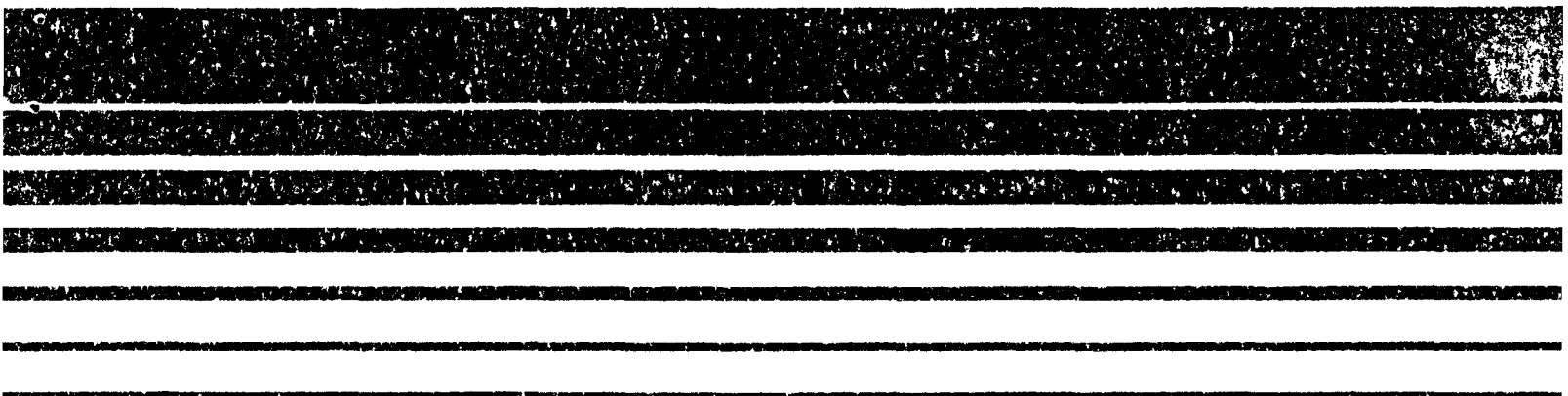


Air



New Hampshire and Vermont Point Source Emission Inventory Update for NECRMP



New Hampshire and Vermont Point Source Emission Inventory Update for NECRMP

by

GCA Corporation
Bedford, Massachusetts 01730

Contract No. 68-02-3510

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Prepared for

U.S. ENVIRONMENTAL PROTECTION AGENCY
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ABSTRACT

The objective of this effort was to update the point source emission inventories of New Hampshire and Vermont for subsequent use in the Northeast Corridor Regional Modeling Project (NECRMP). Sources meeting the prescribed criteria were identified. Updated data were obtained from the state agencies and processed into NEDS.

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SECTION 1

INTRODUCTION

As a result of the existence of ozone transport phenomenon in the Northeast, a study (Northeast Corridor Regional Modeling Project/NECRMP) has recently been formulated to provide a photochemical modeling analysis in the area involving fourteen states. One important segment of this study is the preparation of an Emission Inventory on a temporally, spatially and pollutant allocated basis for the entire study area.

The purpose of this project is to update the annual point source emission inventories for the states of New Hampshire and Vermont. Data has been obtained from the state agencies and a comprehensive data base was prepared for use in developing the final inventory for the NECRMP Modeling Program.

SECTION 2

PROJECT APPROACH

GCA was provided with current New Hampshire and Vermont NEDS Point Source listings from NADB by the Project Officer. All sources were reviewed and classified, by major pollutant emitted and size, according to the criteria listed in Table 2-1. A list of sources to be updated was compiled according to county within each state and submitted to the EPA Project Officer and respective state agencies.

In addition, GCA obtained copies of the adopted regulations affecting sources of VOC and NO_x emissions in New Hampshire and Vermont (References 1 and 2). Growth projection data was also collected for both states (References 3 and 4). These references will be used to develop the final baseline emission inventories for 1980 and 1987. Several copies have been given to the EPA Project Officer for his information.

Visits were made to the New Hampshire and Vermont State Agencies to obtain information used to update the point sources falling into any of the prescribed categories. Any discrepancies in the data were resolved. All data changes, additions, and deletions were coded on NEDS Coding Forms in compliance with the instructions given in AEROS, Volume II. All update data were then keypunched, manually verified, and submitted to EPA Region I for addition to NEDS.

Region I processed all GCA update data through the NEDS edit checks. GCA reviewed all potential errors and resolved the discrepancies. All update data was returned to Region I and processed into NEDS. The appropriate state agencies reviewed and concurred on updates made by GCA.

TABLE 2-1. SUMMARY OF SOURCES INCLUDED IN UPDATE EFFORT BY POLLUTANT AND SIZE

| Pollutant | Source size |
|---|-------------|
| VOC and NO _x * | ≥ 100 TPY |
| VOC* | > 500 TPY |
| NO _x * | > 750 TPY |
| RACT Sources | > 50 TPY |
| CO | > 500 TPY |
| SO ₂ and TSP if the source has VOC, NO _x or CO emissions; | > 100 TPY |
| Data Gaps and Inconsistencies | All |

* May include RACT sources

SECTION 3

DISCUSSION OF RESULTS

INTRODUCTION

A thorough review of emissions data for Vermont and New Hampshire has been completed. Neither state presently has an area source inventory of the quality required for NECRMP. Both states are expected to be in compliance with NAAQS by 1982 and thus are not required to maintain such an inventory. The point source inventory in NEDS was scrutinized and each source classified according to principal pollutant and size as it relates to NECRMP. Each of the sources identified for update was subsequently examined, and necessary changes were coded.

