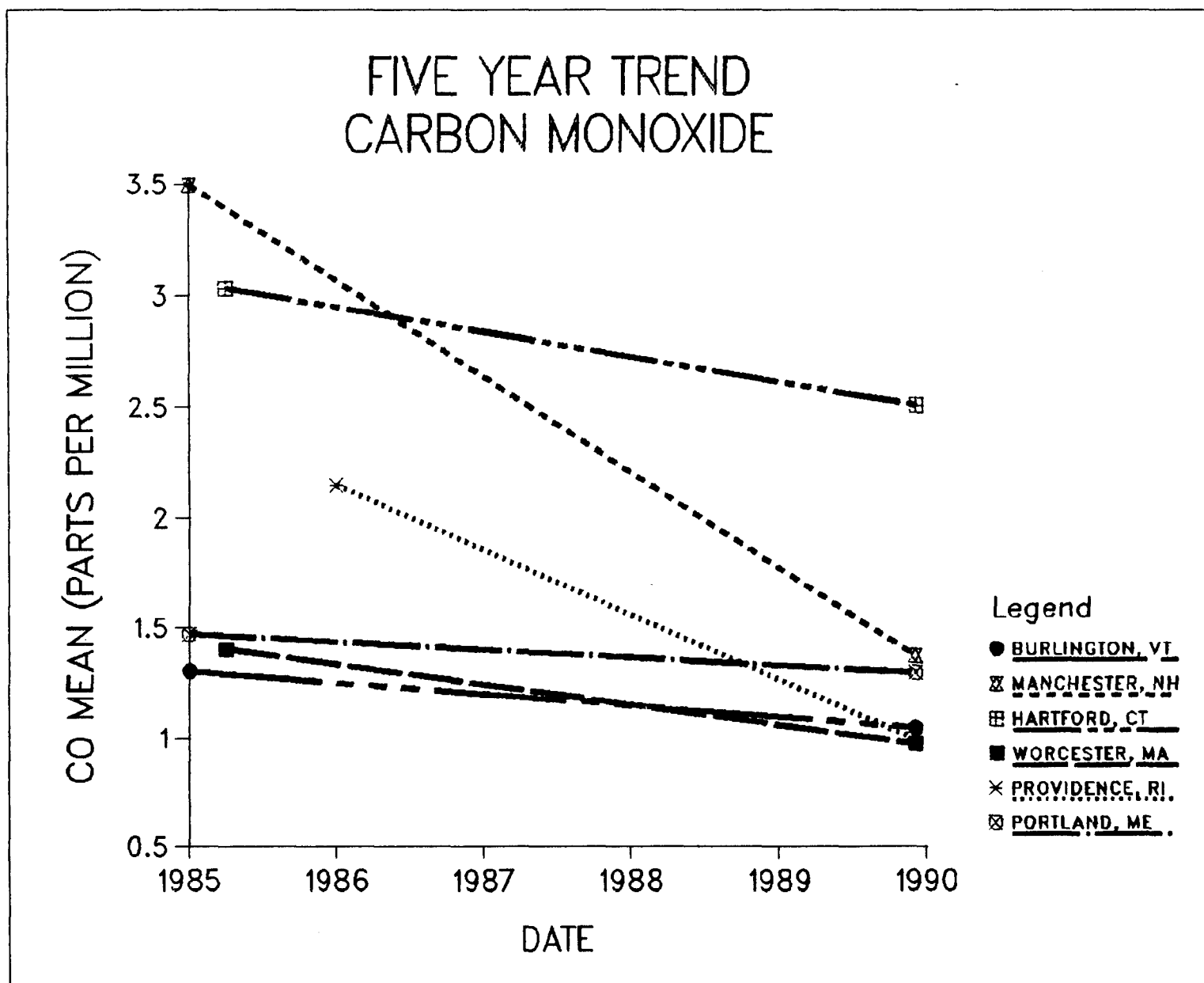
CARBON MONOXIDE (42101)				CONNECTICUT		UNITS: 007 PPM						
P												
O M												
SITE ID	C	T	CITY	COUNTY	ADDRESS	REP YR ORG #OBS	MAX 1-HR 1ST 2ND	OBS> 35	MAX 8-HR 1ST 2ND	OBS> 9	METH	
09-001-0004	1	2	BRIDGEPORT	FAIRFIELD CO	JASPER MCLEVY HALL	89 001 8518	8.3 8.3	0	5.9 5.2	0	011	
09-003-0013	1	1	HARTFORD	HARTFORD CO	401 FLATBUSH AVENUE	89 001 8065	7.2 6.3	0	4.9 4.4	0	011	
09-003-0017	1	1	HARTFORD	HARTFORD CO	COURTHOUSE, 155 MORGAN	89 001 8306	21.3 15.3	0	9.6 9.0	1	011	
09-009-0019	1	2	NEW HAVEN	NEW HAVEN CO	80 TEMPLE STREET	89 000 8524	10.1 9.2	0	6.4 6.0	0	011	
09-001-0020	1	2	STAMFORD	FAIRFIELD CO	LIBRARY 96 BROAD ST	89 001 8672	9.6 9.4	0	6.4 6.0	0	011	
CARBON MONOXIDE (42101)				MAINE		UNITS: 007 PPM						
P												
O M												
SITE ID	C	T	CITY	COUNTY	ADDRESS	REP YR ORG #OBS	MAX 1-HR 1ST 2ND	OBS> 35	MAX 8-HR 1ST 2ND	OBS> 9	METH	
23-005-0018	1	2	PORTLAND	CUMBERLAND CO	529 CONGRESS STREET	89 001 1610	10.5 6.4	0	4.2 4.2	0	011	
CARBON MONOXIDE (42101)				MASSACHUSETTS		UNITS: 007 PPM						
P												
O M												
SITE ID	C	T	CITY	COUNTY	ADDRESS	REP YR ORG #OBS	MAX 1-HR 1ST 2ND	OBS> 35	MAX 8-HR 1ST 2ND	OBS> 9	METH	
25-025-0002	1	2	BOSTON	SUFFOLK CO	KENMORE SQUARE	89 001 8532	10.0 9.0	0	6.6 6.1	0	011	
25-025-0016	1	2	BOSTON	SUFFOLK CO	VISCONTI STREET	89 000 8043	11.0 10.0	0	5.3 4.9	0	011	
25-025-0021	1	1	BOSTON	SUFFOLK CO	340 BREMAN STREET	89 001 8718	8.0 7.0	0	4.8 4.5	0	011	
25-017-0007	1	2	LOWELL	MIDDLESEX CO	OLD CITY HALL, MERRIMACK	89 001 8545	11.0 9.0	0	5.4 5.3	0	011	
25-013-0016	1	2	SPRINGFIELD	HAMPDEN CO	LIBERTY ST PARKING LOT	89 001 7074	10.0 9.0	0	7.6 7.6	0	011	
25-013-2007	1	1	SPRINGFIELD	HAMPDEN CO	EAST COLUMBUS AVENUE	89 001 8077	11.0 10.0	0	7.4 6.5	0	011	
25-027-0020	1	2	WORCESTER	WORCESTER CO	CENTRAL ST FIRE STATION	89 001 8664	14.0 14.0	0	8.0 7.9	0	011	

CARBON MONOXIDE (42101)				NEW HAMPSHIRE		UNITS: 007 PPM									
P						REP		MAX 1-HR		OBS>	MAX 8-HR		OBS>		
SITE ID	C	T	CITY	COUNTY	ADDRESS	YR	ORG	#OBS	1ST	2ND	35	1ST	2ND	9	METH
33-011-0017	1	2	MANCHESTER	HILLSBOROUGH CO	1170 ELM STREET	89	001	3422	14.1	12.1	0	7.2	7.0	0	011
33-011-0018	1	2	MANCHESTER	HILLSBOROUGH CO	20 BRIDGE STREET	89	001	5001	10.4	8.8	0	5.3	4.8	0	011
33-011-1009	1	2	NASHUA	HILLSBOROUGH CO	25 MAIN STREET	89	001	5955	11.5	9.2	0	5.1	4.9	0	011

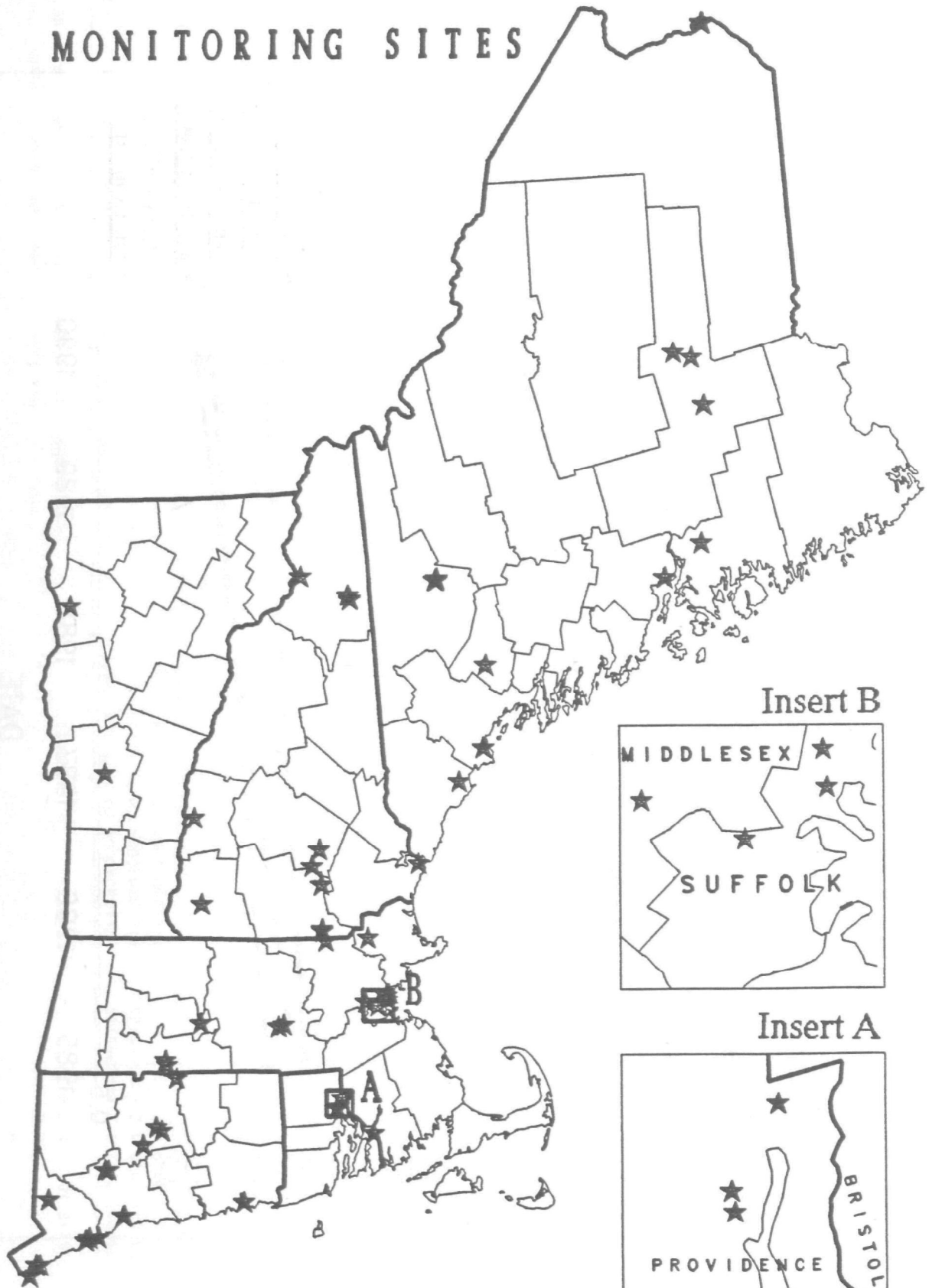
CARBON MONOXIDE (42101)				RHODE ISLAND		UNITS: 007 PPM									
P						REP		MAX 1-HR		OBS>	MAX 8-HR		OBS>		
SITE ID	C	T	CITY	COUNTY	ADDRESS	YR	ORG	#OBS	1ST	2ND	35	1ST	2ND	9	METH
44-007-0015	1	1	PROVIDENCE	PROVIDENCE CO	DEPT. OF HEALTH BUILDING	89	001	8521	14.5	13.5	0	8.4	7.5	0	011
44-007-1009	1	1	PROVIDENCE	PROVIDENCE CO	76 DORRANCE STREET	89	001	8160	11.7	11.4	0	7.3	6.2	0	011

CARBON MONOXIDE (42101)				VERMONT		UNITS: 007 PPM									
P						REP		MAX 1-HR		OBS>	MAX 8-HR		OBS>		
SITE ID	C	T	CITY	COUNTY	ADDRESS	YR	ORG	#OBS	1ST	2ND	35	1ST	2ND	9	METH
50-007-0003	1	2	BURLINGTON	CHITTENDEN CO	ADJ. TO 82 S. WINOOSKI A	89	001	7741	9.7	7.5	0	5.4	3.7	0	011

METHODS:	CODE	CARBON MONOXIDE (42101) COLLECTION METHOD	ANALYSIS METHOD
	011	INSTRUMENTAL	NONDISPERSIVE INFRA-RED



# 1989 SULFUR DIOXIDE MONITORING SITES





## SULFUR DIOXIDE (42401)

MAINE

UNITS: 001 UG/CU METER (25 C)

SITE ID	P O M C T CITY	COUNTY	ADDRESS	REP YR ORG #OBS	OBS			OBS			MAX 1-HR		ARIT MEAN	METH
					MAX 24-HR	>	MAX 3-HR	>	MAX 1-HR	ARIT				
					1ST	2ND	365	1ST	2ND	1300	1ST	2ND		
23-009-2003	1 3	HANCOCK CO	BALD MTN.,DUANE	89 001 1299	59	26	0	75	74	0	79	79	11?	020
23-031-0002	1 2 BIDDEFORD	YORK CO	TREATMENT PLANT	89 001 7979	80	66	0	174	124	0	225	199	19	020
23-019-2012	1 4 EAST MILLINOCK	PENOBSCOT CO	MAIN STREET/MILL	89 110 8693	29	21	0	125	49	0	335	60	8	060
23-001-0011	1 1 LEWISTON	ANDROSCOGGIN	COUNTRY KITCHEN	89 001 7747	100	91	0	199	187	0	259	238	21	020
23-019-1007	1 3 LINCOLN	PENOBSCOT CO	THOMAS MOT. TRA.	89 109 6794	72	54	0	197	164	0	314	236	10	020
23-003-0009	1 3 MADAWASKA	AROOSTOOK CO	PORTABLE SHELTER	89 000 5538	126	66	0	302	242	0	587	563	15?	020
23-003-0012	1 3 MADAWASKA	AROOSTOOK CO	U.S.POST OFFICE	89 113 8285	158	149	0	427	345	0	616	459	22	020
23-003-1003	1 3 MADAWASKA	AROOSTOOK CO	HIGH SCHOOL-ST.	89 000 8225	84	71	0	217	211	0	388	375	8	020
23-017-0011	1 4 MEXICO	OXFORD CO	HUNT'S PROPERTY	89 104 6753	138	136	0	342	333	0	668	479	31	020
23-019-2009	1 2 MILLINOCKET	PENOBSCOT CO	YORK STREET	89 110 8342	115	105	0	507	247	0	686	534	21	060
23-005-0014	1 1 PORTLAND	CUMBERLAND C	SHELTER SITE-OXFO	89 001 8257	116	103	0	164	160	0	210	202	25	020
23-017-2005	1 4 RUMFORD	OXFORD CO	TAYLOR MOUNTAIN-1	89 104 6861	106	106	0	313	290	0	500	482	32	020
23-017-2006	1 4 RUMFORD	OXFORD CO	TAYLOR MOUNTAIN-2	89 104 6832	117	97	0	321	311	0	663	561	28	020
23-017-2007	2 2 RUMFORD	OXFORD CO	VILLAGE GREEN	89 104 8227	97	95	0	414	291	0	618	616	19	020
23-027-0008	1 3 SEARSPORT	WALDO CO	TURNPIKE RD	89 114 6883	66	52	0	229	199	0	529	472	14	020

