



January 24, 2011

Ms. Susan Hedman
Regional Administrator - R19J
USEPA - Region 5
77 W. Jackson Blvd.
Chicago IL 60604

Subject: Wisconsin Infrastructure SIP Components Confirmation

Dear Ms. Hedman:

I am writing to confirm that the State of Wisconsin continues to retain the resources and authorities necessary to evaluate air ambient air quality, develop plans to attain new and existing ambient air quality standards, meet the applicable requirements of the new source review (NSR) program and to effectively enforce all applicable requirements. Specifically, the Wisconsin Department of Natural Resources (WI-DNR) has the authority and resources to implement and satisfactorily complete the requirements listed below as set forth in Section 110 of the Clean Air Act (CAA) for the 1997 and 2006 National Ambient Air Quality Standards (NAAQS), and therefore meets the current applicable requirements of Section 110 of the CAA for 8-hour ozone, PM-2.5, and PM-10.

The State Implementation Plan (SIP) elements listed below are required under Section 110(a). Section 110(a)(1) provides the procedural and timing requirements for SIPs. Section 110(a)(2) lists the basic or infrastructure elements that all individual SIPs must contain. Following each element is a discussion of WI-DNR's ability to fulfill the requirement. In regard to the 8-hour ozone Section 110 infrastructure SIP elements, this transmittal confirms those portions of the federally-approved 1-hour air quality state planning provisions noted in 58 FR 34225 - June 24, 1993.

EPA guidance on the Section 110(a) infrastructure affirmations and required components (Oct 2, 2007 and Sep 25, 2009 – William T. Harnett) addresses the following elements at the core of the overall ambient air quality management structure:

1. Emission limits and other control measures
2. Ambient air quality monitoring/data system
3. Program for enforcement of control measures
4. Interstate [pollutant] transport
5. Adequate [authority and] resources
6. Stationary source monitoring system
7. Emergency power
8. Future SIP revisions
9. Consultation with government officials
10. Public notification
11. PSD and visibility protection
12. Air quality modeling/data
13. Permitting fees
14. Consultation/participation by affected local entities

Required Section 110 SIP Elements (per EPA guidance)

EPA Guidance: The SIP elements listed below are required under section 110(a)(1) and (2). Section 110(a)(1) provides the procedural and timing requirements for SIPs. Section 110(a)(2) lists the basic or "infrastructure" elements that all SIPs must contain. We note that this list is not intended to constitute an interpretation of these provisions, or a change of past practice with respect to these provisions, merely a brief description of the required elements.

Wisconsin response:

Wisconsin Statute Chapter 285 embodies the primary air pollution regulation requirements and authorities of the state. Subchapter II of 285, Wis. Stats., delineates the general duties and authorities of the WI-DNR as the primary agency for air quality management within the state and as the designated authority to implement the state responsibilities of the federal Clean Air Act and associated State Implementation Plans. Prior Wisconsin Legislative Fiscal Bureau Reports regarding Wisconsin Air Management Programs notes an ongoing commitment of the state within its Air Management Programs to include these fourteen general SIP components. Beyond the general authority noted by Ch. 285 Wis. Stats., the individual responses that follow indicate specific authorities related to the discrete SIP provisions.

1. Emission limits and other control measures

EPA Guidance: Emission limits and other control measures – Section 110(a)(2)(A) requires SIPs to include enforceable emission limits and other control measures, means or techniques, schedules for compliance and other related matters. EPA notes that the specific nonattainment area plan requirements of section 110(a)(2)(I) are subject to the timing requirements of section 172, not the timing requirement of section 110(a)(1), and also that SIPs to meet this section are not covered by the Consent Decree.

Wisconsin response:

WI-DNR continues to monitor, update and implement necessary and required revisions to Wisconsin's SIP in the form of emission limits and other control measures in order to meet federal and state ambient air quality standards including 8-hour ozone, PM-2.5 and PM-10. Authority for this effort is established generally for the Bureau of Air Management under ss. 285.11 through 285.19, Wis. Stats. Authorities related to specific pollutants, including the establishment of ambient air quality standards and increments, identification of nonattainment areas, air resource allocations and various performance and emissions standards, are contained in ss. 285.21 through 285.29, Wis. Stats.

2. Ambient air quality monitoring/data system

EPA Guidance : Ambient air quality monitoring/data system – Section 110(a)(2)(B) requires SIPs to include provisions to provide for establishment and operation of ambient air quality monitors, collecting and analyzing ambient air quality data, and making these data available to EPA upon request.

Wisconsin response:

WI-DNR continues to operate an extensive air monitoring network. The data is used after full quality assurance to determine compliance with the federal and state NAAQS. Wisconsin's most recently adopted and EPA-approved annual network plan for 2011 was signed and submitted on June 25, 2010. In addition, WI-DNR actively participated in the recent development of a five-year regional network assessment for Region 5 states dated July 1, 2010. Authority for the monitoring efforts exists under the general WI-DNR air pollution duties in s. 285.11, Wis. Stats. Funding for the monitoring network comes from a variety of sources with EPA providing a major share under its Section 103 and 105 grant programs supporting federal monitoring requirements specified in 40 C.F.R Part 58.10.

3. Program for enforcement of control measures

EPA Guidance: Program for enforcement of control measures – Section 110(a)(2)(C) requires States to include a program providing for enforcement of all SIP measures and the regulation of construction of new or modified sources to meet prevention of significant deterioration (PSD) and nonattainment NSR requirements.

Wisconsin response:

The WI-DNR Air Management and Environmental Enforcement Programs work together to assure compliance with air program SIP provisions and related administrative code and permit requirements. Authority to enforce violations and to assess penalties is contained in ss. 285.83 and 285.87, Wis. Stats. WDNR follows a stepped enforcement process to address violations in proportion to their seriousness. The enforcement responses range from issuance of a Letter of Inquiry (the state counterpart of an EPA 114 request) where additional information is needed to confirm or assess the significance of a violation, up through referral to the Wisconsin Department of Justice for civil or criminal enforcement as appropriate. The EnPPA (Environmental Performance Partnership Agreement) between the Air Program and EPA Region 5 addresses implementation of the EPA HPV (High Priority Violation) policy. The process for prosecution of violations is also addressed in an Air Program Compliance and Enforcement Memorandum of Understanding between EPA Region 5 and the WDNR Air Management Program. Consistent with the provisions of this MOU, the two agencies conduct monthly compliance and enforcement conference calls to discuss program issues and specific cases. WI-DNR retains the authority to develop enforcement mechanisms and supporting fee structures related to the State's prevention of significant deterioration (PSD) and nonattainment NSR construction and operating permits programs under s. 285.11, s. 285.13, s. 285.17, s. 285.19 and ss. 285.60 through 285.69, Wis. Stats.

4. Interstate [pollutant] transport

EPA Guidance: Interstate Transport – Section 110(a)(2)(D) requires SIPs to include provisions prohibiting any source or other type of emissions activity in one State from contributing significantly to nonattainment, or interfering with maintenance, of the NAAQS in another State, or from interfering with measures required to prevent significant deterioration of air quality or to protect visibility in another state. EPA has already issued CAIR to assist States in developing SIPs to meet this requirement for purposes of the 8-hour Ozone and PM-2.5 NAAQS, and has issued separate guidance to all states on how to comply with each prong of this statutory provision.

Wisconsin response:

WI-DNR has adopted and implemented the various major programs related to interstate transport of pollution as noted necessary by EPA – most recently in NR 432 for the state portions of the Clean Air Interstate Rule (CAIR). The agency developed CAIR implementation programs after 2005 to address interstate transport of ozone and PM-2.5 precursors. When EPA finalizes the replacement to the second phase of CAIR, in the form of a final CATR regulation, WI-DNR has the authority to develop refined control requirements to address that federal program – either adopting the Federal Implementation Plan (FIP) directly or through development of an approvable substitute regulation embodying a more unique state program. Wisconsin has entered into agreements and working relationships with the surrounding states of Illinois, Indiana, Michigan and Minnesota to address a continuing assessment and control strategy program development to ensure multi-state nonattainment areas meet required clean air timelines. Together these regulations and cooperative agreements address CAA and EPA concerns over the interstate transport of emissions of regulated pollutants. Wisconsin Statutes ss. 285.11, 285.13 and 285.15 address circumstances where interstate transport reduction agreements between states are needed to resolve SIP development of cross-boundary nonattainment areas.

5. Adequate resources

EPA Guidance: Adequate resources – Section 110(a)(2)(E) requires States to provide for adequate personnel, funding, and legal authority under State law to carry out its SIP, and related issues.

Wisconsin response:

The amount of funding and personnel granted to the WI-DNR is handled through the State of Wisconsin's biennial budget process. The WI-DNR Air Program has several funding sources, including program revenue (fees paid by businesses), tax revenue and grants (federal and state). There are separate accounts affiliated with the different funding sources to ensure the funding and related personnel are used for the intended purpose. The primary federal grant the WI-DNR Air Program receives is the Section 105 Air Pollution Control Grant. It is an annual grant that includes extensive review by EPA prior to award. In addition, the WI-DNR and EPA negotiate

priorities and grant commitments under the Environmental Performance Partnership Agreement (EnPPA), which is a two year agreement itemizing performance measure and outcomes across the various funding sources and grants. The current EnPPA remains in effect until September 30, 2011. Wisconsin's basic air management program duties and authorities are ensured under s. 285.11, Wis. Stats.

6. Stationary source monitoring system

EPA Guidance: Stationary source monitoring system – Section 110(a)(2)(F) requires States to establish a system to monitor emissions from stationary sources and to submit periodic emission reports.

Wisconsin response:

WI-DNR requires regulated sources to submit various reports, dependant on applicable requirements and the type of permit issued, to the Bureau of Air Management Compliance Team. Reports are prioritized through the Bureau Air Leaders structure regarding frequency and relative thoroughness of review. Frequency and requirements for review are incorporated as part of Wis. Adm. Codes NR 438 and 439. Emission reports are now submitted following a federally mandated Compliance Assurance Monitoring (CAM) reporting structure. Over the last several years Wisconsin has crafted a strong and integrated set of net-based monitoring, reporting, permits and compliance databases that have substantially strengthened the integrity of each of its component units. Basic authority for this effort is provided in s. 285.65, Wis. Stats.

7. Emergency power

EPA Guidance: Emergency power – Section 110(a)(2)(G) requires States to provide for authority to address activities causing imminent and substantial endangerment to public health, including contingency plans to implement the emergency episode provisions in their SIPs.

Wisconsin response:

Wisconsin Statute s. 285.85 requires the Agency to act upon a finding that episode or emergency conditions exist. This language authorizes the Department to seek immediate injunctive relief in circumstances of substantial danger to the environment or to the public health of persons. WI-DNR will further revise the PM-2.5 SIP when EPA promulgates Emergency Episode guidance which addresses priority classifications and significant harm levels. A recent review of monitoring to date (since the first federal method monitors started functioning in Wisconsin) for PM-2.5 has yet to exceed the EPA's current functional emergency episode threshold metric of 140 ug/m³ over a 24-hr period.

8. Future SIP revisions

EPA Guidance: Future SIP revisions – Section 110(a)(2)(H) requires States to have the authority to revise their SIPs in response to changes in the NAAQS, availability of improved methods for attaining the NAAQS, or in response to an EPA finding that the SIP is substantially inadequate.

Wisconsin response:

Wisconsin Statutes s. 285.11(6) provides the agency the authority to develop all rules, limits and regulations necessary to meet ambient air quality standards as they evolve and to respond to any EPA findings of inadequacy with the overall Wisconsin SIP and air management programs.

9. Consultation with government officials

EPA Guidance: Consultation with government officials – Section 110(a)(2)(J) requires States to provide a process for consultation with local governments and Federal Land Managers carrying out NAAQS implementation requirements pursuant to section 121 relating to consultation.

Wisconsin response:

Wisconsin DNR follows a coordinated administrative process in the authorization, approval for notice and adoption via its Natural Resources Board in order to move forward all SIP revisions involving implementation and control program or control measure adoption. That coordinated development process ensures that other

potentially fiscally impacted public entities are identified and allowed to become engaged in the development process. The agency pursues formal MOA processes in all conformity and transportation system activities that might impact local transportation projects, regional projects and planning, and federal funding sources outside EPA. The Bureau of Air Management has effectively used formal stakeholder structures in the development and refinement of all major SIP revisions, especially in regard to regional pollutants such as those critical to ozone, haze and PM-2.5. Wisconsin actively engaged Federal Land Managers (FLMs) and states with Class I areas impacted by Wisconsin source area emissions in regard to regional haze reduction planning. WI-DNR is given the authority in s. 285.13(5), Wis. Stats., to "advise, consult, contract and cooperate with other agencies of the state, local governments, industries, other states, interstate or inter-local agencies, and the federal government, and with interested persons or groups" during the entire process of SIP revision development and implementation and for other elements regarding air management for which the agency is the officially-charged agency.

10. Public notification

EPA Guidance: Consultation with government officials – Section 110(a)(2)(J) further requires States to notify the public if NAAQS are exceeded in an area and to enhance public awareness of measures that can be taken to prevent exceedances.

Wisconsin response:

WI-DNR maintains an active monitoring network for multiple criteria pollutants (those with NAAQS) and routinely forecasts air pollutant concentrations. As provided for under s. 285.11, Wis. Stats., public notice is provided at levels associated with the extent of the monitored problem ranging from a simple advisory to alert levels actively participating in regional air quality forecasts and EPA's AIRNOW air quality data outreach program. WI-DNR maintains an active multi-media outreach effort through a variety of partners to ensure adequate public notice and to advise the public on simple means to reduce immediate exposure.

11. PSD and Visibility protection

EPA Guidance: PSD and visibility protection – Section 110(a)(2)(J) also requires States to meet applicable requirements of Part C related to prevention of significant deterioration and visibility protection.

Wisconsin response:

WI-DNR is addressing both the ongoing review of new major sources and major modifications under a SIP-approved PSD new source review program and through the development of a visibility improvement (haze reduction) SIP revision that includes the formal adoption of Wisconsin's BART program into the SIP. PSD is generally authorized under s. 285.11, Wis. Stats., with specific performance, emission standards (including for BART), permitting and fee structure authorities under ss.285.27 and 285.60-285.69, Wis. Stats.

12. Air quality modeling data

EPA Guidance: Air quality modeling/data – Section 110(a)(2)(K) requires that SIPs provide for performing air quality modeling for predicting effects on air quality of emissions from any NAAQS pollutant and submission of such data to EPA upon request.

Wisconsin response:

WI-DNR maintains a capability to perform modeling of the air quality impacts of emissions of all criteria pollutants including ozone and PM-2.5 among others and including both source-oriented and more regionally directed complex photochemical grid models. WI-DNR works with LADCO, EPA and the other Lake Michigan states to perform regional modeling of ozone and PM-2.5 from consistent emissions inventory and meteorology platforms in order to support coordinated and non-competing SIP development for Wisconsin and nearby nonattainment areas and to address interstate pollutant transport and visibility impact assessments. As required by the Clean Air Act, Wisconsin also requires source-specific modeling for PSD-NSR assessment and permitting for the construction of major and some minor sources. These authorities reside under ss. 285.11, 285.13 and 285.60-285.69, Wis. Stats.

13. Permitting fees

EPA Guidance: Permitting Fees – Section 110(a)(2)(L) requires SIPs to require each major stationary source to pay permitting fees to cover the cost of reviewing, approving, implementing and enforcing a permit.

Wisconsin response:

Major stationary sources receive permits under the WI-DNR Title 5 and New Source Review (NSR) programs. The Title 5 program is funded by emission fees paid by the sources and the level of funding, or fees assessed, are included in the State of Wisconsin biennial budget process. The NSR program is funded by permitting fees that vary based on the type and complexity of the permit. These fees were revised effective January 1, 2011. Authority is established under s. 285.69, Wis. Stats.

14. Consultation/participation by affected local entities

EPA Guidance: Consultation/participation by affected local entities – Section 110(a)(2)(M) requires States to provide for consultation and participation in SIP development by local political subdivisions affected by the SIP.

Wisconsin response:

In addition to the consultative authorities and responsibilities noted in response to element 9 addressing Section (a)(2)(J) regarding intergovernmental consultation, WI-DNR follows formal public hearing processes in the development and adoption of all formal SIP revisions that entail new or revised control programs or strategies/targets. As part of its program development approach, the agency actively engages potentially impacted stakeholders and other interested parties including local governmental entities. To ensure this process is active and inclusive, the agency is required to adopt all formal emission control programs and strategies as rules following the state's formal regulatory processes of notice prior to adoption, and, for any SIP revision not related to a single source, to provide the standing Committees of the state legislature with jurisdiction over environmental matters a 60 day review period which effectively ensures local entities have been engaged in the program development process. The Department is obligated to respond to inquiries by the committee Chairs within 15 days under s. 285.14, Wis. Stats.

Based on the information noted here, I believe that Wisconsin-DNR meets or exceeds all of the necessary CAA Section 110 infrastructure needs in regard to 8-hour ozone, regional haze and particulate matter in the form of PM-2.5 and PM-10 and that the authorities in place continue to satisfy those requirements of the CAA. If you have any questions, please feel free to contact Joe Hoch, Regional Pollutants and Mobile Sources Section Chief, Bureau of Air Management at 608-267-7543 or Joseph.Hoch@Wisconsin.gov.

Sincerely



John Melby, Jr. – Director
Bureau of Air Management

Cc: Sue Bangert – AD/8
Pat Stevens – AD/8
Cheryl Newton – USEPA Region 5

State of Wisconsin
DEPARTMENT OF NATURAL RESOURCES
101 S. Webster Street
Box 7921
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March 28, 2011

Cheryl L. Newton, Director
Air and Radiation Division
U.S. Environmental Protection Agency, Region 5
77 West Jackson Boulevard
Mail Code: A-18J
Chicago IL 60604-3507

Subject: Wisconsin Infrastructure State Implementation Plan (SIP) Clarifications for the 1997 8-Hour Ozone (O_3) National Ambient Air Quality Standard (NAAQS) and the 2006 24-Hour Fine Particulate Matter ($PM_{2.5}$) NAAQS.

Dear Ms. Newton:

The Wisconsin Department of Natural Resources (WDNR) submitted a confirmation of Clean Air Act (CAA) Section 110 infrastructure SIP components to the U.S. Environmental Protection Agency (EPA) on January 24, 2011. The purpose of this letter is to provide important clarifications related to greenhouse gases (GHG) and the use of coarse particulate matter (PM_{10}) as a surrogate for $PM_{2.5}$.

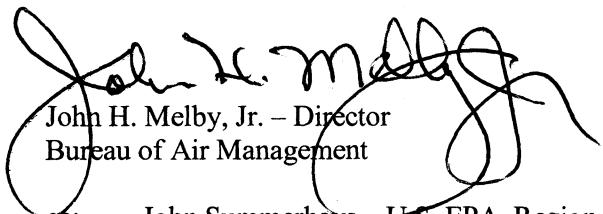
The U.S. EPA published the "Narrowing Rule" in the *Federal Register* on December 30, 2010 (75 FR 82536). The U.S. EPA narrowed its approval of state-specific Prevention of Significant Deterioration (PSD) rules to the extent that those rules required major source permits for sources emitting less than specified thresholds (e.g., 75,000 tons per year (tpy) of carbon dioxide equivalent ("CO₂e")). To avoid any unnecessary confusion, we want to be clear that by our letter of January 24th, we are requesting a finding that Wisconsin's SIP is sufficient to meet the requirements of CAA Section 110(a)(2)(C) and (J) that is based, in pertinent part, on a PSD program that reflects the elevated thresholds of the Narrowing Rule.

The U.S. EPA promulgated the $PM_{2.5}$ NAAQS in 1997. Shortly thereafter, the U.S. EPA issued a guidance document entitled "Interim Implementation for the New Source Review (NSR) Requirements for $PM_{2.5}$." (John S. Seitz, U.S. EPA, October 23, 1997) ("Seitz Memo"). The Seitz Memo recognized that there were "significant technical difficulties" that exist with respect to $PM_{2.5}$ implementation and that due to these difficulties "EPA believes that PM_{10} may properly be used as a surrogate for $PM_{2.5}$ in meeting NSR requirements until these difficulties are resolved." The grace period for use of PM_{10} as a surrogate for $PM_{2.5}$ ends on May 16, 2011.

Wisconsin has discontinued the use of PM_{10} as a surrogate for $PM_{2.5}$ for all NSR requirements. Wisconsin had always implemented this as policy so there is no administrative rule(s) that need to be revised to account for sun setting its use. NSR staff has been instructed that the surrogate policy is no longer to be used and peer review by both the WDNR and U.S. EPA Region 5 staff serve as a check to ensure that it does not occur.

Thank you for your cooperation on these clarifications regarding our infrastructure SIP components. If you have any questions or need additional information, please contact Joseph Hoch, Regional Pollutant and Mobile Source Section Chief, at 608-267-7543 or joseph.hoch@wisconsin.gov.

Sincerely,



John H. Melby, Jr. – Director
Bureau of Air Management

cc: John Summerhays – U.S. EPA, Region 5
John Mooney – U.S. EPA, Region 5
Michael Leslie – U.S. EPA, Region 5
Margaret Hoefer – LS/8
Joseph Hoch – AM/7
Andy Stewart – AM/7



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5

77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

Mike Capo

DEC 15 2011

REPLY TO THE ATTENTION OF:

Bill Baumann, Acting Bureau Director
Air Bureau
Wisconsin Department of Natural Resources
101 South Webster Street
P.O. Box 7921
Madison, Wisconsin 53707-7921

Dear Mr. Baumann,

Thank you for your March 7, 2011 request for a Clean Data Determination for the 2006 24-hour Fine Particulate Matter (PM2.5) National Ambient Air Quality Standard (NAAQS) for the Milwaukee-Racine Nonattainment Area. The Region has reviewed your request and has determined that two PM2.5 monitors within the nonattainment area, which were violating the standard for 2007-2009 design value period, were erroneously approved for discontinuation at the beginning of 2010. Those monitors were the Virginia Street Fire Station PM2.5 monitor (AQS Site ID: 550790043) and the Fire Department Headquarters PM2.5 monitor on Wells Street (AQS Site ID: 550790099). The Region has, therefore, used a series of statistical tests to determine if those two monitors would likely have met the NAAQS if they had continued collecting data through 2010 for the 2008-2010 design value period.

Our analysis results show that the Virginia Street Fire Station PM2.5 monitor, had it continued operating, would very likely have shown attainment of the NAAQS. The monitor also has similar concentrations to the two remaining sites within the County of Milwaukee, which are the Wisconsin Department of Natural Resources (WDNR) Southeast Regional Headquarters PM2.5 monitor (AQS Site ID: 550790026) and the Health Center PM2.5 monitor on 16th Street (AQS Site ID: 550790010). **The Region believes that allowing this monitor to remain shut down would not compromise the requirements of 40 CFR Part 58 Appendix D.**

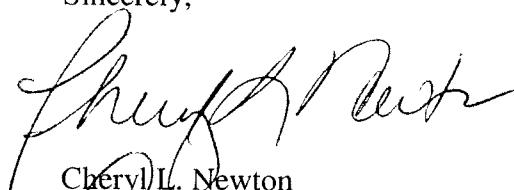
Our analysis results show that the Fire Department Headquarters PM2.5 monitor on Wells Street, had it continued operating, also would very likely have shown attainment of the NAAQS. However, this monitor appears to measure a more unique air mass than the Virginia Street Fire Station PM2.5 monitor. Additionally, people live next door to the Fire Department Headquarters PM2.5 monitor on Wells Street, which qualifies the site as population oriented and would help the nonattainment area's PM2.5 network meet the monitoring requirements of 40 CFR Part 58 Appendix D. **The Region, therefore, is requiring that the Fire Department Headquarters PM2.5 monitor on Wells Street be re-established and restart operation by January 1, 2012.**

Pursuant to your request, we intend to publish rulemaking in the Federal Register proposing to approve your Clean Data Determination request, thereby determining that the Milwaukee-Racine Nonattainment Area is meeting the 24-hour PM2.5 NAAQS. In describing our rationale for

proposing this determination, we plan to provide detailed discussion of our analysis of air quality at the discontinued monitor locations. Our final rulemaking would then reflect consideration of any public comments we receive.

If you have any questions regarding the monitoring data or statistical analysis, please contact Michael Rizzo, at 312-353-8641. If you questions regarding the PM2.5 redesignation process, please contact Gilberto Alvarez at 312-886-6143.

Sincerely,



Cheryl L. Newton
Director
Air and Radiation Division

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March 7, 2011

Mr. John Mooney, Acting Chief of Air Programs Branch
U.S. Environmental Protection Agency, Region 5
77 West Jackson Boulevard
Mail Code: AR-18J
Chicago IL 60604

Subject: Clean Data Determination for the 2006 24-hour Fine Particulate Matter (PM_{2.5}) National Ambient Air Quality Standard (NAAQS)

Dear Mr. Mooney:

The Wisconsin Department of Natural Resources (WDNR) hereby requests the U.S. Environmental Protection Agency (EPA) make a determination that the Milwaukee-Racine nonattainment area has attained the 2006 24-hour PM_{2.5} NAAQS and publish that determination in the Federal Register. This request is based on recent measured attainment statewide from Federal Reference Method (FRM) PM_{2.5} monitors from 2008 through 2010.

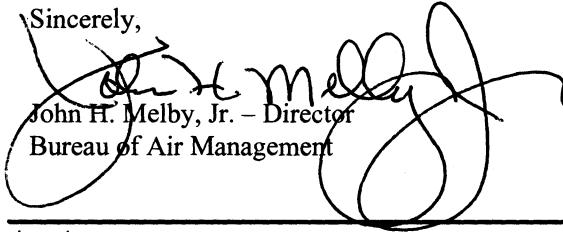
Based upon fully quality assured, quality controlled, FRM PM_{2.5} monitoring data, 98th percentile 24-hour PM_{2.5} concentrations and derived design values are presented in the attachment to this correspondence. All PM_{2.5} monitors in Wisconsin measured attainment of the 24-hour PM_{2.5} NAAQS for this period with resulting design values of 31.7 – 33.0 µg/m³ within the nonattainment area and 16.9 – 35.3 µg/m³ statewide. Notably, attainment levels have been achieved throughout the state well in advance of the December 2014 statutory deadline.

It is our understanding that a clean data determination by the U.S. EPA for the 2006 24-hour PM_{2.5} NAAQS suspends the requirement for the WDNR to submit an attainment demonstration and associated reasonably available control measures, reasonable further progress plans, contingency measures, and other planning items related to attainment of the PM_{2.5} NAAQS, in accordance with 40 CFR 51.1004. The WDNR also understands that the suspension of these planning requirements can be rescinded if the U.S. EPA subsequently issues a finding that the area is no longer attaining the NAAQS.

The measured improvements in PM_{2.5} air quality are due to a variety of state and federally enforceable control programs implemented to reduce emissions of PM_{2.5} and its precursor pollutants. The WDNR will work collaboratively with the U.S. EPA to develop a redesignation request for the Milwaukee-Racine nonattainment area over the next several months that further quantifies the achieved emission reductions.

Thank you for considering this request. If you have any questions or need additional information, please contact Joseph Hoch, Regional Pollutant and Mobile Source Section Chief, at 608-267-7543.

Sincerely,



John H. Melby, Jr. – Director
Bureau of Air Management

ATTACHMENT

Summary of PM_{2.5} Ambient Monitoring Data

All PM_{2.5} monitors in Wisconsin measured attainment of the 24-hour PM_{2.5} NAAQS for the period 2008 through 2010. During this period, the design values ranged from 31.7 – 33.0 µg/m³ within the nonattainment area and 16.9 – 35.3 µg/m³ statewide. The following table summarizes the 24-hour PM_{2.5} 98th percentile concentrations and resulting design values for the period 2008 through 2010.