Table 3-1 summarizes the number of sources updated in the major pollutant categories in each of the states, classified by county. When tabulating sources, each source was included in only one category, with category hierarchy defined from left to right across the top of the chart. Thus, if a source emitted both more than 100 tons of VOC and 100 tons of SO₂, it would be counted only in the "VOC > 100" category. All sources updated but not falling into any of the categories listed were considered "Small Sources" for tabulation purposes.

It should be noted that figures listed in Table 3-1 reflect sources as they were before the update. Hence, new sources added to NEDS are not contained in this table. Some of the sources may have grown or declined in emissions enough to put them into one of the other categories. The obvious example is in the case of source deletions: the source was counted in the category in which it fell before it was deleted. The number of deletions for a given category may then be determined by examining Tables 3-2 through 3-15 which detail the updates in each state. Where possible, the detailed tables note changes in source status. It was determined that it was not viable to do a complete update of all small point sources. However, some small point sources were updated because they were missing essential information, required deletion, etc. In New Hampshire 112 of a total of 219 small point sources (51.1%) were updated. Of a total of 126 small point sources in Vermont, updates were made to 16 (12.7%).

The remainder of this section discusses the point source updates made for New Hampshire and Vermont.

NEW HAMPSHIRE POINT SOURCE UPDATE

For New Hampshire, 209 of the 316 point sources were updated. In addition, two new sources which are classified under RACT > 50 TPY, were

TABLE 3-1. NUMBER OF SOURCES UPDATED IN EACH POLLUTANT CATEGORY, BY COUNTY^a

| County | VOC [*] | VOC | NO _x | CO | SO ₂ or TSP | Small | County |
|----------------------|------------------|-------------------------------|-------------------------------|-----------|------------------------|----------------------|--------|
| | > 500 TPY | > 100 TPY but < 500 TPY | > 750 TPY but < 100 TPY | > 500 TPY | > 100 TPY | sources ^b | totals |
| <u>New Hampshire</u> | | | | | | | |
| Belknap | - | - | - | - | - | 4 | 6 |
| Carroll | - | - | - | - | - | 10 | 11 |
| Cheshire | - | 5 | - | - | 4 | 12 | 24 |
| Coos | - | 2 | 2 | - | - | 9 | 15 |
| Grafton | - | 1 | 1 | - | 3 | 10 | 16 |
| Hillsborough | 2 | 7 | 1 | 1 | 3 | 23 | 45 |
| Merrimack | - | 2 | 1 | - | 4 | 5 | 14 |
| Rockingham | 3 | 8 | 3 | - | 3 | 25 | 46 |
| Strafford | 1 | 4 | - | - | 5 | 8 | 20 |
| Sullivan | - | - | - | - | 5 | 6 | 12 |
| Total | 6 | 29 | 6 | 1 | 27 | 112 | 209 |
| <u>Vermont</u> | | | | | | | |
| Addison | - | 2 | - | - | - | 3 | 5 |
| Bennington | - | - | - | - | 1 | - | 6 |
| Caledonia | - | - | - | - | 1 | - | 1 |
| Chittendon | - | 4 | 1 | - | - | 2 | 15 |
| Essex | - | 1 | - | - | 1 | - | 2 |
| Franklin | 1 | - | - | - | - | 1 | 2 |
| Lamoille | - | - | - | - | 1 | - | 1 |
| Orange | - | 1 | - | - | - | - | 2 |
| Orleans | - | 1 | - | - | 2 | - | 3 |
| Rutland | - | 1 | - | - | 1 | 2 | 4 |
| Washington | - | - | - | - | - | 2 | 2 |
| Windham | - | 1 | - | - | 1 | 6 | 8 |
| Windsor | - | 1 | - | - | - | - | 2 |
| Total | 1 | 12 | 0 | 0 | 8 | 16 | 53 |

^a Includes those deleted.

^b Not qualifying in any other category.

* May include RACT Sources.

added. This figure includes the update of small sources (less than 25 tons of pollutant per year), many of which were deletions of dumps at the request of New Hampshire personnel.

Tables 3-2 through 3-8 summarize the updates for each source and are listed by county. The tables reflect the source category applicable after the update was completed. The plant name, the NEDS source I.D. number, the NEDS update action (Add, Change, or Delete), and a brief Update Description is included for each source. All updates were for the year 1979, and where no other data changes were required, the year of record alone was updated. The term "annual fuel rate" in the update description applies to the operating rate appropriate for the particular SCC category of interest. For the points which included two or more SCC categories, necessary changes were made to each and are indicated by the phrase "by SCC."

Table 3-2 lists dumps. Unless otherwise noted, the dumps fall into the small source category. Most dumps included in NEDS are no longer used for open burning, with the exception of Ossipee dump in Carroll County and Pittsburg Dump in Coos County. Those dumps not in operation were deleted from NEDS.