? INDICATES THAT THE MEAN DOES NOT SATISFY SUMMARY CRITERIA

SULFUR DIOXIDE (42401)					MASSACHUSETTS				UNITS: 001 UG/CU METER (25 C)									
SITE ID	P		CITY	COUNTY	ADDRESS	YR	ORG	#OBS	OBS			OBS			ARIT			
	O M								MAX 24-HR	>	MAX 3-HR	>	MAX 1-HR	MEAN	METH			
	C	T																
25-025-0002	2	1	BOSTON	SUFFOLK CO	KENMORE SQUARE	89	001	8654	154	132	0	228	208	0	469	307	38	020
25-025-0021	1	1	BOSTON	SUFFOLK CO	340 BREMAN STREET	89	001	8624	140	129	0	249	213	0	291	257	32	020
25-025-1003	1	1	CHELSEA	SUFFOLK CO	POWDER HORN HILL	89	001	8027	147	132	0	246	231	0	299	265	28	020
25-005-1004	1	1	FALL RIVER	BRISTOL CO	GLOBE STREET	89	001	8710	187	92	0	527	356	0	537	532	23	020
25-009-0005	1	1	LAWRENCE	ESSEX CO	HIGH STREET	89	001	8423	112	107	0	243	208	0	270	267	26	000
25-013-0016	1	2	SPRINGFIELD	HAMPDEN CO	LIBERTY STREET	89	001	7866	156	145	0	246	236	0	280	262	33	020
25-013-1009	1	1	SPRINGFIELD	HAMPDEN CO	LONGHILL STREET	89	001	8454	111	108	0	259	216	0	301	301	24	020
25-015-4002	1	2	WARE	HAMPSHIRE CO	QUABBIN SUMMIT	89	001	8495	96	59	0	154	127	0	267	165	13	020
25-017-1005	1	1	WATERTOWN	MIDDLESEX CO	VICTORY FIELD	89	001	8046	135	123	0	227	194	0	249	238	20	020
25-027-0019	2	2	WORCESTER	WORCESTER CO	DPW YARD, BELMONT	89	000	8503	78	68	0	101	100	0	123	113	15	020
25-027-0020	2	1	WORCESTER	WORCESTER CO	CENTRAL STREET	89	001	8151	140	105	0	249	231	0	307	301	27	020



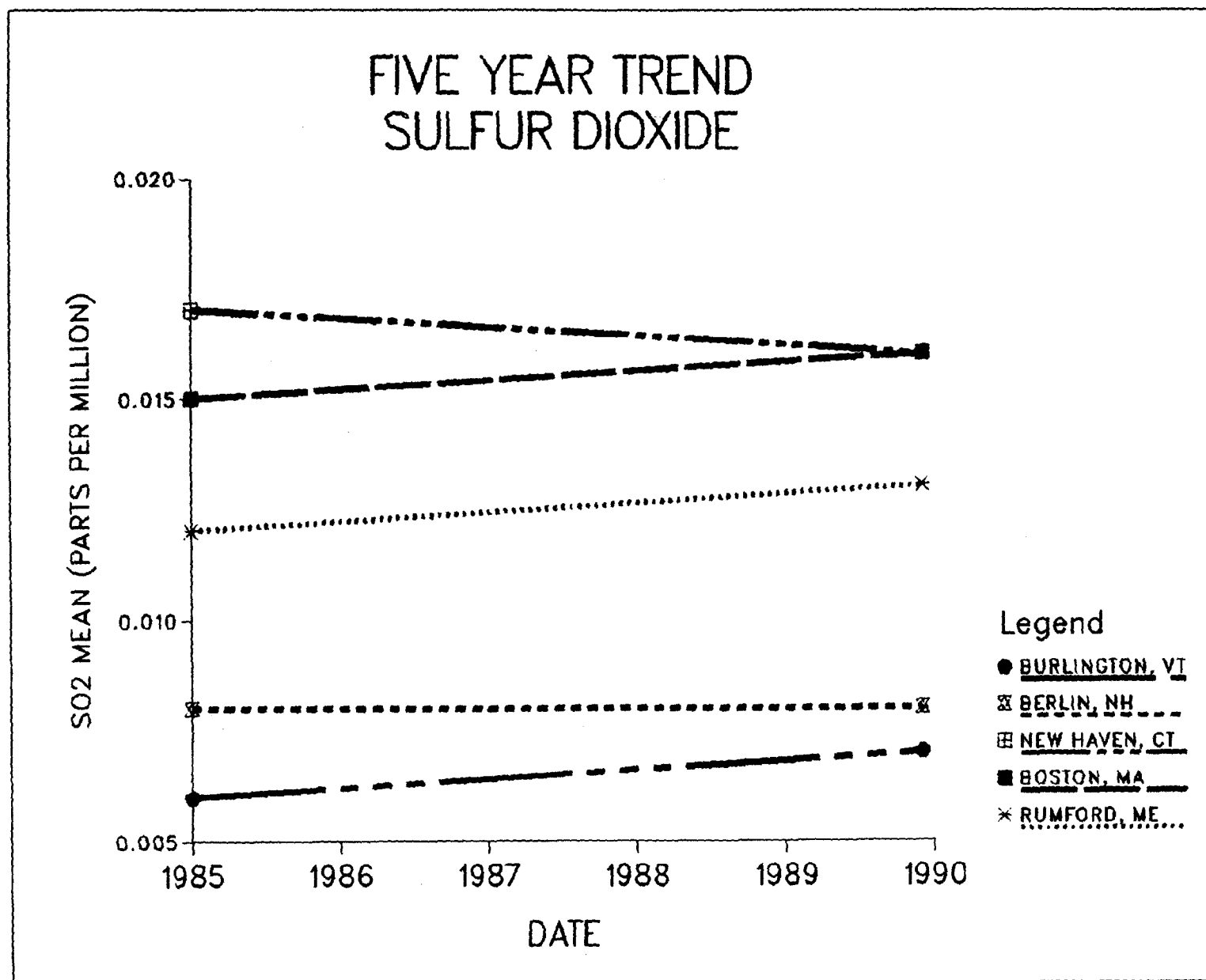
SULFUR DIOXIDE (42401)					NEW HAMPSHIRE				UNITS: 001 UG/CU METER (25 C)									
SITE ID	P		C T CITY	COUNTY	ADDRESS	YR	ORG	#OBS	OBS			OBS			MAX 1-HR	ARIT	METH	
	O	M							MAX 24-HR	>	MAX 3-HR	>						
	1ST	2ND							365	1ST	2ND	1300						
33-007-0014	2	2	BERLIN	COOS CO	LANCASTER STREET	89	902	8448	153	79	0	579	307	0	709	590	21	020
33-007-0016	1	3	BERLIN	COOS CO	200 ENMAN HILL RD	89	902	7946	71	60	0	243	219	0	435	423	10	020
33-007-0019	1	3	BERLIN	COOS CO	CATES HILL RD	89	902	8466	114	113	0	462	443	0	783	760	23	020
33-013-0006	1	3	BOW	MERRIMACK CO	SOUTH BOW AND DUN	89	001	8376	59	57	0	224	189	0	333	328	13	023
33-019-0003	1	2	CLAREMONT	SULLIVAN CO	SOUTH STREET	89	001	1443	87	74	0	155	141	0	267	228	29?	023
33-005-0007	1	2	KEENE	CHESHIRE CO	RAILROAD STREET	89	001	1328	99	95	0	203	156	0	215	204	39?	023
33-011-0016	1	1	MANCHESTER	HILLSBOROUGH	HARNETT PARK	89	001	8554	126	113	0	243	200	0	521	417	24	023
33-011-1005	1	2	NASHUA	HILLSBOROUGH	18 MULLBERRY ST	89	001	4255	51	40	0	81	78	0	100	93	12?	023
33-011-1009	1	0	NASHUA	HILLSBOROUGH	25 MAIN STREET	89	001	8546	113	111	0	190	179	0	244	238	22	023
33-011-1010	1	2	NASHUA	HILLSBOROUGH	SANDERS ASSOCIATE	89	001	8424	110	87	0	194	190	0	362	241	18	023
33-007-1007	1	3	NORTHUMBERLAND	COOS CO	ROUTES 110 AND 3,	89	001	4471	142	76	0	302	293	0	461	409	15?	023
33-007-1007	2	3	NORTHUMBERLAND	COOS CO	ROUTES 110 AND 3,	89	001	3345	80	78	0	224	218	0	498	335	13?	020
33-013-1003	1	2	PEMBROKE	MERRIMACK CO	PEMBROKE HILL	89	001	8384	228	131	0	496	447	0	697	692	21	023
33-015-0009	1	2	PORTSMOUTH	ROCKINGHAM C	VAUGHAN STREET	89	001	8632	82	75	0	227	227	0	346	333	21	023
? INDICATES THAT THE MEAN DOES NOT SATISFY SUMMARY CRITERIA																		

? INDICATES THAT THE MEAN DOES NOT SATISFY SUMMARY CRITERIA

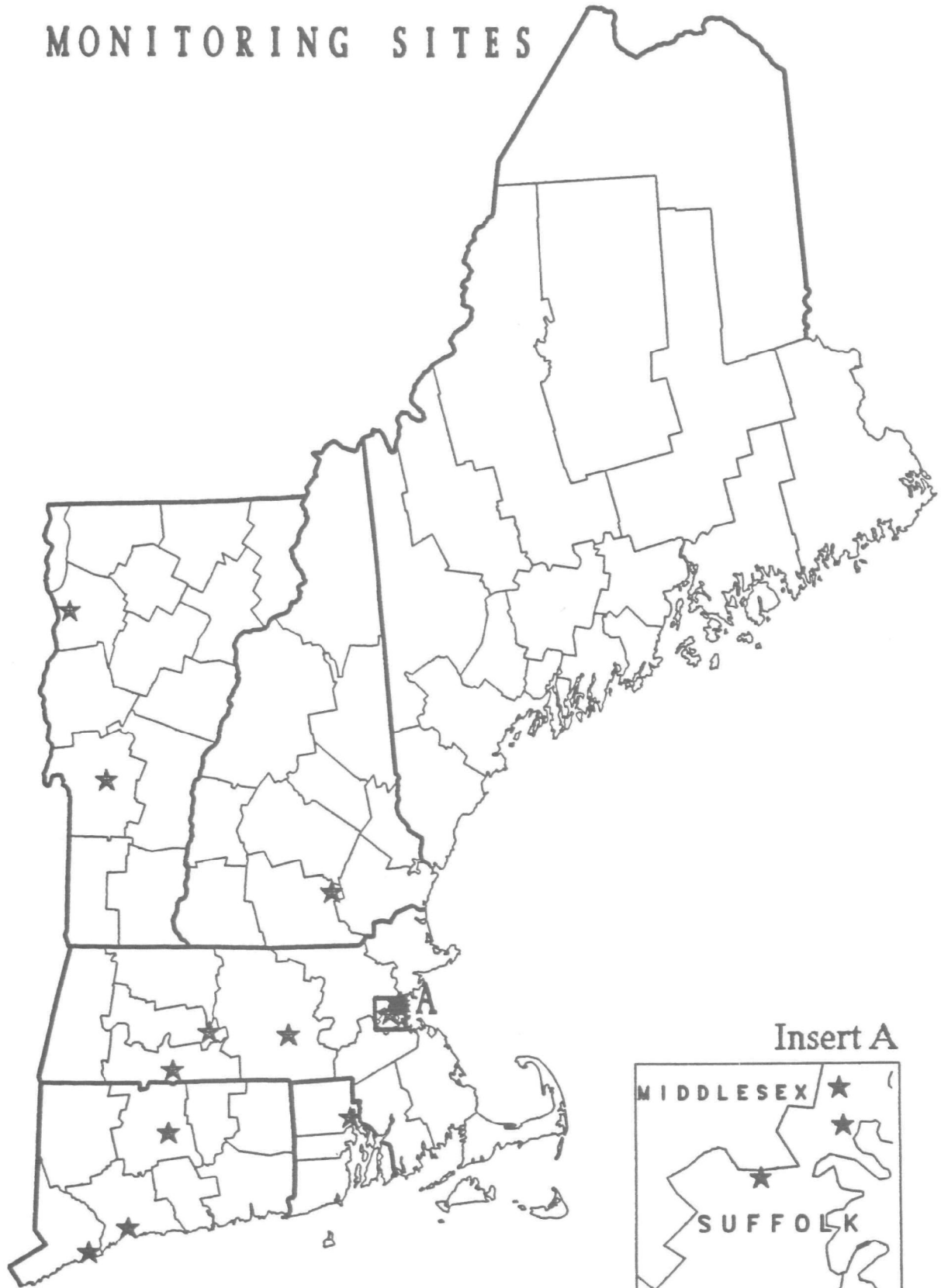
SULFUR DIOXIDE (42401)				RHODE ISLAND				UNITS: 001 UG/CU METER (25 C)										
SITE ID	P		CITY	COUNTY	ADDRESS	YR	ORG	#OBS	OBS			OBS			ARIT	METH		
	O	M							MAX 24-HR	>	MAX 3-HR	>	MAX 1-HR					
	C T								1ST	2ND	365	1ST	2ND	1300			1ST	2ND
44-007-1005	1	1	PAWTUCKET	PROVIDENCE C	SUMMIT STREET	89	001	7629	135	104	0	244	237	0	256	252	28	023
44-007-0015	1	1	PROVIDENCE	PROVIDENCE C	DEPT. OF HEALTH	89	001	8194	108	107	0	212	211	0	398	329	28	023
44-007-1009	1	1	PROVIDENCE	PROVIDENCE C	76 DORRANCE ST	89	001	8290	155	122	0	260	237	0	325	302	38	020

SULFUR DIOXIDE (42401)				VERMONT		UNITS: 001 UG/CU METER (25 C)												
P						OBS				OBS								
O M				REP		MAX 24-HR		>		MAX 3-HR		>		MAX 1-HR		ARIT		
SITE ID	C	T	CITY	COUNTY	ADDRESS	YR	ORG	#OBS	1ST	2ND	365	1ST	2ND	1300	1ST	2ND	MEAN	METH
50-007-0003	1	1	BURLINGTON	CHITTENDEN C	ADJ. TO 82 S. WIN	89	001	8026	98	82	0	258	177	0	330	304	19	020
50-021-0002	1	2	RUTLAND	RUTLAND CO	PARKING LOT	89	001	5304	103	97	0	180	174	0	220	204	27?	020
? INDICATES THAT THE MEAN DOES NOT SATISFY SUMMARY CRITERIA																		

SULFUR DIOXIDE (42401)			
METHODS:	CODE	COLLECTION METHOD	ANALYSIS METHOD
	====	=====	=====
	000	MULTIPLE METHODS	MULTIPLE METHODS
	020	INSTRUMENTAL	PULSED FLUORESCENT
	023	INSTRUMENTAL	ULTRA VIOLET STIMULATED FLUORESCNC
	060	INSTRUMENTAL	PULSED FLUORESCENT



# 1989 NITROGEN DIOXIDE MONITORING SITES



NITROGEN DIOXIDE (42602)				CONNECTICUT	UNITS: 007 PPM									
P														
O M						REP	MAX	1-HR	MAX	24-HR	ARIT			
SITE ID	C	T	CITY	COUNTY	ADDRESS	YR	ORG	#OBS	1ST	2ND	1ST	2ND	MEAN	METH
09-001-0113	1	2	BRIDGEPORT	FAIRFIELD CO	30 CONGRESS ST (REAR)	89	001	7894	.121	.117			.026	014
09-003-1003	1	2	EAST HARTFORD	HARTFORD CO	30 REMINGTON ROAD	89	001	8161	.075	.074			.020	014
09-009-1123	1	2	NEW HAVEN	NEW HAVEN CO	715 STATE STREET	89	001	8248	.119	.111			.028	014