Table 1. Statewide 24-Hour PM_{2.5} 98th Percentile Concentrations and Design Values from 2008 - 2010

Site Name	Site ID	POC	24-Hour 98%-ile FRM PM _{2.5} Concentrations (µg/m ³)			Resulting Design Value ¹
			2008	2009	2010	
Green Bay	550090005	1	34.6	36.4	35.1	35.3
Appleton	550870009	1	30.5	33.5	36.6	33.5
Milw-DNR SERHQ	550790026	1	27.5	39.0	32.6	33.0
Potosi	550430009	1	35.2	33.0	30.2	32.8
Waukesha	551330027	2	29.9	32.8	35.9	32.8
Milw-16th CHC	550790010	2	27.5	39.1	30.9	32.5
LaCrosse	550630012	1	29.2	39.5	28.7	32.4
Milw-FAA/College Ave.	550790058	1	26.9	33.0	35.3	31.7
Madison	550250047	1	32.0	32.1	29.5	31.2
Perkinstown	551198001	1	33.0	25.3	32.5	30.2
Manitowoc	550710007	1	24.7	33.6	29.5	29.2
Devils Lake	551110007	1	24.4	37.8	24.9	29.0
Mayville / Horicon	550270007	1	24.7	32.3	29.9	28.9
Harrington Beach	550890009	1	26.3	31.5	27.6	28.4
Somerset	551091002	1	24.2	33.9	27.0	28.3
Chiwaukee	550590019	1	25.8	34.7	23.3	27.9
Trout Lake	551250001	1	21.2	24.5	20.9	22.2
Potawatomi	550410007	1	15.2	20.4	22.1	19.2
Bad River	550030010	1	16.0	17.6	17.3	16.9

¹ Design Values were developed in accordance with 40 CFR 50 Appendix N
Monitors located in the Milwaukee-Racine nonattainment area are identified by bold text.
FRM – Federal Reference Method

Based on this data, the WDNR believes a clean data determination for the Milwaukee-Racine nonattainment area is both reasonable and justified at this time. The WDNR will continue to operate a federally approved FRM PM_{2.5} monitoring network in this area to track continued attainment of the 2006 24-hour PM_{2.5} NAAQS.

Appendix 3

An Analysis of Characteristics and Precursors to Ambient PM_{2.5} Levels in Southeastern Wisconsin for Purposes of Designing Emission Inventories for Inclusion in a Request for Redesignation to Attainment PM_{2.5} Nonattainment Counties of Milwaukee, Waukesha and Racine

Bureau of Air Management
Wisconsin Department of Natural Resources
August 2011

(Updated in May 2012 to address ammonia pollution)

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1 Purpose of Report

The purpose of this report is to provide a technical demonstration to identify certain long-term (2001 through 2009, 2010) characteristics, distributions and profiles in measured fine particulates (i.e. those particles with an aerodynamic diameters less than 2.5 microns (“PM_{2.5}”)) and some of their precursors in southeastern Wisconsin.

Evaluating these long-term behaviors and features of PM_{2.5} and precursors in southeastern Wisconsin will help in assessing which (if any) additional emission inventories need to be constructed as part of the Wisconsin Department of Natural Resources (WDNR)’s request for the redesignation to attainment for PM_{2.5} nonattainment counties in southeastern Wisconsin as part of the state implementation plan (SIP) for PM_{2.5}.

2 Overview: PM_{2.5} nonattainment designations and request to redesignate to attainment

On November 13, 2009 (74 FR 58688) the U.S. Environmental Protection Agency (EPA) designated the Wisconsin counties of Milwaukee, Racine and Waukesha (Figure 1) as being in nonattainment of the year 2006 24-hour PM_{2.5} National Ambient Air Quality Standard (NAAQS). This designation was part of the U.S. EPA’s national rulemaking in which numerous other regions in the country were also designated as not attaining a PM_{2.5} NAAQS.

This rulemaking, which was done in accordance with Section 107(d) of the Federal Clean Air Act (CAA), was based upon the Agency’s review of PM_{2.5} measurements collected during the three year period 2006-2008.

The PM_{2.5} measurements collected at monitoring sites in Milwaukee and Waukesha Counties during 2008-2010 show that all sites have attained all PM_{2.5} NAAQS during this three year period. There never has been any PM_{2.5} monitoring conducted in Racine County.

Consequently, the Wisconsin Department of Natural Resources (WDNR) is in the process of drafting a request that the U.S. EPA redesignate Milwaukee, Racine and Waukesha Counties (Figure 1) as attaining the year 2006 24-hour PM_{2.5} NAAQS.

The U.S. EPA has established guidance and requirements that any state must follow in submitting a redesignation request.

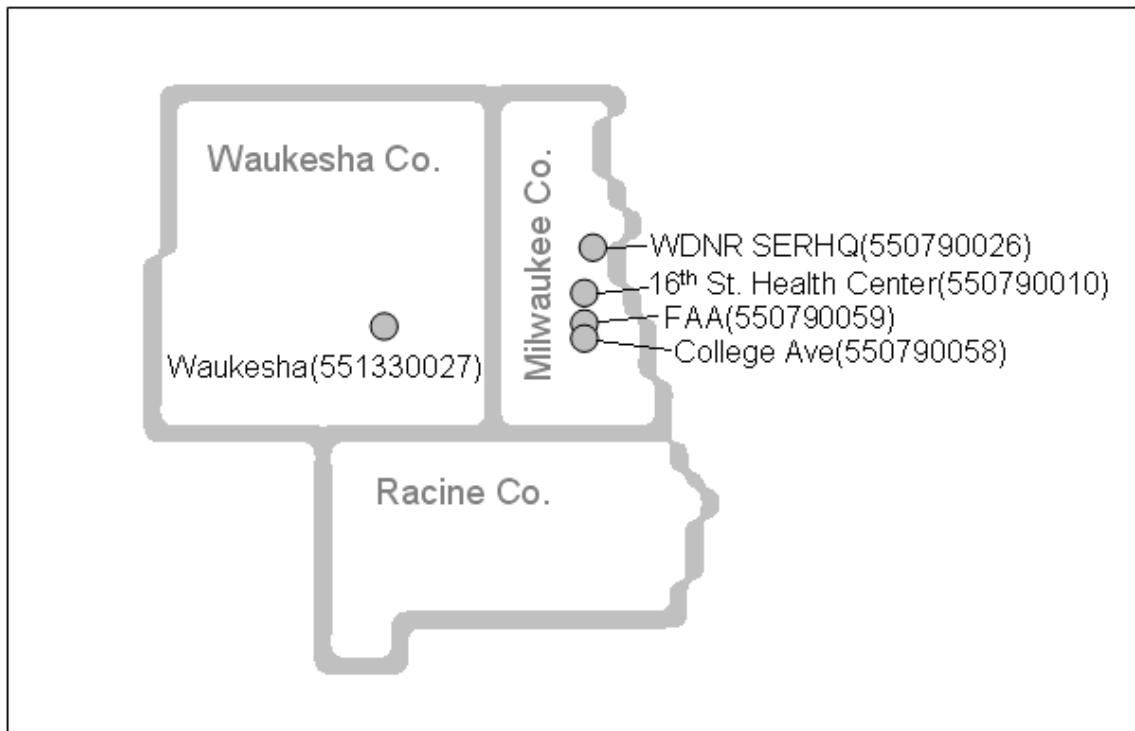
Under section 172(c)(3) of the federal Clean Air Act (CAA), any state seeking a redesignation to attainment is required to submit a comprehensive, accurate and current inventory of actual (base year / attainment year) emissions. Additionally, under section 175A of the CAA, the state must submit a maintenance plan that demonstrates continued attainment for at least 10 years after approval of a redesignation. This maintenance plan must include a maintenance inventory.

Eight years after the redesignation, a revised maintenance plan for the next ten years must be submitted to the U.S. EPA. In order to address the possibility of future NAAQS violations, the maintenance plan must contain contingency measures.

Figure 1

**Wisconsin Nonattainment Counties
And FRM PM_{2.5} Monitoring Sites
(Milwaukee, Waukesha and Racine)**

2006 24-Hour PM_{2.5} NAAQS



3 Overview: Requirements on evaluating concentration levels of PM_{2.5} and gaseous PM_{2.5} precursors for PM_{2.5} SIP revisions (e.g., redesignation requests)

On April 25, 2007 the U.S. EPA promulgated many requirements and guidance notes regarding provisions for implementation of PM_{2.5} NAAQS – as part of the Agency’s Clean Air Fine Particle Implementation Rule (72 **FR** 50586). These requirements are codified in 40 **CFR** 51 subpart Z (“provisions for implementation of PM_{2.5} NAAQS”).

Among these PM_{2.5} SIP requirements is addressing pollutants contributing to PM_{2.5} concentrations. Section 40 CFR 51.1002(c) requires that

“The State implementation plan [SIP] must identify and evaluate sources of PM_{2.5} direct emissions and PM_{2.5} attainment plan precursors in accordance with §§ 51.1009 and 51.1010. After January 1, 2011, for purposes of establishing emissions limits under 51.1009 and 51.1010, States must establish such limits taking into consideration the condensable fraction of direct PM_{2.5} emissions”

“(1) The State must address sulfur dioxide [SO₂] as a PM_{2.5} attainment plan precursor and evaluate sources of SO₂ emissions in the State for control measures.”

“(2)-(4) The State must address any of the following gaseous precursors: NOx [oxides of nitrogen], volatile organic compounds [VOCs], and ammonia [NH₃] as PM_{2.5} attainment plan precursors and evaluate their emission sources in the State for control measures, unless the State and the U.S. EPA provide an appropriate technical demonstration for a specific area showing that these emissions from sources in the State do not significantly contribute to PM_{2.5} concentrations in the nonattainment area.”

“(5) The State must submit a demonstration to reverse any presumption in this rule for a PM_{2.5} precursor with respect to a particular nonattainment area, if the administrative record related to development of its SIP shows that the presumption is not technically justified for that area.”

Since 2001 in southeastern Wisconsin, the WDNR has collected a sizable archive of measurements of both unsplicated (bulk) and splicated PM_{2.5} compounds (e.g., SO₄, NO₃ and OC), as well most of their gaseous precursors (SO₂, NOx and VOCs). Consequently, this study contains analyses of the long-term trends (2001-2009) in the characteristics and relationships between the above-mentioned precursors and PM_{2.5} species.

However, there is one gaseous PM_{2.5} precursor (ammonia [NH₃]) for which EPA regulations [40 CFR 51.1002(c)(4)] note should be investigated for potential impact on PM_{2.5} levels. Ammonia aids in the formation of NO₃ PM_{2.5}, as well as ammonium (NH₄) PM_{2.5}. However, the WDNR has almost no ambient NH₃, measurements, especially in southeastern Wisconsin. Consequently, there is no analysis possible of the long-term characteristics of NH₃ concentrations as they relate to NO₃ levels in southeastern Wisconsin.

However, the Illinois State Water Supply (ISWS) did collect daily 24 hour-averaged NH₃ measurements during January – March 2009 at the WDNR monitoring sites in Mayville (ID # 550270070)and Milwaukee SERHQ (ID# 550790026). The ISWS conducted this NH₃ sampling as part of a LADCO-sponsored study to evaluate the science of nitrate PM_{2.5} levels during the winter in southeastern Wisconsin (i.e., the “Winter Nitrate Study” [WNS], Stanier, et. al, 2010). The WDNR and several contractors (including ISWS) monitored a total of 25 parameters as part of the WNS field measurement program during January-March 2009.

Using the WNS measurements, researchers from the University of Iowa conducted a detailed modeling analysis of what processes appear to assist in producing relative high NO₃ levels in southeastern Wisconsin during the winter months (Stanier, et. al, 2010). These results, especially as they involve NH₃ concentrations are discussed in Section 6.8.

4 Data analysis overview

Addressing the requirements listed in 40 CFR 51.1002(c)(2) and (3) forms the heart of this study -- as they pertain to the WDNR drafting a request that the U.S. EPA redesignate Milwaukee, Racine and Waukesha Counties to attainment of the year 2006 24-hour PM_{2.5} NAAQS. Specifically, for the long-term (2001-2009) period in Wisconsin's PM_{2.5} nonattainment counties - this analysis looks at the characteristics and distributions of the following pollutants:

- a) PM_{2.5} (measured according to EPA's federal reference method [FRM]),
- b) Major speciated PM_{2.5} ions, and
- c) The gaseous PM_{2.5} precursors VOCs and NOx - how their concentration levels relate to the targeted PM_{2.5} ions and FRM PM_{2.5}.

Meteorological conditions are known to greatly influence ambient levels of PM_{2.5}, especially those formed as secondary particles from gaseous precursors (Damburg 2007, LADCO 2009). Consequently, some of the graphical assessments illustrate how varying profiles of several meteorological metrics (e.g., average daily temperature, average daily relative humidity) relate to PM_{2.5} levels.

The results of these analyses will provide a technical demonstration that helps answer the following questions regarding emission inventories for this redesignation request:

- a) How should the emissions inventories be configured on a temporal basis? Based on annual activity levels? Or targeted to those portion(s) of the calendar when the ambient PM_{2.5} levels are most dominant?
- b) Which gaseous precursor(s) demonstrate to make contributions to secondary (condensable) PM_{2.5} levels that are sufficiently large such that their emissions must be taken into account as part of the PM_{2.5} SIP?

With regards to part (b) – this assessment will address the influence of the PM_{2.5} precursor pollutants VOCs and NOx. There are little, if any ambient ammonia (NH₃) measurement data available for southeastern Wisconsin. Consequently, NH₃ is not evaluated for this study.

5 Measurement data

The geographical focus of this study of PM_{2.5} and PM_{2.5} precursor measurements for purposes of assessing which emission inventories need to be constructed is the PM_{2.5} nonattainment area in Wisconsin (i.e., the Counties of Milwaukee, Waukesha and Racine [Figure 1]). Note, there have never been any measurements of any PM_{2.5} and PM_{2.5} precursors collected in Racine County.

5.1 FRM PM_{2.5} data

One of the questions that need answering in this study is how the emissions inventories should be configured on a temporal basis. Should the emissions be established for annual activities and throughputs? Or should they be derived for the calendar season of greatest PM_{2.5} impact? (e.g., winter months). In order to evaluate this question all of the validated 24 hour, filter-based FRM PM_{2.5} measurements collected in both Milwaukee and Waukesha Counties during January 1999 – December 2010 were analyzed. The WDNR commenced FRM PM_{2.5} monitoring in Wisconsin in January 1999.

At varying times during January 1999 – December 2010 the WDNR has operated a total of 7 FRM PM_{2.5} monitoring sites in Milwaukee County, as follows:

<u>Site Name</u>	<u>Site ID #</u>
16th St. Health Center	550790010 (a)
DNR SER HQ	550790026 (a)
Virginia St. Fire Station	550790043
Craig School	550790050
County Zoo	550790051
College Ave.	550790058 (a)
Fed Aviation Adm. Bldg	550790059
Wells St. Fire Station	550790099

(a) Active site as of July 2011. All other monitoring sites have been discontinued.

The WDNR, during the same 12 year period, maintained two FRM PM_{2.5} monitoring sites in Waukesha County:

<u>Site Name</u>	<u>Site ID #</u>
Cleveland Ave	551330027(a)
Barstow St	551330034

(a) Active site as of July 2011. The Barstow site has been discontinued.

5.2 Speciated PM_{2.5} data

Since 2001 the WDNR, at the Milwaukee-DNR SERHQ and Waukesha-Cleveland sites, has also collected a second series of 24-hour, filter-based PM_{2.5} mass samples using a different instrument and filter system from the FRM equipment. (i.e., the Speciation Air Sampling System [SASS]). In turn, these SASS PM_{2.5} mass samples have been laboratory-analyzed for many different types of PM_{2.5} species that comprise the total PM_{2.5} mass.

Based upon the lab analysis of the PM_{2.5} mass collected on these speciation filters, the large majority of PM_{2.5} mass has been identified as pertaining to four PM_{2.5} species, as follows:

- Sulfates (SO_4), most which are formed from the atmospheric chemical processes involving the gaseous $\text{PM}_{2.5}$ precursor sulfur dioxide (SO_2).
- Organic carbon (OC), most which is formed from the atmospheric chemical processes involving heavier volatile organic compounds (VOCs) – largely in the aromatics species group.
- Nitrates (NO_3), most which are formed from the atmospheric chemical processes involving the gaseous $\text{PM}_{2.5}$ precursors oxides of nitrogen (NOx) and ammonia (NH_3).

The U.S. EPA guidance for $\text{PM}_{2.5}$ SIPs already requires that the states need to compile and assess SO_2 emission inventories for their contribution to $\text{PM}_{2.5}$ levels (mostly via SO_4).

However, the U.S. EPA requirements [40 CFR 51.1002(c)] note that states should also evaluate how the $\text{PM}_{2.5}$ precursors VOCs, NOx and NH_3 may influence $\text{PM}_{2.5}$ levels in their $\text{PM}_{2.5}$ nonattainment. Any of these precursors which are estimated to “significantly contribute” (EPA language) to $\text{PM}_{2.5}$ levels in the $\text{PM}_{2.5}$ nonattainment area – emission inventories for the precursor(s) need to be compiled.

For this study, WDNR’s large measurement archive of both VOCs and NOx allows for a long-term assessment on how OC $\text{PM}_{2.5}$ levels relate to VOC concentrations, and also compare NO_3 $\text{PM}_{2.5}$ concentrations to NOx levels in Wisconsin’s $\text{PM}_{2.5}$ nonattainment area. The data sets of both VOC and NOx measurements collected in southeastern Wisconsin that were analyzed for these comparisons are described in the following two sections.

As noted in Section 3, there is almost a complete absence of NH_3 measurements in southeastern Wisconsin, which includes Wisconsin’s $\text{PM}_{2.5}$ nonattainment counties of Milwaukee, Waukesha and Racine. Consequently, the influence of NH_3 on NO_3 levels in this area is derived from a modeling analysis conducted as part of the 2010 Winter Nitrate Study (Stanier, et. al, 2010). A discussion of this analysis is contained in Section 6.8.

5.3 VOC measurement data

The purpose of evaluating VOC measurements as they relate to $\text{PM}_{2.5}$ concentrations is that one of the largest $\text{PM}_{2.5}$ component species is organic carbon (OC) (Wis DNR, 2003). Some OC $\text{PM}_{2.5}$ is formed as a primary pollutant directly emitted into the atmosphere.

However, the large majority of OC $\text{PM}_{2.5}$ is formed in the atmosphere as a secondary organic aerosol (SOA) (Grosjean and Seinfeld, 1989). The ability of a given VOC species to produce these condensable SOA products depends on its atmospheric abundance, reactivity, oxidant availability and volatility of its products (NARSTO, 2001). Of note is that the large majority of VOC species do not form SOA under atmospheric conditions due to the typically high vapor pressure of their products.

The SOA particles are formed mostly as a result of certain atmospheric chemistry processes involving a synthesis of sunlight, heat and moisture which transform some of the heavier (i.e., lower vapor pressure) VOCs (mostly from the aromatics group) to yield condensable particulates (Grosjean and Seinfeld, 1989).

Consequently, the two categories of ambient VOC concentrations that are analyzed in this $\text{PM}_{2.5}$ study are total VOCs (i.e., total nonmethane organic carbon [TNMOCs]) and the aromatic species.

The only ambient speciated VOC measurement data collected in Wisconsin’s $\text{PM}_{2.5}$ nonattainment area have been at the Milwaukee DNR SERHQ site, located approximately 2 miles north of the Milwaukee downtown and 2 miles east of Lake Michigan (Figure 1).

There have been two types of speciated VOC measurement data collected at the SER site:

a) Lab analysis of integrated 24 hour air samples collected in stainless steel canisters – once every 6th calendar day, year around. The “VOC canister” data base used in this study is for the period 2001 – 2009.

b) Continuous analysis of ambient air streamed into an automated gas chromatograph (“autoGC”) during the months of June-July-August for the years 2001-2007. The VOC concentrations derived from this continuous sampling were synthesized into hourly averaged and then into calendar day (24-hour) levels.

The WDNR Air Monitoring Section has evaluated how “canister” and “autoGC” 24-hour averaged VOC measurements compare for same day sampling. Their findings concluded that the overall differences between the two VOC measurement methods were sufficiently minimal. Consequently, the WDNR ruled that both VOC data bases could be used interchangeably in the same analysis.

Consequently, the data base of validated 24-hour VOC (i.e., TNMOC, aromatic species) established for this study was derived as of 1) VOC concentrations from for all canister-based samples (year-around collection), and 2) the 24-hour averaged VOC data from the autoGC on those dates that were not already witness to canister sampling.

This resulting data base of 24-hour averaged TNMOC and aromatic VOCs concentrations is used in comparison with the same day 24-hour FRM and OC PM_{2.5} measurements at Milwaukee-SER during 2001-2009.

5.4 NOx measurement data

The purpose of evaluating NOx measurements as they relate to PM_{2.5} concentrations is that one of the largest PM_{2.5} component species is nitrate (NO₃). Some nitrates are formed as a primary pollutant directly emitted into the atmosphere.

However, the large majority of NO₃ PM_{2.5} is formed in the atmosphere as secondary fine particulates (Damberg, 2007).

The only ambient NOx measurement data collected in Wisconsin’s PM_{2.5} nonattainment area have been at the Milwaukee DNR SERHQ site. The NOx data base used in this study consist of 24-hour (calendar day) averaged values that have been aggregated from validated hourly-averaged NOx.

This resulting data base of 24-hour averaged NOx concentrations is used in comparison with the same day 24-hour FRM and NO₃ PM_{2.5} measurements at Milwaukee-SER during 2001-2009.

5.5 Meteorological data

The concentration levels of PM_{2.5} and its major precursors can be greatly influenced by varying meteorological conditions (LADCO, 2009). Consequently, there are graphs constructed for this study that profile changes in FRM PM_{2.5}, OC and NO₃ PM_{2.5} and their precursor concentrations.

The source of all meteorological data employed in this study was the weather measurements taken at the National Weather Service (NWS) station located at Milwaukee Mitchell Field Airport (“MKE”). The MKE site is located approximately 3 miles west of Lake Michigan and approximately 10 miles directly south of the WDNR monitoring site at the Milwaukee-DNR SERHQ office.

Many of the graphs that contain air pollution data from Milwaukee-SER site also display MKE meteorological data. Both the SER and MKE sites are approximately the same distance west of the Lake Michigan, which can greatly modify weather patterns on the east side of Milwaukee. Consequently, it is

believed that the MKE meteorological data are adequately representative of the meteorology at the SER site.

The MKE NWS meteorological data were used because they are more complete and subject to more quality assurance than the meteorological measurements taken at Milwaukee-DNR SERHQ.

6 Evaluating characteristics of PM_{2.5} in Milwaukee and Waukesha Counties

6.1 Month of year distributions - average FRM PM_{2.5} concentrations

Figures 2 and 3 display county-wide, collective month-of-year metrics - both the average daily FRM PM_{2.5} concentrations and the percentage of daily FRM PM_{2.5} concentrations greater than 30 ug/m³ for all validated FRM PM_{2.5} monitoring conducted during January 1999 – December 2010 in Milwaukee and Waukesha Counties, respectively.

Both graphs display the same general patterns. Those patterns are that the highest monthly average PM_{2.5} levels and the greatest occurrence of high site-PM_{2.5} days (i.e., defined as > 30ug/m³) during January 1999 – December 2010 are noticeably skewed to the colder months of November – March. Using Milwaukee County PM_{2.5} data, the collective average month-of-year PM_{2.5} concentration for November – March (15.0 ug/m³) is 26% higher than for the remaining seven months (11.8 ug/m³). Furthermore, the collective average percentage rate of high PM_{2.5} days for November – March (6.68%) is more than twice the rate of high PM_{2.5} site-days during the other seven months (2.97%).

There is a weak secondary maximum in these PM_{2.5} statistics during July-August. The graphs show that the lowest monthly PM_{2.5} levels typically occur during the meteorologically transitional spring (March-April) and autumn (September-October) seasons. For Waukesha County - a very similar evaluation of annual distribution in FRM PM_{2.5} can be derived from applying the same metrics.

Figures 2 and 3 reveal that both the long-term (1999-2010) PM_{2.5} levels are highest and the exceedances of the 24-hour PM_{2.5} NAAQS are most likely during the colder months of December – February in southeastern Wisconsin. These characteristics suggest that the focus of PM_{2.5} SIP work, including emissions inventory development might be most effective if directed towards PM_{2.5}-related activity levels and throughput during December-February.

Reid, et.al. (2011) have already compiled winter time emissions inventories (“average January weekday”, years 2005 and 2008) for the pollutants NOx, VOCs and carbon monoxide (CO) for several sites in the upper Midwest, including the vicinity of the Milwaukee DNR SERHQ site. These emission inventories were constructed from inventory components developed by the Lake Michigan Air Directors Consortium (LADCO). Of note is that summertime emissions inventories were also compiled as part of this study.

6.2 Month of Year – Average speciated PM_{2.5} concentrations

Figures 4 is similar to Figure 2 in that it displays collective month-of-year average daily PM_{2.5} concentrations collected in Milwaukee during the past decade. However, Figures 4, as well as Figure 5, is derived from the 24-hour speciated PM_{2.5} measurements collected at the Milwaukee-SER site during January 2001 (when speciation PM_{2.5} monitoring started) through December 2009. Figures 4 and 5 show composite month-of-year stacked bar graphs of the daily average concentrations and percentage fractions of FRM values, respectively for the four major PM_{2.5} species (organic carbon [OC], nitrate [NO₃], sulfate [SO₄] and ammonium [NH₄]) that together comprise 90%+ of the PM_{2.5} mass collected on filters in Wisconsin.

These graphs show that OC is generally the single largest speciated PM_{2.5} component, expressing a slight bias towards higher values during the warmer months of June – August. Furthermore, Figure 5 reveals that the OC comprises almost half the total PM_{2.5} mass during May-August. Damberg (2007) notes that OC exhibits higher mass in the summer when photochemical activity is highest (i.e., peak solar radiation and temperature). This results in generating sizable amounts of secondary organic aerosols (SOA) from the heavier volatile organic compounds (VOCs) that have lower vapor pressures. These VOCs are classified as aromatics (e.g., toluene, xylene). Man-made sources of aromatic gases include mobile sources, petrochemical manufacturing and solvents (Damberg, 2007).

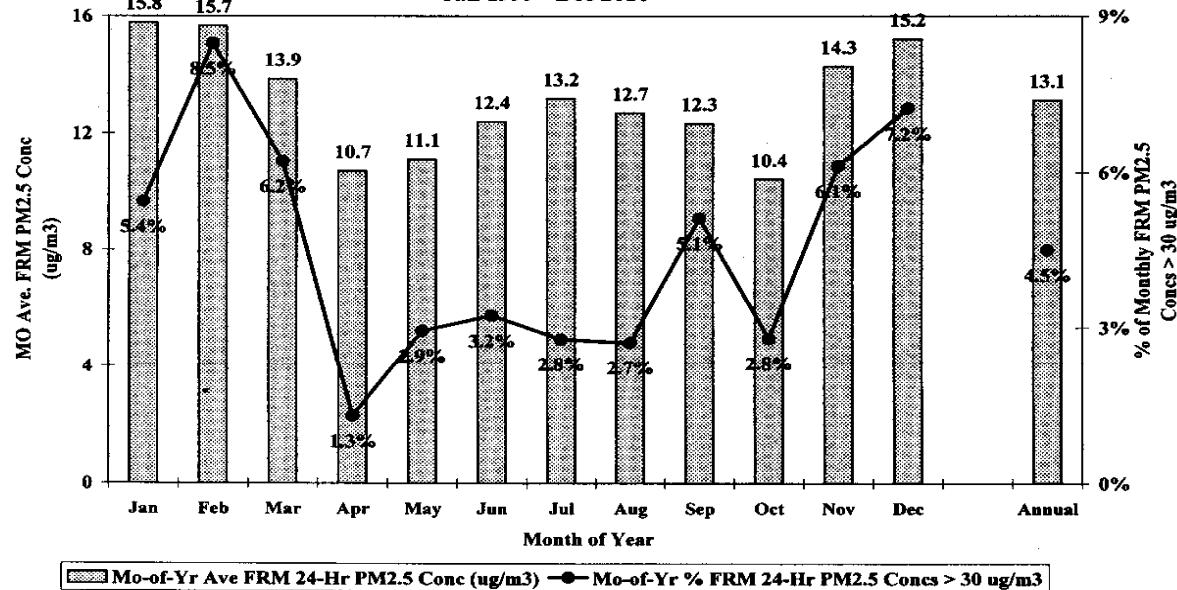
The next largest overall PM_{2.5} constituent is nitrate (NO₃), at least when this pollutant is significantly highest during the colder months. According to Husar (1999) and Blanchard and Tanenbaum (2003), the formation of NO₃ PM_{2.5} is favored by the availability of gaseous ammonia (NH₃) and nitric acid (HNO₃) along with low temperatures, and high relative humidity. Figures 4 and 5 corroborate that nitrate's properties of being semi-volatile and not stable in higher temperatures lead to NO₃ levels that are typically higher during winter months and significantly lower in summer (Husar, 1999).