Table 3-3 lists the principal NO_x sources and their updates. Many of these sources additionally emit SO_2 at rates greater than 100 TPY, and one source (Brown Company-Berlin) emits CO exceeding 500 TPY as well as SO_2 . Three former NO_x sources have closed and were deleted.

Table 3-4 lists principal VOC sources which are greater than 100 TPY; exceptions and revisions are noted in the update descriptions. The only inconsistency found was that Markem Corporation in Cheshire County was duplicated in NEDS and hence 0039 was deleted. Several of these sources also emit SO_2 at rates exceeding 100 TPY.

Table 3-5 describes principal VOC RACT Sources emitting greater than 50 TPY, with a few exceptions noted in the update descriptions. For instance, Converse Rubber and Kingston Steel were both deleted because they are out of business and Sanders Associates (0110 in Hillsborough County) was deleted since it duplicated 0083 in Hillsborough County. Three sources are now emitting less than 50 TPY. The two new sources added were Bergen Patterson and Hampshire Manufacturing which were assigned NEDS I.D.'s of 0026 and 0020 in their respective counties.

Table 3-6 lists SO_2 sources emitting more than 100 TPY. None of the sources listed emit VOC or NO_x in quantities exceeding 25 TPY.

Table 3-7 lists one of two CO sources exceeding 500 TPY, Manchester Incinerator. It was deleted because it is no longer in operation. The other, Brown Company-Berling, can be found in Table 3-3.

TABLE 3-2. NEW HAMPSHIRE DUMPS

| Plant name | NEDS I.D. | Action | Update description |
|-------------------------|---------------|--------|---------------------------------------|
| <u>Belknap County</u> | | | |
| Belmont | 0010 | Delete | No longer operating |
| Gilford | 0011 | Delete | No longer operating |
| Merideth | 0012 | Delete | No longer operating |
| Tilton | 0013 | Delete | No longer operating |
| <u>Carroll County</u> | | | |
| Bartlett | 0003 | Delete | No longer operating |
| Conway | 0004 | Delete | No longer operating |
| Moultonboro | 0005 | Delete | No longer operating |
| Ossipee | 0006 | Change | Annual fuel rate |
| Tamworth | 0007 | Delete | No longer operating |
| Wakefield | 0008 | Delete | No longer operating |
| Wolfboro (listed twice) | 0009 and 0010 | Delete | No longer operating |
| <u>Cheshire County</u> | | | |
| Chesterfield | 0023 | Delete | No longer operating |
| Alstead | 0022 | Delete | No longer operating |
| Fitzwilliam | 0024 | Delete | No longer operating |
| Hinsdale | 0025 | Delete | No longer operating |
| Jaffery | 0026 | Delete | No longer operating |
| Keene | 0027 | Delete | No longer operating, was VOC > 100 |
| Marlboro | 0028 | Delete | No longer operating |
| Rindge | 0029 | Delete | No longer operating |
| Swanzey | 0030 | Delete | No longer operating |
| Troy | 0031 | Delete | No longer operating |
| Walpole | 0032 | Delete | No longer operating |
| Westmoreland | 0033 | Delete | No longer operating |
| Winchester | 0034 | Delete | No longer operating |
| <u>Coos County</u> | | | |
| Berlin | 0005 | Delete | No longer operating, was VOC > 100 |
| Colebrook | 0006 | Delete | No longer operating |
| Gorham | 0007 | Delete | No longer operating |
| Groveton | 0008 | Delete | No longer operating, was VOC > 100 |
| Lancaster | 0009 | Delete | No longer operating |
| Stewartson | 0011 | Delete | No longer operating |
| Stratford | 0012 | Delete | No longer operating |
| Whitefield | 0013 | Delete | No longer operating |
| Pittsburg | 0010 | Change | Annual fuel rate |

(continued)

TABLE 3-2 (continued)

| Plant name | NEDS I.D. | Action | Update description |
|----------------------------|-----------|--------|---------------------------------------|
| <u>Grafton County</u> | | | |
| Bethlehem | 0008 | Delete | No longer operating |
| Bristol | 0009 | Delete | No longer operating |
| Enfield | 0010 | Delete | No longer operating |
| Franconia | 0011 | Delete | No longer operating |
| Hanover | 0012 | Delete | No longer operating |
| Haverhill | 0013 | Delete | No longer operating |
| Lebanon | 0014 | Delete | No longer operating |
| Lincoln | 0015 | Delete | No longer operating |
| Lisbon | 0016 | Delete | No longer operating |
| Plymouth | 0017 | Delete | No longer operating |
| <u>Hillsborough County</u> | | | |
| Amherst | 0029 | Delete | No longer operating |
| Bedford | 0030 | Delete | No longer operating |
| Bennington | 0031 | Delete | No longer operating |
| Brookline | 0032 | Delete | No longer operating |
| Francestown | 0033 | Delete | No longer operating |
| Goffstown | 0034 | Delete | No longer operating |
| Greenfield | 0035 | Delete | No longer operating |
| Greenville | 0036 | Delete | No longer operating |
| Hancock | 0037 | Delete | No longer operating |
| Hillsborough | 0038 | Delete | No longer operating |
| Litchfield | 0039 | Delete | No longer operating |
| Manchester | 0040 | Delete | No longer operating, was VOC > 100 |
| Merrimack | 0041 | Delete | No longer operating, was VOC > 100 |
| Milford | 0042 | Delete | No longer operating |
| Mount Vernon | 0043 | Delete | No longer operating |
| New Boston | 0044 | Delete | No longer operating |
| Pelham | 0045 | Delete | No longer operating |
| Petersborough | 0046 | Delete | No longer operating |
| Weare | 0047 | Delete | No longer operating |
| Wilton | 0048 | Delete | No longer operating |
| <u>Merrimack County</u> | | | |
| Andover | 0010 | Delete | No longer operating |
| Franklin | 0011 | Delete | No longer operating |
| Henniker | 0012 | Delete | No longer operating |
| Northfield | 0013 | Delete | No longer operating |
| Pittsfield | 0014 | Delete | No longer operating |