NITROGEN DIOXIDE (42602)				MASSACHUSETTS			UNITS: 007 PPM						
P													
O M													
SITE ID	C	T	CITY	COUNTY	ADDRESS	REP YR ORG	#OBS	MAX 1ST	1-HR 2ND	MAX 1ST	24-HR 2ND	ARIT MEAN	METH
25-025-0002	2	3	BOSTON	SUFFOLK CO	KENMORE SQUARE, 590 COMMON	89 001	8427	.135	.134			.032	014
25-025-0021	1	1	BOSTON	SUFFOLK CO	340 BREMAN STREET	89 001	8637	.115	.105			.032	014
25-025-1003	1	1	CHELSEA	SUFFOLK CO	POWDER HORN HILL	89 001	8312	.178	.157			.030	014
25-013-0016	1	2	SPRINGFIELD	HAMPDEN CO	LIBERTY STREET PARKING LOT	89 001	6797	.150	.130			.029	014
25-015-4002	1	2	WARE	HAMPSHIRE CO	QUABBIN SUMMIT	89 001	8268	.091	.077			.008	014
25-027-0020	1	2	WORCESTER	WORCESTER CO	CENTRAL STREET FIRE STATIO	89 001	8485	.122	.115			.026	014

NITROGEN DIOXIDE (42602)				NEW HAMPSHIRE		UNITS: 007 PPM						
P												
O M												
SITE ID	C T CITY	COUNTY	ADDRESS	REP	MAX	1-HR	MAX	24-HR	ARIT			
				YR ORG #OBS	1ST	2ND	1ST	2ND	MEAN	METH		
33-011-0016	1 2 MANCHESTER	HILLSBOROUGH CO	HARNETT PARK	89 001 7949	.178	.164			.022	014		

## NITROGEN DIOXIDE (42602)

RHODE ISLAND

UNITS: 007 PPM

SITE ID	P O M C T CITY	COUNTY	ADDRESS	REP		MAX		1-HR		MAX		24-HR		ARIT	
				YR	ORG	#OBS	1ST	2ND	1ST	2ND	1ST	2ND	MEAN	METH	
44-007-0012	2 2 PROVIDENCE	PROVIDENCE CO	ROCKEFELLER LIBRARY, PROSP	89	000	7912	.111	.108						.024	014

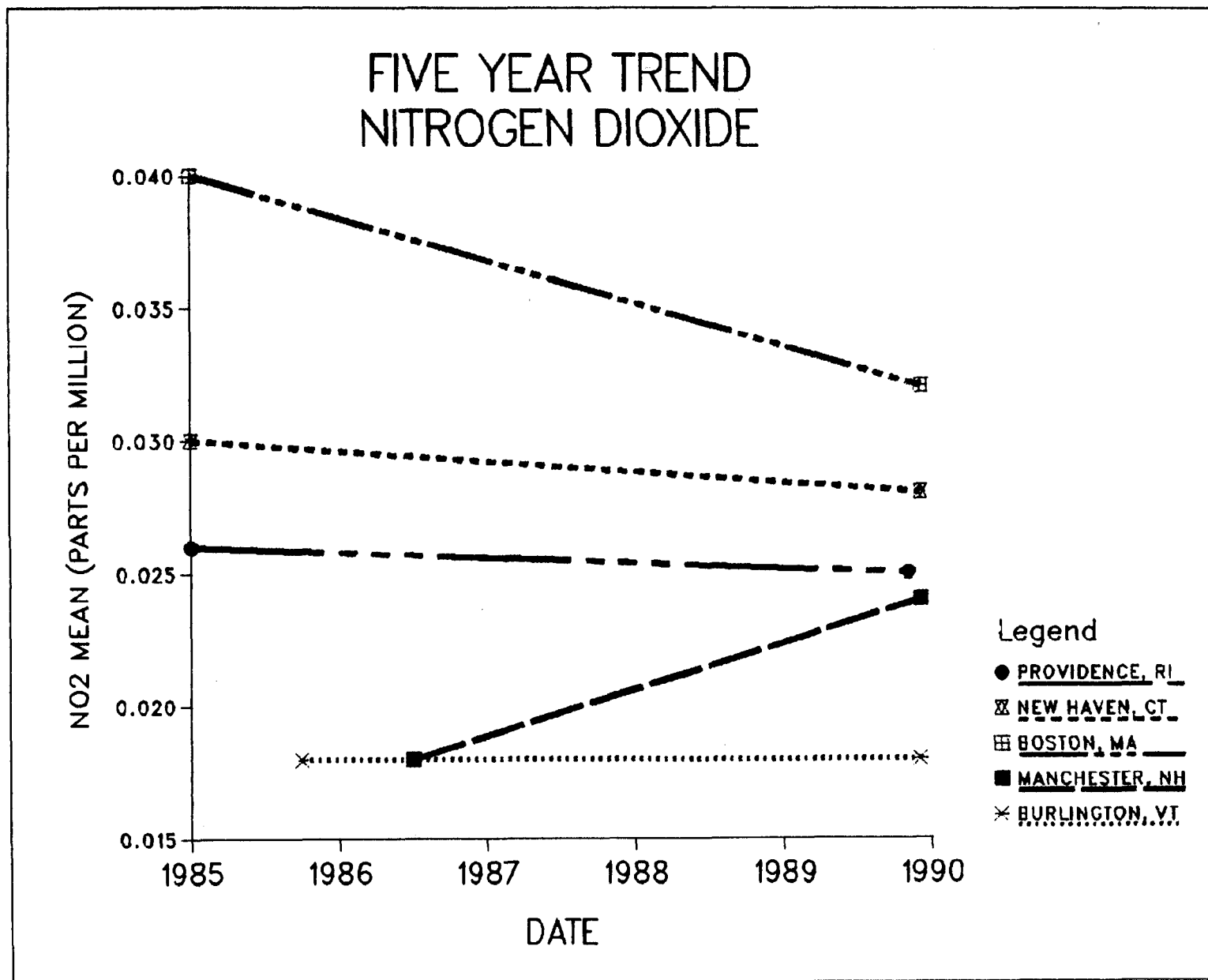
## NITROGEN DIOXIDE (42602)

VERMONT

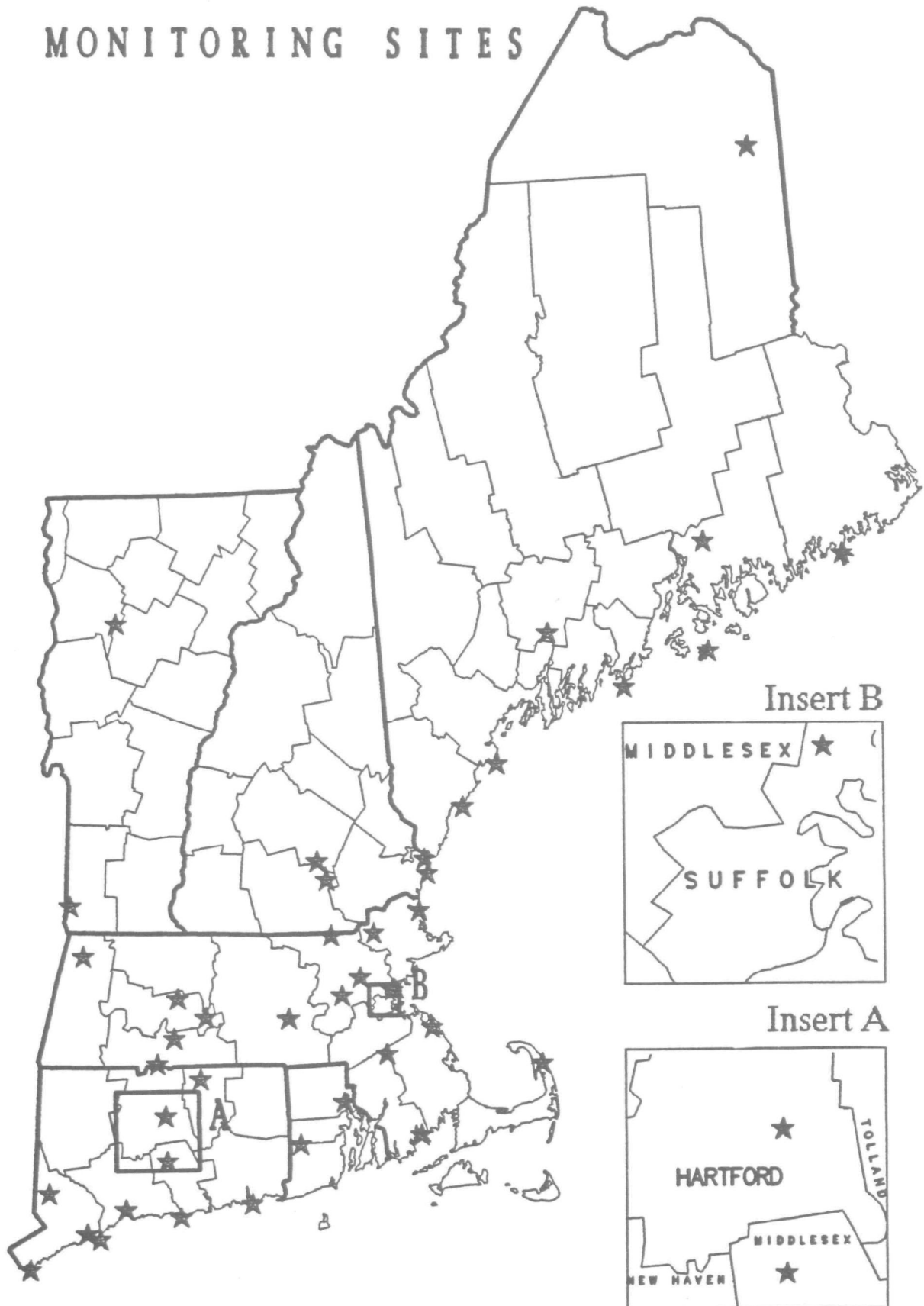
UNITS: 007 PPM

SITE ID	P O M C T CITY	COUNTY	ADDRESS	REP		MAX		1-HR		MAX		24-HR		ARIT	
				YR	ORG	#OBS	1ST	2ND	1ST	2ND	1ST	2ND	MEAN	METH	
50-007-0003	1 2 BURLINGTON	CHITTENDEN CO	ADJ. TO 82 S. WINOOSKI AVE	89	001	7745	.066	.066						.019	014
50-021-0002	1 2 RUTLAND	RUTLAND CO	PARKING LOT ADJ. TO 9 MERC	89	001	7008	.080	.076						.015	014

METHODS:	CODE	NITROGEN DIOXIDE (42602)	
		COLLECTION METHOD	ANALYSIS METHOD
	====	=====	=====
	014	INSTRUMENTAL	CHEMILUMINESCENCE



# 1989 OZONE MONITORING SITES





## OZONE (44201)

## CONNECTICUT

UNITS: 007 PPM

OZONE SEASON: APR 01 TO OCT 31

P				*				VALID DAILY 1-HR MAXIMUM				* MISS DAYS				
O M				REP *NUM NUM				-----MAXIMA-----				VALS>.125 * ASSUMED <				
SITE ID	C T	CITY	COUNTY	ADDRESS	YR	ORG	*MEAS	REQ	1ST	2ND	3RD	4TH	MEAS	EST	* STANDARD	METH
09-001-0113	1 2	BRIDGEPORT	FAIRFIELD C	30 CONGRESS ST	89	001	213	214	.156	.147	.145	.131	4	4.0	1	014
09-001-1123	1 2	DANBURY	FAIRFIELD C	TRAILER	89	001	209	214	.134	.127	.124	.123	2	2.0	1	014
09-003-1003	1 1	EAST HARTFORD	HARTFORD CO	30 REMINGTON RD	89	001	203	214	.166	.140	.134	.133	5	5.2	1	014
09-001-0017	1 2	GREENWICH	FAIRFIELD C	GREENWICH POINT	89	001	203	214	.187	.162	.150	.149	7	7.3	1	014
09-011-0008	1 2	GROTON	NEW LONDON	UNIVERSITY OF CT	89	001	197	214	.145	.142	.137	.132	6	6.4	3	014
09-009-3002	1 3	MADISON	NEW HAVEN C	HAMMONASSET STAT	89	000	192	214	.149	.148	.136	.126	4	4.3	10	014
09-007-0007	1 1	MIDDLETOWN	MIDDLESEX C	CT VALLEY HOSP	89	001	205	214	.172	.167	.149	.128	5	5.1	3	014
09-009-1123	1 1	NEW HAVEN	NEW HAVEN C	715 STATE STREET	89	001	195	214	.156	.149	.141	.129	4	4.3	3	014
09-013-1001	1 1	STAFFORD	TOLLAND CO	ROUTE 190	89	001	181	214	.159	.128	.126	.123	3	3.4	9	014
09-001-3007	1 1	STRATFORD	FAIRFIELD C	USCG LIGHTHOUSE	89	001	203	214	.202	.175	.165	.156	10	10.4	3	014

## OZONE (44201)

## MAINE

UNITS: 007 PPM

OZONE SEASON: APR 01 TO OCT 31

SITE ID	P	C T CITY	COUNTY	ADDRESS	YR	ORG	* REP *NUM *MEAS	NUM REQ	VALID DAILY 1-HR MAXIMUM				* MISS DAYS			
	O M								-----MAXIMA-----	VALS>.125 * ASSUMED <						
									1ST	2ND	3RD	4TH	MEAS	EST	* STANDARD	METH
23-009-2003	1 2		HANCOCK CO	BALD MTN.,DUANE	89	001	134	214	.108	.099	.091	.087	0	0.0	2	000
23-013-0003	1 3		KNOX CO	ISLE AU HAUT	89	000	127	214	.118	.108	.108	.107	0	0.0	1	011
23-013-0004	1 3		KNOX CO	PORT CLYDE	89	001	182	214	.134	.120	.120	.119	1	1.2	2	014
23-031-2002	1 2		YORK CO	OCEAN AVE/PARSON	89	001	159	214	.154	.147	.140	.122	3	4.0	1	011
23-005-2003	1 2	CAPE ELIZABET	CUMBERLAND	SHELTER SITE	89	001	203	214	.146	.130	.125	.113	3	3.2	0	011
23-011-2001	2 2	GARDINER	KENNEBEC CO	GARDINER H.S.	89	001	186	214	.126	.108	.100	.098	1	1.1	2	014
23-029-0019	1 2	JONESPORT	WASHINGTON	JONESPORT	89	001	119	214	.100	.093	.092	.092	0	0.0	0	011
23-003-1008	1 3	PRESQUE ISLE	AROOSTOOK C	PI REGIONAL OFC	89	110	95	214	.061	.060	.057	.057	0	0.0	3	014
23-009-0101	1 3		HANCOCK CO	ACADIA NP	89	815	202	214	.130	.103	.103	.088	1	1.0	5	014