Figure 2

Month-of-Year Ave FRM 24-Hr PM_{2.5} Concentrations
and
Percentage of FRM 24-Hr PM_{2.5} Concs > 30 ug/m³

Milwaukee County FRM PM_{2.5} Monitoring Sites^(a)

Jan 1999 - Dec 2010



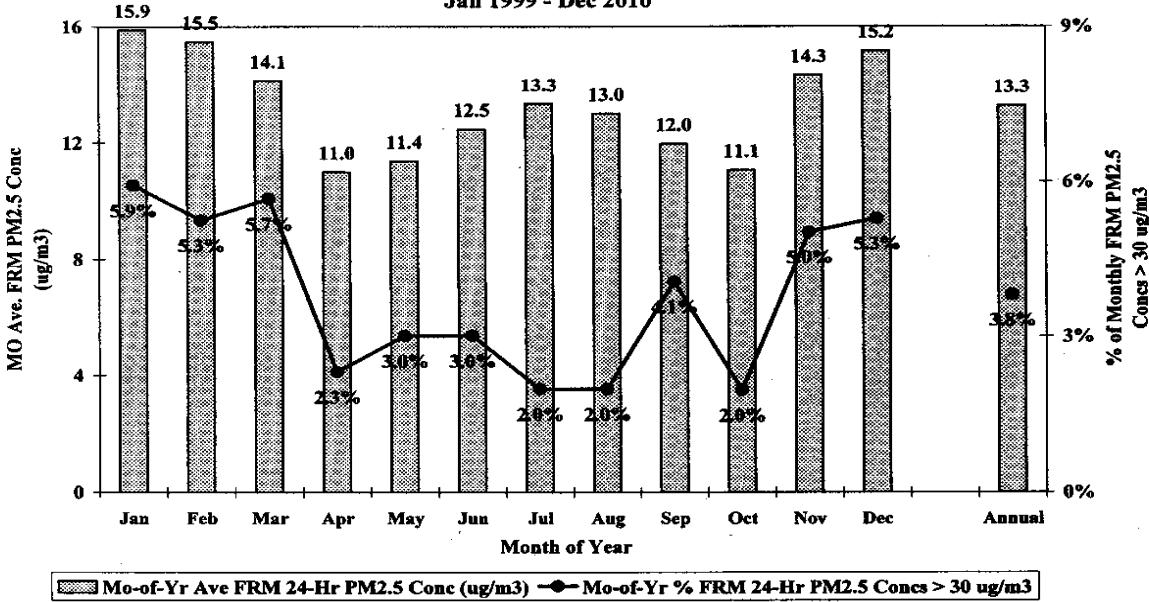
^(a) The WDNR operated seven FRM PM_{2.5} monitoring sites in Milwaukee County during Jan 1999 - Dec 2010 -- collecting a total of 9065 validated FRM 24-Hr PM_{2.5} samples.

Figure 3

Month-of-Year Ave FRM 24-Hr PM_{2.5} Concentrations
and
Percentage of FRM 24-Hr PM_{2.5} Concs > 30 ug/m₃

Waukesha County FRM PM_{2.5} Monitoring Sites^(a)

Jan 1999 - Dec 2010

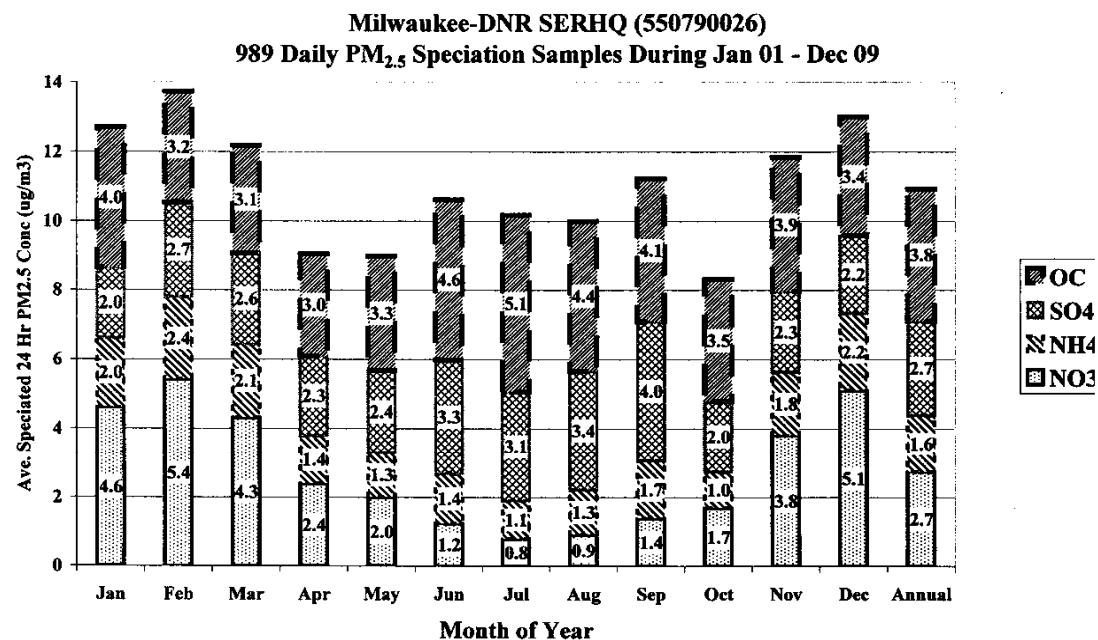


^(a) The WDNR operated two FRM PM_{2.5} monitoring sites in Waukesha County during Jan 1999 - Dec 2010 -- collecting a total of 2445 validated FRM 24-hr PM_{2.5} samples.

Figure 4

Ave Month-Of-Yr Speciated 24 Hr PM_{2.5} Concentrations

Nitrate (NO₃), Ammonium (NH₄), Sulfate (SO₄), Organic Carbon (OC)^(a)



^(a) All speciated PM_{2.5} concentrations, including OC, are unadjusted from final validated values.

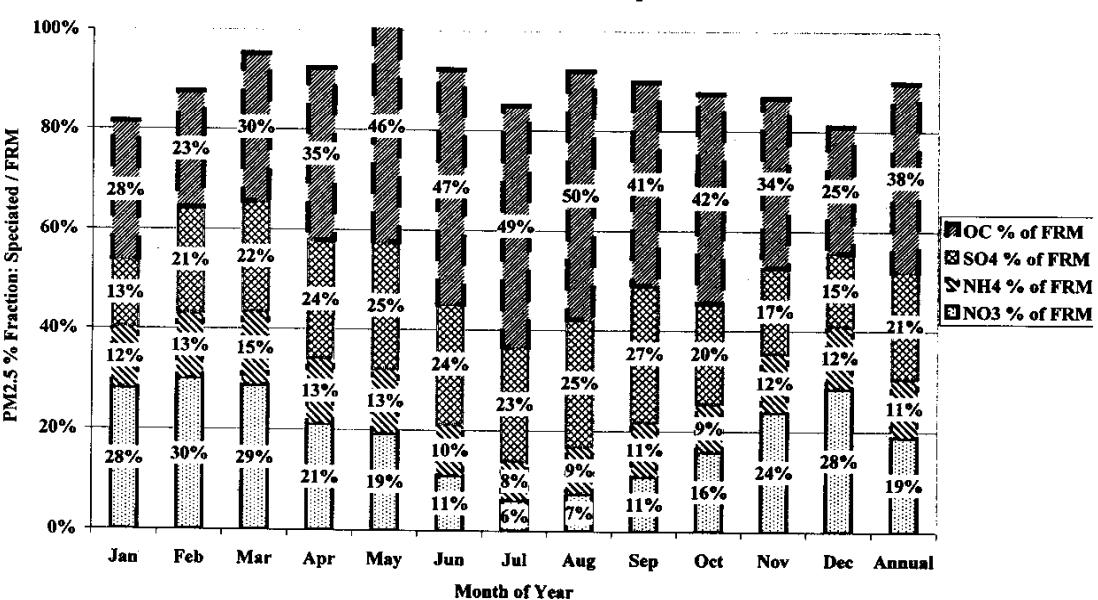
Figure 5

Ave Month-Of-Yr Speciated 24 Hr PM_{2.5} Concentrations
as Percentage of Same-Day FRM PM_{2.5} Values

Nitrate (NO₃), Ammonium (NH₄), Sulfate (SO₄), Organic Carbon (OC)^(a)

Milwaukee-DNR SERHQ (550790026)

989 Daily PM_{2.5} Speciation / FRM Samples for Jan 01-Dec 09



^(a) All speciated PM_{2.5} concentrations, including OC, are unadjusted from the final validated values.

Overall, the 3rd largest overall PM_{2.5} component is sulfate (SO₄). Figures 4 and 5 reveal that the distribution in sulfate's concentrations throughout a 12-month period is similar to OC in that its monthly average concentrations also peak during the summer months – only much more dramatically. Sulfate, like OC, is mostly formed as a secondary aerosol through oxidation (for sulfate through SO₂ – via either gas-phase photochemistry with the hydroxyl radical [OH⁻] in the presence of sunlight or aqueous-phase oxidation in presence of cloud droplets (Seinfeld and Pandis, 1998). The SO₄ production is substantially maximized during days of warm weather and high solar radiation (Husar, 1999).

Ammonium (NH₄) is the remaining major PM_{2.5} constituent of any sizable mass. Ammonium is formed largely from the gaseous precursor ammonia (NH₃), which mostly comes from oxides of nitrogen (NO_x) emissions being oxidized in the presence of the hydroxyl radical (OH⁻) (Seinfeld and Pandis, 1998). Ammonium is actually part of the products when NH₃ reacts with either sulfuric acid (H₂SO₄) or nitric acid (HNO₃) to form either ammonium sulfate (NH₄SO₄) or ammonium nitrate (NH₄NO₃), respectively (Damberg, 2007). Ammonium sulfate formation is preferential under most conditions, though ammonium nitrate is favored by low temperature and high humidity.

Similar to NO₃, Figures 4 and 5 show that ambient NH₄ levels at Milwaukee SER exhibit a seasonal trend of the highest monthly values occurring during the colder months (November – March) and the lowest concentrations during the warmer period (April – October). However, the spread in the range of monthly NH₄ is much less than for NO₃.

6.3 Speciated PM_{2.5} distributions vs. increasing ambient temperature

Figure 6 shows how NO₃, NH₄, SO₄ and OC PM_{2.5} at Milwaukee DNR SERHQ varied with increasing daily average ambient temperature, as measured at Milwaukee Mitchell Airport's National Weather Service [NWS] office [MKE] during 2001-2009.

As expected, the average NO₃ profile exhibits a generally inverse relationship – substantially decreasing concentrations with increasing temperatures (i.e., a minimum of 0.6 ug/m³ at temperatures > 85 F). As noted by Stanier, et.al (2009) nitrate is semi-volatile secondary aerosol (formed from a highly complex set of processes involving nitric acid [HNO₃] and ammonium) that can evaporate in warmer environments.

However, it is noteworthy that the peak daily average NO₃ concentrations (mean: 5.6 ug/m³) were not during the coldest temperatures but in the 30-35 F range. This suggests that other factors (e.g., high relative humidity) may have played an important secondary role in nitrate formation. Husar (1999) makes reference to high humidity assisting NO₃ formation.

Ammonium (NH₄) levels were a bit more uniform with respect to increasing daily average temperature (i.e., ranging from 1.3 to 2.5 ug/m³). There also was no real NH₄ trend with respect to temperature. The peak NH₄ (2.5 ug/m³ for 80-85 F) was followed by a relatively low 1.5 ug/m³ for temperatures > 85 F.

Also as expected - the average SO₄ profile exhibits a generally direct correlation with ambient temperature. Sulfates are largely a product of both photochemical and in-cloud oxidation involving sulfur dioxide (SO₂) (US EPA, 2003). These processes are optimized during warmer weather periods.

There is a significant rise in SO₄ concentrations with increasing temperatures (i.e., a minimum of 1.3 ug/m³ at temperatures < 15 F, peaking at 6.6 ug/m³ for the 80-85 F bin). The distribution in OC vs. increasing temperatures generally followed a similar, but less dramatic trend to that for SO₄. Namely, OC levels averaged approximately 3.4 ug/mg for temperatures under 55 F and above 5.1 ug/m³ when daily average temperatures were > 75 F.

Figure 6

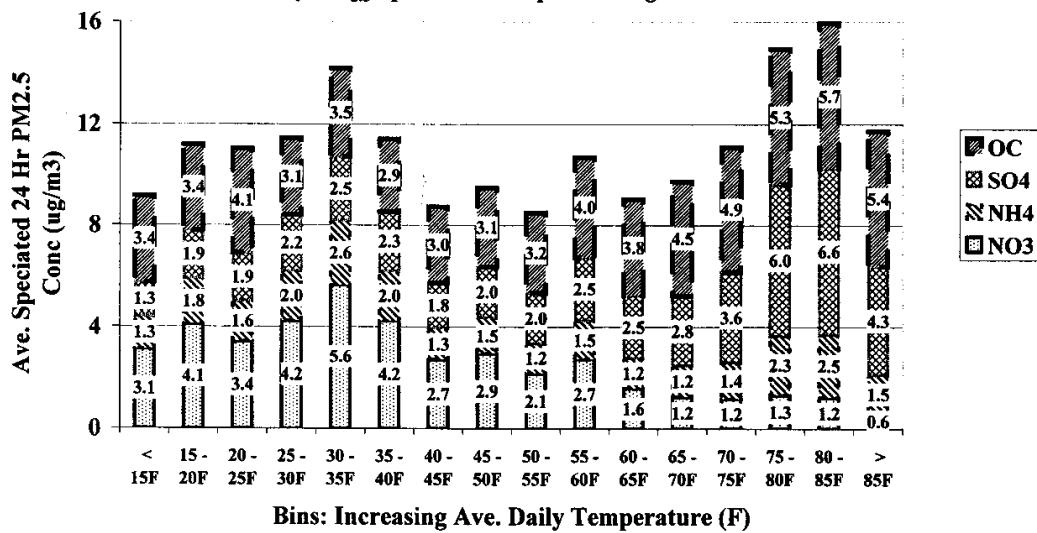
Ave Speciated 24 Hr PM_{2.5} Concentrations

vs. Increasing Ave Daily Temperature^(a)

Nitrate (NO₃), Ammonium (NH₄), Sulfate (SO₄), Organic Carbon (OC)^(b)

Milwaukee-DNR SERHQ (550790026)

988 Daily PM_{2.5} Speciation Samples During Jan 01 - Dec 09



^(a) Meteorological data are from the Nat'l Weather Service (NWS) at Milwaukee Mitchell Airport.

^(b) All speciated PM_{2.5} values, including OC, are unadjusted from final validated concs.

Figure 7

Ave Speciated 24 Hr PM_{2.5} Concs

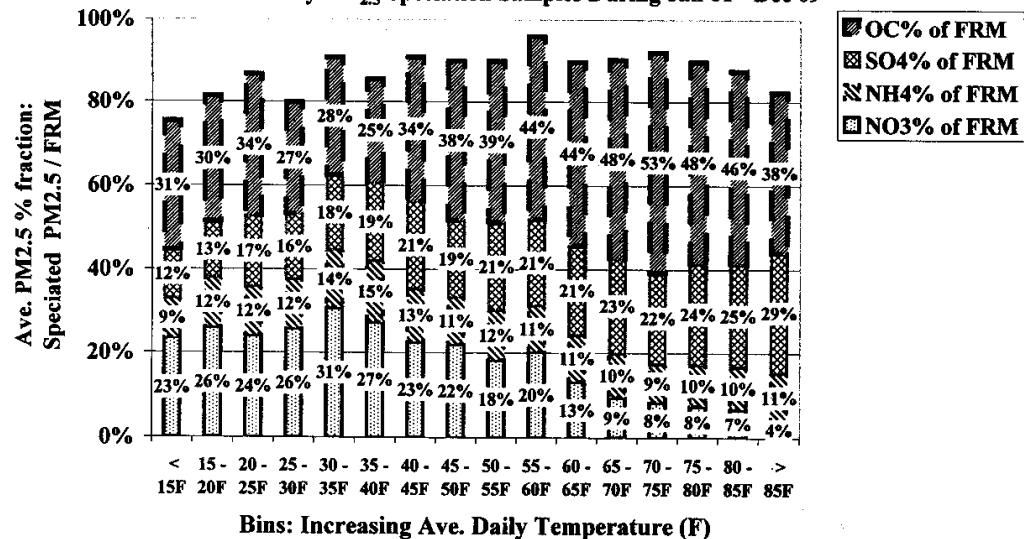
as Percentage of Same-Day FRM PM_{2.5} Concs

vs. Increasing Ave Daily Temperature^(a)

Nitrate (NO₃), Ammonium (NH₄), Sulfate (SO₄), Organic Carbon (OC)^(b)

Milw-DNR SERHQ

988 Daily PM_{2.5} Speciation Samples During Jan 01 - Dec 09



^(a) Meteorological data are from the Nat'l Weather Service (NWS) at Milwaukee Mitchell Airport.

^(b) All speciated PM_{2.5} data, including OC, are unadjusted from final validated concs.

Figure 7 is similar to Figure 6 except that Milwaukee-SER PM_{2.5} species' percentage fraction profiles of FRM PM_{2.5} are normalized against bins of increasing MKE daily average temperatures. This graph generally validates most of the Figures 6 features. Namely, the profiles' percentage fractions for NO₃ and SO₄ PM_{2.5} relative to increasing temperature largely follow the same for the speciated PM_{2.5} concentrations (Figure 6). The NO₃ fraction is substantially much higher during the colder months (< 40 F: 27% average) than during the warm months (> 65 F: 8% average). Conversely, SO₄ exhibited lower average percentage fractions for temperatures < 30 F (16%), much higher fractions (28%) for temperatures > 70 F.

Across the temperature spectrum the distribution percentage fractions for NH₄ (9 - 15%) and OC (31 – 5%) are both relatively less variable, more uniform than for either NO₃ or SO₄. This indicates that NH₄ and OC contributions to overall PM_{2.5} mass are less influenced by surface temperature fluctuations than are SO₄ and NO₃.

6.4 Speciated PM_{2.5} distributions vs. increasing daily temperature difference (observed minus climate average).

There is a more noticeable pattern when comparing Milwaukee SER's speciated PM_{2.5} to the differences between MKE's daily average temperature and its daily climatological average (30 years [1971-2000]) (WSCO, 2009) (Figure 8). Namely, all four targeted PM_{2.5} species (NO₃, SO₄, NH₄ and OC) had relatively lower daily average concentrations on days well below climate normal temperatures (< -16 F departure), steadily and sizably increasing to relatively very warm days (> + 20 F departure).

Steadily increasing PM_{2.5} associated with days witnessing climatologically warm temperatures was also noted for the Wisconsin's highest FRM PM_{2.5} days (WDNR, 2009). This earlier PM_{2.5} study indicated that a positive correlation between high PM_{2.5} and climatologically warm days appears to be part of a more complex meteorological scenario which also includes relatively high atmospheric moisture (i.e., relative humidity) and winds with a noticeable southerly wind component.

Figure 9 is similar to Figure 8 except that Milwaukee-SER PM_{2.5} species' percentage fraction profiles of FRM PM_{2.5} are normalized against bins of increasing differences between MKE's daily average temperature and its daily climatological average. The individual percentage fraction profiles for SO₄, NO₃, OC and NH₄ are each largely similar, save for their behavior during the largest negative temperature differences.

6.5 Speciated PM_{2.5} distributions vs. increasing relative humidity

There is a generally continual increase in the average concentrations of PM_{2.5} species NO₃, SO₄ and NH₄ at Milwaukee-SER as a function of increasing daily average relative humidity (RH) at MKE (Figure 10). Higher PM_{2.5} associated with days that have elevated RH is similarly evident for Wisconsin's 50 highest PM_{2.5} days (WDNR 2009). Organic carbon PM_{2.5} is different from the other species in that there is little variation (min: 3.2 ug/m³, max: 4.1 ug/m³) across the range of RH bins.

Seinfeld and Pandis (1998) noted that the presence of water vapor makes it more efficient to photochemically oxidize gaseous SO₂ into SO₄. Pathak, et.al. (2009) stated that there can be a significant production of secondary aerosols, especially during the summer due, in part, to a "large water vapor content."

Figure 11 is similar to Figure 10 except that Milwaukee-SER PM_{2.5} species' percentage fraction profiles of FRM PM_{2.5} are normalized against bins of increasing MKE daily average relative humidity. The profiles' percentage fractions for NO₃ and NH₄ PM_{2.5} generally get larger with respect to higher relative humidity. This follows the same trend for the speciated PM_{2.5} concentrations (Figure 10).

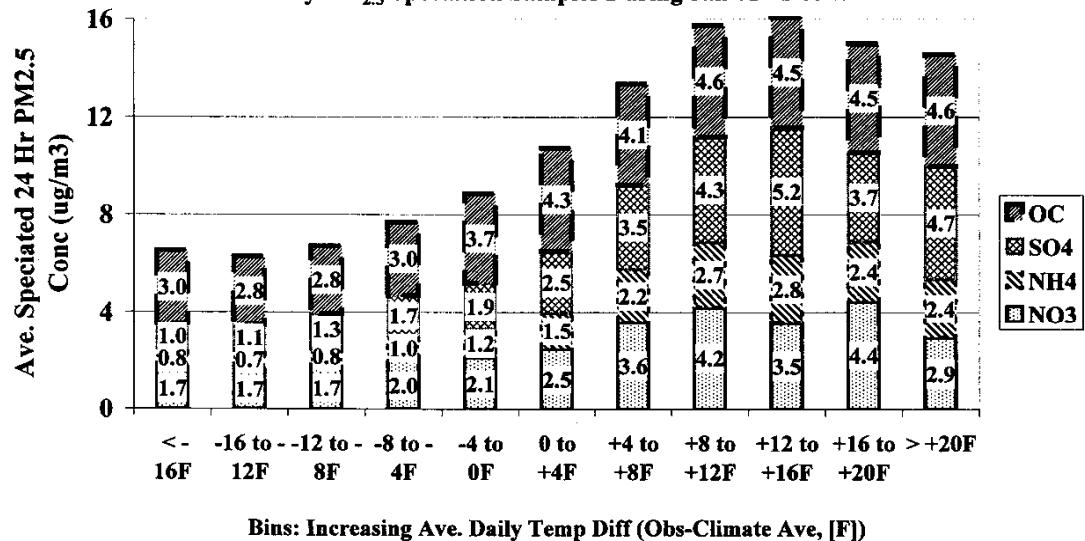
Figure 8

**Ave Speciated 24 Hr PM_{2.5} Concs
vs. Increasing Ave Daily Temperature Difference
(Observed-Climate Ave)^(a)**

Nitrate (NO₃), Ammonium (NH₄), Sulfate (SO₄), Organic Carbon (OC)^(b)

Milwaukee-DNR SERHQ

988 Daily PM_{2.5} Speciation Samples During Jan 01 - Dec 09



(a) Meteorological data from the Nat'l Weather Service (NWS) at Milwaukee Mitchell Airport.

(b) All speciated PM_{2.5} data, including OC, are unadjusted from final validated concs.

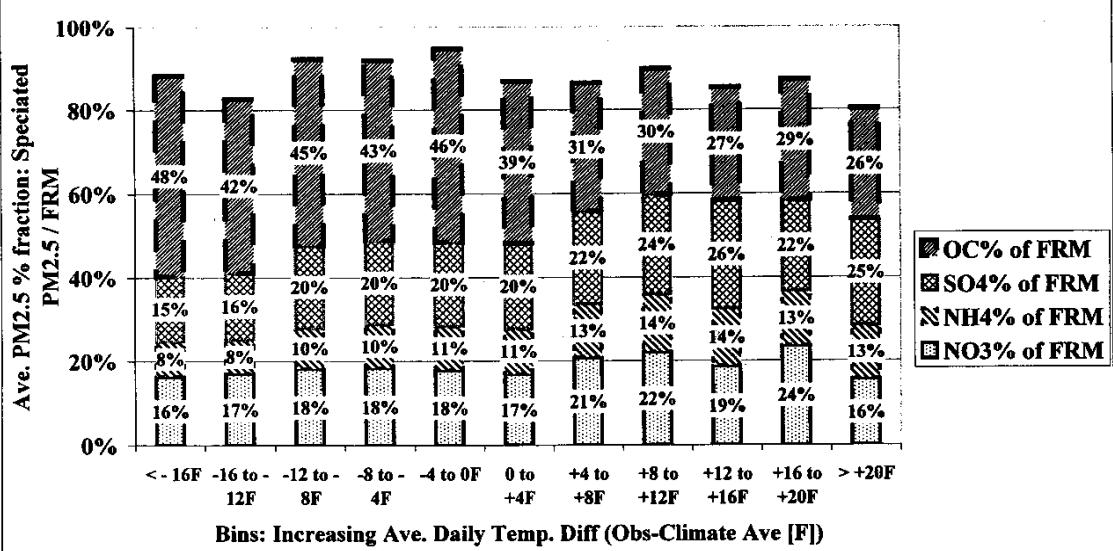
Figure 9

**Ave Speciated 24 Hr PM_{2.5} Concs as % of FRM PM_{2.5} Concs
vs. Increasing Ave Daily Temp Diff (Obs-Climate Ave)^(a)**

Nitrate (NO₃), Ammonium (NH₄), Sulfate (SO₄), Organic Carbon (OC)^(b)

Milw-DNR SERHQ

988 Daily PM_{2.5} Speciation Samples During Jan 01 - Dec 09



(a) Meteorological data from the Nat'l Weather Service (NWS) at Milwaukee Mitchell Airport.

(b) All speciated PM_{2.5} data, including OC, are unadjusted from final validated concs.

Organic carbon's relative fraction contribution to FRM PM_{2.5} is inverse to that for NO₃ and NH₄. The OC percentage fraction is greatest (58%) for the lowest relative humidity bin (< 40 %) and smallest (25%) for the highest relative humidity (> 90%). Varadarajan (2007) did a study of PM_{2.5} in Ohio, which also revealed that OC had a negative relation to increasing relative humidity.

Sulfate's percentage fraction of FRM PM_{2.5} (18-26%) is sizable but fairly uniform across the relative humidity spectrum. Robinson, et.al. (2002) evaluated the hygroscopic growth of fresh sulfur-based particles by comparing size distributions measured at different levels of relative humidity during nucleation events in the Pittsburgh (PA) Air Quality Study. They found negligible to modest hygroscopic growth across relative humidity levels ranging from 10 to 55%.

6.6 Analysis of FRM and organic carbon PM_{2.5} and OC's gaseous precursors

As noted in previous sections, organic carbon is typically the single largest PM_{2.5} constituent (by mass) collected on speciation filters in Wisconsin. Furthermore, the large majority of OC is formed in the atmosphere as secondary organic aerosols (SOA) (Grosjean and Seinfeld, 1989). These SOAs are produced from complicated atmospheric chemistry processes involving a synthesis of sunlight, heat and moisture which transform some of the heavier VOCs (called aromatics) to yield condensable particulates (Grosjean and Seinfeld, 1989).

Section 5.3 provides an overview of the measurements of ambient VOCs (also referred to as total nonmethane organic carbon [TNMOC]), focusing on aromatic species collected at the Milwaukee DNR SERHQ monitoring site.

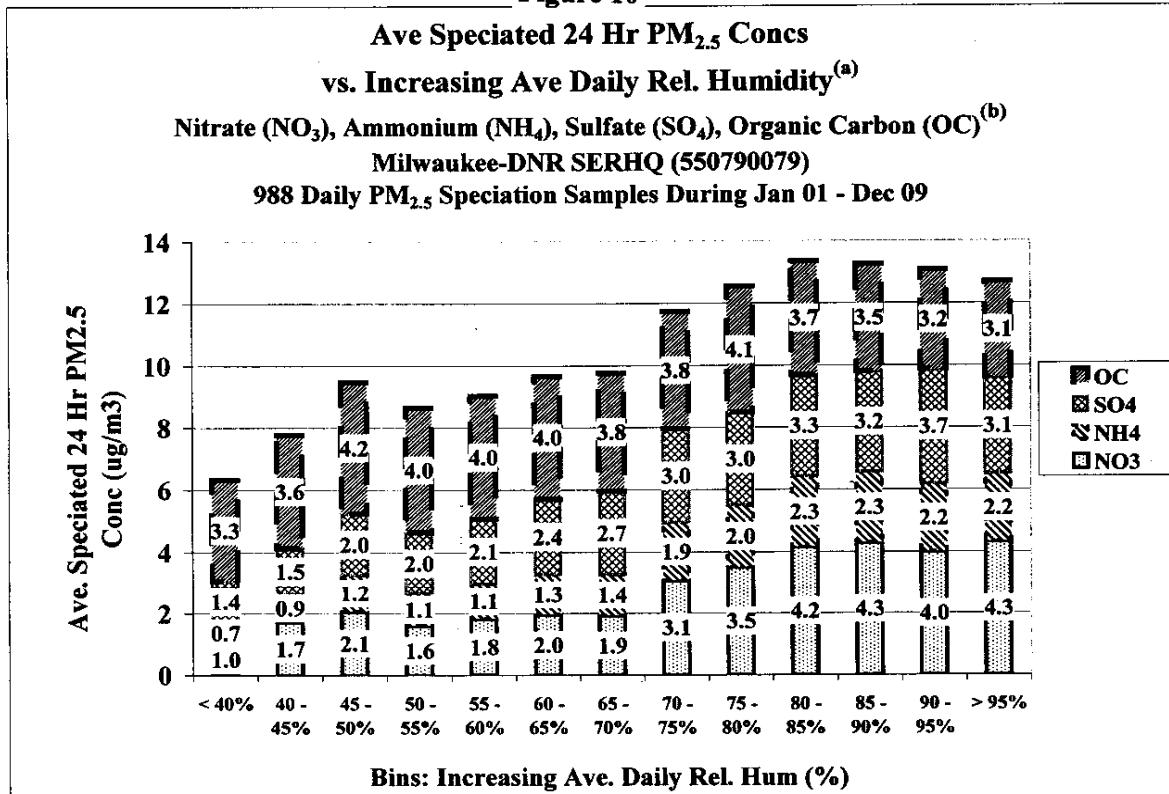
The following discussion and associated graphs describe some long term (2001-2009) relationships between concentrations of ambient VOCs (especially aromatics) and OC at the Milwaukee DNR SERHQ monitoring site.