(continued)

TABLE 3-2 (continued)

| Plant name | NEDS I.D. | Action | Update description |
|--------------------------|-----------|--------|---------------------------------------|
| <u>Rockingham County</u> | | | |
| Atkinson | 0018 | Delete | No longer operating |
| Auburn | 0019 | Delete | No longer operating |
| Chester | 0020 | Delete | No longer operating |
| Deerfield | 0021 | Delete | No longer operating |
| Derry | 0022 | Delete | No longer operating, was VOC > 100 |
| Epping | 0023 | Delete | No longer operating |
| Exeter | 0024 | Delete | No longer operating |
| Greenland | 0025 | Delete | No longer operating |
| Hampton | 0026 | Delete | No longer operating |
| Hampton Falls | 0027 | Delete | No longer operating |
| Kingston | 0028 | Delete | No longer operating |
| Londonderry | 0029 | Delete | No longer operating |
| Newton | 0030 | Delete | No longer operating |
| North Hampton | 0031 | Delete | No longer operating |
| Nottingham | 0032 | Delete | No longer operating |
| Plaistow | 0033 | Delete | No longer operating |
| Raymond | 0034 | Delete | No longer operating |
| Rye | 0035 | Delete | No longer operating |
| Seabrook | 0036 | Delete | No longer operating |
| Windham | 0037 | Delete | No longer operating |
| <u>Strafford County</u> | | | |
| Barrington | 0019 | Delete | No longer operating, was VOC > 100 |
| Durham | 0020 | Delete | No longer operating, was VOC > 100 |
| Farmington | 0021 | Delete | No longer operating |
| Lee | 0022 | Delete | No longer operating |
| Milton | 0023 | Delete | No longer operating |
| Rollinsford | 0024 | Delete | No longer operating |
| Somersworth | 0025 | Delete | No longer operating |
| Stafford | 0026 | Delete | No longer operating |
| <u>Sullivan County</u> | | | |
| Charlestown | 0006 | Delete | No longer operating |
| Claremont | 0007 | Delete | No longer operating |
| Newport | 0008 | Delete | No longer operating |
| Sunapee | 0009 | Delete | No longer operating |
| Cornish | 0010 | Delete | No longer operating |
| Plainfield | 0011 | Delete | No longer operating |

TABLE 3-3. NEW HAMPSHIRE PRINCIPAL NO_x SOURCES

| Plant name | NEDS I.D. | Action | Update description |
|-------------------------------------|-----------|--------|--|
| <u>Coos County</u> | | | |
| Brown Company-Gorham | 0001 | Change | Annual fuel rate |
| Brown Co.-Berlin | 0002 | Change | Annual fuel rate |
| Groveton Papers | 0004 | Change | Annual fuel rate |
| Balsams Hotel & Tillotson Rubber | 0014 | Change | Annual fuel rate |
| <u>Grafton County</u> | | | |
| Dartmouth College | 0020 | Change | Annual fuel rate |
| <u>Hillsborough County</u> | | | |
| Foster Grant ^a | 0007 | Change | Name changed to American Hoechst, Annual fuel rate |
| Monadnock Paper ^a | 0070 | Change | Add name, Annual fuel rate |
| Seal Tanning | 0008 | Delete | No longer operating |
| Waumbec Dye | 0004 | Delete | No longer operating |
| <u>Merrimack County</u> | | | |
| N.H. Hospital | 0032 | Change | Annual fuel rate |
| <u>Rockingham County</u> | | | |
| Clemson Auto Fabrics ^a | 0041 | Change | Year of record only |
| <u>Strafford County</u> | | | |
| Spaulding Fibre Milton ^a | 0012 | Change | Annual fuel rate |
| United Tanners | 0003 | Delete | No longer operating |

^aCurrently less than 100 TPY NO_x.