## OZONE (44201)

## MASSACHUSETTS

UNITS: 007 PPM

OZONE SEASON: APR 01 TO OCT 31

P O M SITE ID	C T CITY	COUNTY	ADDRESS	YR ORG	*REP	*NUM	NUM	VALID DAILY 1-HR MAXIMUM				* MISS DAYS				
								-----MAXIMA-----				VALS>.125	* ASSUMED <			
								1ST	2ND	3RD	4TH	MEAS	EST	* STANDARD	METH	
25-003-4002	1 2	ADAMS	BERKSHIRE C	MT. GREYLOCK	89	001	163	214	.102	.086	.085	.083	0	0.0	1	014
25-013-0003	1 2	AGAWAM	HAMPDEN CO	152 SOUTH WESTFI	89	001	191	214	.148	.125	.119	.118	2	2.2	1	014
25-015-0103	1 3	AMHERST	HAMPSHIRE C	NORTH PLEASANT S	89	001	207	214	.112	.107	.103	.097	0	0.0	2	000
25-025-1003	1 1	CHELSEA	SUFFOLK CO	POWDER HORN HILL	89	001	211	214	.123	.114	.113	.090	0	0.0	1	014
25-013-0008	1 1	CHICOPEE	HAMPDEN CO	ANDERSON ROAD	89	001	204	214	.117	.115	.110	.109	0	0.0	2	014
25-005-1001	1 1	EASTON	BRISTOL CO	NORTH EASTON	89	001	211	214	.136	.132	.113	.103	2	2.0	3	014
25-005-1002	1 2	FAIRHAVEN	BRISTOL CO	LEROY WOOD SCH	89	001	176	214	.150	.122	.108	.100	1	1.2	0	014
25-009-0005	1 1	LAWRENCE	ESSEX CO	HIGH STREET	89	001	201	214	.118	.106	.103	.102	0	0.0	2	011
25-017-6001	1 3	LEXINGTON	MIDDLESEX C	NEW ENGLAND REGI	89	801	146	214	.107	.106	.100	.099	0	0.0	1	014
25-009-4003	1 1	NEWBURYPORT	ESSEX CO	PARKER RIVER NWR	89	001	193	214	.123	.123	.101	.098	0	0.0	1	014
25-023-2001	1 3	SCITUATE	PLYMOUTH CO	SCITUATE POLICE	89	001	203	214	.131	.118	.118	.115	1	1.1	0	014
25-017-1801	1 1	SUDBURY	MIDDLESEX C	WATER ROW RD	89	001	200	214	.122	.120	.111	.107	0	0.0	3	014
25-001-0002	1 3	TRURO	BARNSTABLE	FOX BOTTOM AREA	89	001	198	214	.144	.128	.127	.127	4	4.3	1	014
25-015-4002	1 1	WARE	HAMPSHIRE C	QUABBIN SUMMIT	89	001	211	214	.168	.133	.126	.123	3	3.0	2	014
25-027-0019	1 1	WORCESTER	WORCESTER C	DPW YARD, BELMON	89	001	214	214	.127	.103	.095	.095	1	1.0	0	014

## OZONE (44201)

## NEW HAMPSHIRE

UNITS: 007 PPM

OZONE SEASON: APR 01 TO OCT 31

P				*			VALID DAILY 1-HR MAXIMUM				* MISS DAYS				
O M				REP *NUM NUM			-----MAXIMA-----				VALS>.125 * ASSUMED <				
SITE ID	C T	CITY	COUNTY	ADDRESS	YR ORG	*MEAS	REQ	1ST	2ND	3RD	4TH	MEAS	EST	* STANDARD	METH
33-013-0006	1 3	BOW	MERRIMACK C	SOUTH BOW	89 001	200	214	.122	.103	.091	.090	0	0.0	2	011
33-011-0016	1 2	MANCHESTER	HILLSBOROUG	HARNETT PARK	89 001	210	214	.117	.089	.085	.080	0	0.0	4	011
33-011-1010	1 2	NASHUA	HILLSBOROUG	SANDERS ASSOCIAT	89 001	211	214	.121	.093	.092	.085	0	0.0	3	011
33-015-0009	1 1	PORTSMOUTH	ROCKINGHAM	VAUGHAN STREET	89 001	213	214	.114	.107	.106	.099	0	0.0	1	011
33-015-0012	1 2	RYE	ROCKINGHAM	RYE HARBOR STATE	89 001	213	214	.165	.140	.124	.121	2	2.0	0	011

## OZONE (44201)

RHODE ISLAND

UNITS: 007 PPM

OZONE SEASON: APR 01 TO OCT 31

SITE ID	C T	CITY	COUNTY	ADDRESS	C T	YR	ORG	*MEAS	REQ	VALID DAILY 1-HR MAXIMUM				* MISS DAYS		METH	
										1ST	2ND	3RD	4TH	MEAS	EST		
44-003-0002	1	2	KENT CO	W. ALTON JONES		89	001	162	214	.160	.132	.112	.107	2	2.6	1	014
44-007-0012	1	1	PROVIDENCE	ROCKEFELLER LIB		89	001	198	214	.107	.105	.099	.095	0	0.0	5	011

## OZONE (44201)

VERMONT

UNITS: 007 PPM

OZONE SEASON: APR 01 TO OCT 31

SITE ID	C T	CITY	COUNTY	ADDRESS	C T	YR	ORG	*MEAS	REQ	VALID DAILY 1-HR MAXIMUM				* MISS DAYS		METH	
										1ST	2ND	3RD	4TH	MEAS	EST		
50-007-0007	1	2	CHITTENDEN	PROCTOR MAPLE		89	001	173	214	.091	.088	.080	.076	0	0.0	4	014
50-003-0004	1	2	BENNINGTON	AIRPORT RD		89	001	205	214	.106	.091	.090	.088	0	0.0	3	014

## OZONE (44201)

METHODS:

CODE

COLLECTION METHOD

ANALYSIS METHOD

=====

=====

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000

MULTIPLE METHODS

MULTIPLE METHODS

011

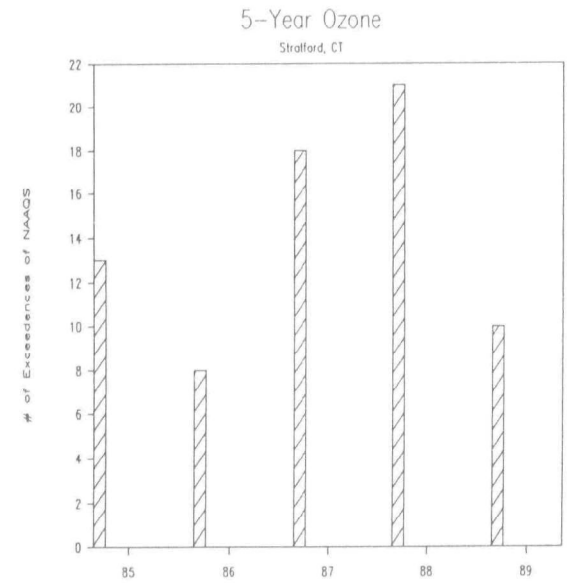
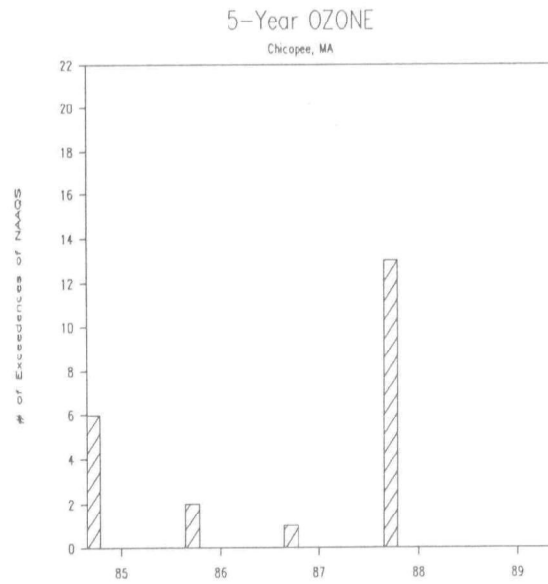
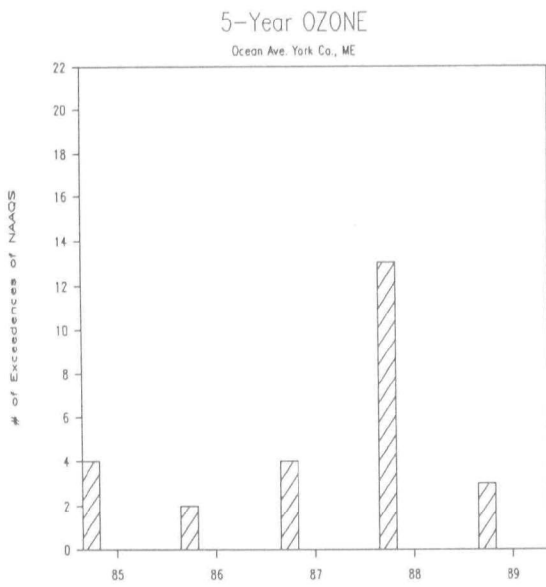
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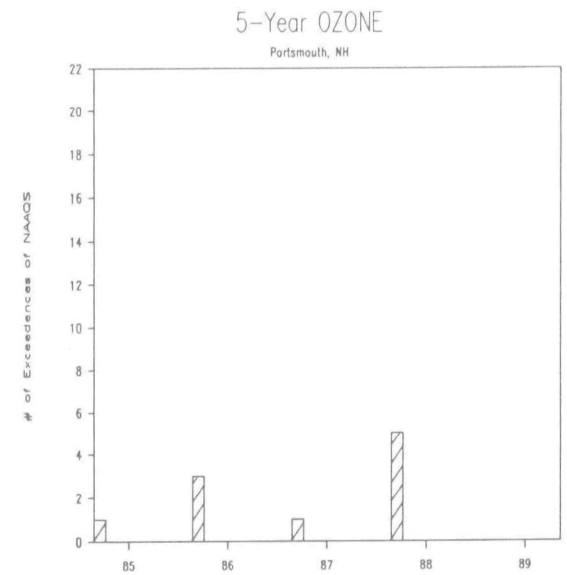
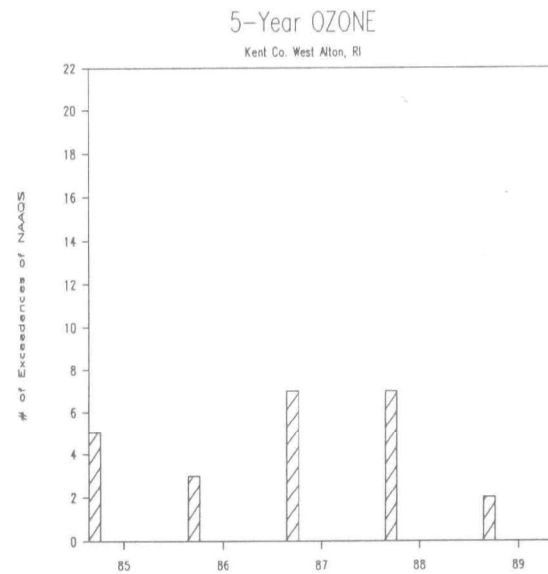
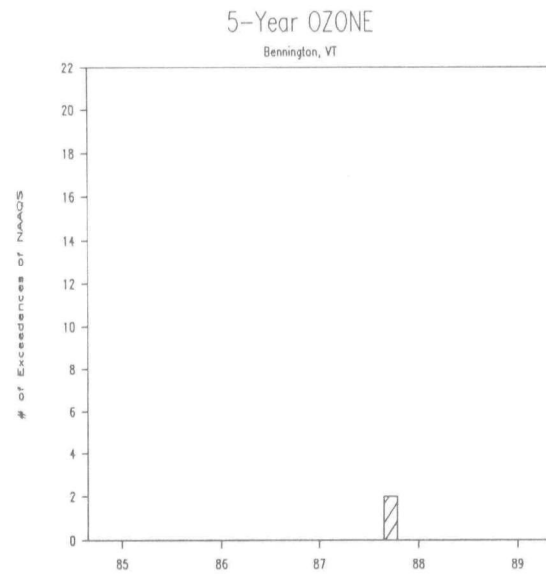
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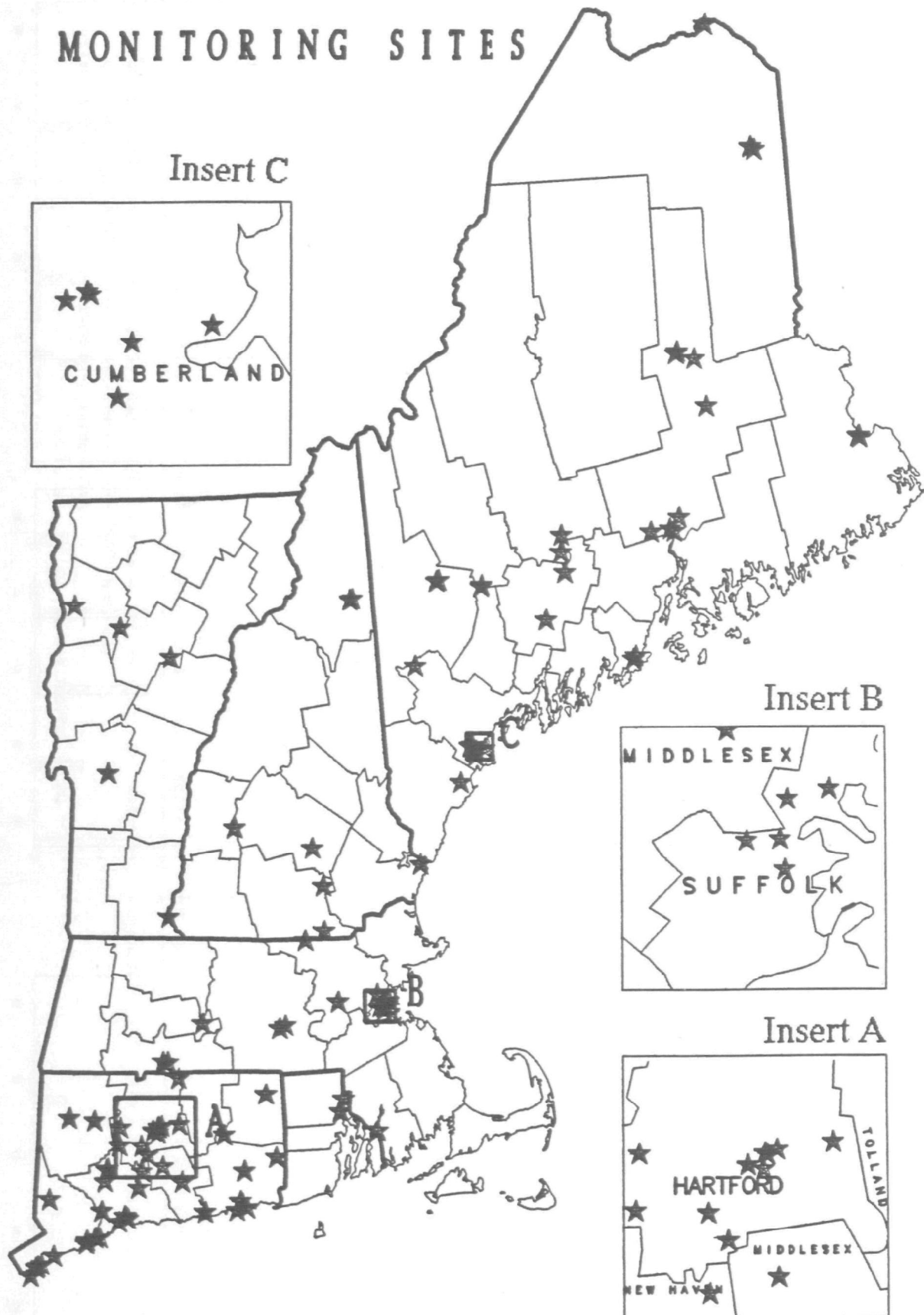
ULTRA VIOLET



40



# 1989 PM-10 MONITORING SITES



PM-10 TOTAL 0-10UM (81102)

CONNECTICUT

UNITS: 001 UG/CU METER (25 C)