Figure 12 displays SER's collective month-of-year median daily concentrations of TNMOCs, aromatics and OC during 2001 - 2009. Consistent with the OC portion of Figure 4 – OC levels peak during the summer months. (July: 5.0 ug/m³). The profile of aromatic VOCs follows an approximately similar pattern. Namely, peak monthly-averages are highest during the summer (but not directly in July). The TNMOCs also generally crest during the summer. However, TNMOCs also exhibits a strong secondary maximum during the winter months.

Figure 13 shows how average OC and FRM PM_{2.5} track against increasing average 24-hour TNMOC concentrations during 2001-2009. From this graph, there is a respectable correlation between increasing TNMOCs and increasing both FRM and OC PM_{2.5} through the TNMOC bin 105-120 ppbC. This correlation is temporarily reversed for TNMOC levels between 120–150 ppbC, only to resume for the next highest TNMOC bin (150-165 ppbC).

Figure 14 is similar to Figure 13, the only difference being that bins of average aromatic concentrations replace TNMOCs as the independent (x-axis) metric. The profiles of average OC and FRM PM_{2.5} tracking with respect to increasing average 24-hour aromatic levels during 2001-2009 is quite similar to tracking of TNMOCs (Figure 13). There appears to be an adequate correlation between increasing aromatics and increasing both FRM and OC PM_{2.5} through the lower half of the aromatics distribution (18-21 ppbC bin). Aromatic concentrations above 21 ppbC yield generally flat profiles for both FRM and OC.

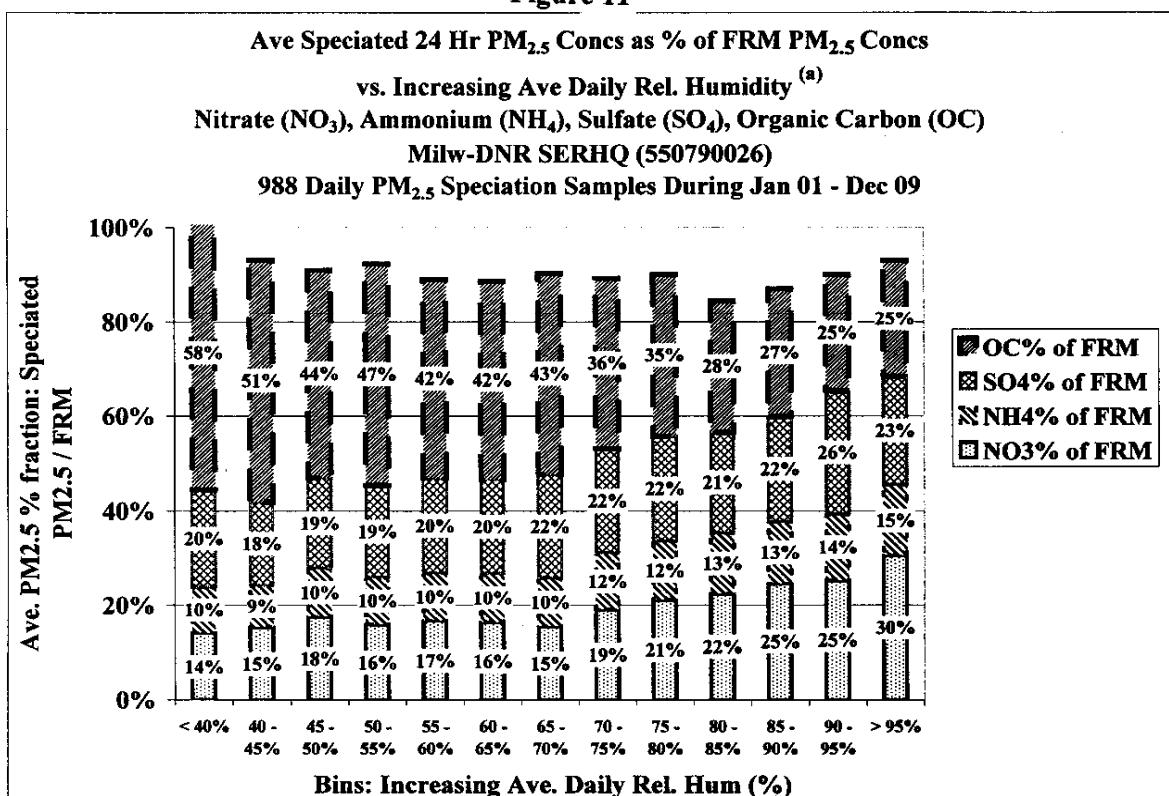
Figure 10



^(a) Meteorological data are from the Nat'l Weather Service (NWS) at Milwaukee Mitchell Airport.

^(b) Speciated PM_{2.5} data, including OC, are unadjusted from final validated values.

Figure 11



^(a) Meteorological data are from the Nat'l Weather Service (NWS) at Milwaukee Mitchell Airport.

^(b) The speciated PM_{2.5} data, including OC, are unadjusted from final validated values.

Figure 15 tracks SER's OC PM_{2.5} levels as well as its 24-hour-averaged TNMOCs and aromatic concentrations with respect to MKE's increasing daily average ambient temperature during 2001-2009.

In general, all three pollutants exhibit little coherency for temperatures below 40 F. However, starting from the temperature bin of 40-45 degrees Fahrenheit (F), the TNMOCs and aromatic VOCs are generally increasing with rising temperatures. The OC values follow a similar pattern of growing with higher temperatures, but are commencing for the temperature bin 35-40 F.

Explaining factors that contribute to increasing OC with respect to warmer temperatures is difficult because of the highly nonlinear chemistry of secondary organic aerosol (SOA) formation, which dominates OC. There is also the smaller fraction of primary OC that is emitted directly. As pointed out by Cabada (2004), much of the SOA mass can result from long-range transport, not local chemistry. However, ambient temperature has been shown to sizably influence SOA production rates, based upon reaction chamber studies (Warren, et.al., 2009).

6.7 Analysis of nitrate and FRM PM_{2.5} and NOx

Figure 16 displays SER's collective month-of-year average concentrations of 1) median of the daily average 1-hr NOx and 2) same-day daily average NO₃ PM_{2.5} during 2001–2009. The NOx levels display a pattern of being considerably highest during the coldest months (November-February: 24 ppb average), which is twice the levels during the summer months. Since the NOx emissions do not demonstrate a seasonal bias – and boundary layer heights do not appear to be seasonally dependent, -photochemistry must play a dominant role in determining seasonal NOx levels (Hayden, et.al., 2003).

The profile of nitrate concentrations are well correlated with NOx levels. Average NO₃ is substantially biased higher towards the colder months. (5 ug/m³ average during December-February). This is consistent with the NO₃ portion of Figure 4. The seed of most nitrate formation is in gaseous precursor NOx. Gas-phase species nitric acid (HNO₃) is derived from the oxidation of NOx, which is also favored during the colder weather. NO₃ is then produced from equilibrium reactions between HNO₃, and ammonia (NH₃) (Blanchard and Tanenbaum, 2003). The equilibrium favors the condensed phase at lower temperatures and higher humidities.

Additionally, nitrate is semi-volatile and not stable in higher temperatures (Husar, 1999). Consequently, all of the above-described characteristics lead to NO₃ concentrations being generally much higher during colder winter months, significantly lower in summer.

Figure 17 highlights how average NO₃ and its average percentage fraction of overall FRM PM_{2.5} levels track with respect to increasing average daily median 1-hour NOx at Milwaukee-SER during June 2001 – December 2009. This graph reflects the similar NO₃ | NOx characteristics to those displayed in Figure 16. For increasing NOx concentrations (at least up to 35 ppb), there is a strong positive correlation of substantial, steady increases in both average NO₃ levels (min. 0.5 ppb to max. 7.0 ppb) and NO₃'s percentage fraction of the overall FRM PM_{2.5} values (min. 8.2% to max. 29.2%). For NOx concentrations above 40 ppb, both the NO₃ concentrations and NO₃/FRM percentage fractions plateau at very high levels.

Figure 18 shows how SER's average daily median 1-hour NOx and average daily NO₃ trend with respect to increasing MKE's average daily temperature during June 2001 – December 2009. As expected from both Figures 6 and 16, these pollutants appear to have generally negative correlations with increasing temperature at least through the 60-65 F temperature bin. Above 65 F the NO₃ and NOx levels have only minor changes.

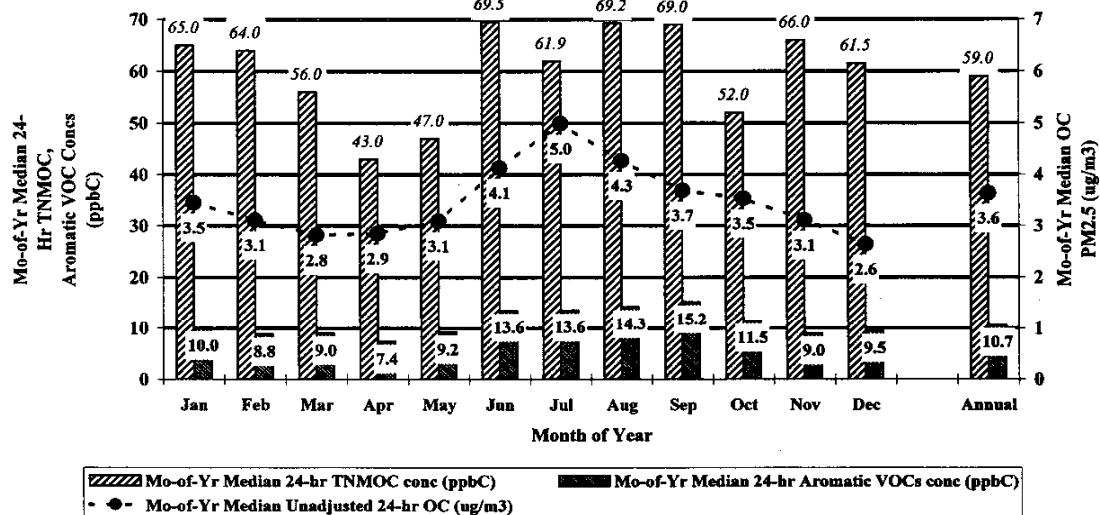
Figure 12

Month-of-Year Median 24-Hr Concentrations

Total Nonmethane Organic Carbon (TNMOC)
Aromatic VOC Species
Unadjusted Organic Carbon (OC) PM_{2.5}

Milwaukee DNR SERHQ Site

527 VOC / PM_{2.5} Sampling Days during Jan 2001 - Dec 2009^(a)



^(a) 466 days of 24-Hr VOC-avg'd data from lab analysis of canister-based air, 61 days of VOC obs from hrly-avg'd auto GC VOCs. Organic carbon (OC) data from speciation analysis of PM_{2.5} mass.

Figure 13

Ave. Unadjusted 24-Hr Organic Carbon PM_{2.5}

Ave. 24-Hr FRM PM_{2.5}

vs.

Increasing Ave. 24-Hr Total Nonmethane Organic Carbon (TNMOCs)

Milwaukee-SER Monitoring Site

512 VOC / Speciated & FRM PM_{2.5} Sampling Days during Jan 2001 - Oct 2009

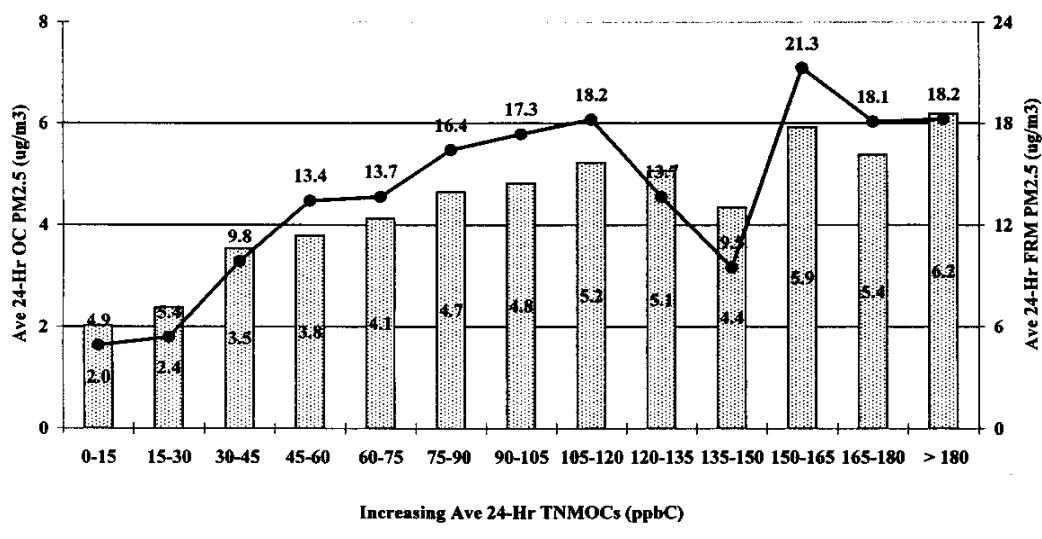


Figure 14

Ave. Unadjusted 24-Hr Organic Carbon PM_{2.5}

Ave. 24-Hr FRM PM_{2.5}

vs.

Increasing Ave. 24-Hr Aromatic Species VOCs

Milwaukee-SER Monitoring Site

512 VOC / Speciated & FRM PM_{2.5} Sampling Days during Jan 2001 - Oct 2009

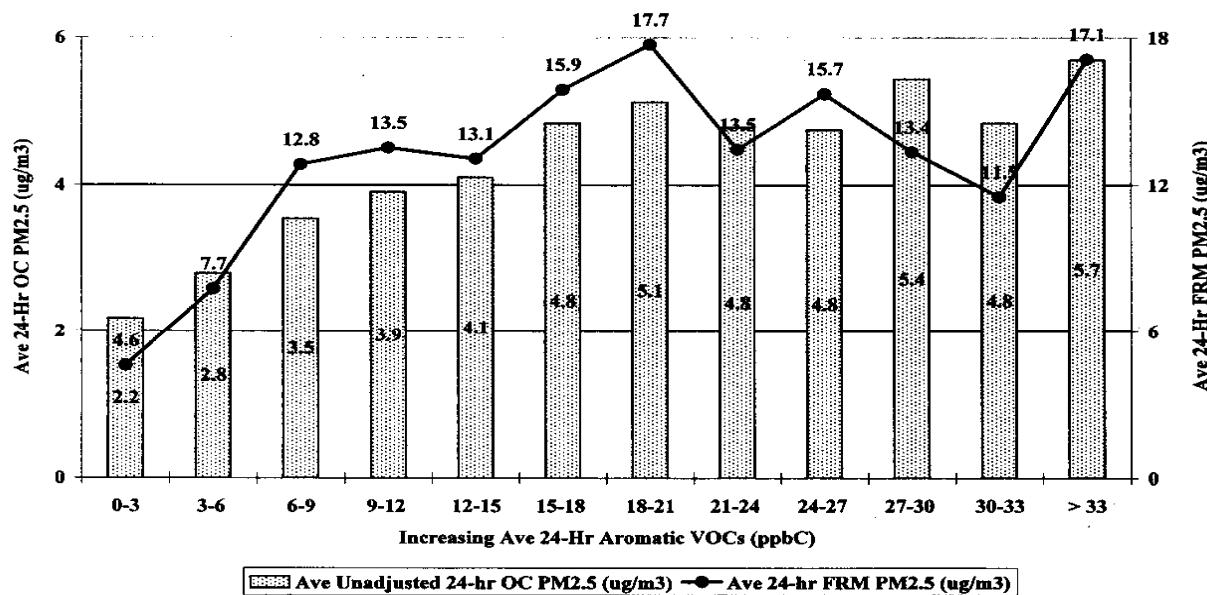


Figure 15

Median 24-Hr Concentrations

As a Function of Increasing Ave. Daily Temperature^(b)

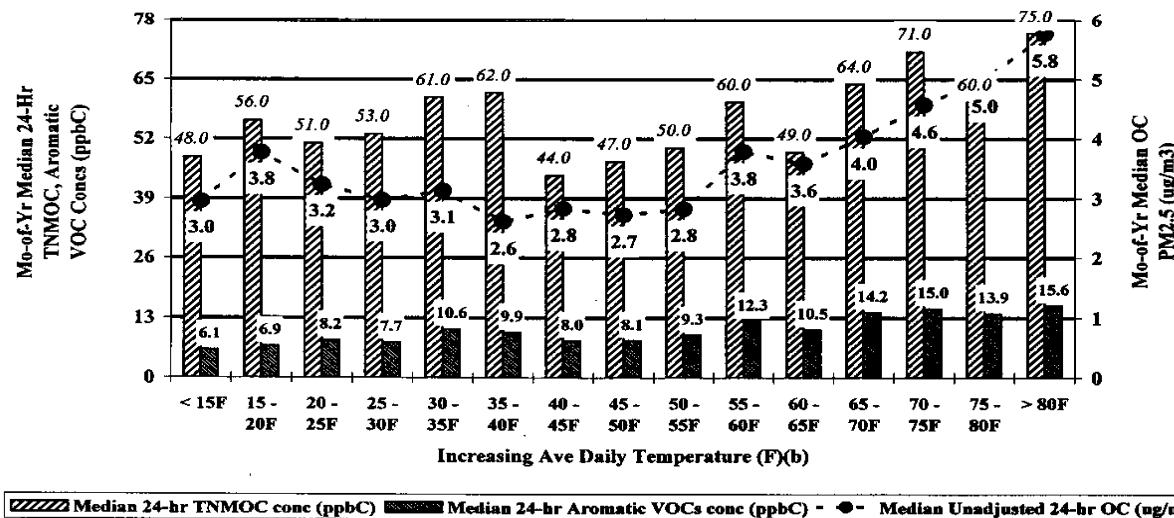
Total Nonmethane Organic Carbon (TNMOC)

Aromatic VOC Species

Unadjusted Organic Carbon (OC) PM_{2.5}

Milw-DNR SERHQ

488 VOC / PM_{2.5} Sampling Days during Jan 2001 - Oct 2009^(a)



(a) 428 VOC samples: lab-analyzed canister air. 60 VOC samples: hrly-avg'd autoGC VOCs. OC data: speciation of PM_{2.5} mass.

(b) Met. data: Nat'l Weather Service site at Milw Mitchell Airport, 10 mi south of SER site.

Figure 16
Month-of-Year Ave Daily Concentrations

Daily Median 1-Hr Oxides of Nitrogen (NO_x)
24-Hr Nitrate (NO₃) PM_{2.5}

Milwaukee-SER Monitoring Site
816 NO_x / Speciated PM_{2.5} Sampling Days During Jun 2001 - Dec 2009

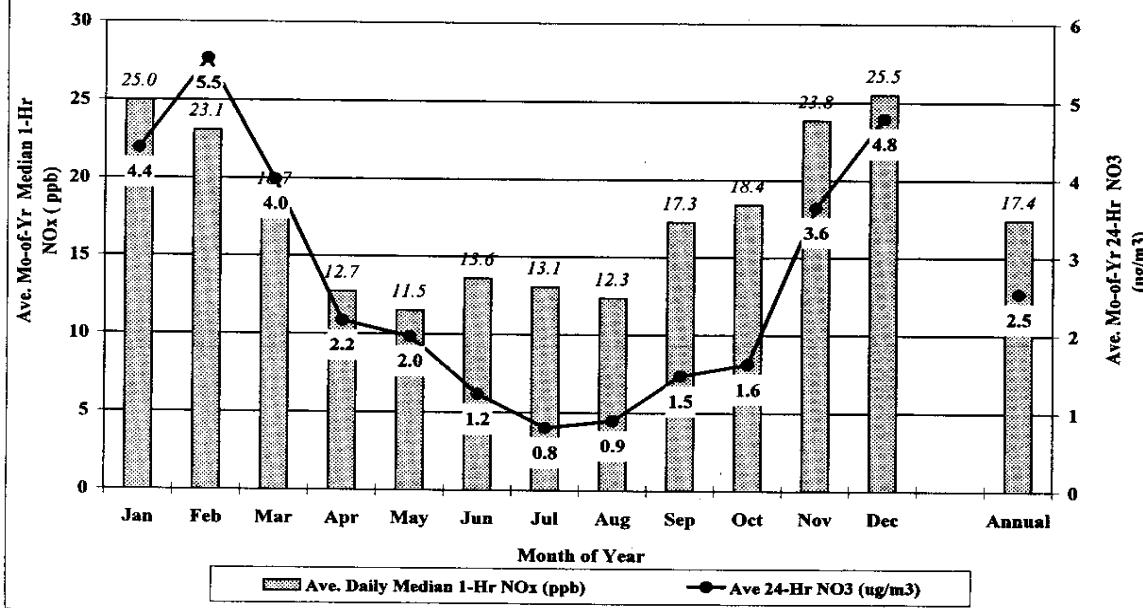


Figure 17
Ave. 24-Hr Nitrate (NO₃) PM_{2.5}
Ave. 24-Hr PM_{2.5} Percentage Fraction: NO₃ / Fed Reference Method (FRM)
vs.
Increasing Ave. Daily Median 1-Hr NOx

Milwaukee-SER Monitoring Site
816 NO_x / Speciated & FRM PM_{2.5} Sampling Days: Jun 2001-Dec 2009

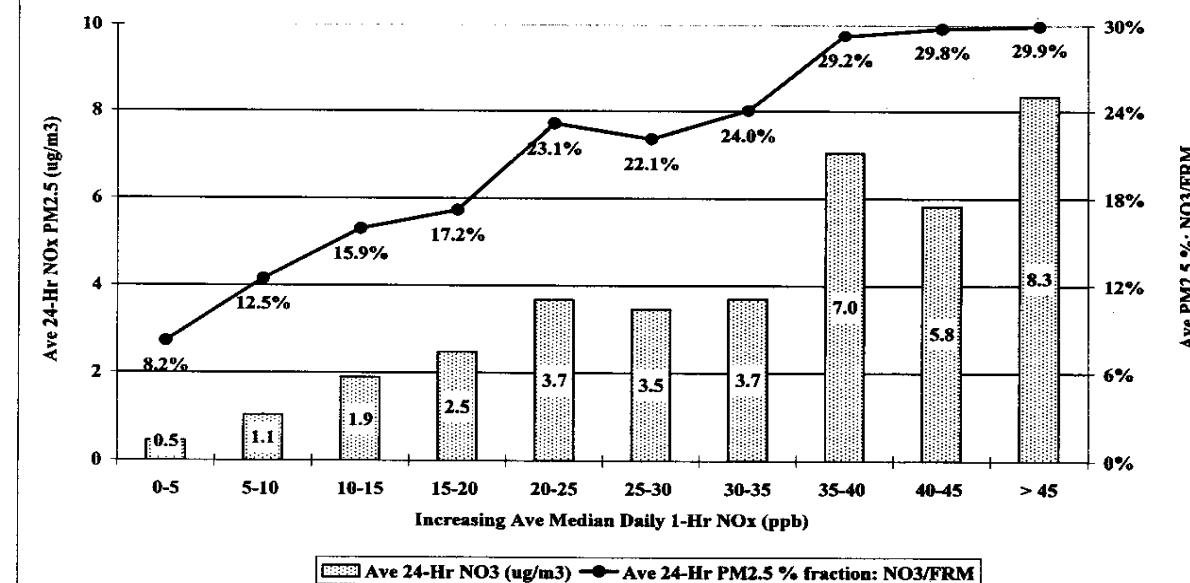
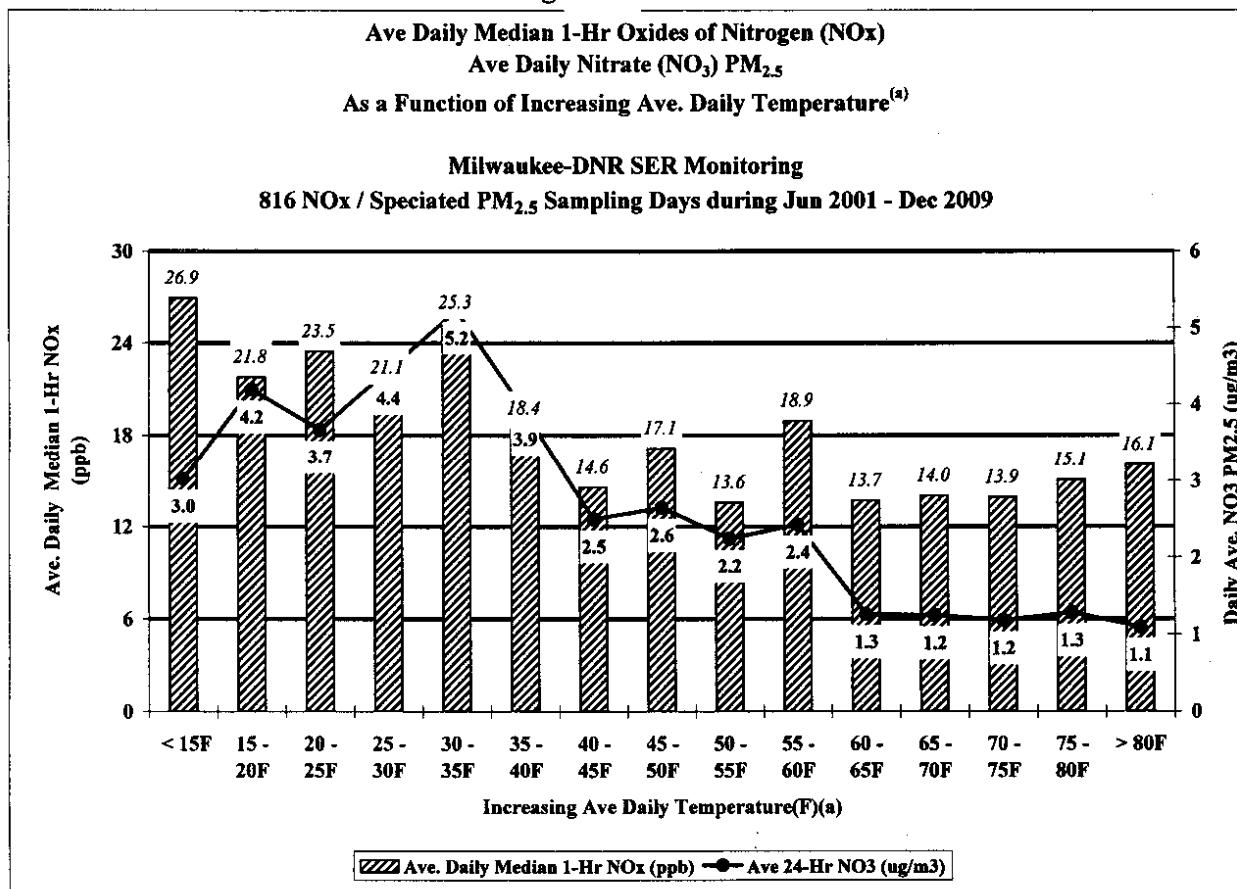


Figure 18



^(a) Meteorological data are from the National Weather Service (NWS) station at Milwaukee Mitchell Airport, approx 10 miles south of the Milw-SER monitoring site.

6.8 Winter Nitrate Study: Ammonia's modeled influence on nitrate PM_{2.5} levels in southeastern Wisconsin

As noted in Section 3, there is almost a complete absence of NH₃ measurements in southeastern Wisconsin, which includes Wisconsin's PM_{2.5} nonattainment counties of Milwaukee, Waukesha and Racine. Consequently, the influence of NH₃ on NO₃ levels in this area is derived from a modeling analysis conducted as part of the 2010 Winter Nitrate Study (Stanier, et. al, 2010).