TABLE 3-4. NEW HAMPSHIRE PRINCIPAL VOC SOURCES
GREATER THAN 100 TPY

| Plant name | NEDS I.D. | Action | Update description |
|----------------------------|-----------|--------|--|
| <u>Cheshire County</u> | | | |
| MPB Corp. Precision Park | 0013 | Change | Annual fuel rate, now < 25 TPY |
| Troy Mills | 0016 | Change | Annual fuel rate |
| Markem Corp. | 0039 | Delete | Duplicate of 0042 |
| Market Corp. | 0042 | Change | Annual fuel rate |
| <u>Hillsborough County</u> | | | |
| Nashua Corp. | 0026 | Change | Annual fuel rate |
| Nashua Corp. | 0072 | Change | Annual fuel rate |
| Prevue Products | 0078 | Change | Annual fuel rate |
| Triangle Pacific Cabinets | 0092 | Change | Annual fuel rate |
| Batesville Casket | 0093 | Change | Annual fuel rate |
| Interstate Uniform | 0109 | Change | Annual fuel rate |
| <u>Merrimack County</u> | | | |
| Brezner Tanning | 0036 | Change | Name changed to Allied Leather, annual fuel rate, now SO ₂ source only |
| Atlantic Laminates | 0038 | Change | Annual fuel rate |
| <u>Rockingham County</u> | | | |
| USM Corp. - Bailey | 0058 | Change | Annual fuel rate |
| Mobile Oil | 0061 | Change | Annual fuel rate |
| Atlantic Term. Corp. | 0063 | Change | Fuel rate update by SCC |
| Essex Int'l | 0043 | Change | Annual fuel rate |
| Northeast Petroleum | 0055 | Change | Year of record only |
| Union Oil | 0057 | Change | Fuel rate update by SCC |
| Atlantic Terminal Corp. | 0062 | Change | Fuel rate update by SCC |
| Ideal Tape | 0069 | Change | Annual fuel rate |
| Kingston Warren | 0070 | Change | Annual fuel rate |
| <u>Strafford County</u> | | | |
| Davidson Rubber | 0027 | Change | Annual fuel rate |
| Davidson Rubber | 0002 | Change | Year of record only |
| G.E. | 0035 | Change | Year of record only |

TABLE 3-5. NEW HAMPSHIRE PRINCIPAL RACT SOURCES
GREATER THAN 50 TPY

| Plant name | NEDS I.D. | Action | Update description |
|----------------------------|-----------|--------|--|
| <u>Belknap County</u> | | | |
| Allen-Rodgers | 0001 | Change | Annual fuel rate |
| Quin-T | 0025 | Change | Annual fuel rate |
| Bergen Patterson | 0026 | Add | All information - new source |
| <u>Carroll County</u> | | | |
| Yield House | 0014 | Change | Annual fuel rate |
| <u>Cheshire County</u> | | | |
| Whitney Bros. | 0015 | Change | Annual fuel rate |
| Sprague & Carlton | 0009 | Change | Annual fuel rate |
| Hedstrom Company | 0008 | Change | Annual fuel rate |
| <u>Coos County</u> | | | |
| Converse Rubber | 0003 | Delete | No longer operating |
| <u>Grafton County</u> | | | |
| Rockwell International | 0022 | Change | Annual fuel rate |
| <u>Hillsborough County</u> | | | |
| Hermisdorf Fixture | 0005 | Change | Annual fuel rate |
| Beebe Rubber | 0020 | Change | Annual fuel rate |
| Johns - Manville | 0023 | Change | Year of record only |
| Hampshire Mfg. | 0096 | Change | Annual fuel rate |
| GTE Sylvania | 0107 | Change | Annual fuel rate, now < 25 TPY |
| Sanders Assoc. | 0110 | Delete | Duplicate of 0083 |
| Sprague Elec. | 0111 | Change | Annual fuel rate |
| <u>Merrimack County</u> | | | |
| Rumford Press | 0044 | Change | Year of record only |
| <u>Rockingham County</u> | | | |
| Simplex Wire | 0006 | Change | Annual fuel rate |
| Gulf Oil | 0047 | Change | Annual fuel rate by SCC, now < 25 TPY |
| Kingston Steel | 0051 | Delete | No longer operating |
| Colonial Cleaners | 0067 | Change | Year of record only |

(continued)

TABLE 3-5 (continued)

| Plant name | NEDS I.D. | Action | Update description |
|-------------------------|-----------|--------|--|
| <u>Strafford County</u> | | | |
| Moore Bus. Forms | 0005 | Change | Annual fuel rate |
| Action Industries | 0039 | Change | Annual fuel rate |
| <u>Sullivan County</u> | | | |
| Sturm-Ruger | 0019 | Change | Annual fuel rate by SCC, now < 50 TPY |
| Hampshire Mfg-Clermont | 0020 | Add | All information - new source |

TABLE 3-6. NEW HAMPSHIRE PRINCIPAL SO₂ SOURCES
GREATER THAN 100 TPY

| Name | NEDS I.D. | Action | Update description |
|----------------------------|-----------|--------|--|
| <u>Cheshire County</u> | | | |
| Paper Service | 0003 | Change | Annual fuel rate |
| Ashuelot Paper | 0004 | Change | Annual fuel rate |
| AC Lawrence Leather | 0021 | Change | Annual fuel rate |
| Hindsdale Products | 0037 | Change | Annual fuel rate |
| <u>Grafton County</u> | | | |
| L.W. Packard | 0001 | Change | Annual fuel rate |
| Hitchcock Hosp. | 0025 | Change | Annual fuel rate |
| Plymouth St. College | 0033 | Change | Annual fuel rate |
| <u>Hillsborough County</u> | | | |
| Anheuser Busch | 0017 | Change | Annual fuel rate |
| Sanders Assoc. | 0027 | Change | Annual fuel rate |
| Nashua NH Foundation | 0028 | Change | Annual fuel rate |
| <u>Merrimack County</u> | | | |
| Concord Steam | 0005 | Change | Annual fuel rate |
| USM Corp. | 0007 | Change | Annual fuel rate |
| Concord Hosp. | 0017 | Change | Annual fuel rate |
| Brezner Tanning | 0037 | Change | Name changed to Allied Leather, annual fuel rate, now < 25 TPY |
| <u>Rockingham County</u> | | | |
| Phillips Exeter | 0004 | Change | Annual fuel rate |
| CH Sprague | 0040 | Change | Annual fuel rate |
| <u>Strafford County</u> | | | |
| W.H. Elliot | 0001 | Change | Annual fuel rate |
| Univ. of N.H. | 0009 | Change | Annual fuel rate |
| Spaulding Fibre-Rochester | 0013 | Change | Annual fuel rate |
| Gt. Falls Bleachery | 0017 | Change | Annual fuel rate |
| G.E. | 0018 | Change | Annual fuel rate |
| <u>Sullivan County</u> | | | |
| Claremont Paper | 0001 | Change | Annual fuel rate |
| Coy Paper | 0002 | Change | Annual fuel rate |
| Joy Mfg. | 0003 | Change | Annual fuel rate |
| Door Woolen | 0005 | Change | Annual fuel rate |
| Dartmouth Woolen | 0013 | Change | Annual fuel rate |