SITE ID	P		CITY	COUNTY	ADDRESS	YR	ORG	SCHEDULED							-----MAXIMUM VALUES-----					WTD	
	O M							REP	NUM	NUM	%	NUM					VALS > 150	ARITH			
	C	T						OBS	OBS	OBS	REQ	1ST	2ND	3RD	4TH	MEAS	EST	MEAN	METH		
09-009-0004	1	2	ANSONIA	NEW HAVEN	DIVISION STREET TREAT	89	001	57	57	93	61	56	53	46	44	0	0.00	25	062		
09-003-6002	1	3	BERLIN	HARTFORD C	BERLIN HIGH SCHOOL	89	001	59	59	97	61	51	48	46	42	0	0.00	22	062		
09-001-0010	1	1	BRIDGEPORT	FAIRFIELD	ROOSEVELT SCHOOL PARK	89	001	57	57	93	61	61	56	56	54	0	0.00	27	062		
09-001-0015	1	2	BRIDGEPORT	FAIRFIELD	MYRTLE AVE	89	001	59	59	97	61	70	69	68	67	0	0.00	36	062		
09-001-0113	1	3	BRIDGEPORT	FAIRFIELD	30 CONGRESS ST (REAR)	89	001	57	57	93	61	63	61	54	53	0	0.00	27	062		
09-003-1001	1	2	BRISTOL	HARTFORD C	CITY HALL 111 N. MAIN	89	001	60	60	98	61	50	44	44	40	0	0.00	23	062		
09-003-2001	1	2	BURLINGTON	HARTFORD C	PUNCH BROOK ROAD	89	001	58	58	95	61	41	32	29	28	0	0.00	15	062		
09-005-0005	1	2	CORNWALL	LITCHFIELD	MOHAWK MTN MICROWAVE	89	001	60	60	98	61	45	33	31	30	0	0.00	15	062		
09-001-1123	1	3	DANBURY	FAIRFIELD	TRAILER, W. CONNECTIC	89	001	56	56	92	61	52	48	48	47	0	0.00	25	062		
09-001-1401	1	3	DARIEN	FAIRFIELD	I-95 AT BROOKSIDE DR	89	001	45	45	98	46	60	60	52	49	0	0.00	29?	062		
09-003-1004	1	3	EAST HARTF	HARTFORD C	CITY HALL, 740 MAIN S	89	001	59	59	97	61	60	57	53	51	0	0.00	26	062		
09-003-1005	1	2	ENFIELD	HARTFORD C	SHAKER ROAD	89	001	58	58	95	61	48	40	36	36	0	0.00	20	062		
09-001-0017	1	3	GREENWICH	FAIRFIELD	GREENWICH POINT PARK	89	001	56	56	92	61	57	48	48	44	0	0.00	21	062		
09-011-0006	1	2	GROTON	NEW LONDON	GROTON HIGHWAY GARAGE	89	001	59	59	97	61	55	41	38	37	0	0.00	20	062		
09-007-0002	1	2	HADDAM	MIDDLESEX	CRIMINAL JUSTICE ACAD	89	001	58	58	95	61	51	39	36	34	0	0.00	19	062		
09-003-0013	1	1	HARTFORD	HARTFORD C	401 FLATBUSH AVENUE	89	001	56	56	92	61	47	47	46	44	0	0.00	23?	062		
09-003-0014	1	3	HARTFORD	HARTFORD C	FRANKLIN AVE. FIREHOU	89	001	58	58	95	61	63	54	52	50	0	0.00	24	062		
09-003-0015	1	1	HARTFORD	HARTFORD C	HELCO, 400 SHELDON ST	89	001	59	59	97	61	65	59	54	47	0	0.00	30	062		
09-003-1018	1	3	HARTFORD	HARTFORD C	CORNER OF SHELDON ST.	89	001	60	60	98	61	64	58	57	55	0	0.00	28	062		
09-003-7001	1	2	MANCHESTER	HARTFORD C	TOWN HALL, 41 CENTER	89	001	59	59	97	61	51	50	38	36	0	0.00	21	062		
09-009-4002	1	2	MERIDEN	NEW HAVEN	STODDARD BUILDING, 16	89	001	48	48	79	61	57	50	42	42	0	0.00	23?	062		
09-007-1003	1	2	MIDDLETOWN	MIDDLESEX	CITY HALL, DEKOVEN DR	89	001	57	57	93	61	56	52	51	43	0	0.00	23	062		
09-009-0010	1	2	MILFORD	NEW HAVEN	EGAN CENTER	89	001	57	57	93	61	55	40	39	38	0	0.00	23	062		
09-009-5001	1	2	NAUGATUCK	NEW HAVEN	229 CHURCH STREET	89	001	60	60	98	61	63	52	50	48	0	0.00	26	062		
09-003-0018	1	3	NEW BRITAI	HARTFORD C	NORTHEAST UTILITIES	89	001	61	60	98	61	60	54	53	45	0	0.00	24	062		
09-009-0011	1	2	NEW HAVEN	NEW HAVEN	HAMILTON AVE	89	001	59	59	97	61	62	57	50	49	0	0.00	29	062		
09-009-0013	1	1	NEW HAVEN	NEW HAVEN	FIRE HEADQUARTERS	89	001	57	57	93	61	57	43	42	42	0	0.00	25	062		
09-009-0018	1	1	NEW HAVEN	NEW HAVEN	STILES STREET	89	001	350	350	96	365	126	112	109	109	0	0.00	44	062		
09-009-0021	1	3	NEW HAVEN	NEW HAVEN	CORNER OF STILES ST	89	001	57	57	67	90	90	83	79	77	0	0.00	39?	062		

PM-10 TOTAL 0-10UM (81102)

CONNECTICUT (continued)

UNITS: 001 UG/CU METER (25 C)

SITE ID	P O M C T CITY	COUNTY	ADDRESS	REP YR ORG	SCHEDULED			NUM REQ	----MAXIMUM VALUES-----				VALS > 150 EST	WTD ARITH		
					NUM OBS	NUM OBS	% OBS		1ST	2ND	3RD	4TH		MEAS	MEAN	METH
09-009-1123	1 2 NEW HAVEN	NEW HAVEN	715 STATE STREET	89 001	56	56	92	61	59	54	54	47	0	0.00	28	062
09-009-1123	2 3 NEW HAVEN	NEW HAVEN	715 STATE STREET	89 001	59	59	97	61	57	52	52	47	0	0.00	28	062
09-011-0009	1 3 NEW LONDON	NEW LONDON	PERKINS ST TURN-AROUN	89 001	42	42	91	46	55	39	39	37	0	0.00	22?	062
09-001-2014	1 2 NORWALK	FAIRFIELD	1-95 AT WEST AVE	89 001	57	57	93	61	82	69	68	63	0	0.00	37	062
09-011-3002	1 2 NORWICH	NEW LONDON	22 COURT HOUSE SQUARE	89 001	60	60	98	61	54	47	45	44	0	0.00	23	062
09-007-0005	1 3 OLD SAYBRO	MIDDLESEX	1-95 NORTH BOUND	89 001	59	59	97	61	69	45	45	44	0	0.00	23	062
09-015-0002	1 2 PUTNAM	WINDHAM CO	115 CHURCH ST	89 001	59	59	97	61	50	40	39	37	0	0.00	20	062
09-001-0026	1 3 STAMFORD	FAIRFIELD	1-95 AT TRAIN STATION	89 001	5	5	33	15	48	38	36	27	0	0.00	33?	062
09-001-8001	1 2 STAMFORD	FAIRFIELD	653 MAIN STREET	89 001	59	59	97	61	62	57	51	49	0	0.00	26	062
09-001-5005	1 2 STRATFORD	FAIRFIELD	730 MAIN STREET	89 001	60	60	98	61	57	52	46	44	0	0.00	25	062
09-005-6001	1 2 TORRINGTON	LITCHFIELD	140 MAIN STREET	89 001	60	60	98	61	48	48	44	43	0	0.00	23	062
09-011-9001	1 3 VOLUNTOWN	NEW LONDON	PACHAUG STATE FOREST	89 001	56	56	92	61	47	36	30	29	0	0.00	16	062
09-009-4006	1 2 WALLINGFOR	NEW HAVEN	45 SOUTH MAIN ST	89 001	58	58	95	61	46	45	44	37	0	0.00	22	062
09-009-2123	1 1 WATERBURY	NEW HAVEN	MEADOW ST OFF RAMP	89 001	59	59	97	61	70	68	68	66	0	0.00	33	062
09-009-2123	2 3 WATERBURY	NEW HAVEN	MEADOW ST OFF RAMP	89 001	56	56	92	61	71	64	63	62	0	0.00	32	062
09-009-3007	1 3 WATERBURY	NEW HAVEN	519 EAST MAIN ST	89 001	57	57	93	61	70	60	56	55	0	0.00	27	062
09-011-1101	1 2 WATERFORD	NEW LONDON	NEW LONDON COUNTRY CL	89 001	58	58	95	61	52	35	33	31	0	0.00	18	062
09-009-8003	1 2 WEST HAVEN	NEW HAVEN	OLEANDER ST AT I-95	89 001	60	60	98	61	59	50	49	47	0	0.00	28	062
09-015-1002	1 3 WILLIMANTI	WINDHAM CO	108 VALLEY ST	89 001	60	60	98	61	45	43	41	38	0	0.00	21	062

? INDICATES THAT THE MEAN DOES NOT SATISFY SUMMARY CRITERIA

PM-10 TOTAL 0-10UM (81102)					MAINE		UNITS: 001 UG/CU METER (25 C)											
P							SCHEDULED										WTD	
O M					REP		NUM										ARITH	
C T CITY					YR ORG		OBS OBS OBS REQ										MEAN METH	
COUNTY ADDRESS							-----MAXIMUM VALUES-----										VALS > 150	
							1ST 2ND 3RD 4TH MEAS EST											
SITE ID																		



PM-10 TOTAL 0-10UM (81102)				MAINE (continued)				UNITS: 001 UG/CU METER (25 C)									
P				SCHEDULED				WTD									
O M				REP	NUM	NUM	%	NUM	----MAXIMUM VALUES-----					VALS > 150	ARITH		
SITE ID	C	T	CITY	YR	ORG	OBS	OBS	OBS	REQ	1ST	2ND	3RD	4TH	MEAS	EST	MEAN	METH
23-005-1008	1	2	WESTBROOK	89	001	331	331	91	365	66	64	58	57	0	0.00	24	062
23-005-1012	2	4	WESTBROOK	89	101	54	54	89	61	58	54	49	44	0	0.00	23	062
23-005-7002	1	4	WESTBROOK	89	101	57	57	93	61	42	39	38	37	0	0.00	21	062
23-011-2003	2	3	WINSLOW	89	000	62	62	102	61	77	75	67	59	0	0.00	28	064

? INDICATES THAT THE MEAN DOES NOT SATISFY SUMMARY CRITERIA

PM-10 TOTAL 0-10UM (81102)				MASSACHUSETTS				UNITS: 001 UG/CU METER (25 C)									
P				SCHEDULED				WTD									
O M				REP	NUM	NUM	%	NUM	----MAXIMUM VALUES-----					VALS > 150	ARITH		
SITE ID	C	T	CITY	YR	ORG	OBS	OBS	OBS	REQ	1ST	2ND	3RD	4TH	MEAS	EST	MEAN	METH
25-025-0002	1	1	BOSTON	89	001	50	50	82	61	55	54	53	51	0	0.00	32?	063
25-025-0012	1	2	BOSTON	89	001	57	57	93	61	58	53	48	46	0	0.00	26	062
25-025-0021	1	2	BOSTON	89	001	56	52	83	63	53	51	48	43	0	0.00	24?	000
25-025-0024	1	1	BOSTON	89	001	55	55	90	61	58	54	53	52	0	0.00	30	064
25-025-0027	1	1	BOSTON	89	001	58	58	95	61	78	75	65	58	0	0.00	36	064
25-005-3001	1	2	FALL RIVER	89	001	66	61	100	61	54	42	37	36	0	0.00	22	063
25-017-3002	1	2	MEDFORD	89	001	33	33	72	46	76	48	43	41	0	0.00	28?	062
25-013-0011	2	2	SPRINGFIEL	89	001	56	56	92	61	60	53	46	44	0	0.00	29	064
25-013-2007	1	1	SPRINGFIEL	89	001	54	54	89	61	79	58	54	52	0	0.00	31	064
25-017-1801	1	2	SUDBURY	89	001	60	60	98	61	49	43	34	29	0	0.00	17	063
25-015-4002	1	2	WARE	89	001	111	61	100	61	57	45	42	37	0	0.00	15	062
25-013-5003	1	2	WEST SPRIN	89	001	30	30	97	31	51	40	37	34	0	0.00	24?	062
25-027-0013	1	2	WORCESTER	89	001	55	55	90	61	57	53	53	38	0	0.00	25?	064
25-027-0016	1	1	WORCESTER	89	001	59	58	95	61	58	56	53	51	0	0.00	27	064

? INDICATES THAT THE MEAN DOES NOT SATISFY SUMMARY CRITERIA

PM-10 TOTAL 0-10UM (81102)				NEW HAMPSHIRE				UNITS: 001 UG/CU METER (25 C)												
SITE ID	C	T	CITY	COUNTY	ADDRESS	YR	ORG	SCHEDULED				-----MAXIMUM VALUES-----					WTD			
								REP	NUM	NUM	%	NUM	1ST	2ND	3RD	4TH	MEAS	EST	ARITH	METH
33-013-5001	1	3		MERRIMACK	MT. SUNAPEE	89	001	51	51	84	61	40	38	31	30	0	0.00	14	064	
33-007-0008	2	3	BERLIN	COOS CO	OFF HUTCHINS STREET	89	000	89	30	100	30	150	98	96	71	0	0.00	32?	064	
33-007-0014	1	0	BERLIN	COOS CO	LANCASTER STREET TRAI	89	902	329	61	100	61	217	145	133	133	1	1.00	40	064	
33-007-0014	4	3	BERLIN	COOS CO	LANCASTER STREET TRAI	89	902	110	101	163	62	70	63	63	62	0	0.00	35	062	
33-013-0004	1	2	CONCORD	MERRIMACK	JUNCTION RTS. 3 AND 9	89	001	61	56	92	61	98	91	90	72	0	0.00	34	064	
33-011-2001	2	2	HOLLIS	HILLSBOROU	RTE. 122, SILVER LAKE	89	001	1	1	7	15	23				0	0.00	23?	064	
33-011-0015	1	1	MANCHESTER	HILLSBOROU	351 CHESTNUT STREET	89	001	57	57	93	61	47	47	44	43	0	0.00	24	064	
33-011-0015	2	3	MANCHESTER	HILLSBOROU	351 CHESTNUT STREET	89	001	3	3	20	15	29	22	16		0	0.00	22?	064	
33-011-0015	3	3	MANCHESTER	HILLSBOROU	351 CHESTNUT STREET	89	001	53	53	87	61	49	47	37	36	0	0.00	19?	064	
33-011-1007	1	2	NASHUA	HILLSBOROU	MAIN STREET	89	001	59	59	97	61	86	52	50	48	0	0.00	24	064	
33-015-0009	1	2	PORTSMOUTH	ROCKINGHAM	VAUGHAN STREET	89	001	52	52	85	61	86	47	44	40	0	0.00	23?	064	

? INDICATES THAT THE MEAN DOES NOT SATISFY SUMMARY CRITERIA

PM-10 TOTAL 0-10UM (81102)					RHODE ISLAND			UNITS: 001 UG/CU METER (25 C)											
P					SCHEDULED								WTD						
O M					REP	NUM	NUM	%	NUM	----MAXIMUM VALUES-----				VALS > 150	ARITH				
SITE ID	C	T	CITY	COUNTY	ADDRESS	YR	ORG	OBS	OBS	OBS	REQ	1ST	2ND	3RD	4TH	MEAS	EST	MEAN	METH
44-007-1005	1	1	PAWTUCKET	PROVIDENCE	SUMMIT STREET	89	001	61	61	100	61	59	57	56	52	0	0.00	32	064
44-007-0020	1	2	PROVIDENCE	PROVIDENCE	ALLENS AVE	89	001	61	61	100	61	83	80	78	73	0	0.00	39	064