Ammonia (NH₃) is a gaseous byproduct emitted from agricultural operations such as manure storage, spreading and fertilizer applications. In the atmosphere NH₃ reacts with sulfuric acid (H₂SO₄) and nitric acid (HNO₃) to form ammonium sulfate (NH₄SO₄) and ammonium nitrate (NH₄NO₃) PM_{2.5}, respectively (Kenski, 2006).

Preliminary analyses by Stanier, et.al. (2010) indicate that "...local sources of NOx (e.g., nearby highways) are important for the [highly-urbanized] Milwaukee, and that regional sources of NH₃ affect both Milwaukee and [rural] Mayville. Stanier and his group further noted that "During episodes, total nitrate concentrations were about doubled over average concentrations at Milwaukee and tripled at Mayville [where ammonia has a greater presence]." One of their summary conclusions was that "Total ammonia and total nitrate (and, by extension, NOx) influence episode intensity. Controls of ammonia or nitrate are likely to decrease episode concentrations."

7 Summary

As stated in Section 1, a primary purpose of this study is to identify long-term characteristics, distributions and profiles in measured PM_{2.5} and some of PM_{2.5} gaseous precursors (TNMOCs, aromatic VOCs, NOx) in southeastern Wisconsin. This assessment, which is required under sections 40 CFR 51.1002(2) and (3) of the federal Clean Air Act, is needed in order to assess if NOx and / or VOC emission inventories need to be constructed as part of the WDNR's request for redesignating to attainment for the PM_{2.5} nonattainment counties in southeastern Wisconsin (Figure 1).

Section 6 details the findings from analyzing these long-term relationships of PM_{2.5} and PM_{2.5} precursors in southeastern Wisconsin. Of the many points identified in this study, the following are probably most pertinent to the purpose of the overall study:

- Figure 2: The collective average month-of-year PM_{2.5} concentration at FRM sites in Milwaukee County for November – March 1999–2011 is 15.0 ug/m³, which is 26% higher than for the remaining seven months (11.8 ug/m³). For these same sites and time period - the collective average percentage rate of high PM_{2.5} days (site-days > 30ug/m³) for November – March (6.68%) is more than twice the rate of high PM_{2.5} site-days during the other seven months (2.97%).
- Figures 4 and 5: Organic carbon (OC) is generally the single largest speciated PM_{2.5} component, with a slight bias towards higher values during the warmer months of June – August and comprises almost half the total PM_{2.5} mass during May - August.
- Figure 12: Milwaukee SER's OC levels peak during the summer months. (July: 5.0 ug/m³). The profile of both TNMOCs and aromatic VOCs also show peak monthly-averages during the summer. However, TNMOCs also exhibits a strong secondary maximum during the winter months.
- Figure 13 and 14: There is a respectable correlation between both increasing TNMOCs (Figure 13) as well as aromatic VOCs (Figure 14) and rising levels of both FRM and OC PM_{2.5}.
- Figure 16: SER's NOx levels are considerably highest during the coldest months (November - February: 24 ppb average), which is twice the levels during the summer months.
- Figures 15 and 16: Nitrate concentrations are well correlated with NOx levels. The average NO₃ is also substantially biased higher towards the colder months (5 ug/m³ average during December–February).
- Figure 17: With increasing NOx concentrations, there is a strong positive correlation of substantial, steady increases in both average NO₃ levels (min. 0.5 ppb to max. 7.0 ppb) and NO₃'s percentage fraction of the overall FRM PM_{2.5} values (min. 8.2% to max. 29.2%).

As noted in several previous sections, there is only a negligible archive of ammonia (NH₃) measurements in southeastern Wisconsin. Consequently, an assessment of this PM_{2.5} precursor's role in influencing PM_{2.5} levels in Wisconsin's PM_{2.5} nonattainment was derived from a recent study on the science of high nitrate PM_{2.5} levels during winter months in southeastern Wisconsin (i.e., the WNS report [Stanier, et.al., 2010]).

Based upon Stanier's thermodynamic modeling with a limited (3 months) measurement data set, it was estimated that ammonia has a highly complex relationship to nitrate PM_{2.5} levels during the winter in southeastern Wisconsin. In general, the modeling showed higher NH₃ concentrations were associated with higher nitrate levels – more so at the rural WNS site (Mayville), less so at the urbanized Milwaukee WNS site.

8 Proposed Recommendations

Exceedances of the 24-hour PM_{2.5} NAAQS can occur during any time of the year in Wisconsin. However, Figures 2 and 3 demonstrate that PM_{2.5} has a modest tendency to be highest, along with the best potential to exceed the standard, during November-March in Milwaukee and Waukesha counties. From these analyses, it is evident that both organic carbon (OC) and nitrate (NO₃) comprise a substantial fraction of the PM_{2.5} mass measured in southeastern Wisconsin's PM_{2.5} nonattainment area (Figure 1).

These characteristics suggest that the focus of PM_{2.5} SIP work, including emissions inventory development might be most effective if directed towards PM_{2.5}-related activity levels and throughput during December-February. This three month period is generally defined as the "meteorological winter" in the upper Midwest of the United States.

Based upon these assessments - at this time it could be practical to consider the following options on developing emission inventories (EI) for the WDNR's request to redesignate to attainment the PM_{2.5} nonattainment counties of Milwaukee, Waukesha and Racine as part of the state implementation plan (SIP) for PM_{2.5}:

- Construct additional emission inventories for the PM_{2.5} precursors VOCs and NOx, which are shown in this study to yield substantial contributions to the formation of secondary PM_{2.5} aerosols (organic carbon [OC] and nitrates [NO₃]) in southeastern Wisconsin. This demonstration was completed per the requirements contained in 40 CFR 51.1004(c) ("Pollutants contributing to fine particle concentrations")
- Construct emission inventories for all major PM_{2.5}-related pollutants (i.e., direct PM_{2.5}, SO₂, NOx and VOCs). These inventories should target activity levels and throughputs representative of that portion of the calendar when PM_{2.5} levels are seasonally highest (i.e., an average winter day).
- Results from thermodynamic modeling conducted as part of the Winter Nitrate Study (WNS, Stanier, et.al.,2010) indicated that ammonia greatly enhances the production of nitrate PM_{2.5} during winters in southeastern Wisconsin.

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APPENDIX 4: 2006 AND 2010 POINT SOURCE EMISSIONS CALCULATIONS

2005 Point Source Emissions

FID	COUNTY	POLLUTANT	2005(TONS)	2005(TPWD)
241004610	Milwaukee	NOx	5.383	1.47E-02
241005600	Milwaukee	NOx	5.359	1.47E-02
241005710	Milwaukee	NOx	19.368	5.31E-02
241006260	Milwaukee	NOx	17.330	4.75E-02
241006370	Milwaukee	NOx	31.288	8.57E-02
241006810	Milwaukee	NOx	4.681	1.28E-02
241006920	Milwaukee	NOx	67.520	1.85E-01
241007030	Milwaukee	NOx	44.891	1.23E-01
241007690	Milwaukee	NOx	4,649.559	1.27E+01
241007800	Milwaukee	NOx	3,893.653	1.07E+01
241008130	Milwaukee	NOx	9.244	2.53E-02
241008240	Milwaukee	NOx	25.935	7.11E-02
241008680	Milwaukee	NOx	17.975	4.92E-02
241009670	Milwaukee	NOx	21.821	5.98E-02
241010770	Milwaukee	NOx	6.142	1.68E-02
241010990	Milwaukee	NOx	2.009	5.50E-03
241011100	Milwaukee	NOx	34.604	9.48E-02
241011760	Milwaukee	NOx	23.039	6.31E-02
241011870	Milwaukee	NOx	31.556	8.65E-02
241012200	Milwaukee	NOx	9.634	2.64E-02
241012310	Milwaukee	NOx	13.470	3.69E-02
241012970	Milwaukee	NOx	62.000	1.70E-01
241013080	Milwaukee	NOx	3.345	9.17E-03
241014180	Milwaukee	NOx	0.774	2.12E-03
241014620	Milwaukee	NOx	14.401	3.95E-02
241015390	Milwaukee	NOx	7.780	2.13E-02
241016710	Milwaukee	NOx	2.932	8.03E-03
241017040	Milwaukee	NOx	0.542	1.48E-03
241017370	Milwaukee	NOx	0.451	1.24E-03
241017590	Milwaukee	NOx	0.488	1.34E-03
241017920	Milwaukee	NOx	0.961	2.63E-03
241018140	Milwaukee	NOx	1.385	3.79E-03
241019350	Milwaukee	NOx	2.790	7.64E-03
241019900	Milwaukee	NOx	34.369	9.42E-02
241020780	Milwaukee	NOx	1.295	3.55E-03
241021880	Milwaukee	NOx	4.059	1.11E-02
241023640	Milwaukee	NOx	41.460	1.14E-01
241024190	Milwaukee	NOx	7.089	1.94E-02
241024300	Milwaukee	NOx	13.436	3.68E-02
241025070	Milwaukee	NOx	1.843	5.05E-03
241025290	Milwaukee	NOx	2.616	7.17E-03
241025510	Milwaukee	NOx	2.606	7.14E-03
241026060	Milwaukee	NOx	0.662	1.81E-03
241026500	Milwaukee	NOx	1.252	3.43E-03
241027050	Milwaukee	NOx	325.606	8.92E-01
241027160	Milwaukee	NOx	6.076	1.66E-02
241027380	Milwaukee	NOx	3.050	8.36E-03
241027600	Milwaukee	NOx	1.841	5.04E-03

FID	COUNTY	POLLUTANT	2005(TONS)	2005(TPWD)
241027930	Milwaukee	NOx	7.964	2.18E-02
241028810	Milwaukee	NOx	11.882	3.26E-02
241028920	Milwaukee	NOx	2.177	5.96E-03
241029030	Milwaukee	NOx	9.698	2.66E-02
241029140	Milwaukee	NOx	13.930	3.82E-02
241029250	Milwaukee	NOx	249.337	6.83E-01
241029470	Milwaukee	NOx	0.111	3.04E-04
241029690	Milwaukee	NOx	0.906	2.48E-03
241029800	Milwaukee	NOx	1.155	3.17E-03
241031120	Milwaukee	NOx	13.854	3.80E-02
241031340	Milwaukee	NOx	9.382	2.57E-02
241031450	Milwaukee	NOx	0.847	2.32E-03
241032440	Milwaukee	NOx	0.042	1.16E-04
241032770	Milwaukee	NOx	4.356	1.19E-02
241033210	Milwaukee	NOx	6.976	1.91E-02
241033430	Milwaukee	NOx	1.535	4.20E-03
241033650	Milwaukee	NOx	1.225	3.36E-03
241034200	Milwaukee	NOx	0.025	6.89E-05
241036840	Milwaukee	NOx	0.428	1.17E-03
241036950	Milwaukee	NOx	1.914	5.24E-03
241038820	Milwaukee	NOx	3.474	9.52E-03
241040690	Milwaukee	NOx	1.161	3.18E-03
241041900	Milwaukee	NOx	1.810	4.96E-03
241042670	Milwaukee	NOx	1.145	3.14E-03
241045420	Milwaukee	NOx	0.850	2.33E-03
241045750	Milwaukee	NOx	15.592	4.27E-02
241047730	Milwaukee	NOx	0.471	1.29E-03
241052680	Milwaukee	NOx	4.738	1.30E-02
241053010	Milwaukee	NOx	0.783	2.14E-03
241053450	Milwaukee	NOx	4.188	1.15E-02
241054330	Milwaukee	NOx	0.253	6.92E-04
241055870	Milwaukee	NOx	3.741	1.02E-02
241063570	Milwaukee	NOx	3.609	9.89E-03
241094370	Milwaukee	NOx	0.565	1.55E-03
241094700	Milwaukee	NOx	1.188	3.25E-03
241095910	Milwaukee	NOx	3.746	1.03E-02
241116700	Milwaukee	NOx	2.165	5.93E-03
241167630	Milwaukee	NOx	0.680	1.86E-03
241168070	Milwaukee	NOx	0.435	1.19E-03
241168180	Milwaukee	NOx	7.242	1.98E-02
241168510	Milwaukee	NOx	2.646	7.25E-03
241168620	Milwaukee	NOx	25.524	6.99E-02
241189520	Milwaukee	NOx	0.658	1.80E-03
241202170	Milwaukee	NOx	1.458	3.99E-03
241213720	Milwaukee	NOx	1.050	2.88E-03
241222410	Milwaukee	NOx	0.635	1.74E-03
241225710	Milwaukee	NOx	0.080	2.19E-04
241228350	Milwaukee	NOx	360.091	9.87E-01
241231760	Milwaukee	NOx	0.290	7.95E-04
241232640	Milwaukee	NOx	0.056	1.53E-04
241234840	Milwaukee	NOx	0.082	2.23E-04
241235940	Milwaukee	NOx	0.434	1.19E-03

FID	COUNTY	POLLUTANT	2005(TONS)	2005(TPWD)
241251670	Milwaukee	NOx	0.850	2.33E-03
241256290	Milwaukee	NOx	0.089	2.44E-04
241256730	Milwaukee	NOx	0.690	1.89E-03
241266740	Milwaukee	NOx	1.232	3.38E-03
241270810	Milwaukee	NOx	0.124	3.41E-04
241276750	Milwaukee	NOx	0.444	1.22E-03
241308870	Milwaukee	NOx	0.180	4.93E-04
241316020	Milwaukee	NOx	0.213	5.83E-04
241321960	Milwaukee	NOx	0.001	1.76E-06
241334060	Milwaukee	NOx	0.823	2.26E-03
241355400	Milwaukee	NOx	5.687	1.56E-02
241371350	Milwaukee	NOx	1.104	3.03E-03
241372120	Milwaukee	NOx	0.942	2.58E-03
241413810	Milwaukee	NOx	0.466	1.28E-03
241442630	Milwaukee	NOx	0.585	1.60E-03
241450440	Milwaukee	NOx	6.451	1.77E-02
241454290	Milwaukee	NOx	1.101	3.02E-03
241454400	Milwaukee	NOx	1.529	4.19E-03
241455500	Milwaukee	NOx	1.031	2.82E-03
241459790	Milwaukee	NOx	0.419	1.15E-03
241472770	Milwaukee	NOx	2.199	6.02E-03
241480910	Milwaukee	NOx	0.502	1.38E-03
241514570	Milwaukee	NOx	0.323	8.86E-04
241670660	Milwaukee	NOx	0.609	1.67E-03
241672090	Milwaukee	NOx	0.635	1.74E-03
241709930	Milwaukee	NOx	0.244	6.69E-04
241723240	Milwaukee	NOx	4.466	1.22E-02
241751950	Milwaukee	NOx	2.800	7.67E-03
241757340	Milwaukee	NOx	5.597	1.53E-02
241779450	Milwaukee	NOx	0.621	1.70E-03
241832360	Milwaukee	NOx	1.800	4.93E-03
241879550	Milwaukee	NOx	1.365	3.74E-03
241961610	Milwaukee	NOx	1.800	4.93E-03
241964580	Milwaukee	NOx	0.742	2.03E-03
252004280	Milwaukee	NOx	5.774	1.58E-02
252004940	Milwaukee	NOx	2.591	7.10E-03
252005380	Racine	NOx	10.360	2.84E-02
252005820	Racine	NOx	6.271	1.72E-02
252005930	Racine	NOx	106.620	2.92E-01
252006370	Racine	NOx	45.781	1.25E-01
252007030	Racine	NOx	0.670	1.84E-03
252007140	Racine	NOx	3.053	8.36E-03
252007580	Racine	NOx	0.286	7.84E-04
252007690	Racine	NOx	3.471	9.51E-03
252008460	Racine	NOx	2.937	8.05E-03
252009780	Racine	NOx	0.586	1.60E-03
252011870	Racine	NOx	7.678	2.10E-02
252012090	Racine	NOx	7.233	1.98E-02
252013190	Racine	NOx	2.489	6.82E-03
252013630	Racine	NOx	1.567	4.29E-03
252019900	Racine	NOx	6.923	1.90E-02
252041130	Racine	NOx	2.579	7.06E-03

FID	COUNTY	POLLUTANT	2005(TONS)	2005(TPWD)
252070500	Racine	NOx	0.153	4.19E-04
252075340	Racine	NOx	0.494	1.35E-03
252076990	Racine	NOx	3.552	9.73E-03
252077760	Racine	NOx	0.222	6.07E-04
252080070	Racine	NOx	0.215	5.89E-04
252091070	Racine	NOx	0.465	1.27E-03
252103940	Racine	NOx	7.379	2.02E-02
252126380	Racine	NOx	0.536	1.47E-03
252135950	Racine	NOx	0.786	2.15E-03
252194140	Racine	NOx	11.989	3.28E-02
252229670	Racine	NOx	0.150	4.12E-04
252236380	Racine	NOx	3.936	1.08E-02
268005100	Waukesha	NOx	1.054	2.89E-03
268005430	Waukesha	NOx	10.944	3.00E-02
268005870	Waukesha	NOx	3.745	1.03E-02
268006310	Waukesha	NOx	0.032	8.80E-05
268006750	Waukesha	NOx	11.293	3.09E-02
268006970	Waukesha	NOx	12.521	3.43E-02
268007080	Waukesha	NOx	2.367	6.49E-03
268007740	Waukesha	NOx	1.771	4.85E-03
268008400	Waukesha	NOx	12.800	3.51E-02
268008510	Waukesha	NOx	2.400	6.58E-03
268008730	Waukesha	NOx	4.428	1.21E-02
268009500	Waukesha	NOx	1.888	5.17E-03
268010710	Waukesha	NOx	1.863	5.10E-03
268012030	Waukesha	NOx	3.885	1.06E-02
268012250	Waukesha	NOx	2.274	6.23E-03
268012360	Waukesha	NOx	1.015	2.78E-03
268012580	Waukesha	NOx	0.175	4.79E-04
268012910	Waukesha	NOx	6.602	1.81E-02
268013240	Waukesha	NOx	1.641	4.49E-03
268014560	Waukesha	NOx	0.156	4.27E-04
268014670	Waukesha	NOx	27.868	7.63E-02
268014780	Waukesha	NOx	0.210	5.75E-04
268015330	Waukesha	NOx	2.854	7.82E-03
268016100	Waukesha	NOx	2.735	7.49E-03
268016210	Waukesha	NOx	2.630	7.20E-03
268023580	Waukesha	NOx	2.145	5.88E-03
268028200	Waukesha	NOx	6.419	1.76E-02
268028420	Waukesha	NOx	1.240	3.40E-03
268082650	Waukesha	NOx	5.568	1.53E-02
268088700	Waukesha	NOx	2.814	7.71E-03
268088920	Waukesha	NOx	8.236	2.26E-02
268089140	Waukesha	NOx	2.866	7.85E-03
268107620	Waukesha	NOx	0.557	1.52E-03
268142270	Waukesha	NOx	0.499	1.37E-03
268144250	Waukesha	NOx	1.357	3.72E-03
268152500	Waukesha	NOx	0.585	1.60E-03

FID	COUNTY	POLLUTANT	2005(TONS)	2005(TPWD)
268152610	Waukesha	NOx	0.490	1.34E-03
268154260	Waukesha	NOx	0.196	5.37E-04
268154370	Waukesha	NOx	1.350	3.70E-03
268157890	Waukesha	NOx	5.315	1.46E-02
268158660	Waukesha	NOx	0.459	1.26E-03
268161410	Waukesha	NOx	0.917	2.51E-03
268164160	Waukesha	NOx	0.224	6.14E-04
268165370	Waukesha	NOx	0.167	4.58E-04
268168560	Waukesha	NOx	2.548	6.98E-03
268171310	Waukesha	NOx	1.952	5.35E-03
268173290	Waukesha	NOx	0.004	1.21E-05
268175270	Waukesha	NOx	0.560	1.53E-03
268180660	Waukesha	NOx	0.064	1.76E-04
268183080	Waukesha	NOx	13.959	3.82E-02
268185610	Waukesha	NOx	4.933	1.35E-02
268186160	Waukesha	NOx	0.000	4.32E-07
268198370	Waukesha	NOx	0.006	1.69E-05
268203430	Waukesha	NOx	0.396	1.09E-03
268204090	Waukesha	NOx	0.544	1.49E-03
268213880	Waukesha	NOx	0.059	1.60E-04
268218170	Waukesha	NOx	0.494	1.35E-03
268219490	Waukesha	NOx	0.406	1.11E-03
268221360	Waukesha	NOx	4.692	1.29E-02
268221910	Waukesha	NOx	0.410	1.12E-03
268227850	Waukesha	NOx	0.404	1.11E-03
268228070	Waukesha	NOx	0.900	2.47E-03
268239290	Waukesha	NOx	0.164	4.49E-04
268244130	Waukesha	NOx	12.596	3.45E-02
268255790	Waukesha	NOx	1.374	3.76E-03
268257220	Waukesha	NOx	5.349	1.47E-02
268262060	Waukesha	NOx	0.167	4.57E-04
268266020	Waukesha	NOx	0.045	1.23E-04
268270420	Waukesha	NOx	0.091	2.49E-04
268270750	Waukesha	NOx	0.116	3.18E-04
268289450	Waukesha	NOx	0.304	8.32E-04
268290550	Waukesha	NOx	1.562	4.28E-03
268342470	Waukesha	NOx	0.253	6.93E-04
268376900	Waukesha	NOx	1.109	3.04E-03
268404730	Waukesha	NOx	0.983	2.69E-03
268414850	Waukesha	NOx	0.271	7.42E-04
268423870	Waukesha	NOx	0.891	2.44E-03
268457970	Waukesha	NOx	52.498	1.44E-01
268463800	Waukesha	NOx	2.093	5.73E-03
268523970	Waukesha	NOx	4.140	1.13E-02
268525070	Waukesha	NOx	1.105	3.03E-03
268544540	Waukesha	NOx	0.228	6.23E-04
341003300	Waukesha	NOx	0.099	2.72E-04

FID	COUNTY	POLLUTANT	2005(TONS)	2005(TPWD)
341018810	Waukesha	NOx	0.330	9.04E-04
341024310	Waukesha	NOx	1.027	2.81E-03
341075460	Waukesha	NOx	4.607	1.26E-02
341076780	Waukesha	NOx	0.281	7.70E-04
341092510	Waukesha	NOx	4.803	1.32E-02
241004610	Milwaukee	PM25	0.724	1.98E-03
241005600	Milwaukee	PM25	0.144	3.95E-04
241005710	Milwaukee	PM25	30.692	8.41E-02
241006260	Milwaukee	PM25	66.865	1.83E-01
241006370	Milwaukee	PM25	2.409	6.60E-03
241006810	Milwaukee	PM25	0.509	1.39E-03
241006920	Milwaukee	PM25	2.096	5.74E-03
241007030	Milwaukee	PM25	3.757	1.03E-02
241007690	Milwaukee	PM25	17.493	4.79E-02
241007800	Milwaukee	PM25	8.113	2.22E-02
241008130	Milwaukee	PM25	1.266	3.47E-03
241008240	Milwaukee	PM25	1.869	5.12E-03
241008350	Milwaukee	PM25	1.852	5.07E-03
241008680	Milwaukee	PM25	1.618	4.43E-03
241009670	Milwaukee	PM25	1.450	3.97E-03
241010770	Milwaukee	PM25	3.413	9.35E-03
241010990	Milwaukee	PM25	0.053	1.47E-04
241011100	Milwaukee	PM25	1.699	4.66E-03
241011760	Milwaukee	PM25	2.005	5.49E-03
241011870	Milwaukee	PM25	7.061	1.93E-02
241012200	Milwaukee	PM25	1.086	2.97E-03
241012310	Milwaukee	PM25	13.447	3.68E-02
241012970	Milwaukee	PM25	1.671	4.58E-03
241013080	Milwaukee	PM25	0.147	4.03E-04
241014180	Milwaukee	PM25	0.184	5.04E-04
241014620	Milwaukee	PM25	1.093	2.99E-03
241015390	Milwaukee	PM25	10.484	2.87E-02
241016710	Milwaukee	PM25	0.402	1.10E-03
241017040	Milwaukee	PM25	0.041	1.13E-04
241017370	Milwaukee	PM25	0.015	3.98E-05
241017590	Milwaukee	PM25	0.215	5.88E-04
241017920	Milwaukee	PM25	0.029	7.90E-05
241018140	Milwaukee	PM25	0.042	1.14E-04
241019350	Milwaukee	PM25	0.304	8.33E-04
241019900	Milwaukee	PM25	1.901	5.21E-03
241020780	Milwaukee	PM25	0.100	2.74E-04
241021880	Milwaukee	PM25	4.107	1.13E-02
241023640	Milwaukee	PM25	2.804	7.68E-03
241024190	Milwaukee	PM25	0.536	1.47E-03
241024300	Milwaukee	PM25	1.617	4.43E-03
241025070	Milwaukee	PM25	0.184	5.03E-04
241025290	Milwaukee	PM25	0.354	9.70E-04

FID	COUNTY	POLLUTANT	2005(TONS)	2005(TPWD)
241025510	Milwaukee	PM25	0.234	6.41E-04
241026060	Milwaukee	PM25	0.020	5.44E-05
241027050	Milwaukee	PM25	26.130	7.16E-02
241027160	Milwaukee	PM25	6.816	1.87E-02
241027380	Milwaukee	PM25	0.418	1.14E-03
241027600	Milwaukee	PM25	0.417	1.14E-03
241027930	Milwaukee	PM25	0.157	4.31E-04
241028810	Milwaukee	PM25	0.697	1.91E-03
241028920	Milwaukee	PM25	0.034	9.29E-05
241029030	Milwaukee	PM25	0.269	7.38E-04
241029140	Milwaukee	PM25	0.378	1.04E-03
241029250	Milwaukee	PM25	34.622	9.49E-02
241029690	Milwaukee	PM25	0.013	3.59E-05
241029800	Milwaukee	PM25	17.363	4.76E-02
241031120	Milwaukee	PM25	1.894	5.19E-03
241031340	Milwaukee	PM25	0.885	2.42E-03
241031450	Milwaukee	PM25	0.084	2.31E-04
241032440	Milwaukee	PM25	0.001	3.49E-06
241032770	Milwaukee	PM25	1.629	4.46E-03
241033210	Milwaukee	PM25	0.914	2.50E-03
241033430	Milwaukee	PM25	0.184	5.05E-04
241033650	Milwaukee	PM25	0.037	1.00E-04
241034200	Milwaukee	PM25	0.020	5.39E-05
241036840	Milwaukee	PM25	0.051	1.41E-04
241036950	Milwaukee	PM25	1.604	4.40E-03
241037280	Milwaukee	PM25	0.000	3.60E-08
241038820	Milwaukee	PM25	0.328	8.99E-04
241040690	Milwaukee	PM25	0.159	4.36E-04
241041900	Milwaukee	PM25	0.248	6.79E-04
241042670	Milwaukee	PM25	0.137	3.76E-04
241045420	Milwaukee	PM25	0.116	3.19E-04
241045750	Milwaukee	PM25	0.563	1.54E-03
241047730	Milwaukee	PM25	0.032	8.65E-05
241052680	Milwaukee	PM25	0.358	9.80E-04
241053010	Milwaukee	PM25	0.250	6.84E-04
241054330	Milwaukee	PM25	0.030	8.30E-05
241055870	Milwaukee	PM25	0.284	7.78E-04
241063570	Milwaukee	PM25	1.542	4.22E-03
241091400	Milwaukee	PM25	1.493	4.09E-03
241094370	Milwaukee	PM25	0.017	4.78E-05
241094700	Milwaukee	PM25	3.374	9.24E-03
241095910	Milwaukee	PM25	1.522	4.17E-03
241116700	Milwaukee	PM25	0.065	1.78E-04
241167630	Milwaukee	PM25	0.093	2.55E-04
241168070	Milwaukee	PM25	0.033	9.06E-05
241168180	Milwaukee	PM25	0.707	1.94E-03
241168510	Milwaukee	PM25	0.197	5.40E-04