TABLE 3-7. NEW HAMPSHIRE PRINCIPAL CO SOURCE
GREATER THAN 500 TPY

| Plant name | NEDS I.D. | Action | Update description |
|----------------------------|-----------|--------|---------------------|
| <u>Hillsborough County</u> | | | |
| Manchester Incinerator | 0015 | Delete | No longer operating |

TABLE 3-8. NEW HAMPSHIRE PUBLIC SERVICE COMPANIES

| Name | NEDS I.D. | Action | Update description |
|--------------------------------|-----------|--------|---------------------|
| <u>Carroll County</u> | | | |
| White Lake Plant | 0012 | Change | Annual fuel rate |
| <u>Coos County</u> | | | |
| Lost Nation | 0018 | Change | Annual fuel rate |
| <u>Hillsborough County</u> | | | |
| Kelleys Station | 0014 | Delete | No longer operating |
| Manchester Plant | 0079 | Change | Annual fuel rate |
| <u>Merrimack County</u> | | | |
| Merrimack Plant ^a | 0026 | Change | Annual fuel rate |
| <u>Rockingham County</u> | | | |
| Daniel St. ^a | 0011 | Change | Annual fuel rate |
| Schiller Plant ^a | 0012 | Change | Annual fuel rate |
| Newington Station ^a | 0054 | Change | Annual fuel rate |
| Schiller Station | 0056 | Change | Year of record only |

^aNO_x > 750 and SO₂ > 100.

Table 3-8 summarizes the Public Service Companies. Merrimack Plant, Daniel St., Schiller Plant and Newington Station each emit NO_x greater than 750 TPY and SO₂ greater than 100 TPY. The others can be classified as small sources.

The final table, 3-9, lists the updates made to sources which were missing some or all of the pertinent information. Most are sources emitting less than 25 tons of the criteria pollutants or are no longer in operation. Two sources, Fuel Storage Corporation and New England Tank Industries, merged; therefore New England Tank was deleted and the appropriate points added to Fuel Storage Corporation.

VERMONT POINT SOURCE UPDATE

A total of 53 point sources were updated for the state of Vermont. It was determined that it is not viable to do a complete update of all small sources in the state although 16 sources falling into that category were updated because of missing data.

Tables 3-10 through 3-15 summarize all NEDS updates made by category. Each source appears in the table appropriate before the update was made. These tables parallel those for New Hampshire and are, for the most part, self-explanatory. Plants which closed were deleted from the NEDS files. In some cases it was necessary to update boiler size, fuel heat content, and sulfur content as well as the annual fuel rate. Updates of this nature are indicated by the phrase "Fuel Data" in the Update Description. Changes noted by "Annual Fuel Rate" apply to the operating rate appropriate for the applicable SCC category.

Table 3-10 shows changes to Burlington Electric and Light Department which emits more than 100 tons of NO_x each year. This plant is an example of a change in boiler fuel type where data for oil and wood are added to points 01 through 03 as well as updating the usage rate for natural gas. The other tables have a similar format. Where actions for specific points within a source are not detailed, it may be assumed that the same action was used throughout the source. Simmonds plant (source 0011 in Addison County) on Table 3-15 was deleted since it was found to duplicate source 0006 listed in Table 3-11. Of the 19 sources with missing data in Table 3-15, nearly all (16) were found to be small sources, not falling into any of the other categories. The remaining three sources, Bemis-Rygate Mill, Whitefield Paper, and Boise-Cascade all emit more than 100 tons of SO₂ each year.

TABLE 3-9. NEW HAMPSHIRE SOURCES WITH INFORMATION MISSING

| Name | NEDS I.D. | Action | Update description |
|-------------------------------------|--------------------------------|--------|--|
| <u>Carroll County</u> | | | |
| New England Pulp & Paper | 0038 (Grafton) ^a | Delete | No longer operating |
| <u>Grafton County</u> | | | |
| International Packings ^b | 0002 | Change | Annual fuel rate |
| <u>Hillsborough County</u> | | | |
| American Velcro ^b | 0049 | Change | Name changed to Velcro USA, annual fuel rate |
| Sanders Assoc. ^c | 0083 | Change | Name added, annual fuel rate |
| <u>Rockingham County</u> | | | |
| Pease AFB ^d | 0016 | Change | Annual fuel rate |
| Fuel Storage Corp. ^b | 0068 | Change | Annual fuel rate, combined with New England Tank (0053) |
| Atlantic Terminal Sales | 0038 | Change | Year of record only |
| Coleman Oil | 0042 | Delete | No longer operating |
| National Urethane Products | 0052 | Delete | No longer operating |
| New England Tank Ind. | 0053 | Delete | Combined with Fuel Storage (0068) |

^aNEDS lists in Grafton County, actually in Carroll County.