PM-10 TOTAL 0-10UM (81102)				VERMONT	UNITS: 001 UG/CU METER (25 C)										WTD				
P				SCHEDULED												ARITH			
O M				REP	NUM	NUM	%	NUM	----MAXIMUM VALUES-----				VALS > 150						
SITE ID	C	T	CITY	COUNTY	ADDRESS	YR	ORG	OBS	OBS	OBS	REQ	1ST	2ND	3RD	4TH	MEAS	EST	MEAN	METH
50-007-0007	1	2		CHITTENDEN	PROCTOR MAPLE RESEARC	89	001	51	51	84	61	37	30	29	28	0	0.00	15?	062
50-023-0003	3	0	BARRE	WASHINGTON	SOUTH SEMINARY STREET	89	001	48	48	79	61	52	46	44	42	0	0.00	24?	062
50-025-0003	2	2	BRATTLEBOR	WINDHAM CO	232 MAIN STREET	89	001	54	54	89	61	45	41	40	38	0	0.00	23?	062
50-007-0003	1	1	BURLINGTON	CHITTENDEN	ADJ. TO 82 S. WINOOSK	89	001	53	53	87	61	49	43	43	42	0	0.00	26?	062
50-007-0003	2	3	BURLINGTON	CHITTENDEN	ADJ. TO 82 S. WINOOSK	89	001	27	27	87	31	43	42	42	41	0	0.00	25?	062
50-021-0002	1	2	RUTLAND	RUTLAND CO	PARKING LOT ADJ. TO 9	89	001	44	44	96	46	70	60	52	47	0	0.00	27?	062
50-021-0002	2	3	RUTLAND	RUTLAND CO	PARKING LOT ADJ. TO 9	89	001	16	16	100	16	71	60	53	50	0	0.00	33?	062
50-021-0004	2	3	RUTLAND	RUTLAND CO	15-19 WALES STREET	89	001	11	11	73	15	47	46	44	36	0	0.00	32?	062

? INDICATES THAT THE MEAN DOES NOT SATISFY SUMMARY CRITERIA

METHODS:		PM-10 TOTAL 0-10UM (81102)	ANALYSIS METHOD
CODE	COLLECTION METHOD		
000	MULTIPLE METHODS		MULTIPLE METHODS
062	HI-VOL-WEDDING-INLET		GRAVIMETRIC
063	HI-VOL-SA/GMW-1200		GRAVIMETRIC
064	HI-VOL-SA/GMW-321-B		GRAVIMETRIC

# FIVE YEAR TREND PM 10

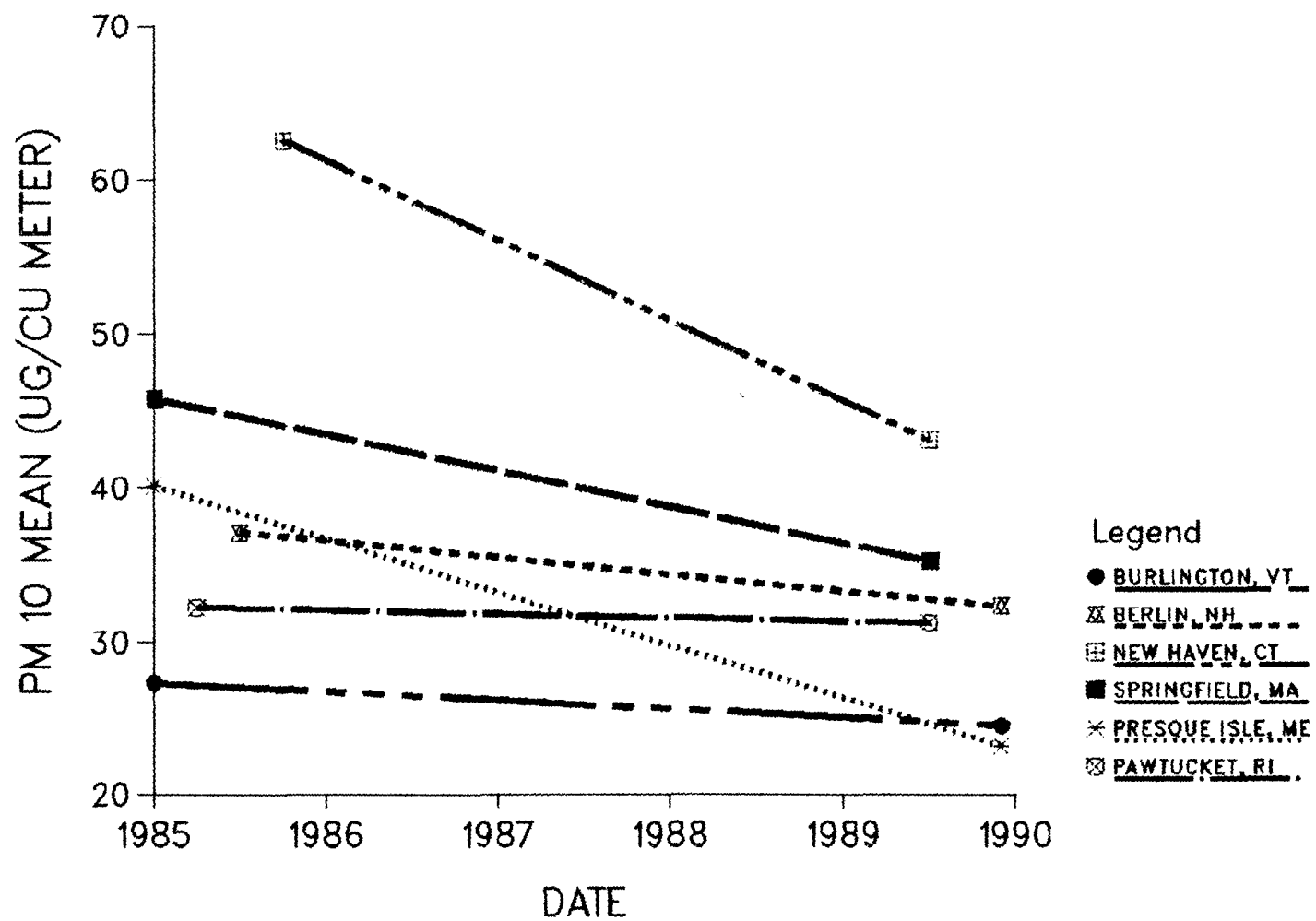


TABLE 4

NUMBER OF STATIONS VIOLATING NATIONAL AMBIENT AIR QUALITY STANDARDS IN 1989  
BY AIR QUALITY CONTROL REGION

AQCR	AQCR No. State		PM <sub>10</sub>		CO		SO <sub>2</sub>		NO <sub>2</sub>	O <sub>3</sub>	Pb
			* 24-hour 150ug/m <sup>3</sup>	Annual Arithmetic Mean 50ug/m <sup>3</sup>	* Hour 35ppm	* 8-Hour 9ppm	* 24-Hour 365ug/m <sup>3</sup>	Annual Average 80ug/m <sup>3</sup>	Annual Average 100ug/m <sup>3</sup>	* 1-Hour 0.12ppm	Quarterly Average 1.5ug/m <sup>3</sup>
Eastern Connecticut	041	CT	0/8	0/8	---	---	0/1	0/1	---	2/2	---
Hartford New Haven Springfield	042	CT	0/28	0/28	0/3	0/3	0/11	0/11	0/2	4/4	0/2
Hartford New Haven Springfield	042	MA	0/4	0/4	0/2	0/2	0/3	0/3	0/2	2/4	0/2
New Jersey New York Connecticut	043	CT	0/10	0/10	0/2	0/2	0/6	0/6	0/1	4/4	---
Northwestern Connecticut	044	CT	0/2	0/2	---	---	---	---	---	---	---
Androscoggin Valley	107	ME	0/10	0/10	---	---	0/6	0/7	---	0/3	0/2
Androscoggin Valley	107	NH	0/2	0/2	---	---	0/4	0/4	---	---	---
Aroostook	108	ME	0/4	0/4	---	---	0/3	0/3	---	0/1	---
Down East	109	ME	0/11	0/11	---	---	0/4	0/4	---	0/2	0/1
Metropolitan Portland	110	ME	0/8	0/8	0/1	0/1	0/2	0/2	---	2/2	0/3

\* Unless the second highest average exceeds the NAAQS, there is no violation.

x/y: x is the number of stations in violation, y is the number of stations reporting data for time period.

--- This pollutant is not monitored in the AQCR (state portion).

TABLE 4 (Continued)

NUMBER OF STATIONS VIOLATING NATIONAL AMBIENT AIR QUALITY STANDARDS IN 1988  
BY AIR QUALITY CONTROL REGION

AQCR	AQCR No.	State	PM <sub>10</sub> Annual Arithmetic Mean		CO		SO <sub>2</sub>		NO <sub>2</sub>	O <sub>3</sub>	Pb
			* 24-hour 150ug/m <sup>3</sup>	50ug/m <sup>3</sup>	* Hour 35ppm	* 8-Hour 9ppm	* 24-Hour 365ug/m <sup>3</sup>	Annual Average 80ug/m <sup>3</sup>	Annual Average 100ug/m <sup>3</sup>	* 1-Hour 0.12ppm	Quarterly Average 1.5ug/m <sup>3</sup>
Northwest Maine	111	ME	---	---	---	---	---	---	---	---	---
Berkshire	117	MA	---	---	---	---	---	---	---	0/1	---
Central Massachusetts	118	MA	0/2	0/2	0/1	0/1	0/2	0/2	0/1	0/1	---
Metropolitan Boston	119	MA	0/7	0/7	0/3	0/3	0/4	0/4	0/3	0/3	0/2
Metropolitan Providence	120	MA	0/1	0/1	---	---	0/1	0/1	---	2/4	---
Metropolitan Providence	120	RI	0/2	0/2	0/2	0/2	0/3	0/3	0/1	1/2	0/4
Merrimack Valley	121	MA	---	---	0/1	0/1	0/1	0/1	---	0/2	---
Merrimack Valley	121	NH	0/6	0/6	0/3	0/3	0/9	0/9	0/1	1/5	0/7
Central New Hampshire	149	NH	---	---	---	---	---	---	---	---	---
Champlain Valley	159	VT	0/4	0/4	0/1	0/1	0/2	0/2	0/2	0/1	0/3
Vermont	221	VT	0/2	0/2	---	---	---	---	---	0/1	0/1

\* Unless the second highest average exceeds the NAAQS, there is no violation.

x/y: x is the number of stations in violation, y is the number of stations reporting data for time period.

--- This pollutant is not monitored in the AQCR (state portion).

# REGION I

## AIR QUALITY CONTROL REGIONS

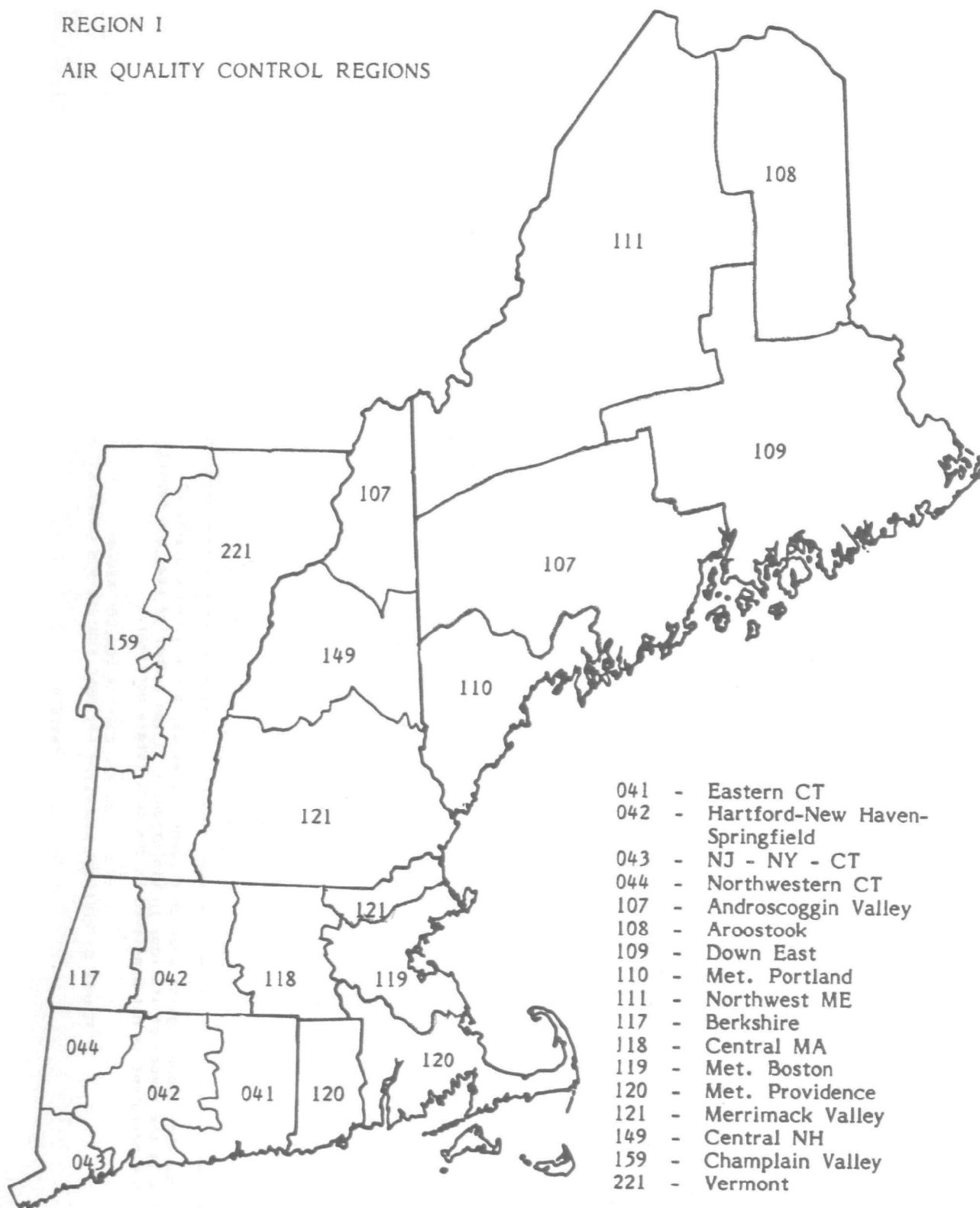


TABLE 5

## STATIONS WHERE READINGS EXCEEDED EPISODE LEVELS

January-December 1989

PM<sub>10</sub>

Standard	State	AQCR	City (Address)	Site No.	Mo./Day	Duration	Highest Level Reached
Emergency							
24-hour avg.	None						
500 $\mu\text{g}/\text{m}^3$							
Warning							
24-hour avg.	None						
420 $\mu\text{g}/\text{m}^3$							
Alert							
24-hour avg.	None						
350 $\mu\text{g}/\text{m}^3$							

January-December 1989

Nitrogen Dioxide

Standard	State	AQCR	City (Address)	Site No.	Mo./Day	Duration	Highest Level Reached
Emergency							
1.6ppm - 1-hour avg.	None						
0.4ppm - 24-hour avg.							
Warning							
1.2ppm - 1-hour avg.	None						
0.3ppm - 24-hour avg.							
Alert							
0.6ppm - 1-hour avg.	None						
0.15ppm - 24-hour avg.							