FID	COUNTY	POLLUTANT	2005(TONS)	2005(TPWD)
241168620	Milwaukee	PM25	16.610	4.55E-02
241189520	Milwaukee	PM25	0.020	5.41E-05
241202170	Milwaukee	PM25	0.129	3.53E-04
241222410	Milwaukee	PM25	0.076	2.09E-04
241225710	Milwaukee	PM25	0.001	3.90E-06
241228350	Milwaukee	PM25	2.047	5.61E-03
241231760	Milwaukee	PM25	0.035	9.53E-05
241234840	Milwaukee	PM25	0.060	1.65E-04
241235940	Milwaukee	PM25	0.033	9.05E-05
241256290	Milwaukee	PM25	0.011	2.93E-05
241256730	Milwaukee	PM25	0.000	4.03E-08
241266740	Milwaukee	PM25	0.135	3.71E-04
241270810	Milwaukee	PM25	0.016	4.45E-05
241276750	Milwaukee	PM25	0.053	1.46E-04
241308870	Milwaukee	PM25	0.001	1.64E-06
241316020	Milwaukee	PM25	0.016	4.43E-05
241321960	Milwaukee	PM25	0.077	2.11E-04
241334060	Milwaukee	PM25	0.063	1.71E-04
241335160	Milwaukee	PM25	3.750	1.03E-02
241355400	Milwaukee	PM25	0.250	6.84E-04
241362660	Milwaukee	PM25	0.017	4.64E-05
241371350	Milwaukee	PM25	0.084	2.30E-04
241372120	Milwaukee	PM25	3.736	1.02E-02
241413810	Milwaukee	PM25	0.014	3.83E-05
241442630	Milwaukee	PM25	0.230	6.31E-04
241450440	Milwaukee	PM25	0.476	1.30E-03
241454290	Milwaukee	PM25	0.081	2.21E-04
241454400	Milwaukee	PM25	0.116	3.18E-04
241455500	Milwaukee	PM25	0.092	2.53E-04
241459790	Milwaukee	PM25	0.050	1.38E-04
241472770	Milwaukee	PM25	43.815	1.20E-01
241480910	Milwaukee	PM25	0.060	1.65E-04
241514570	Milwaukee	PM25	0.028	7.59E-05
241670660	Milwaukee	PM25	0.046	1.27E-04
241672090	Milwaukee	PM25	0.054	1.47E-04
241723240	Milwaukee	PM25	0.339	9.30E-04
241751950	Milwaukee	PM25	0.384	1.05E-03
241757340	Milwaukee	PM25	0.409	1.12E-03
241832360	Milwaukee	PM25	0.054	1.48E-04
241879550	Milwaukee	PM25	0.041	1.12E-04
241961610	Milwaukee	PM25	0.207	5.68E-04
241961720	Milwaukee	PM25	0.001	2.12E-06
241964580	Milwaukee	PM25	0.015	4.16E-05
341003300	Waukesha	PM25	0.007	2.03E-05
341005280	Waukesha	PM25	7.983	2.19E-02
341018810	Waukesha	PM25	0.025	6.87E-05
341024310	Waukesha	PM25	0.562	1.54E-03

FID	COUNTY	POLLUTANT	2005(TONS)	2005(TPWD)
341062260	Waukesha	PM25	0.022	6.16E-05
341075460	Waukesha	PM25	0.314	8.61E-04
341076780	Waukesha	PM25	0.021	5.85E-05
341092510	Waukesha	PM25	0.527	1.44E-03
252004280	Racine	PM25	2.520	6.90E-03
252004940	Racine	PM25	1.601	4.39E-03
252005380	Racine	PM25	4.087	1.12E-02
252005820	Racine	PM25	0.477	1.31E-03
252005930	Racine	PM25	57.258	1.57E-01
252006370	Racine	PM25	1.382	3.79E-03
252007030	Racine	PM25	0.051	1.39E-04
252007140	Racine	PM25	0.338	9.26E-04
252007580	Racine	PM25	0.009	2.35E-05
252007690	Racine	PM25	0.264	7.23E-04
252008460	Racine	PM25	0.325	8.90E-04
252009780	Racine	PM25	0.060	1.64E-04
252011870	Racine	PM25	1.258	3.45E-03
252012090	Racine	PM25	0.458	1.25E-03
252013190	Racine	PM25	0.288	7.90E-04
252013630	Racine	PM25	0.129	3.54E-04
252019900	Racine	PM25	0.526	1.44E-03
252041130	Racine	PM25	0.851	2.33E-03
252070500	Racine	PM25	0.018	5.03E-05
252075340	Racine	PM25	0.015	4.06E-05
252076990	Racine	PM25	0.000	1.77E-07
252077760	Racine	PM25	0.006	1.71E-05
252078200	Racine	PM25	0.200	5.47E-04
252080070	Racine	PM25	0.016	4.48E-05
252091070	Racine	PM25	0.014	3.82E-05
252103940	Racine	PM25	0.542	1.48E-03
252126380	Racine	PM25	0.016	4.40E-05
252135950	Racine	PM25	0.079	2.16E-04
252147060	Racine	PM25	0.816	2.24E-03
252194140	Racine	PM25	0.740	2.03E-03
252194910	Racine	PM25	0.055	1.50E-04
252224830	Racine	PM25	2.829	7.75E-03
252229670	Racine	PM25	0.005	1.24E-05
252236380	Racine	PM25	1.454	3.98E-03
268005100	Waukesha	PM25	0.126	3.47E-04
268005430	Waukesha	PM25	22.824	6.25E-02
268005650	Waukesha	PM25	3.324	9.11E-03
268005870	Waukesha	PM25	0.285	7.80E-04
268006310	Waukesha	PM25	0.103	2.83E-04
268006750	Waukesha	PM25	0.803	2.20E-03
268006970	Waukesha	PM25	3.237	8.87E-03
268007080	Waukesha	PM25	1.150	3.15E-03
268007740	Waukesha	PM25	0.135	3.69E-04

FID	COUNTY	POLLUTANT	2005(TONS)	2005(TPWD)
268008400	Waukesha	PM25	0.205	5.60E-04
268008510	Waukesha	PM25	0.164	4.48E-04
268008730	Waukesha	PM25	1.003	2.75E-03
268009500	Waukesha	PM25	1.760	4.82E-03
268010710	Waukesha	PM25	0.002	5.10E-06
268012030	Waukesha	PM25	1.935	5.30E-03
268012250	Waukesha	PM25	0.066	1.81E-04
268012360	Waukesha	PM25	0.013	3.60E-05
268012580	Waukesha	PM25	0.021	5.75E-05
268012910	Waukesha	PM25	0.476	1.30E-03
268013240	Waukesha	PM25	0.288	7.90E-04
268014120	Waukesha	PM25	1.098	3.01E-03
268014560	Waukesha	PM25	0.008	2.27E-05
268014670	Waukesha	PM25	0.600	1.64E-03
268014780	Waukesha	PM25	0.006	1.73E-05
268015330	Waukesha	PM25	0.261	7.15E-04
268016100	Waukesha	PM25	0.213	5.85E-04
268016210	Waukesha	PM25	0.017	4.67E-05
268023580	Waukesha	PM25	0.257	7.05E-04
268028200	Waukesha	PM25	0.493	1.35E-03
268028420	Waukesha	PM25	0.071	1.94E-04
268082650	Waukesha	PM25	0.204	5.58E-04
268088700	Waukesha	PM25	0.458	1.26E-03
268088920	Waukesha	PM25	9.323	2.55E-02
268089140	Waukesha	PM25	1.161	3.18E-03
268107620	Waukesha	PM25	0.017	4.57E-05
268142270	Waukesha	PM25	0.060	1.64E-04
268144250	Waukesha	PM25	0.008	2.27E-05
268152500	Waukesha	PM25	0.000	4.01E-08
268152610	Waukesha	PM25	0.000	3.35E-08
268154260	Waukesha	PM25	0.005	1.34E-05
268154370	Waukesha	PM25	0.975	2.67E-03
268157890	Waukesha	PM25	0.096	2.64E-04
268158660	Waukesha	PM25	0.007	1.96E-05
268161410	Waukesha	PM25	0.110	3.01E-04
268164160	Waukesha	PM25	0.002	6.58E-06
268165370	Waukesha	PM25	0.020	5.50E-05
268168560	Waukesha	PM25	0.303	8.29E-04
268170320	Waukesha	PM25	0.000	7.26E-08
268171310	Waukesha	PM25	0.120	3.29E-04
268173290	Waukesha	PM25	0.000	1.28E-07
268175270	Waukesha	PM25	0.067	1.84E-04
268180660	Waukesha	PM25	0.430	1.18E-03
268183080	Waukesha	PM25	0.280	7.68E-04
268185610	Waukesha	PM25	0.538	1.47E-03
268186160	Waukesha	PM25	0.000	1.29E-08
268198370	Waukesha	PM25	1.730	4.74E-03

FID	COUNTY	POLLUTANT	2005(TONS)	2005(TPWD)
268203430	Waukesha	PM25	0.030	8.25E-05
268204090	Waukesha	PM25	0.005	1.28E-05
268213880	Waukesha	PM25	0.002	4.81E-06
268218170	Waukesha	PM25	0.059	1.62E-04
268219490	Waukesha	PM25	1.206	3.30E-03
268221910	Waukesha	PM25	0.031	8.55E-05
268227850	Waukesha	PM25	0.031	8.40E-05
268228070	Waukesha	PM25	0.108	2.96E-04
268239290	Waukesha	PM25	0.022	6.15E-05
268255790	Waukesha	PM25	0.103	2.81E-04
268257220	Waukesha	PM25	0.597	1.64E-03
268262060	Waukesha	PM25	0.020	5.49E-05
268266020	Waukesha	PM25	0.001	3.70E-06
268270750	Waukesha	PM25	0.003	9.55E-06
268289450	Waukesha	PM25	0.614	1.68E-03
268290550	Waukesha	PM25	0.160	4.39E-04
268299130	Waukesha	PM25	1.971	5.40E-03
268353800	Waukesha	PM25	0.000	1.59E-08
268376900	Waukesha	PM25	0.956	2.62E-03
268404730	Waukesha	PM25	0.076	2.07E-04
268414850	Waukesha	PM25	0.008	2.23E-05
268423870	Waukesha	PM25	0.052	1.43E-04
268457970	Waukesha	PM25	0.392	1.07E-03
268463800	Waukesha	PM25	2.249	6.16E-03
268523970	Waukesha	PM25	0.761	2.08E-03
268525070	Waukesha	PM25	0.084	2.30E-04
268544540	Waukesha	PM25	0.006	1.77E-05
241004610	Milwaukee	SO2	0.034	9.31E-05
241005600	Milwaukee	SO2	0.044	1.21E-04
241005710	Milwaukee	SO2	2.358	6.46E-03
241006260	Milwaukee	SO2	11.733	3.21E-02
241006370	Milwaukee	SO2	54.643	1.50E-01
241006810	Milwaukee	SO2	0.023	6.43E-05
241006920	Milwaukee	SO2	0.402	1.10E-03
241007030	Milwaukee	SO2	2.468	6.76E-03
241007690	Milwaukee	SO2	12,902.614	3.53E+01
241007800	Milwaukee	SO2	8,483.158	2.32E+01
241008130	Milwaukee	SO2	0.120	3.28E-04
241008240	Milwaukee	SO2	0.144	3.93E-04
241008680	Milwaukee	SO2	1.244	3.41E-03
241009670	Milwaukee	SO2	0.118	3.23E-04
241010770	Milwaukee	SO2	0.037	1.01E-04
241010990	Milwaukee	SO2	0.303	8.29E-04
241011100	Milwaukee	SO2	95.890	2.63E-01
241011760	Milwaukee	SO2	32.553	8.92E-02
241011870	Milwaukee	SO2	1.171	3.21E-03
241012200	Milwaukee	SO2	0.058	1.58E-04

FID	COUNTY	POLLUTANT	2005(TONS)	2005(TPWD)
241012310	Milwaukee	SO2	3.680	1.01E-02
241012970	Milwaukee	SO2	0.216	5.90E-04
241013080	Milwaukee	SO2	0.020	5.50E-05
241014180	Milwaukee	SO2	0.015	3.98E-05
241014620	Milwaukee	SO2	0.090	2.48E-04
241015390	Milwaukee	SO2	0.730	2.00E-03
241016710	Milwaukee	SO2	0.018	4.82E-05
241017040	Milwaukee	SO2	0.003	8.91E-06
241017370	Milwaukee	SO2	0.003	7.41E-06
241017590	Milwaukee	SO2	0.003	8.02E-06
241017920	Milwaukee	SO2	0.006	1.58E-05
241018140	Milwaukee	SO2	0.008	2.28E-05
241019350	Milwaukee	SO2	0.021	5.81E-05
241019900	Milwaukee	SO2	0.298	8.18E-04
241020780	Milwaukee	SO2	0.017	4.55E-05
241021880	Milwaukee	SO2	0.445	1.22E-03
241023640	Milwaukee	SO2	0.233	6.38E-04
241024190	Milwaukee	SO2	0.071	1.95E-04
241024300	Milwaukee	SO2	0.216	5.92E-04
241025070	Milwaukee	SO2	0.112	3.06E-04
241025290	Milwaukee	SO2	0.016	4.30E-05
241025510	Milwaukee	SO2	0.016	4.28E-05
241026060	Milwaukee	SO2	0.004	1.09E-05
241026500	Milwaukee	SO2	0.008	2.06E-05
241027050	Milwaukee	SO2	484.337	1.33E+00
241027160	Milwaukee	SO2	0.002	5.38E-06
241027380	Milwaukee	SO2	0.018	5.01E-05
241027600	Milwaukee	SO2	12.388	3.39E-02
241027930	Milwaukee	SO2	0.048	1.31E-04
241028810	Milwaukee	SO2	0.472	1.29E-03
241028920	Milwaukee	SO2	0.013	3.58E-05
241029030	Milwaukee	SO2	0.069	1.90E-04
241029140	Milwaukee	SO2	0.030	8.18E-05
241029250	Milwaukee	SO2	0.501	1.37E-03
241029470	Milwaukee	SO2	0.001	1.82E-06
241029690	Milwaukee	SO2	1.534	4.20E-03
241029800	Milwaukee	SO2	4.631	1.27E-02
241031120	Milwaukee	SO2	0.083	2.27E-04
241031340	Milwaukee	SO2	0.068	1.87E-04
241031450	Milwaukee	SO2	0.288	7.90E-04
241032440	Milwaukee	SO2	0.000	6.98E-07
241032770	Milwaukee	SO2	0.029	7.84E-05
241033210	Milwaukee	SO2	0.046	1.26E-04
241033430	Milwaukee	SO2	0.009	2.52E-05
241033650	Milwaukee	SO2	0.008	2.09E-05
241034200	Milwaukee	SO2	0.001	1.75E-06
241036840	Milwaukee	SO2	0.003	7.04E-06

FID	COUNTY	POLLUTANT	2005(TONS)	2005(TPWD)
241036950	Milwaukee	SO2	0.011	2.89E-05
241038820	Milwaukee	SO2	0.021	5.71E-05
241040690	Milwaukee	SO2	0.007	1.91E-05
241041900	Milwaukee	SO2	0.011	2.98E-05
241042670	Milwaukee	SO2	0.007	1.88E-05
241045420	Milwaukee	SO2	0.005	1.40E-05
241045750	Milwaukee	SO2	0.375	1.03E-03
241047730	Milwaukee	SO2	0.010	2.82E-05
241052680	Milwaukee	SO2	0.169	4.63E-04
241053010	Milwaukee	SO2	0.022	5.98E-05
241053450	Milwaukee	SO2	0.018	4.91E-05
241054330	Milwaukee	SO2	0.002	4.15E-06
241055870	Milwaukee	SO2	0.023	6.32E-05
241063570	Milwaukee	SO2	0.017	4.59E-05
241094370	Milwaukee	SO2	0.002	6.63E-06
241094700	Milwaukee	SO2	0.007	1.95E-05
241095910	Milwaukee	SO2	0.163	4.46E-04
241116700	Milwaukee	SO2	0.013	3.56E-05
241167630	Milwaukee	SO2	0.006	1.55E-05
241168180	Milwaukee	SO2	0.050	1.36E-04
241168510	Milwaukee	SO2	0.033	9.12E-05
241189520	Milwaukee	SO2	0.004	1.08E-05
241202170	Milwaukee	SO2	0.009	2.40E-05
241213720	Milwaukee	SO2	0.006	1.73E-05
241222410	Milwaukee	SO2	0.004	1.04E-05
241225710	Milwaukee	SO2	0.000	9.39E-07
241228350	Milwaukee	SO2	1.852	5.07E-03
241231760	Milwaukee	SO2	0.002	4.77E-06
241232640	Milwaukee	SO2	0.000	9.21E-07
241234840	Milwaukee	SO2	0.000	1.34E-06
241235940	Milwaukee	SO2	0.003	7.14E-06
241251670	Milwaukee	SO2	0.005	1.40E-05
241256290	Milwaukee	SO2	0.001	1.46E-06
241256730	Milwaukee	SO2	0.004	1.13E-05
241266740	Milwaukee	SO2	0.007	1.79E-05
241270810	Milwaukee	SO2	0.001	2.91E-06
241276750	Milwaukee	SO2	0.003	7.29E-06
241308870	Milwaukee	SO2	0.001	2.96E-06
241316020	Milwaukee	SO2	0.001	3.50E-06
241321960	Milwaukee	SO2	0.004	1.06E-05
241334060	Milwaukee	SO2	0.005	1.35E-05
241355400	Milwaukee	SO2	2.850	7.81E-03
241362660	Milwaukee	SO2	0.004	1.12E-05
241371350	Milwaukee	SO2	0.007	1.82E-05
241372120	Milwaukee	SO2	0.032	8.70E-05
241413810	Milwaukee	SO2	0.003	7.66E-06
241442630	Milwaukee	SO2	0.018	4.92E-05

FID	COUNTY	POLLUTANT	2005(TONS)	2005(TPWD)
241450440	Milwaukee	SO2	0.151	4.14E-04
241454290	Milwaukee	SO2	0.007	1.81E-05
241454400	Milwaukee	SO2	0.009	2.51E-05
241459790	Milwaukee	SO2	0.003	6.89E-06
241472770	Milwaukee	SO2	2.856	7.82E-03
241480910	Milwaukee	SO2	0.003	8.25E-06
241514570	Milwaukee	SO2	0.001	3.80E-06
241670660	Milwaukee	SO2	0.004	1.00E-05
241672090	Milwaukee	SO2	0.004	1.04E-05
241709930	Milwaukee	SO2	0.001	4.02E-06
241723240	Milwaukee	SO2	0.027	7.34E-05
241751950	Milwaukee	SO2	0.017	4.60E-05
241757340	Milwaukee	SO2	0.034	9.20E-05
241832360	Milwaukee	SO2	0.011	2.96E-05
241879550	Milwaukee	SO2	0.008	2.24E-05
241961610	Milwaukee	SO2	0.011	2.96E-05
241964580	Milwaukee	SO2	0.004	1.11E-05
341003300	Waukesha	SO2	0.001	1.60E-06
341018810	Waukesha	SO2	0.002	5.42E-06
341024310	Waukesha	SO2	0.006	1.69E-05
341075460	Waukesha	SO2	0.028	7.57E-05
341076780	Waukesha	SO2	0.002	4.62E-06
341092510	Waukesha	SO2	0.232	6.36E-04
252004280	Milwaukee	SO2	0.575	1.57E-03
252004940	Milwaukee	SO2	0.666	1.82E-03
252005380	Racine	SO2	9.060	2.48E-02
252005820	Racine	SO2	0.162	4.43E-04
252005930	Racine	SO2	232.779	6.38E-01
252006370	Racine	SO2	0.686	1.88E-03
252007030	Racine	SO2	0.004	1.10E-05
252007140	Racine	SO2	0.090	2.47E-04
252007580	Racine	SO2	0.002	4.70E-06
252007690	Racine	SO2	0.021	5.71E-05
252008460	Racine	SO2	0.049	1.34E-04
252009780	Racine	SO2	0.007	1.81E-05
252011870	Racine	SO2	0.046	1.26E-04
252012090	Racine	SO2	0.172	4.72E-04
252013190	Racine	SO2	3.292	9.02E-03
252013630	Racine	SO2	0.009	2.58E-05
252019900	Racine	SO2	0.047	1.28E-04
252041130	Racine	SO2	0.018	4.81E-05
252070500	Racine	SO2	0.001	2.52E-06
252075340	Racine	SO2	0.003	8.12E-06
252076990	Racine	SO2	1.015	2.78E-03
252077760	Racine	SO2	0.001	3.64E-06
252080070	Racine	SO2	0.001	3.53E-06
252091070	Racine	SO2	0.003	7.64E-06

FID	COUNTY	POLLUTANT	2005(TONS)	2005(TPWD)
252103940	Racine	SO2	0.068	1.86E-04
252126380	Racine	SO2	0.003	8.81E-06
252135950	Racine	SO2	0.009	2.55E-05
252194140	Racine	SO2	0.705	1.93E-03
252229670	Racine	SO2	0.001	2.47E-06
252236380	Racine	SO2	0.128	3.51E-04
268005100	Waukesha	SO2	0.006	1.73E-05
268005430	Waukesha	SO2	1.592	4.36E-03
268005870	Waukesha	SO2	0.022	6.16E-05
268006310	Waukesha	SO2	0.039	1.06E-04
268006750	Waukesha	SO2	0.119	3.25E-04
268006970	Waukesha	SO2	0.812	2.23E-03
268007080	Waukesha	SO2	1.352	3.70E-03
268007740	Waukesha	SO2	0.011	2.91E-05
268008400	Waukesha	SO2	0.077	2.10E-04
268008510	Waukesha	SO2	0.014	3.95E-05
268008730	Waukesha	SO2	0.230	6.31E-04
268009500	Waukesha	SO2	0.132	3.62E-04
268010710	Waukesha	SO2	0.011	3.06E-05
268012030	Waukesha	SO2	0.076	2.09E-04
268012250	Waukesha	SO2	0.014	3.74E-05
268012360	Waukesha	SO2	0.006	1.67E-05
268012580	Waukesha	SO2	0.001	2.88E-06
268012910	Waukesha	SO2	8.098	2.22E-02
268013240	Waukesha	SO2	0.193	5.29E-04
268014560	Waukesha	SO2	0.001	2.56E-06
268014670	Waukesha	SO2	0.463	1.27E-03
268014780	Waukesha	SO2	0.001	3.45E-06
268015330	Waukesha	SO2	0.017	4.69E-05
268016100	Waukesha	SO2	0.016	4.50E-05
268016210	Waukesha	SO2	0.016	4.32E-05
268023580	Waukesha	SO2	0.013	3.53E-05
268028200	Waukesha	SO2	6.436	1.76E-02
268028420	Waukesha	SO2	5.305	1.45E-02
268082650	Waukesha	SO2	0.024	6.54E-05
268088700	Waukesha	SO2	0.331	9.07E-04
268088920	Waukesha	SO2	2.872	7.87E-03
268089140	Waukesha	SO2	0.000	1.40E-07
268107620	Waukesha	SO2	0.003	9.15E-06
268142270	Waukesha	SO2	0.003	8.21E-06
268144250	Waukesha	SO2	0.006	1.72E-05
268152500	Waukesha	SO2	0.317	8.69E-04
268152610	Waukesha	SO2	0.215	5.89E-04
268154260	Waukesha	SO2	0.001	3.22E-06
268154370	Waukesha	SO2	0.008	2.22E-05
268157890	Waukesha	SO2	0.015	4.15E-05
268158660	Waukesha	SO2	0.002	6.56E-06

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268161410	Waukesha	SO2	0.005	1.51E-05
268164160	Waukesha	SO2	0.000	1.32E-06
268165370	Waukesha	SO2	0.001	2.75E-06
268168560	Waukesha	SO2	5.467	1.50E-02
268170320	Waukesha	SO2	0.000	1.75E-08
268171310	Waukesha	SO2	0.048	1.33E-04
268173290	Waukesha	SO2	0.000	7.28E-08
268175270	Waukesha	SO2	0.003	9.21E-06
268180660	Waukesha	SO2	0.000	1.06E-06
268183080	Waukesha	SO2	0.084	2.29E-04
268185610	Waukesha	SO2	9.119	2.50E-02
268186160	Waukesha	SO2	0.000	2.59E-09
268198370	Waukesha	SO2	0.012	3.39E-05
268203430	Waukesha	SO2	0.002	6.51E-06
268204090	Waukesha	SO2	0.004	9.84E-06
268213880	Waukesha	SO2	0.000	9.62E-07
268218170	Waukesha	SO2	0.003	8.12E-06
268219490	Waukesha	SO2	0.044	1.20E-04
268221910	Waukesha	SO2	0.002	6.75E-06
268227850	Waukesha	SO2	0.002	6.63E-06
268228070	Waukesha	SO2	0.005	1.48E-05
268239290	Waukesha	SO2	0.001	2.69E-06
268244130	Waukesha	SO2	7.849	2.15E-02
268255790	Waukesha	SO2	0.085	2.33E-04
268257220	Waukesha	SO2	4.199	1.15E-02
268262060	Waukesha	SO2	0.001	2.74E-06
268266020	Waukesha	SO2	0.000	7.40E-07
268270420	Waukesha	SO2	0.001	1.49E-06
268270750	Waukesha	SO2	0.001	1.91E-06
268289450	Waukesha	SO2	0.020	5.47E-05
268290550	Waukesha	SO2	0.010	2.65E-05
268376900	Waukesha	SO2	0.073	2.00E-04
268404730	Waukesha	SO2	0.006	1.62E-05
268414850	Waukesha	SO2	0.002	4.45E-06
268423870	Waukesha	SO2	0.005	1.34E-05
268457970	Waukesha	SO2	0.128	3.50E-04
268463800	Waukesha	SO2	0.138	3.77E-04
268523970	Waukesha	SO2	0.039	1.06E-04
268525070	Waukesha	SO2	0.007	1.82E-05
268544540	Waukesha	SO2	0.001	3.74E-06
241004610	Milwaukee	VOC	0.311	8.52E-04
241005490	Milwaukee	VOC	4.863	1.33E-02
241005600	Milwaukee	VOC	2.400	6.57E-03
241005710	Milwaukee	VOC	30.894	8.46E-02
241006260	Milwaukee	VOC	126.611	3.47E-01
241006370	Milwaukee	VOC	53.502	1.47E-01
241006810	Milwaukee	VOC	9.806	2.69E-02

FID	COUNTY	POLLUTANT	2005(TONS)	2005(TPWD)
241006920	Milwaukee	VOC	10.041	2.75E-02
241007030	Milwaukee	VOC	122.860	3.37E-01
241007690	Milwaukee	VOC	114.873	3.15E-01
241007800	Milwaukee	VOC	27.471	7.53E-02
241008130	Milwaukee	VOC	7.583	2.08E-02
241008240	Milwaukee	VOC	4.275	1.17E-02
241008680	Milwaukee	VOC	45.339	1.24E-01
241009670	Milwaukee	VOC	5.412	1.48E-02
241010770	Milwaukee	VOC	5.923	1.62E-02
241010990	Milwaukee	VOC	13.150	3.60E-02
241011100	Milwaukee	VOC	1.836	5.03E-03
241011760	Milwaukee	VOC	18.201	4.99E-02
241011870	Milwaukee	VOC	28.286	7.75E-02
241012200	Milwaukee	VOC	11.954	3.28E-02
241012310	Milwaukee	VOC	51.514	1.41E-01
241012970	Milwaukee	VOC	10.306	2.82E-02
241013080	Milwaukee	VOC	0.184	5.04E-04
241014180	Milwaukee	VOC	3.553	9.74E-03
241014620	Milwaukee	VOC	427.502	1.17E+00
241015390	Milwaukee	VOC	30.708	8.41E-02
241016710	Milwaukee	VOC	0.189	5.19E-04
241017040	Milwaukee	VOC	2.310	6.33E-03
241017370	Milwaukee	VOC	2.967	8.13E-03
241017590	Milwaukee	VOC	28.258	7.74E-02
241017700	Milwaukee	VOC	8.075	2.21E-02
241017920	Milwaukee	VOC	24.347	6.67E-02
241018140	Milwaukee	VOC	5.802	1.59E-02
241019350	Milwaukee	VOC	5.231	1.43E-02
241019460	Milwaukee	VOC	13.323	3.65E-02
241019900	Milwaukee	VOC	2.655	7.27E-03
241020780	Milwaukee	VOC	15.694	4.30E-02
241021220	Milwaukee	VOC	56.165	1.54E-01
241021880	Milwaukee	VOC	15.657	4.29E-02
241023640	Milwaukee	VOC	32.178	8.82E-02
241024190	Milwaukee	VOC	0.453	1.24E-03
241024300	Milwaukee	VOC	1.454	3.98E-03
241025070	Milwaukee	VOC	0.732	2.01E-03
241025290	Milwaukee	VOC	1.102	3.02E-03
241025510	Milwaukee	VOC	0.138	3.78E-04
241026060	Milwaukee	VOC	0.871	2.39E-03
241026500	Milwaukee	VOC	15.986	4.38E-02
241027050	Milwaukee	VOC	2.260	6.19E-03
241027160	Milwaukee	VOC	0.119	3.25E-04
241027380	Milwaukee	VOC	0.168	4.60E-04
241027600	Milwaukee	VOC	34.896	9.56E-02
241027930	Milwaukee	VOC	0.426	1.17E-03
241028810	Milwaukee	VOC	88.873	2.43E-01