^bVOC > 100 TPY.

^cRACT > 50 TPY.

^dSO₂ > 100 TPY.

TABLE 3-10. VERMONT NO_x SOURCE GREATER THAN 100 TPY

| Plant name | Plant ID | Action | Update description |
|---|----------|---------------|--|
| <u>Chittendon</u> | | | |
| BELD Moran (Burlington Elec. and Light Dept.) | 0003 | Add Change | Points 01-03: Fuel types oil & wood Points 01-08: Fuel Data |

TABLE 3-11. VERMONT SOURCES OF VOC GREATER THAN 100 TPY

| Plant name | Plant ID | Action | Update description |
|-----------------------------------|----------|--------|---|
| <u>Addison</u> | | | |
| Simmonds | 0006 | Change | Points 01-05: Annual Fuel Rates & Stack Height |
| | | Delete | Points 09: No longer operating |
| | | Change | Point 10: Annual Fuel Rate |
| Weyerhaeuser | 0007 | Change | Points 03,04,06: Fuel Data |
| <u>Chittendon</u> | | | |
| Gulf Oil | 0013 | Change | Name to Astroline Petroleum |
| | | Change | Points 01-09: Annual Fuel Rates, Tank Dimensions |
| Mobil Oil | 0021 | Change | Tank Parameters, Annual Fuel Rate |
| Texaco | 0026 | Change | Name to Cray Energy |
| Vermont Furniture Co. | 0034 | Change | Annual Fuel Rate to 0 - No longer Manufactures Furniture |
| <u>Essex</u> | | | |
| Ethan Allen | 0002 | Change | Fuel Data |
| <u>Franklin</u> | | | |
| Stanpack, Fonda Cont. | 0009 | Change | Name to Saxon Ind., Inc., Fonda Contnr., Annual Fuel Rate and Stack Parameters |
| <u>Orange</u> | | | |
| Ethan Allen | 0004 | Change | Annual Fuel Rates |
| <u>Orleans</u> | | | |
| Ethan Allen | 0002 | Change | Fuel Data |
| <u>Rutland</u> | | | |
| Rutland Plywood - Carris Reels | 0013 | Change | Annual Fuel Rates |
| | | Delete | Point 05: No longer operating |
| <u>Windham</u> | | | |
| American Optical | 0002 | Add | New Point 01 for Boiler |
| | | Change | Point 02: Annual Fuel Rate |
| <u>Windsor</u> | | | |
| Goodyear Tire | 0007 | Add | Points 01 & 02: Boilers not prev. included |
| | | Change | Points 03-05: Annual Fuel Rates |

TABLE 3-12. VERMONT VOC RACT SOURCES GREATER THAN 50 TPY

| Plant name | Plant ID | Action | Update description |
|--------------------------|----------|--------|--|
| <u>Bennington</u> | | | |
| Cornish Wire | 0005 | Change | Name to General Cable, Fuel Data, Stack Parameters |
| Green Mountain Furniture | 0008 | Delete | No longer operating |
| Stanley Tools | 0012 | Delete | No longer operating |
| Union Carbide | 0013 | Change | Points 01 & 02: Fuel Data, Stack Parameters |
| | | Change | Points 03 & 04: Annual Fuel Rates |
| | | Delete | Points 05 & 06: No longer operating |
| Ben-Mont Paper | 0001 | Change | Points 01 & 02: Stack Parameters, Fuel Data |
| | | Change | Point 03: Annual Fuel Rate |
| <u>Chittendon</u> | | | |
| Amoco | 0002 | Change | Name to Vermont Morgan, Annual Fuel Rates |
| Exxon | 0006 | Change | Points 02-07: Fuel data and capacity |
| | | Add | Point 01: All information-gasoline storage |
| Green Mountain Petroleum | 0012 | Change | Points 01-04: Stack Parameters, Fuel Data |
| | | Delete | Points 05-05: No longer operating |
| IBM | 0016 | Change | Points 01-03: Annual Fuel Rates, SCC |
| | | Delete | Points 04-05: No longer operating |
| Northern Oil | 0022 | Change | Tank Parameters, Annual Fuel Rate |
| | | Add | Points 04-05: All information |
| Shell Oil | 0024 | Delete | No longer operating |
| Elias Lyman Oil | 0004 | Change | Fuel Data, Stack Parameters |
| Haveg Industries | 0014 | Change | Annual Fuel Rates |
| <u>Orange</u> | | | |
| Bradford Veneer | 0001 | Delete | No longer operating |
| <u>Windsor</u> | | | |
| Cone-Blanchard | 0003 | Change | Annual Fuel Rate |