January-December 1989

Carbon Monoxide

Standard	State	AQCR	City (Address)	Site No.	Mo./Day	Duration	Highest Level Reached
Emergency							
8-hour avg.	None						
46 $\text{mg}/\text{m}^3$							
Warning							
8-hour avg.	None						
34 $\text{mg}/\text{m}^3$							
Alert							
8-hour avg.	None						
17 $\text{mg}/\text{m}^3$							



TABLE 5 (Continued)

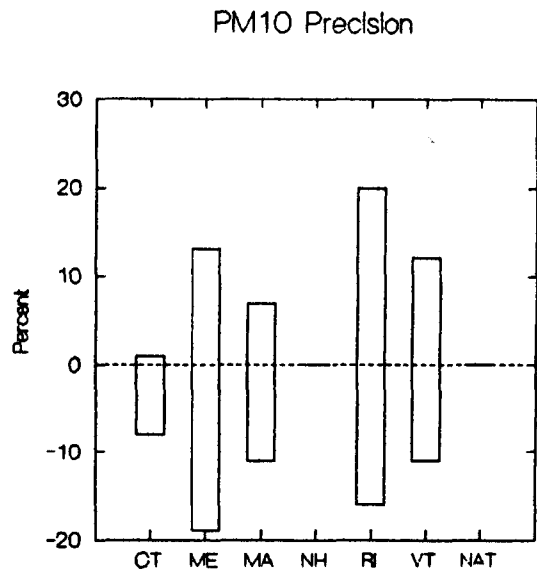
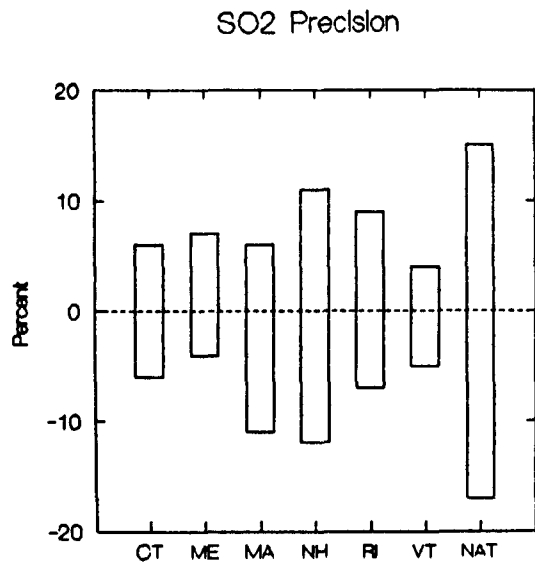
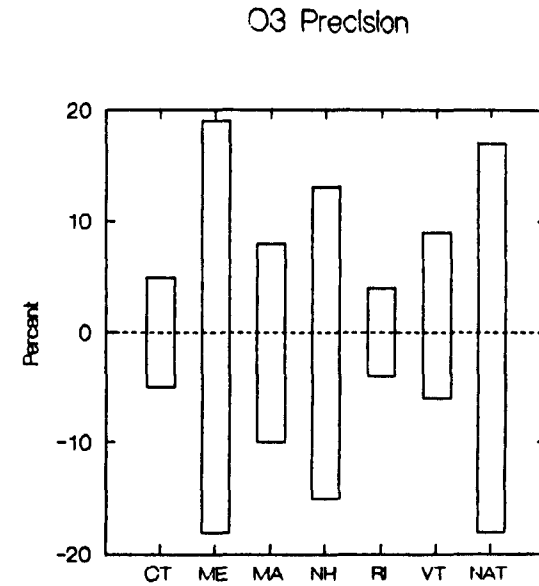
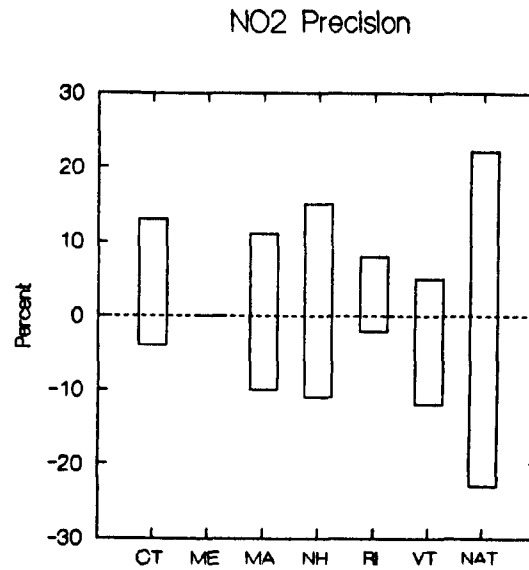
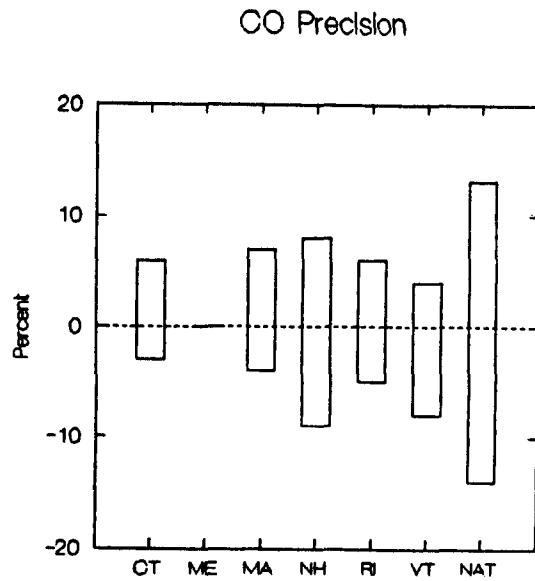
STATIONS WHERE READINGS EXCEEDED EPISODE LEVELS  
January-December 1989  
Sulfur Dioxide

Standard	State	AOCR	City (Address)	Site No.	Mo./Day	Duration	Highest Level Reached
Emergency							
3-hour avg.	None						
2100 ug/m <sup>3</sup>							
Warning							
3-hour avg.	None						
1600 ug/m <sup>3</sup>							
Alert							
3-hour avg.	None						
800 ug/m <sup>3</sup>							

January-December 1989  
Ozone

Standard	State	AOCR	City (Address)	Site No.	Mo./Day/Time	Duration	Highest Level Reached
Emergency							
1-hour avg.	None						
0.5 ppm							
Warning							
1-hour avg.	None						
0.4 ppm							
Alert							
1-hour avg.	CT	043	Stratford	09-001-3007	7/25/15	0.202ppm	1 hour
0.2 ppm							

TABLE 6

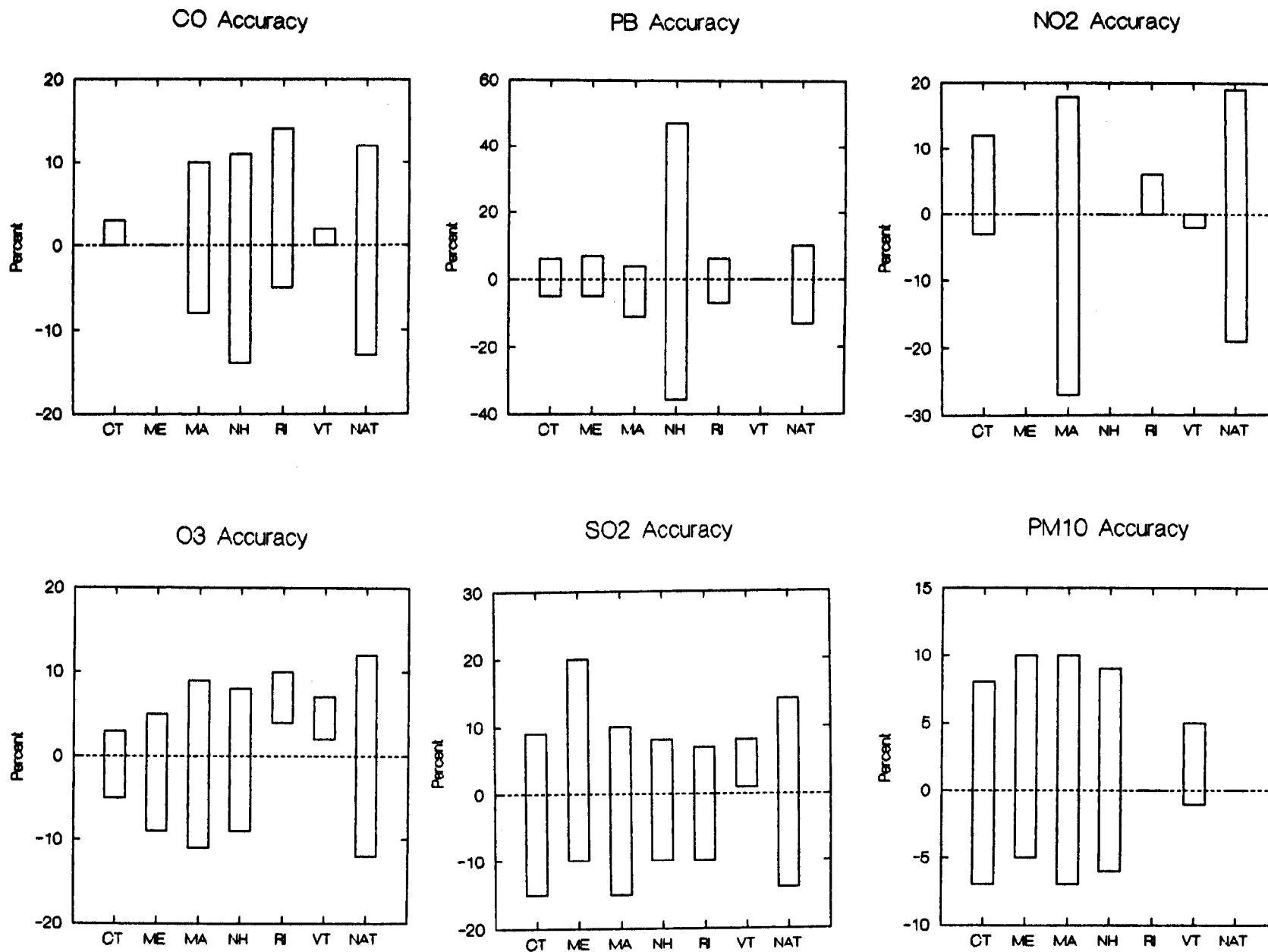


Acceptable 95% probability limits as established by the Quality Assurance Division of EPA.

LIMITS	Precision	Accuracy
Satisfactory	<±15%	<±20%
High	±16% to ±20%	±21% to ±25%
Excessive	>±20%	>±25%

1989 PRECISION DATA FOR NEW ENGLAND:  
ANNUAL AVERAGE PROBABILITY LIMITS IN PERCENT

TABLE 7



1989 ACCURACY DATA FOR NEW ENGLAND ANNUAL AVERAGE PROBABILITY LIMITS  
FOR LOWEST CONCENTRATION (CONTINUOUS METHODS),  
FLOW RATE (PM10), AND ANALYSIS (Pb) REPORTED IN PERCENT

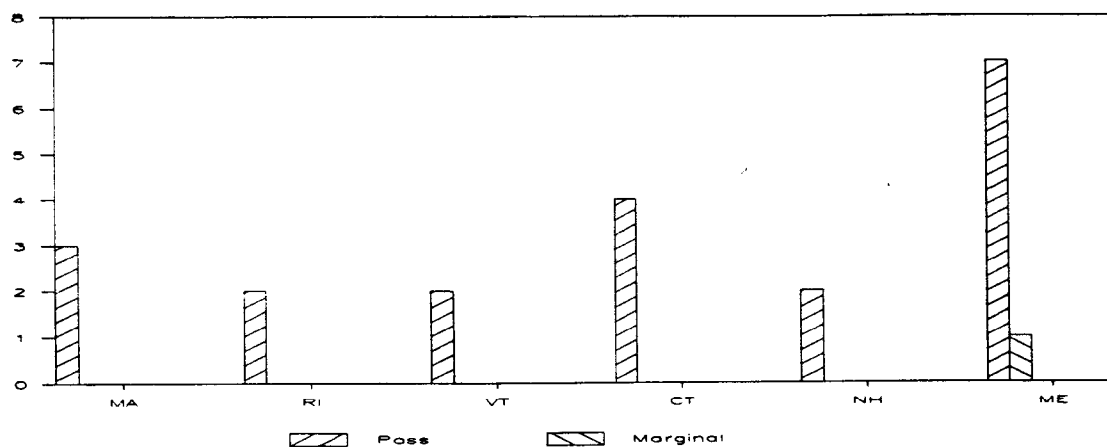
## Region I 1989 Performance Audit Program

Region I conducts an audit program to assess the performance of Ambient Air Monitoring networks and provides operators of these systems with technical assistance to maintain and improve overall data quality. Procedures used in auditing continuous air monitoring sites are explained in Volume II, Section 2.0 of the U.S. EPA Quality Assurance Handbook. These performance audits are conducted by the EPA Region I Ambient Air and Emissions Monitoring Section in Lexington.

A total of 48 audits were conducted in the six New England States on instruments that measure Ozone, Sulfur Dioxide, and Particulate Matter. 1989 was a year of equipment problems. The Roots meter for measuring PM10 was inoperable as well as depleted SO2 Reim tubes.

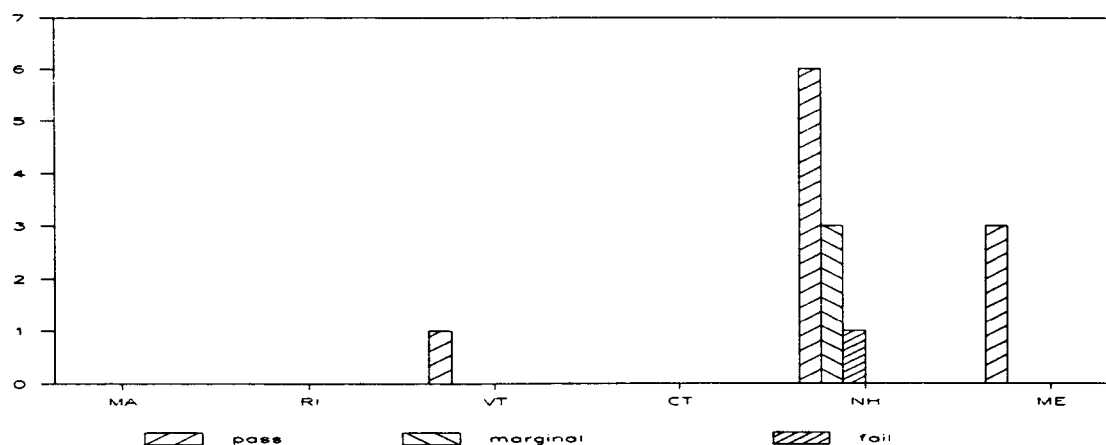
Of the 20 Ozone Audits conducted, 19 passed, 1 was marginal, and none failed.

Ozone Audits 1989



14 SO2 audits were conducted in 1988; of these 10 passed, 3 were marginal, and 1 failed.

SO2 Audits 1989



6 Particulate Audits were conducted, of which: 1 passed, 2 were marginal, and 3 failed.

TABLE 9

## REGION I NONATTAINMENT AREAS

AS OF DECEMBER 31, 1989

All values listed are the second highest values reported.

(Except exceedence only)

Only data currently in the EPA system are listed.

	Date and Magnitude of Last Reported Violation to NAAQS	
<u>CONNECTICUT</u>		
- Primary 8-hour Standard for CO		
AQCR 42 (Exceedence only)	1989	9.6 ppm
AQCR 43 (Exceedence only)	1986	10.9 ppm
- Primary 1-hour Standard for O <sub>3</sub>		
AQCR 41	1989	0.142 ppm
AQCR 42	1989	0.167 ppm
AQCR 43	1989	0.175 ppm
AQCR 44	1980	0.211 ppm
-Primary 24-hour Standard for PM <sub>10</sub> *		
AQCR 42 New Haven	1987	202 ug/m <sup>3</sup>
<u>MAINE</u>		
- Primary 24-hour Standard for SO <sub>2</sub>		
AQCR 109 Millinocket	1980	548 ug/m <sup>3</sup>
- Primary 1-hour Standard for O <sub>3</sub>		
AQCR 107 (Exceedence only)	1989	0.134 ppm
AQCR 110	1989	0.147 ppm
-Primary 24-hour Standard for PM <sub>10</sub> *		
AQCR 108	1987	172 ug/m <sup>3</sup>
<u>MASSACHUSETTS</u>		
- Primary 8-hour Standard for CO		
AQCR 042 Springfield (Exceedence only)	1987	9.5 ppm
AQCR 118 Worcester (Exceedence only)	1986	14.5 ppm
AQCR 119		
Boston	1986	9.8 ppm
Cambridge	1978	9.5 ppm
Medford	1980	10.6 ppm
Quincy	1977	9.5 ppm
Waltham	1978	11.5 ppm
AQCR 121 Lowell	1984	11.1 ppm

---

\* Group 1 area - not technically a nonattainment area.