FID	COUNTY	POLLUTANT	2005(TONS)	2005(TPWD)
241028920	Milwaukee	VOC	57.280	1.57E-01
241029030	Milwaukee	VOC	33.219	9.10E-02
241029140	Milwaukee	VOC	0.274	7.50E-04
241029250	Milwaukee	VOC	45.751	1.25E-01
241029470	Milwaukee	VOC	0.028	7.78E-05
241029690	Milwaukee	VOC	0.223	6.11E-04
241029800	Milwaukee	VOC	48.579	1.33E-01
241031120	Milwaukee	VOC	0.760	2.08E-03
241031340	Milwaukee	VOC	102.247	2.80E-01
241031450	Milwaukee	VOC	0.148	4.05E-04
241032440	Milwaukee	VOC	4.266	1.17E-02
241032770	Milwaukee	VOC	19.222	5.27E-02
241033210	Milwaukee	VOC	0.376	1.03E-03
241033430	Milwaukee	VOC	42.387	1.16E-01
241033650	Milwaukee	VOC	2.340	6.41E-03
241033760	Milwaukee	VOC	8.554	2.34E-02
241034200	Milwaukee	VOC	5.084	1.39E-02
241034420	Milwaukee	VOC	2.382	6.53E-03
241036840	Milwaukee	VOC	0.696	1.91E-03
241036950	Milwaukee	VOC	0.097	2.65E-04
241037280	Milwaukee	VOC	0.130	3.56E-04
241038820	Milwaukee	VOC	4.050	1.11E-02
241040690	Milwaukee	VOC	15.996	4.38E-02
241041130	Milwaukee	VOC	37.700	1.03E-01
241041900	Milwaukee	VOC	0.813	2.23E-03
241042670	Milwaukee	VOC	7.500	2.05E-02
241043880	Milwaukee	VOC	3.663	1.00E-02
241045420	Milwaukee	VOC	0.047	1.28E-04
241045750	Milwaukee	VOC	0.683	1.87E-03
241046410	Milwaukee	VOC	0.245	6.70E-04
241047730	Milwaukee	VOC	3.597	9.86E-03
241049160	Milwaukee	VOC	3.884	1.06E-02
241049710	Milwaukee	VOC	8.479	2.32E-02
241052680	Milwaukee	VOC	4.275	1.17E-02
241053010	Milwaukee	VOC	0.582	1.59E-03
241053450	Milwaukee	VOC	0.596	1.63E-03
241053560	Milwaukee	VOC	1.890	5.18E-03
241054330	Milwaukee	VOC	1.514	4.15E-03
241055870	Milwaukee	VOC	0.206	5.63E-04
241063570	Milwaukee	VOC	57.067	1.56E-01
241078640	Milwaukee	VOC	11.974	3.28E-02
241079300	Milwaukee	VOC	1.643	4.50E-03
241094370	Milwaukee	VOC	11.997	3.29E-02
241094700	Milwaukee	VOC	4.761	1.30E-02
241095910	Milwaukee	VOC	0.202	5.54E-04
241116700	Milwaukee	VOC	10.560	2.89E-02
241164770	Milwaukee	VOC	18.070	4.95E-02

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241167630	Milwaukee	VOC	0.039	1.07E-04
241168070	Milwaukee	VOC	1.083	2.97E-03
241168180	Milwaukee	VOC	0.399	1.09E-03
241168510	Milwaukee	VOC	1.275	3.49E-03
241168620	Milwaukee	VOC	0.319	8.75E-04
241174560	Milwaukee	VOC	20.198	5.53E-02
241189520	Milwaukee	VOC	4.548	1.25E-02
241197990	Milwaukee	VOC	3.014	8.26E-03
241202170	Milwaukee	VOC	0.270	7.40E-04
241213720	Milwaukee	VOC	3.940	1.08E-02
241222410	Milwaukee	VOC	0.486	1.33E-03
241225710	Milwaukee	VOC	10.770	2.95E-02
241227910	Milwaukee	VOC	4.951	1.36E-02
241228350	Milwaukee	VOC	18.033	4.94E-02
241231760	Milwaukee	VOC	0.016	4.37E-05
241232640	Milwaukee	VOC	4.069	1.11E-02
241234840	Milwaukee	VOC	3.243	8.89E-03
241235940	Milwaukee	VOC	3.606	9.88E-03
241245180	Milwaukee	VOC	21.204	5.81E-02
241251670	Milwaukee	VOC	1.887	5.17E-03
241256290	Milwaukee	VOC	4.410	1.21E-02
241256730	Milwaukee	VOC	5.687	1.56E-02
241266740	Milwaukee	VOC	13.891	3.81E-02
241270810	Milwaukee	VOC	16.326	4.47E-02
241276750	Milwaukee	VOC	33.487	9.17E-02
241308870	Milwaukee	VOC	7.458	2.04E-02
241309090	Milwaukee	VOC	14.578	3.99E-02
241316020	Milwaukee	VOC	9.362	2.56E-02
241318330	Milwaukee	VOC	1.634	4.48E-03
241321850	Milwaukee	VOC	4.132	1.13E-02
241321960	Milwaukee	VOC	0.035	9.68E-05
241325590	Milwaukee	VOC	10.455	2.86E-02
241334060	Milwaukee	VOC	13.164	3.61E-02
241355400	Milwaukee	VOC	0.057	1.55E-04
241362660	Milwaukee	VOC	4.403	1.21E-02
241371350	Milwaukee	VOC	0.345	9.46E-04
241372120	Milwaukee	VOC	4.617	1.26E-02
241413810	Milwaukee	VOC	6.082	1.67E-02
241428550	Milwaukee	VOC	17.275	4.73E-02
241435260	Milwaukee	VOC	16.512	4.52E-02
241442630	Milwaukee	VOC	21.255	5.82E-02
241450440	Milwaukee	VOC	0.347	9.51E-04
241454290	Milwaukee	VOC	26.392	7.23E-02
241454400	Milwaukee	VOC	0.084	2.30E-04
241455500	Milwaukee	VOC	5.757	1.58E-02
241459790	Milwaukee	VOC	0.641	1.75E-03
241472770	Milwaukee	VOC	0.280	7.68E-04

FID	COUNTY	POLLUTANT	2005(TONS)	2005(TPWD)
241473650	Milwaukee	VOC	5.405	1.48E-02
241480910	Milwaukee	VOC	5.023	1.38E-02
241514570	Milwaukee	VOC	4.906	1.34E-02
241536350	Milwaukee	VOC	0.434	1.19E-03
241670660	Milwaukee	VOC	18.923	5.18E-02
241672090	Milwaukee	VOC	0.035	9.57E-05
241684630	Milwaukee	VOC	8.569	2.35E-02
241709930	Milwaukee	VOC	5.227	1.43E-02
241714000	Milwaukee	VOC	17.276	4.73E-02
241723240	Milwaukee	VOC	12.330	3.38E-02
241723460	Milwaukee	VOC	1.432	3.92E-03
241741940	Milwaukee	VOC	8.611	2.36E-02
241751950	Milwaukee	VOC	3.822	1.05E-02
241757340	Milwaukee	VOC	41.068	1.13E-01
241805300	Milwaukee	VOC	5.584	1.53E-02
241832360	Milwaukee	VOC	1.830	5.01E-03
241879550	Milwaukee	VOC	1.435	3.93E-03
241916180	Milwaukee	VOC	2.220	6.08E-03
241961610	Milwaukee	VOC	0.095	2.61E-04
241961720	Milwaukee	VOC	14.101	3.86E-02
241964580	Milwaukee	VOC	6.213	1.70E-02
241967440	Milwaukee	VOC	1.829	5.01E-03
341003300	Waukesha	VOC	7.088	1.94E-02
341018810	Waukesha	VOC	6.131	1.68E-02
341024310	Waukesha	VOC	17.245	4.72E-02
341027170	Waukesha	VOC	7.004	1.92E-02
341037290	Waukesha	VOC	8.995	2.46E-02
341039270	Waukesha	VOC	7.849	2.15E-02
341062260	Waukesha	VOC	9.256	2.54E-02
341075460	Waukesha	VOC	9.800	2.69E-02
341076780	Waukesha	VOC	0.826	2.26E-03
341092510	Waukesha	VOC	0.836	2.29E-03
252004280	Milwaukee	VOC	0.174	4.78E-04
252004720	Milwaukee	VOC	1.635	4.48E-03
252004940	Racine	VOC	37.638	1.03E-01
252005380	Racine	VOC	17.450	4.78E-02
252005820	Racine	VOC	0.343	9.39E-04
252005930	Racine	VOC	26.726	7.32E-02
252006370	Racine	VOC	187.968	5.15E-01
252007030	Racine	VOC	0.037	1.01E-04
252007140	Racine	VOC	2.875	7.88E-03
252007580	Racine	VOC	0.351	9.62E-04
252007690	Racine	VOC	8.268	2.27E-02
252008460	Racine	VOC	4.772	1.31E-02
252009780	Racine	VOC	16.336	4.48E-02
252011870	Racine	VOC	3.524	9.66E-03
252012090	Racine	VOC	2.151	5.89E-03

FID	COUNTY	POLLUTANT	2005(TONS)	2005(TPWD)
252013190	Racine	VOC	0.025	6.82E-05
252013630	Racine	VOC	16.277	4.46E-02
252019900	Racine	VOC	0.381	1.04E-03
252041130	Racine	VOC	8.906	2.44E-02
252070500	Racine	VOC	5.201	1.42E-02
252075340	Racine	VOC	5.131	1.41E-02
252076990	Racine	VOC	1.162	3.18E-03
252077760	Racine	VOC	3.008	8.24E-03
252078200	Racine	VOC	0.866	2.37E-03
252080070	Racine	VOC	4.940	1.35E-02
252081390	Racine	VOC	3.588	9.83E-03
252091070	Racine	VOC	2.665	7.30E-03
252103940	Racine	VOC	0.399	1.09E-03
252109550	Racine	VOC	5.098	1.40E-02
252111530	Racine	VOC	0.045	1.24E-04
252126380	Racine	VOC	4.328	1.19E-02
252128580	Racine	VOC	1.099	3.01E-03
252135950	Racine	VOC	0.834	2.28E-03
252173680	Racine	VOC	11.730	3.21E-02
252194140	Racine	VOC	27.126	7.43E-02
252195350	Racine	VOC	0.684	1.87E-03
252229670	Racine	VOC	5.819	1.59E-02
252236380	Racine	VOC	9.773	2.68E-02
252236490	Racine	VOC	1.612	4.42E-03
252237260	Racine	VOC	0.272	7.45E-04
268005100	Waukesha	VOC	0.058	1.59E-04
268005430	Waukesha	VOC	105.537	2.89E-01
268005870	Waukesha	VOC	0.206	5.64E-04
268006310	Waukesha	VOC	4.029	1.10E-02
268006750	Waukesha	VOC	13.022	3.57E-02
268006970	Waukesha	VOC	1.224	3.35E-03
268007080	Waukesha	VOC	2.084	5.71E-03
268007410	Waukesha	VOC	1.381	3.78E-03
268007740	Waukesha	VOC	29.497	8.08E-02
268008400	Waukesha	VOC	61.958	1.70E-01
268008510	Waukesha	VOC	75.299	2.06E-01
268008620	Waukesha	VOC	28.070	7.69E-02
268008730	Waukesha	VOC	0.332	9.11E-04
268009500	Waukesha	VOC	5.455	1.49E-02
268010710	Waukesha	VOC	13.141	3.60E-02
268011150	Waukesha	VOC	14.462	3.96E-02
268012030	Waukesha	VOC	38.663	1.06E-01
268012250	Waukesha	VOC	12.951	3.55E-02
268012360	Waukesha	VOC	37.170	1.02E-01
268012580	Waukesha	VOC	6.487	1.78E-02
268012800	Waukesha	VOC	8.302	2.27E-02
268012910	Waukesha	VOC	0.068	1.86E-04

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268014560	Waukesha	VOC	6.098	1.67E-02
268014670	Waukesha	VOC	21.552	5.90E-02
268014780	Waukesha	VOC	3.006	8.24E-03
268015330	Waukesha	VOC	2.778	7.61E-03
268016100	Waukesha	VOC	59.419	1.63E-01
268016210	Waukesha	VOC	31.096	8.52E-02
268017200	Waukesha	VOC	12.709	3.48E-02
268017640	Waukesha	VOC	9.755	2.67E-02
268023580	Waukesha	VOC	0.118	3.23E-04
268028200	Waukesha	VOC	0.064	1.76E-04
268028420	Waukesha	VOC	1.166	3.19E-03
268082650	Waukesha	VOC	25.973	7.12E-02
268088920	Waukesha	VOC	24.936	6.83E-02
268089140	Waukesha	VOC	0.052	1.42E-04
268107620	Waukesha	VOC	5.377	1.47E-02
268142270	Waukesha	VOC	8.096	2.22E-02
268144250	Waukesha	VOC	0.036	9.94E-05
268148210	Waukesha	VOC	0.829	2.27E-03
268152500	Waukesha	VOC	0.714	1.96E-03
268152610	Waukesha	VOC	0.502	1.38E-03
268154260	Waukesha	VOC	1.993	5.46E-03
268154370	Waukesha	VOC	0.072	1.96E-04
268155250	Waukesha	VOC	27.705	7.59E-02
268157890	Waukesha	VOC	0.105	2.88E-04
268158110	Waukesha	VOC	4.702	1.29E-02
268158660	Waukesha	VOC	12.934	3.54E-02
268161410	Waukesha	VOC	6.229	1.71E-02
268164160	Waukesha	VOC	4.826	1.32E-02
268165150	Waukesha	VOC	21.328	5.84E-02
268165370	Waukesha	VOC	2.305	6.31E-03
268168560	Waukesha	VOC	0.025	6.98E-05
268170320	Waukesha	VOC	2.186	5.99E-03
268170760	Waukesha	VOC	5.744	1.57E-02
268171310	Waukesha	VOC	7.446	2.04E-02
268173290	Waukesha	VOC	9.848	2.70E-02
268175270	Waukesha	VOC	9.022	2.47E-02
268175490	Waukesha	VOC	4.182	1.15E-02
268180660	Waukesha	VOC	2.980	8.16E-03
268183080	Waukesha	VOC	138.431	3.79E-01
268185610	Waukesha	VOC	0.055	1.49E-04
268186160	Waukesha	VOC	25.239	6.91E-02
268198370	Waukesha	VOC	9.430	2.58E-02
268203430	Waukesha	VOC	10.315	2.83E-02
268204090	Waukesha	VOC	2.352	6.45E-03
268213880	Waukesha	VOC	1.953	5.35E-03
268218170	Waukesha	VOC	4.752	1.30E-02
268219490	Waukesha	VOC	23.840	6.53E-02

FID	COUNTY	POLLUTANT	2005(TONS)	2005(TPWD)
268221360	Waukesha	VOC	22.705	6.22E-02
268221910	Waukesha	VOC	3.400	9.32E-03
268227850	Waukesha	VOC	8.171	2.24E-02
268228070	Waukesha	VOC	12.370	3.39E-02
268238190	Waukesha	VOC	2.811	7.70E-03
268239290	Waukesha	VOC	42.975	1.18E-01
268244130	Waukesha	VOC	7.774	2.13E-02
268255790	Waukesha	VOC	0.110	3.01E-04
268257220	Waukesha	VOC	6.590	1.81E-02
268257990	Waukesha	VOC	6.587	1.80E-02
268262060	Waukesha	VOC	2.888	7.91E-03
268266020	Waukesha	VOC	1.656	4.54E-03
268270420	Waukesha	VOC	4.826	1.32E-02
268270750	Waukesha	VOC	19.261	5.28E-02
268284280	Waukesha	VOC	1.502	4.11E-03
268289450	Waukesha	VOC	0.025	6.79E-05
268290440	Waukesha	VOC	4.101	1.12E-02
268290550	Waukesha	VOC	5.843	1.60E-02
268298250	Waukesha	VOC	10.457	2.86E-02
268306280	Waukesha	VOC	20.846	5.71E-02
268312770	Waukesha	VOC	6.900	1.89E-02
268337080	Waukesha	VOC	1.674	4.59E-03
268342470	Waukesha	VOC	10.403	2.85E-02
268376900	Waukesha	VOC	0.091	2.48E-04
268382620	Waukesha	VOC	8.772	2.40E-02
268393620	Waukesha	VOC	3.076	8.43E-03
268404730	Waukesha	VOC	11.187	3.06E-02
268414850	Waukesha	VOC	10.611	2.91E-02
268423870	Waukesha	VOC	18.193	4.98E-02
268457970	Waukesha	VOC	7.638	2.09E-02
268463800	Waukesha	VOC	0.171	4.68E-04
268504390	Waukesha	VOC	5.476	1.50E-02
268523970	Waukesha	VOC	0.417	1.14E-03
268525070	Waukesha	VOC	3.276	8.97E-03
268529360	Waukesha	VOC	3.335	9.14E-03
268534310	Waukesha	VOC	6.135	1.68E-02
268544540	Waukesha	VOC	0.775	2.12E-03
268574020	Waukesha	VOC	1.312	3.59E-03
268576770	Waukesha	VOC	0.500	1.37E-03
368011050	Waukesha	VOC	11.713	3.21E-02

2008 Point Source Emissions

FID	COUNTY	POLLUTANT	2008(TONS)	2008(TPWD)
241005600	Milwaukee	NOx	3.611	9.89E-03
241005710	Milwaukee	NOx	22.057	6.04E-02
241006260	Milwaukee	NOx	21.050	5.77E-02
241006370	Milwaukee	NOx	2.455	6.73E-03
241006810	Milwaukee	NOx	3.463	9.49E-03
241006920	Milwaukee	NOx	98.535	2.70E-01
241007030	Milwaukee	NOx	44.694	1.22E-01
241007690	Milwaukee	NOx	4,979.441	1.36E+01
241007800	Milwaukee	NOx	3,106.287	8.51E+00
241008130	Milwaukee	NOx	9.910	2.72E-02
241008240	Milwaukee	NOx	36.588	1.00E-01
241008680	Milwaukee	NOx	19.522	5.35E-02
241009670	Milwaukee	NOx	22.940	6.28E-02
241010770	Milwaukee	NOx	9.439	2.59E-02
241010990	Milwaukee	NOx	1.845	5.05E-03
241011100	Milwaukee	NOx	50.637	1.39E-01
241011760	Milwaukee	NOx	13.968	3.83E-02
241011870	Milwaukee	NOx	20.557	5.63E-02
241012200	Milwaukee	NOx	6.374	1.75E-02
241012310	Milwaukee	NOx	10.607	2.91E-02
241013080	Milwaukee	NOx	3.615	9.90E-03
241014180	Milwaukee	NOx	1.991	5.45E-03
241014620	Milwaukee	NOx	15.818	4.33E-02
241015390	Milwaukee	NOx	6.231	1.71E-02
241016710	Milwaukee	NOx	1.033	2.83E-03
241017040	Milwaukee	NOx	0.000	3.22E-07
241017370	Milwaukee	NOx	0.600	1.64E-03
241017590	Milwaukee	NOx	0.416	1.14E-03
241017920	Milwaukee	NOx	0.825	2.26E-03
241019350	Milwaukee	NOx	2.550	6.99E-03
241019900	Milwaukee	NOx	38.533	1.06E-01
241020780	Milwaukee	NOx	1.663	4.56E-03
241021220	Milwaukee	NOx	2.969	8.13E-03
241021880	Milwaukee	NOx	1.905	5.22E-03
241023640	Milwaukee	NOx	41.364	1.13E-01
241024190	Milwaukee	NOx	7.865	2.15E-02
241024300	Milwaukee	NOx	11.038	3.02E-02
241025070	Milwaukee	NOx	2.289	6.27E-03
241025290	Milwaukee	NOx	2.762	7.57E-03
241025510	Milwaukee	NOx	2.567	7.03E-03
241026060	Milwaukee	NOx	0.623	1.71E-03
241026500	Milwaukee	NOx	0.852	2.33E-03
241027050	Milwaukee	NOx	393.748	1.08E+00
241027160	Milwaukee	NOx	9.175	2.51E-02
241027380	Milwaukee	NOx	2.446	6.70E-03
241027930	Milwaukee	NOx	9.064	2.48E-02

FID	COUNTY	POLLUTANT	2008(TONS)	2008(TPWD)
241028810	Milwaukee	NOx	11.631	3.19E-02
241029030	Milwaukee	NOx	6.984	1.91E-02
241029140	Milwaukee	NOx	3.835	1.05E-02
241029250	Milwaukee	NOx	141.567	3.88E-01
241029470	Milwaukee	NOx	0.183	5.01E-04
241029800	Milwaukee	NOx	1.626	4.45E-03
241031120	Milwaukee	NOx	14.954	4.10E-02
241031450	Milwaukee	NOx	1.278	3.50E-03
241032770	Milwaukee	NOx	5.307	1.45E-02
241033210	Milwaukee	NOx	8.737	2.39E-02
241033430	Milwaukee	NOx	1.492	4.09E-03
241033650	Milwaukee	NOx	0.866	2.37E-03
241034200	Milwaukee	NOx	0.256	7.01E-04
241036840	Milwaukee	NOx	0.208	5.68E-04
241036950	Milwaukee	NOx	2.034	5.57E-03
241038820	Milwaukee	NOx	4.236	1.16E-02
241040690	Milwaukee	NOx	1.088	2.98E-03
241041900	Milwaukee	NOx	1.626	4.46E-03
241042670	Milwaukee	NOx	1.236	3.39E-03
241045420	Milwaukee	NOx	2.338	6.40E-03
241045750	Milwaukee	NOx	13.471	3.69E-02
241047730	Milwaukee	NOx	2.061	5.65E-03
241052680	Milwaukee	NOx	4.718	1.29E-02
241053010	Milwaukee	NOx	0.222	6.07E-04
241053450	Milwaukee	NOx	2.726	7.47E-03
241054330	Milwaukee	NOx	0.249	6.83E-04
241055870	Milwaukee	NOx	4.051	1.11E-02
241063570	Milwaukee	NOx	2.739	7.50E-03
241094370	Milwaukee	NOx	0.589	1.61E-03
241094700	Milwaukee	NOx	1.256	3.44E-03
241095910	Milwaukee	NOx	3.724	1.02E-02
241116700	Milwaukee	NOx	1.898	5.20E-03
241164770	Milwaukee	NOx	0.738	2.02E-03
241167630	Milwaukee	NOx	0.560	1.53E-03
241168070	Milwaukee	NOx	1.674	4.59E-03
241168180	Milwaukee	NOx	8.105	2.22E-02
241168510	Milwaukee	NOx	2.856	7.82E-03
241168620	Milwaukee	NOx	97.030	2.66E-01
241189520	Milwaukee	NOx	0.882	2.42E-03
241202170	Milwaukee	NOx	1.286	3.52E-03
241213720	Milwaukee	NOx	1.002	2.74E-03
241222410	Milwaukee	NOx	0.790	2.16E-03
241222850	Milwaukee	NOx	0.188	5.16E-04
241225710	Milwaukee	NOx	0.008	2.19E-05
241227910	Milwaukee	NOx	0.078	2.13E-04
241228350	Milwaukee	NOx	335.036	9.18E-01
241231760	Milwaukee	NOx	0.307	8.41E-04

FID	COUNTY	POLLUTANT	2008(TONS)	2008(TPWD)
241235940	Milwaukee	NOx	0.465	1.27E-03
241245180	Milwaukee	NOx	0.645	1.77E-03
241251670	Milwaukee	NOx	1.001	2.74E-03
241254310	Milwaukee	NOx	2.367	6.48E-03
241256730	Milwaukee	NOx	0.745	2.04E-03
241266740	Milwaukee	NOx	1.499	4.11E-03
241276750	Milwaukee	NOx	0.642	1.76E-03
241305790	Milwaukee	NOx	0.205	5.61E-04
241308870	Milwaukee	NOx	0.175	4.79E-04
241316020	Milwaukee	NOx	0.219	5.99E-04
241321960	Milwaukee	NOx	0.001	1.84E-06
241334060	Milwaukee	NOx	1.339	3.67E-03
241355400	Milwaukee	NOx	5.164	1.41E-02
241362660	Milwaukee	NOx	0.838	2.29E-03
241370140	Milwaukee	NOx	0.772	2.12E-03
241371350	Milwaukee	NOx	1.167	3.20E-03
241372120	Milwaukee	NOx	0.490	1.34E-03
241413810	Milwaukee	NOx	0.433	1.19E-03
241442630	Milwaukee	NOx	0.478	1.31E-03
241450440	Milwaukee	NOx	6.153	1.69E-02
241454290	Milwaukee	NOx	0.868	2.38E-03
241455500	Milwaukee	NOx	1.378	3.78E-03
241480910	Milwaukee	NOx	0.572	1.57E-03
241514570	Milwaukee	NOx	0.473	1.30E-03
241672090	Milwaukee	NOx	1.565	4.29E-03
241709930	Milwaukee	NOx	0.200	5.49E-04
241723240	Milwaukee	NOx	7.037	1.93E-02
241757340	Milwaukee	NOx	3.139	8.60E-03
241789350	Milwaukee	NOx	0.753	2.06E-03
241832360	Milwaukee	NOx	2.371	6.50E-03
241879550	Milwaukee	NOx	1.537	4.21E-03
241961610	Milwaukee	NOx	6.401	1.75E-02
241964580	Milwaukee	NOx	0.982	2.69E-03
341003300	Waukesha	NOx	0.152	4.18E-04
341005280	Waukesha	NOx	0.815	2.23E-03
341024310	Waukesha	NOx	1.046	2.87E-03
341024420	Waukesha	NOx	4.954	1.36E-02
341076780	Waukesha	NOx	0.238	6.51E-04
341092510	Waukesha	NOx	4.862	1.33E-02
252004280	Racine	NOx	5.013	1.37E-02
252004940	Racine	NOx	2.907	7.96E-03
252005380	Racine	NOx	19.276	5.28E-02
252005820	Racine	NOx	6.131	1.68E-02
252005930	Racine	NOx	205.316	5.63E-01
252006370	Racine	NOx	43.215	1.18E-01
252007030	Racine	NOx	0.614	1.68E-03
252007140	Racine	NOx	4.993	1.37E-02

FID	COUNTY	POLLUTANT	2008(TONS)	2008(TPWD)
252007690	Racine	NOx	4.299	1.18E-02
252008460	Racine	NOx	3.265	8.94E-03
252009780	Racine	NOx	1.050	2.88E-03
252011870	Racine	NOx	10.562	2.89E-02
252012090	Racine	NOx	7.626	2.09E-02
252013190	Racine	NOx	0.044	1.21E-04
252013630	Racine	NOx	1.803	4.94E-03
252019900	Racine	NOx	8.034	2.20E-02
252041130	Racine	NOx	2.748	7.53E-03
252075340	Racine	NOx	0.768	2.10E-03
252076990	Racine	NOx	2.794	7.65E-03
252077760	Racine	NOx	0.320	8.75E-04
252078200	Racine	NOx	0.191	5.22E-04
252080070	Racine	NOx	0.441	1.21E-03
252086120	Racine	NOx	0.542	1.48E-03
252091070	Racine	NOx	0.519	1.42E-03
252103940	Racine	NOx	8.381	2.30E-02
252126380	Racine	NOx	0.272	7.45E-04
252135950	Racine	NOx	1.509	4.13E-03
252194140	Racine	NOx	10.215	2.80E-02
252229670	Racine	NOx	0.171	4.67E-04
252236380	Racine	NOx	4.211	1.15E-02
252237260	Racine	NOx	2.551	6.99E-03
241472770	Milwaukee	NOx	6.885	1.89E-02
268005100	Waukesha	NOx	1.380	3.78E-03
268005430	Waukesha	NOx	4.644	1.27E-02
268006310	Waukesha	NOx	0.018	4.97E-05
268006750	Waukesha	NOx	85.826	2.35E-01
268006970	Waukesha	NOx	13.415	3.68E-02
268007080	Waukesha	NOx	3.505	9.60E-03
268008400	Waukesha	NOx	9.850	2.70E-02
268008510	Waukesha	NOx	1.565	4.29E-03
268008620	Waukesha	NOx	0.440	1.21E-03
268008730	Waukesha	NOx	4.282	1.17E-02
268009500	Waukesha	NOx	1.600	4.38E-03
268010710	Waukesha	NOx	2.019	5.53E-03
268012030	Waukesha	NOx	4.295	1.18E-02
268012250	Waukesha	NOx	2.354	6.45E-03
268012360	Waukesha	NOx	1.964	5.38E-03
268012580	Waukesha	NOx	0.159	4.34E-04
268012800	Waukesha	NOx	0.847	2.32E-03
268012910	Waukesha	NOx	6.009	1.65E-02
268014560	Waukesha	NOx	0.169	4.64E-04
268014670	Waukesha	NOx	24.961	6.84E-02
268014780	Waukesha	NOx	0.145	3.97E-04
268015330	Waukesha	NOx	2.693	7.38E-03
268016100	Waukesha	NOx	2.478	6.79E-03