TABLE 3-13. VERMONT TSP SOURCES GREATER THAN 100 TPY

| Plant name | Plant ID | Action | Update description |
|---------------------|----------|------------------|--|
| <u>Lamoille</u> | | | |
| Pratt, Read | 0004 | Change | Stack Temperatures and annual fuel rates |
| <u>Oreleans</u> | | | |
| Indian Head Plywood | 0004 | Change Add | Fuel Data Point 02 |
| <u>Rutland</u> | | | |
| True Temper Corp. | 0015 | Change Change | Point 01: Stack parameters Point 02: Annual fuel rate |

TABLE 3-14. VERMONT SO₂ SOURCES GREATER THAN 100 TPY

| Plant name | Plant ID | Action | Update description |
|-------------------|----------|--------|---------------------|
| <u>Bennington</u> | | | |
| Pownal Tanning | 0010 | Change | Fuel Data |
| <u>Orleans</u> | | | |
| H.P. Hood | 0003 | Delete | No longer operating |

TABLE 3-15. VERMONT SOURCES WITH INFORMATION MISSING

| Plant name | Plant ID | Action | Update description |
|-------------------------|----------|--------|---|
| <u>Addison</u> | | | |
| Simmonds | 0011 | Delete | Duplicate of source 0006 |
| Kraft Foods | 0002 | Change | Add Fuel Data & Stack Temperatures |
| Middleburg College | 0004 | Change | Points 02 & 04 converted to coal |
| | | Change | Points 01-05: Fuel Data and Stack Parameters |
| <u>Caledonia</u> | | | |
| Bemis-Rygate Mill | 0001 | Change | Name to CPM-Rygate Mill, Stack Heights, fuel data |
| <u>Chittendon</u> | | | |
| Milton Steam | 0020 | Change | Year of Record |
| United Realty | 0028 | Delete | No longer operating |
| <u>Essex</u> | | | |
| Whitefield Paper | 0005 | Change | Annual fuel rate & stack temperature |
| <u>Franklin</u> | | | |
| Vermont Whey | 0013 | Change | Year of record |
| <u>Rutland</u> | | | |
| Brandon Training | 0001 | Change | Fuel data |
| Castleton State College | 0002 | Change | Fuel data |
| <u>Washington</u> | | | |
| Cabot Farmers | 0001 | Change | Fuel data |
| Vermont State Hospital | 0017 | Change | Year of Record |
| <u>Windham</u> | | | |
| Boise-Cascade | 0003 | Change | Fuel data |
| Brattleboro Retreat | 0007 | Change | Fuel data |
| Cerosimo Lumber | 0008 | Change | Fuel data |
| Erving Paper Mills | 0009 | Change | Fuel data |
| Mountain Paper Products | 0011 | Delete | No longer operating |
| Putney Paper | 0012 | Change | Fuel data |
| Robertson Paper | 0013 | Change | Fuel data |

SECTION 4

SUMMARY

To obtain the best possible emissions data for NECRMP, GCA has thoroughly reviewed and updated the New Hampshire and Vermont point source inventories. All data for updates were provided by the appropriate state agencies and are valid for 1979.

Table 4-1 summarizes the total number of updates for each state. All sources identified as meeting the criteria listed in Table 2-1 were updated. In addition, small sources were also updated where feasible. In New Hampshire, 112 of the 209 small sources were included in the updates, many of which consist of deletion of dumps from the NEDS files as requested by New Hampshire personnel. Sixteen of a total of 126 small sources were updated for Vermont. The percent of total sources updated that appears in Table 4-1 represents the total number of sources updated divided by the total number of sources before the deletions and additions. Table 4-1 shows that 66.8 percent of all point sources in New Hampshire and 32.7 percent of Vermont point sources have been updated to reflect the most recent available data.

TABLE 4-1. SUMMARY OF NEDS TRANSACTIONS FOR
NEW HAMPSHIRE AND VERMONT

| | New Hampshire | Vermont |
|---|---------------|---------|
| Source deletions | 114 | 8 |
| Source additions | 2 | 0 |
| Sources with information changes | 95 | 45 |
| Total sources updated | 211 | 53 |
| Total sources before update (excludes additions) | 316 | 162 |
| % Sources updated | 66.8 | 32.7 |

SECTION 5

REFERENCES

1. New Hampshire Air Pollution Control Commission. Regulation No. 22: Prevention, Abatement, and Control of Volatile Organic Compound Emissions. July 1979.
2. Vermont Agency of Environmental Conservation. Air Pollution Control Regulations. November 1979.
3. Calculations and Coding of Volatile Organic Source Emissions in New Hampshire. EPA-902/9-79-006. February 1979.
4. Agency of Environmental Conservation, State of Vermont. Air Quality Implementation Plan. November 1979. pp. 6-13 to 6-47.

TECHNICAL REPORT DATA

(Please read Instructions on the reverse before completing)

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15. SUPPLEMENTARY NOTES

EPA Project Officer: James Southerland

16. ABSTRACT

The objective of this effort was to update the point source emission inventories of New Hampshire and Vermont for subsequent use in the Northeast Corridor Regional Modeling Project (NECRMP). Sources meeting the prescribed criteria were identified. Updated data were obtained from the state agencies and processed into NEDS.

| | | |
|--|----------------------------------|------------------------|
| 17. KEY WORDS AND DOCUMENT ANALYSIS | | |
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| NECRMP Point Sources Emissions Emission Inventory | | |
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