TABLE 9 (Continued)  
REGION I NONATTAINMENT AREAS  
AS OF DECEMBER 31, 1989

MASSACHUSETTS

- Primary 1-hour Standard for O <sub>3</sub>			
AQCR 042	1989	0.133	ppm
AQCR 117	1983	0.135	ppm
AQCR 118 (Exceedence only)	1989	0.127	ppm
AQCR 119	1988	0.169	ppm
AQCR 120	1989	0.132	ppm
AQCR 121	1988	0.159	ppm

NEW HAMPSHIRE

- Primary 8-hour Standard for CO			
AQCR 121			
City of Manchester	1987	10.3	ppm
Nashua	1986	10.3	ppm
- Primary 1-hour Standard for O <sub>3</sub>			
AQCR 121	1989	0.140	ppm

RHODE ISLAND

- Primary 8-hour Standard for CO			
AQCR 120 Providence (Exceedence only)	1986	9.5	ppm
- Primary 1-hour Standard for O <sub>3</sub>			
AQCR 120	1988	0.168	ppm

TABLE 10

REGION I ATTAINMENT AND UNCLASSIFIED AREAS AS OF  
DECEMBER 31, 1989, WITH VIOLATIONS IN THE LAST THREE YEARS

	<u>Date and Magnitude of Last Reported Violation to NAAQS</u>	
<u>MAINE</u>		
- Primary 1-hour Standard for O <sub>3</sub> AQCR 109	1988	0.153 ppm
<u>NEW HAMPSHIRE</u>		
- Primary PM <sub>10</sub> Standard AQCR 107 (Exceedence only)	1989	217 ug/m3
<u>VERMONT</u>		
- Primary 1-hour Standard for O <sub>3</sub> AQCR 221	1988	0.125 ppm

## AIR QUALITY SUMMARIES AND TRENDS

The next several pages contain a discussion of the air quality for each of the New England States. The data for these analyses were collected by the New England States and were submitted to EPA in fulfillment of the Federal monitoring requirements.

### 1989 CONNECTICUT AMBIENT AIR QUALITY SUMMARY

#### **PM<sub>10</sub>**

There were no violations of the NAAQS for PM<sub>10</sub> reported in Connecticut in 1989. The highest 24-hour monitored concentration was reported at 5 Styles Street in New Haven at 126 ug/m<sup>3</sup>, or 84% of the standard. That same site had an annual average PM<sub>10</sub> concentration of 44 ug/m<sup>3</sup>, or 88% of the NAAQS. Both these values are lower than their respective 1988 concentrations. All other sites in Connecticut are well below the NAAQS.

#### **Pb**

There were no violations of the NAAQS reporting in 1989. In general, lead levels are lower than those reported in the last five years, and less than 2% of the lead standard.

#### **CO**

There were no exceedences of the 1 hour NAAQS reported in 1989. Hartford reported one exceedence of the 8-hour NAAQS in 1989. The highest CO level reported was 107% of the NAAQS, which is an improvement over the 1988 levels.

#### **SO<sub>2</sub>**

There were no violations or exceedences of the NAAQS reported in 1989. The maximum SO<sub>2</sub> annual averages occurred in New Haven at 51% of the standard. The highest second-high 24-hour average occurred in New Haven at 70% of the NAAQS.

#### **NO<sub>2</sub>**

The NO<sub>2</sub> sites in Bridgeport, East Hartford and New Haven reported values of 52%, 40% and 56% of the annual standard, respectively. These values are generally in line with those reported in the last five years.

#### **O<sub>3</sub>**

Every site in Connecticut measured violations of the ozone NAAQS in 1989. The highest second high daily maximum reading during 1989 was 0.175 ppm, which occurred in Stratford. Ozone levels were much lower in 1989 compared to 1988, probably due to meteorological factors.

## 1989 MAINE AMBIENT AIR QUALITY SUMMARY

### PM<sub>10</sub>

Of the thirty-three PM<sub>10</sub> sites in operation, the Presque Isle region produced the two highest values. A value of 144 ug/m<sup>3</sup> at the Northeastland Hotel site and a 142 at 507 Main Street. These did not exceed the PM<sub>10</sub> 24-hr NAAQS, since values are first rounded to the nearest 10 ug/m<sup>3</sup> before comparison to the standard of 150 ug/m<sup>3</sup>. The highest valid arithmetic mean, 33 ug/m<sup>3</sup>, for PM<sub>10</sub> was reported in Madawaska.

### Pb

There were no violations of the quarterly lead NAAQS at any of the six sites in the state. The highest daily concentration measured statewide was in Biddeford, at 0.82 ug/m<sup>3</sup>, which was nearly twice as high as the 1988 maximum daily value. Quarterly averages were generally lower in 1989 than in 1988 and for the most part continue the five year downward statewide trend for this pollutant.

### CO

The only CO monitoring site in the state for 1989 was located in Portland. This site was shutdown in early 1989 due to loss of the lease on the site. A new "background" CO site was opened in Hancock County in early 1990.

### SO<sub>2</sub>

There were no violations or exceedances of the standard at any of the fifteen sites in 1989. The highest annual arithmetic mean was in Rumford, at 32 ug/m<sup>3</sup> or 40% of the standard. The highest 24-hour average was in Madawaska, at 158 ug/m<sup>3</sup> or 43% of the standard.

### NO<sub>2</sub>

The State of Maine is not required to monitor NO<sub>2</sub>.

### O<sub>3</sub>

Of the eight sites in operation in Maine, four had violations or exceedances of the NAAQS. Highest numbers of exceedances were at the Cape Elizabeth and Ocean Avenue sites with 3 exceedances each. The highest hourly ozone value was recorded was at the Ocean Avenue site, and was 0.154 ppm or 128% of the standard.



## 1989 MASSACHUSETTS AMBIENT AIR QUALITY SUMMARY

### TSP/PM<sub>10</sub>

Four out of 24 sites reporting TSP data in Massachusetts, would have exceeded the now defunct TSP NAAQS in 1989. Sites in Watertown, Medford, Boston and Charlestown experienced high TSP values for at least one day in 1989. Massachusetts personnel attribute all these high TSP values to nearby road construction or high pollen levels on May 22, 1989. PM<sub>10</sub> levels across the state were well below the PM<sub>10</sub> annual and the 24-hour NAAQS. The highest 24-hour PM<sub>10</sub> levels measured in Massachusetts were recorded at East Columbus Avenue site in Springfield and the City Square site in Charlestown. The values, 79 and 78 ug/m<sup>3</sup>, respectively were less than 53% of the 24-hour standard. The highest arithmetic mean, 36 ug/m<sup>3</sup>, (72% of the standard) was recorded at the Charlestown site.

### Pb

Routine monitoring for lead began in 1982 with sites established in Boston, Lowell, Springfield and Worcester. For 1989 lead monitoring is only conducted in Springfield and Boston since lead levels have dropped off drastically. No violations of the quarterly lead NAAQS have been reported from the present network to date. Maximum quarterly lead levels have steadily decreased at all sites since 1982. The site with the highest values in the State was the Kenmore Square Site in Boston with a maximum quarterly average of 5% of the NAAQS. Maximum quarterly lead levels from other sites in the state ranged from 2% to 4% of the NAAQS.

### CO

No exceedences of the 1-hour or 24-hour NAAQS were reported at the seven sites which monitored CO in the State for 1989. The highest second maximum 1-hour average for the State in 1989 was measured at the Central Street Fire Station in Worcester, at 40% of the 1-hour NAAQS. The highest second maximum 8-hour average for the State was also measured at the Central Street Fire Station in Worcester, at 88% of the NAAQS. 1989 is the second year in a row in Massachusetts CO monitoring history that no site in the state recorded an exceedence of the NAAQS.

### SO<sub>2</sub>

There were no violations of the NAAQS at any of the eleven sites which reported SO<sub>2</sub> data for 1989 in Massachusetts. Maximum SO<sub>2</sub> levels for Massachusetts on an annual basis were reported in Boston at the Kenmore Square site at 48% of the the annual NAAQS. The Kenmore Square site has reported the maximum annual average in the state every year since the site began SO<sub>2</sub> monitoring in 1971. Minimum SO<sub>2</sub> levels on an annual basis were measured in Ware at 16% of the NAAQS. The highest second maximum daily SO<sub>2</sub> level was reported in Springfield at 40% of the NAAQS, while the highest second maximum three hour SO<sub>2</sub> level was reported in Fall River.

## NO<sub>2</sub>

In 1989, six sites collected NO<sub>2</sub> data in Massachusetts. The maximum sites in the State were located in Kenmore Square, Boston, and Brennan Street, East Boston where the annual means were 32% of the NAAQS. NO<sub>2</sub> levels in in other large cities such as Springfield, Worcester and Chelsea, ranged from 26% to 30% of the annual standard. Minimum NO<sub>2</sub> levels were reported for the Quabbin site in Ware at 8% of the standard.

## O<sub>3</sub>

As in past years, ozone standard exceedences were reported at multiple sites in Massachusetts for 1989. Exceedences were recorded at seven of the fifteen sites which operated in 1989. The maximum daily value for 1988 in Massachusetts was recorded at the Quabbin Reservoir site in Ware with a value of 0.168 ppm or 134% of the NAAQS. The Truro site on Cape Cod reported the most days over the standard for 1989, with 4 days in excess of the NAAQS. The Maximum levels decreased by 20% over 1988 levels and the maximum number of days over the standard decreased by 76% due in part to the relatively cooler 1989 summer temperatures as compared to the hotter 1988 summer season.

## 1989 NEW HAMPSHIRE AMBIENT AIR QUALITY SUMMARY

### TSP/PM<sub>10</sub>

New Hampshire would have had a violation of the now defunct TSP NAAQS in 1989. This occurred at the Lancaster Street site in Berlin. There were several violations of the now defunct secondary 24-hour NAAQS in Berlin, also at the same site. Several other sites in New Hampshire recorded one or more exceedence of the 'old' TSP 24-hour standard; in Concord, Portsmouth and Dover. For PM<sub>10</sub>, none of the eight sites in operation in New Hampshire violated the PM<sub>10</sub> NAAQS. The Lancaster Street site in Berlin, however, recorded an exceedence of 217 ug/m<sup>3</sup>, 145% of the primary 24-hour standard. The second highest value at this site, 145 ug/m<sup>3</sup>, was just below the standard of 150 ug/m<sup>3</sup>. The second maximum 24 hour value for other areas in New Hampshire varied from a high of 61% of the standard in Concord to a low of 25% of the standard at Mt. Sunapee. The highest arithmetic mean was recorded in Berlin at 80% of the standard and the lowest at Mt. Sunapee at 28% of the standard.

### Pb

There were no lead violations reported in 1989 at the seven sites which monitor this pollutant in New Hampshire. The highest site--a neighborhood scale site in Portsmouth--reported a maximum quarterly average which was 3% of the NAAQS. The lowest site in the state, which is located in Hollis, had a maximum quarterly average of 1% of the standard.

### CO

No violations of the 1-hour, or the 8-hour NAAQS were reported in 1989; as compared to one reported exceedence of the 8-hour standard in 1988. The maximum 8-hour concentration reported for 1989 in New Hampshire was from Manchester at 80% of the standard. This was the first year since CO monitoring was started in New Hampshire in 1973, that no exceedences of the CO standard were measured in the state.

### SO<sub>2</sub>

No violations of the NAAQS were monitored at any of the thirteen sites which monitored SO<sub>2</sub> in 1989. The last violation measured in New Hampshire occurred in 1980 at a site in Berlin. The maximum daily value for 1989 was measured in Pembroke at 62% of the 24-hour standard. The maximum annual mean in the state was measured in Manchester at 30% of the standard for 1989.

### NO<sub>2</sub>

Only one site in Manchester collected NO<sub>2</sub> data in 1989. NO<sub>2</sub> values at this site were 44% of the annual standard.

### O<sub>3</sub>

Just one of the five ozone sites which collected data in 1989 exceeded the ozone standard. The Rye Harbor location recorded ozone values in excess of the standard on two separate days with ozone levels 132% and 112% of the standard. This contrasts with the summer of 1988 in which all five sites in New Hampshire recorded exceedences of the standard and Rye Harbor recorded 9 days in excess of the standard.

## 1989 RHODE ISLAND AMBIENT AIR QUALITY SUMMARY

### PM<sub>10</sub>

Of the two PM<sub>10</sub> sites in operation, none produced any violations or exceedances of the NAAQS. The highest 24-hour value recorded was in Providence at 83 ug/m<sup>3</sup>, or 55% of the standard.

### Pb

None of the four sites recorded any Calendar Quarter Arithmetic Mean values approaching the standard of 1.5 ug/m<sup>3</sup>. The highest value recorded was 0.87 ug/m<sup>3</sup> at the Dyer Street trailer in Providence, or 58% of the standard.

### CO

Neither of the two CO sites experienced any violations of either the 1-hour or 8-hour standards (the last exceedance of the 8-hour standard occurred in 1986). The highest 1-hour value occurred at the Dept. of Health Building in Providence, and was 14.5 ppm, or 41% of the standard. The highest 8-hour value occurred at the same site and was 8.4 ppm, or 93% of the standard.

### SO<sub>2</sub>

No violations of the NAAQS have been reported for the past eight years. The highest level recorded was measured at both the Dorrance Street site Providence and at the Summit Street site in Pawtucket, a value of 135 ug/m<sup>3</sup>, or 37% of the standard.

### NO<sub>2</sub>

The sole NO<sub>2</sub> site at the Rockefeller Library in Providence experienced no violations. The Annual Arithmetic Mean was only 0.024 ppm, or 45% of the standard.

### O<sub>3</sub>

The second highest daily value reported was on the Alton Jones campus in Kent County, and was 0.132 ppm, or 10% above the standard. This is significantly lower than the second highest value for 1987 and 1988. The Rockefeller Library site in Providence experienced no violations or exceedances, with a highest value of 0.107 ppm, or 89% of the standard.

## 1989 VERMONT AMBIENT AIR QUALITY SUMMARY

### TSP/PM<sub>10</sub>

Of the five PM<sub>10</sub> sites in operation, none produced any violations or exceedances of the NAAQS. The highest value recorded was in Rutland, and was only 71 ug/m<sup>3</sup> or 47% of the NAAQS.

Neither of the two TSP sites in Vermont (Burlington and Bennington) would have registered a violation of the (now defunct) standards. The highest value in the state was recorded at Barre, with an annual geometric mean of 37 ug/m<sup>3</sup> and a second highest 24-hr value of 81 ug/m<sup>3</sup>.

### Pb

None of the three sites in Vermont (Burlington, Rutland and Barre) experienced any violations of the NAAQS for lead. The highest reading recorded, in Barre, was 0.10 ug/m<sup>3</sup>, or 7% of the standard.

### CO

The only CO monitoring site in the state is currently located in Burlington. There were no violations of either the 1-hour or 8-hour standards. The maximum 1-hour value measured was 9.7 ppm, or 28% of the standard. The maximum 8-hour measurement was 5.4 ppm, or 60% of the standard. Both maxima were marginally higher than in 1988.

### SO<sub>2</sub>

There were no violations or exceedances of the standard in 1988 at either of the two SO<sub>2</sub> sites. The highest annual arithmetic mean was at Rutland, at 27 ug/m<sup>3</sup> or 34% of the standard. The highest 24-hour value, also in Rutland, was 103 ug/m<sup>3</sup> or 28% of the standard. Lastly, the highest 3-hour average was in Burlington at 258 ug/m<sup>3</sup>, or 20% of the standard.

### NO<sub>2</sub>

Neither of the two NO<sub>2</sub> sites in Vermont, located at Burlington and Rutland, experienced any violation of the standard of 0.053 ppm. They registered annual arithmetic means of 0.019 ppm, or 38% of the standard and 0.015 ppm, or 30% of the standard, respectively. Values in Burlington have remained essentially constant over the past 3 years. This, the second year of monitoring for Rutland, produced the same value as in 1988.

### O<sub>3</sub>

Neither of the two sites in operation in Vermont registered a violation of the NAAQS. The highest value at Burlington was 0.106 ppm, or 88% of the standard. The highest value at Bennington was 0.091 ppm, or 76% of the standard. Both high values were significantly lower than in 1988.

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