FID	COUNTY	POLLUTANT	2008(TONS)	2008(TPWD)
268016210	Waukesha	NOx	0.775	2.12E-03
268017200	Waukesha	NOx	0.773	2.12E-03
268028200	Waukesha	NOx	3.330	9.12E-03
268028420	Waukesha	NOx	3.577	9.80E-03
268088700	Waukesha	NOx	3.546	9.72E-03
268088920	Waukesha	NOx	1.974	5.41E-03
268089140	Waukesha	NOx	4.075	1.12E-02
268090240	Waukesha	NOx	0.782	2.14E-03
268107620	Waukesha	NOx	0.603	1.65E-03
268142270	Waukesha	NOx	0.915	2.51E-03
268144250	Waukesha	NOx	1.738	4.76E-03
268152500	Waukesha	NOx	0.522	1.43E-03
268152610	Waukesha	NOx	0.453	1.24E-03
268154260	Waukesha	NOx	0.123	3.38E-04
268154370	Waukesha	NOx	2.392	6.55E-03
268157890	Waukesha	NOx	3.461	9.48E-03
268159210	Waukesha	NOx	2.278	6.24E-03
268162730	Waukesha	NOx	0.584	1.60E-03
268164160	Waukesha	NOx	0.080	2.19E-04
268165370	Waukesha	NOx	0.191	5.23E-04
268168560	Waukesha	NOx	3.414	9.35E-03
268170320	Waukesha	NOx	0.001	3.10E-06
268171310	Waukesha	NOx	2.152	5.90E-03
268173290	Waukesha	NOx	0.004	1.03E-05
268175270	Waukesha	NOx	0.687	1.88E-03
268180660	Waukesha	NOx	0.079	2.16E-04
268183080	Waukesha	NOx	10.018	2.74E-02
268183190	Waukesha	NOx	0.682	1.87E-03
268185610	Waukesha	NOx	5.003	1.37E-02
268186160	Waukesha	NOx	0.016	4.49E-05
268198370	Waukesha	NOx	1.643	4.50E-03
268203430	Waukesha	NOx	0.465	1.27E-03
268204090	Waukesha	NOx	0.794	2.18E-03
268213880	Waukesha	NOx	0.047	1.29E-04
268218170	Waukesha	NOx	0.497	1.36E-03
268219490	Waukesha	NOx	0.539	1.48E-03
268221360	Waukesha	NOx	4.690	1.28E-02
268221910	Waukesha	NOx	0.367	1.01E-03
268227850	Waukesha	NOx	0.401	1.10E-03
268228070	Waukesha	NOx	0.900	2.47E-03
268239290	Waukesha	NOx	0.156	4.28E-04
268244130	Waukesha	NOx	17.596	4.82E-02
268257220	Waukesha	NOx	5.804	1.59E-02
268266020	Waukesha	NOx	0.077	2.10E-04
268270420	Waukesha	NOx	0.114	3.13E-04
268270750	Waukesha	NOx	0.165	4.51E-04
268297590	Waukesha	NOx	0.092	2.52E-04

FID	COUNTY	POLLUTANT	2008(TONS)	2008(TPWD)
268353800	Waukesha	NOx	17.648	4.84E-02
268404730	Waukesha	NOx	1.113	3.05E-03
268414850	Waukesha	NOx	0.233	6.38E-04
268423870	Waukesha	NOx	1.936	5.30E-03
268457970	Waukesha	NOx	65.274	1.79E-01
268463800	Waukesha	NOx	1.567	4.29E-03
268504390	Waukesha	NOx	0.163	4.47E-04
268523970	Waukesha	NOx	4.230	1.16E-02
268565440	Waukesha	NOx	3.529	9.67E-03
268572040	Waukesha	NOx	0.209	5.73E-04
268574020	Waukesha	NOx	0.450	1.23E-03
268594920	Waukesha	NOx	0.016	4.28E-05
268600750	Waukesha	NOx	0.412	1.13E-03
268601630	Waukesha	NOx	0.052	1.42E-04
368011050	Waukesha	NOx	0.000	2.69E-08
241005600	Milwaukee	PM25	0.013	3.46E-05
241005710	Milwaukee	PM25	3.739	1.02E-02
241006260	Milwaukee	PM25	6.450	1.77E-02
241006370	Milwaukee	PM25	0.316	8.66E-04
241006810	Milwaukee	PM25	0.064	1.76E-04
241006920	Milwaukee	PM25	0.286	7.84E-04
241007030	Milwaukee	PM25	0.355	9.72E-04
241007690	Milwaukee	PM25	13.234	3.63E-02
241007800	Milwaukee	PM25	6.942	1.90E-02
241008130	Milwaukee	PM25	0.075	2.05E-04
241008240	Milwaukee	PM25	0.127	3.47E-04
241008350	Milwaukee	PM25	0.444	1.22E-03
241008680	Milwaukee	PM25	3.111	8.52E-03
241009670	Milwaukee	PM25	0.812	2.22E-03
241010770	Milwaukee	PM25	0.379	1.04E-03
241010990	Milwaukee	PM25	0.003	7.86E-06
241011100	Milwaukee	PM25	0.920	2.52E-03
241011760	Milwaukee	PM25	0.164	4.50E-04
241011870	Milwaukee	PM25	0.925	2.53E-03
241012200	Milwaukee	PM25	0.075	2.06E-04
241012310	Milwaukee	PM25	1.641	4.50E-03
241013080	Milwaukee	PM25	0.049	1.34E-04
241014180	Milwaukee	PM25	0.015	4.14E-05
241014620	Milwaukee	PM25	0.134	3.68E-04
241015390	Milwaukee	PM25	0.837	2.29E-03
241016710	Milwaukee	PM25	0.008	2.08E-05
241017040	Milwaukee	PM25	0.000	2.45E-09
241017370	Milwaukee	PM25	0.002	5.03E-06
241017590	Milwaukee	PM25	0.004	1.14E-05
241017920	Milwaukee	PM25	0.007	1.97E-05
241019350	Milwaukee	PM25	0.300	8.21E-04
241019900	Milwaukee	PM25	0.219	6.01E-04

FID	COUNTY	POLLUTANT	2008(TONS)	2008(TPWD)
241020780	Milwaukee	PM25	0.004	1.22E-05
241021220	Milwaukee	PM25	0.533	1.46E-03
241021880	Milwaukee	PM25	0.260	7.11E-04
241023640	Milwaukee	PM25	0.288	7.89E-04
241024190	Milwaukee	PM25	0.059	1.63E-04
241024300	Milwaukee	PM25	0.113	3.09E-04
241025070	Milwaukee	PM25	0.017	4.79E-05
241025290	Milwaukee	PM25	0.018	5.01E-05
241025510	Milwaukee	PM25	0.354	9.69E-04
241026060	Milwaukee	PM25	0.002	5.12E-06
241026500	Milwaukee	PM25	0.002	5.12E-06
241027050	Milwaukee	PM25	0.884	2.42E-03
241027160	Milwaukee	PM25	2.798	7.67E-03
241027380	Milwaukee	PM25	0.019	5.09E-05
241027930	Milwaukee	PM25	0.018	4.84E-05
241028810	Milwaukee	PM25	0.161	4.42E-04
241029030	Milwaukee	PM25	0.015	4.12E-05
241029140	Milwaukee	PM25	0.029	7.99E-05
241029250	Milwaukee	PM25	2.389	6.55E-03
241029470	Milwaukee	PM25	0.076	2.09E-04
241029800	Milwaukee	PM25	2.997	8.21E-03
241030240	Milwaukee	PM25	0.000	6.61E-07
241031120	Milwaukee	PM25	0.111	3.03E-04
241031450	Milwaukee	PM25	0.024	6.51E-05
241032770	Milwaukee	PM25	0.235	6.43E-04
241033210	Milwaukee	PM25	0.064	1.75E-04
241033430	Milwaukee	PM25	0.011	3.11E-05
241033650	Milwaukee	PM25	0.068	1.85E-04
241034200	Milwaukee	PM25	0.002	6.48E-06
241036840	Milwaukee	PM25	0.010	2.87E-05
241036950	Milwaukee	PM25	0.120	3.28E-04
241037280	Milwaukee	PM25	0.000	1.60E-07
241038820	Milwaukee	PM25	0.029	7.82E-05
241040690	Milwaukee	PM25	0.015	4.08E-05
241041240	Milwaukee	PM25	0.003	6.93E-06
241041900	Milwaukee	PM25	0.012	3.39E-05
241045420	Milwaukee	PM25	0.018	4.87E-05
241045750	Milwaukee	PM25	0.040	1.09E-04
241047730	Milwaukee	PM25	0.004	1.02E-05
241052680	Milwaukee	PM25	0.036	9.86E-05
241053010	Milwaukee	PM25	0.092	2.51E-04
241053450	Milwaukee	PM25	0.021	5.68E-05
241054330	Milwaukee	PM25	0.000	1.37E-09
241055870	Milwaukee	PM25	0.031	8.44E-05
241063570	Milwaukee	PM25	0.292	7.99E-04
241091400	Milwaukee	PM25	0.076	2.08E-04
241094370	Milwaukee	PM25	0.003	8.76E-06

FID	COUNTY	POLLUTANT	2008(TONS)	2008(TPWD)
241094700	Milwaukee	PM25	0.000	1.09E-06
241095910	Milwaukee	PM25	0.113	3.08E-04
241116700	Milwaukee	PM25	0.006	1.56E-05
241164770	Milwaukee	PM25	0.000	2.18E-07
241165210	Milwaukee	PM25	0.128	3.51E-04
241167630	Milwaukee	PM25	0.004	1.17E-05
241168070	Milwaukee	PM25	0.000	2.28E-07
241168180	Milwaukee	PM25	0.062	1.69E-04
241168510	Milwaukee	PM25	0.132	3.62E-04
241168620	Milwaukee	PM25	4.542	1.24E-02
241189520	Milwaukee	PM25	0.048	1.32E-04
241202170	Milwaukee	PM25	0.003	8.03E-06
241213720	Milwaukee	PM25	0.011	3.09E-05
241222410	Milwaukee	PM25	0.000	3.22E-07
241222850	Milwaukee	PM25	0.161	4.41E-04
241225710	Milwaukee	PM25	0.000	1.19E-07
241227910	Milwaukee	PM25	0.001	1.62E-06
241228350	Milwaukee	PM25	0.116	3.18E-04
241231760	Milwaukee	PM25	0.001	2.52E-06
241235940	Milwaukee	PM25	0.004	9.68E-06
241251670	Milwaukee	PM25	0.003	8.23E-06
241254310	Milwaukee	PM25	0.018	4.93E-05
241256730	Milwaukee	PM25	0.009	2.45E-05
241266740	Milwaukee	PM25	0.005	1.41E-05
241288520	Milwaukee	PM25	0.012	3.27E-05
241305790	Milwaukee	PM25	0.002	5.24E-06
241308870	Milwaukee	PM25	0.405	1.11E-03
241316020	Milwaukee	PM25	0.002	4.55E-06
241321960	Milwaukee	PM25	0.254	6.96E-04
241334060	Milwaukee	PM25	0.008	2.22E-05
241335160	Milwaukee	PM25	0.628	1.72E-03
241355400	Milwaukee	PM25	0.348	9.53E-04
241362660	Milwaukee	PM25	0.006	1.74E-05
241370140	Milwaukee	PM25	0.024	6.59E-05
241371350	Milwaukee	PM25	0.009	2.43E-05
241372120	Milwaukee	PM25	0.254	6.96E-04
241413810	Milwaukee	PM25	0.004	1.03E-05
241442630	Milwaukee	PM25	0.021	5.83E-05
241450440	Milwaukee	PM25	0.040	1.11E-04
241454290	Milwaukee	PM25	0.002	4.78E-06
241455500	Milwaukee	PM25	0.028	7.69E-05
241514570	Milwaukee	PM25	0.004	1.11E-05
241672090	Milwaukee	PM25	0.006	1.73E-05
241709930	Milwaukee	PM25	0.001	1.65E-06
241723240	Milwaukee	PM25	0.050	1.36E-04
241757340	Milwaukee	PM25	0.009	2.58E-05
241789350	Milwaukee	PM25	0.009	2.45E-05

FID	COUNTY	POLLUTANT	2008(TONS)	2008(TPWD)
241832360	Milwaukee	PM25	0.021	5.65E-05
241879550	Milwaukee	PM25	0.001	2.67E-06
241961610	Milwaukee	PM25	0.074	2.02E-04
241964580	Milwaukee	PM25	0.086	2.37E-04
341003300	Waukesha	PM25	0.001	3.06E-06
341005280	Waukesha	PM25	0.513	1.41E-03
341024310	Waukesha	PM25	0.084	2.30E-04
341024420	Waukesha	PM25	0.038	1.03E-04
341037290	Waukesha	PM25	0.000	6.85E-09
341076780	Waukesha	PM25	0.002	4.95E-06
341092510	Waukesha	PM25	0.042	1.14E-04
341112860	Waukesha	PM25	0.000	9.59E-10
252004280	Racine	PM25	0.870	2.38E-03
252004940	Racine	PM25	0.232	6.36E-04
252005380	Racine	PM25	1.289	3.53E-03
252005820	Racine	PM25	0.047	1.28E-04
252005930	Racine	PM25	6.550	1.79E-02
252006370	Racine	PM25	0.604	1.65E-03
252007030	Racine	PM25	0.005	1.28E-05
252007140	Racine	PM25	0.036	9.96E-05
252007690	Racine	PM25	0.033	8.95E-05
252008460	Racine	PM25	1.601	4.39E-03
252009780	Racine	PM25	0.004	1.12E-05
252011870	Racine	PM25	0.025	6.90E-05
252012090	Racine	PM25	0.019	5.11E-05
252013190	Racine	PM25	0.001	3.09E-06
252013630	Racine	PM25	0.016	4.38E-05
252019900	Racine	PM25	0.061	1.68E-04
252041130	Racine	PM25	0.598	1.64E-03
252075340	Racine	PM25	0.007	1.83E-05
252076990	Racine	PM25	0.065	1.77E-04
252077760	Racine	PM25	0.003	7.25E-06
252078200	Racine	PM25	0.004	1.18E-05
252080070	Racine	PM25	0.003	9.18E-06
252086120	Racine	PM25	0.004	1.13E-05
252091070	Racine	PM25	0.005	1.24E-05
252103940	Racine	PM25	0.061	1.66E-04
252126380	Racine	PM25	0.001	4.04E-06
252135950	Racine	PM25	0.011	3.14E-05
252147060	Racine	PM25	0.104	2.85E-04
252194140	Racine	PM25	0.074	2.03E-04
252194910	Racine	PM25	0.007	1.80E-05
252195350	Racine	PM25	0.001	1.52E-06
252224830	Racine	PM25	0.876	2.40E-03
252229670	Racine	PM25	0.001	4.07E-06
252236380	Racine	PM25	1.271	3.48E-03
252237260	Racine	PM25	0.012	3.28E-05

FID	COUNTY	POLLUTANT	2008(TONS)	2008(TPWD)
241472770	Milwaukee	PM25	0.106	2.91E-04
268005430	Waukesha	PM25	1.686	4.62E-03
268005650	Waukesha	PM25	0.673	1.84E-03
268006310	Waukesha	PM25	0.145	3.97E-04
268006750	Waukesha	PM25	0.128	3.50E-04
268006970	Waukesha	PM25	1.074	2.94E-03
268007080	Waukesha	PM25	0.125	3.42E-04
268008400	Waukesha	PM25	0.074	2.04E-04
268008510	Waukesha	PM25	0.012	3.26E-05
268008620	Waukesha	PM25	0.003	9.16E-06
268008730	Waukesha	PM25	0.242	6.62E-04
268009500	Waukesha	PM25	0.180	4.94E-04
268010710	Waukesha	PM25	0.015	4.16E-05
268012030	Waukesha	PM25	0.265	7.27E-04
268012250	Waukesha	PM25	0.013	3.68E-05
268012360	Waukesha	PM25	0.006	1.61E-05
268012580	Waukesha	PM25	0.021	5.72E-05
268012800	Waukesha	PM25	0.006	1.76E-05
268012910	Waukesha	PM25	0.668	1.83E-03
268014120	Waukesha	PM25	0.293	8.03E-04
268014560	Waukesha	PM25	0.001	2.89E-06
268014670	Waukesha	PM25	0.096	2.62E-04
268014780	Waukesha	PM25	0.001	3.46E-06
268015330	Waukesha	PM25	0.034	9.29E-05
268016100	Waukesha	PM25	0.012	3.30E-05
268016210	Waukesha	PM25	0.006	1.66E-05
268017200	Waukesha	PM25	0.007	1.82E-05
268028200	Waukesha	PM25	0.413	1.13E-03
268028420	Waukesha	PM25	0.277	7.59E-04
268088700	Waukesha	PM25	0.569	1.56E-03
268088920	Waukesha	PM25	0.625	1.71E-03
268089140	Waukesha	PM25	0.371	1.02E-03
268090240	Waukesha	PM25	0.005	1.51E-05
268107620	Waukesha	PM25	0.005	1.44E-05
268142270	Waukesha	PM25	0.003	7.52E-06
268144250	Waukesha	PM25	0.003	8.38E-06
268152500	Waukesha	PM25	0.022	6.08E-05
268152610	Waukesha	PM25	0.019	5.27E-05
268154260	Waukesha	PM25	0.000	1.01E-06
268154370	Waukesha	PM25	0.350	9.59E-04
268157890	Waukesha	PM25	0.007	1.93E-05
268159210	Waukesha	PM25	0.023	6.28E-05
268162730	Waukesha	PM25	0.004	1.21E-05
268164160	Waukesha	PM25	0.001	1.67E-06
268168560	Waukesha	PM25	0.596	1.63E-03
268170320	Waukesha	PM25	0.000	2.36E-08
268171310	Waukesha	PM25	0.010	2.67E-05

FID	COUNTY	POLLUTANT	2008(TONS)	2008(TPWD)
268173290	Waukesha	PM25	0.000	3.11E-08
268180660	Waukesha	PM25	0.106	2.90E-04
268183080	Waukesha	PM25	0.027	7.28E-05
268183190	Waukesha	PM25	0.002	5.60E-06
268185610	Waukesha	PM25	0.592	1.62E-03
268186160	Waukesha	PM25	0.000	1.35E-07
268198260	Waukesha	PM25	0.061	1.66E-04
268198370	Waukesha	PM25	0.091	2.49E-04
268203430	Waukesha	PM25	0.004	9.69E-06
268204090	Waukesha	PM25	0.003	8.47E-06
268213880	Waukesha	PM25	0.000	3.86E-07
268218170	Waukesha	PM25	0.001	4.08E-06
268219490	Waukesha	PM25	0.211	5.79E-04
268221360	Waukesha	PM25	0.064	1.76E-04
268221910	Waukesha	PM25	0.003	7.67E-06
268227850	Waukesha	PM25	0.003	8.34E-06
268228070	Waukesha	PM25	0.003	8.75E-06
268239290	Waukesha	PM25	0.001	3.25E-06
268257220	Waukesha	PM25	0.051	1.39E-04
268266020	Waukesha	PM25	0.001	1.83E-06
268270420	Waukesha	PM25	0.000	9.40E-07
268270750	Waukesha	PM25	0.000	1.24E-06
268297590	Waukesha	PM25	0.004	1.03E-05
268299130	Waukesha	PM25	0.171	4.69E-04
268353800	Waukesha	PM25	0.907	2.48E-03
268404730	Waukesha	PM25	0.007	1.87E-05
268414850	Waukesha	PM25	0.001	1.91E-06
268423870	Waukesha	PM25	0.014	3.88E-05
268457970	Waukesha	PM25	0.067	1.82E-04
268463800	Waukesha	PM25	0.540	1.48E-03
268504390	Waukesha	PM25	0.001	3.89E-06
268523970	Waukesha	PM25	0.055	1.51E-04
268560380	Waukesha	PM25	0.098	2.68E-04
268565440	Waukesha	PM25	0.015	4.03E-05
268572040	Waukesha	PM25	0.002	5.00E-06
268574020	Waukesha	PM25	0.001	3.69E-06
268594920	Waukesha	PM25	0.000	5.14E-07
268600750	Waukesha	PM25	0.001	2.30E-06
268601630	Waukesha	PM25	0.000	1.24E-06
241005600	Milwaukee	SO2	0.032	8.71E-05
241005710	Milwaukee	SO2	2.628	7.20E-03
241006260	Milwaukee	SO2	34.622	9.49E-02
241006370	Milwaukee	SO2	4.546	1.25E-02
241006810	Milwaukee	SO2	4.097	1.12E-02
241006920	Milwaukee	SO2	0.366	1.00E-03
241007030	Milwaukee	SO2	0.250	6.84E-04
241007690	Milwaukee	SO2	14,471.271	3.96E+01

FID	COUNTY	POLLUTANT	2008(TONS)	2008(TPWD)
241007800	Milwaukee	SO2	6,886.133	1.89E+01
241008130	Milwaukee	SO2	0.083	2.27E-04
241008240	Milwaukee	SO2	2.455	6.73E-03
241008680	Milwaukee	SO2	0.017	4.64E-05
241009670	Milwaukee	SO2	0.284	7.79E-04
241010770	Milwaukee	SO2	0.042	1.14E-04
241010990	Milwaukee	SO2	0.008	2.17E-05
241011100	Milwaukee	SO2	87.770	2.40E-01
241011760	Milwaukee	SO2	0.151	4.13E-04
241011870	Milwaukee	SO2	0.916	2.51E-03
241012200	Milwaukee	SO2	0.038	1.05E-04
241012310	Milwaukee	SO2	2.660	7.29E-03
241013080	Milwaukee	SO2	0.022	5.95E-05
241014180	Milwaukee	SO2	0.001	3.59E-06
241014620	Milwaukee	SO2	0.104	2.86E-04
241015390	Milwaukee	SO2	0.213	5.85E-04
241017370	Milwaukee	SO2	0.004	9.86E-06
241017590	Milwaukee	SO2	0.002	6.83E-06
241017920	Milwaukee	SO2	0.005	1.36E-05
241019350	Milwaukee	SO2	0.066	1.82E-04
241019900	Milwaukee	SO2	7.169	1.96E-02
241020780	Milwaukee	SO2	0.011	2.97E-05
241021220	Milwaukee	SO2	0.013	3.55E-05
241021880	Milwaukee	SO2	0.171	4.69E-04
241023640	Milwaukee	SO2	0.233	6.39E-04
241024190	Milwaukee	SO2	0.099	2.71E-04
241024300	Milwaukee	SO2	0.219	6.00E-04
241025070	Milwaukee	SO2	0.085	2.33E-04
241025290	Milwaukee	SO2	0.002	5.85E-06
241025510	Milwaukee	SO2	0.015	4.22E-05
241026060	Milwaukee	SO2	0.004	1.02E-05
241026500	Milwaukee	SO2	0.005	1.40E-05
241027050	Milwaukee	SO2	607.873	1.67E+00
241027160	Milwaukee	SO2	24.656	6.76E-02
241027930	Milwaukee	SO2	0.042	1.15E-04
241028810	Milwaukee	SO2	0.068	1.86E-04
241029030	Milwaukee	SO2	0.064	1.75E-04
241029140	Milwaukee	SO2	0.023	6.30E-05
241029250	Milwaukee	SO2	0.586	1.61E-03
241029470	Milwaukee	SO2	0.001	2.15E-06
241029800	Milwaukee	SO2	4.830	1.32E-02
241031120	Milwaukee	SO2	0.359	9.85E-04
241031450	Milwaukee	SO2	0.453	1.24E-03
241032770	Milwaukee	SO2	0.047	1.29E-04
241033210	Milwaukee	SO2	0.059	1.61E-04
241033430	Milwaukee	SO2	0.009	2.45E-05
241033650	Milwaukee	SO2	0.005	1.28E-05

FID	COUNTY	POLLUTANT	2008(TONS)	2008(TPWD)
241034200	Milwaukee	SO2	0.012	3.27E-05
241036840	Milwaukee	SO2	0.001	3.41E-06
241036950	Milwaukee	SO2	0.010	2.68E-05
241038820	Milwaukee	SO2	0.010	2.79E-05
241040690	Milwaukee	SO2	0.007	1.79E-05
241041900	Milwaukee	SO2	0.027	7.53E-05
241042670	Milwaukee	SO2	0.007	2.03E-05
241045420	Milwaukee	SO2	0.014	3.84E-05
241045750	Milwaukee	SO2	2.904	7.96E-03
241047730	Milwaukee	SO2	0.151	4.14E-04
241052680	Milwaukee	SO2	0.017	4.58E-05
241053010	Milwaukee	SO2	0.082	2.24E-04
241053450	Milwaukee	SO2	0.016	4.48E-05
241054330	Milwaukee	SO2	0.001	4.10E-06
241055870	Milwaukee	SO2	0.024	6.66E-05
241063570	Milwaukee	SO2	0.016	4.50E-05
241094370	Milwaukee	SO2	0.003	6.91E-06
241094700	Milwaukee	SO2	0.008	2.06E-05
241095910	Milwaukee	SO2	0.030	8.23E-05
241116700	Milwaukee	SO2	0.011	3.12E-05
241164770	Milwaukee	SO2	0.000	7.26E-08
241167630	Milwaukee	SO2	0.000	1.23E-07
241168180	Milwaukee	SO2	0.060	1.65E-04
241168510	Milwaukee	SO2	0.020	5.61E-05
241168620	Milwaukee	SO2	6.220	1.70E-02
241189520	Milwaukee	SO2	0.004	1.04E-05
241202170	Milwaukee	SO2	0.008	2.11E-05
241213720	Milwaukee	SO2	0.006	1.65E-05
241222410	Milwaukee	SO2	0.171	4.70E-04
241222850	Milwaukee	SO2	0.001	3.10E-06
241225710	Milwaukee	SO2	0.000	9.45E-08
241227910	Milwaukee	SO2	0.000	1.28E-06
241228350	Milwaukee	SO2	1.516	4.15E-03
241231760	Milwaukee	SO2	0.002	5.05E-06
241235940	Milwaukee	SO2	0.003	7.64E-06
241245180	Milwaukee	SO2	0.004	1.06E-05
241251670	Milwaukee	SO2	0.006	1.65E-05
241256730	Milwaukee	SO2	0.004	1.22E-05
241266740	Milwaukee	SO2	1.034	2.83E-03
241276750	Milwaukee	SO2	0.004	1.05E-05
241305790	Milwaukee	SO2	0.001	3.37E-06
241308870	Milwaukee	SO2	0.001	2.88E-06
241316020	Milwaukee	SO2	0.001	3.59E-06
241321960	Milwaukee	SO2	0.004	1.10E-05
241334060	Milwaukee	SO2	0.008	2.20E-05
241355400	Milwaukee	SO2	5.986	1.64E-02
241362660	Milwaukee	SO2	0.005	1.38E-05

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241370140	Milwaukee	SO2	0.004	9.89E-06
241371350	Milwaukee	SO2	0.000	9.12E-07
241372120	Milwaukee	SO2	3.532	9.68E-03
241413810	Milwaukee	SO2	0.003	7.11E-06
241442630	Milwaukee	SO2	0.010	2.81E-05
241450440	Milwaukee	SO2	0.049	1.35E-04
241454290	Milwaukee	SO2	0.005	1.43E-05
241455500	Milwaukee	SO2	0.008	2.27E-05
241480910	Milwaukee	SO2	0.003	9.40E-06
241514570	Milwaukee	SO2	0.002	5.56E-06
241672090	Milwaukee	SO2	0.004	1.21E-05
241709930	Milwaukee	SO2	0.001	3.29E-06
241723240	Milwaukee	SO2	0.042	1.16E-04
241757340	Milwaukee	SO2	0.019	5.16E-05
241789350	Milwaukee	SO2	0.006	1.60E-05
241832360	Milwaukee	SO2	0.014	3.90E-05
241879550	Milwaukee	SO2	0.009	2.53E-05
241961610	Milwaukee	SO2	0.038	1.05E-04
241964580	Milwaukee	SO2	0.005	1.47E-05
341003300	Waukesha	SO2	0.001	2.53E-06
341005280	Waukesha	SO2	0.005	1.34E-05
341024310	Waukesha	SO2	0.006	1.72E-05
341024420	Waukesha	SO2	0.030	8.14E-05
341076780	Waukesha	SO2	0.001	3.90E-06
341092510	Waukesha	SO2	0.301	8.24E-04
252004280	Milwaukee	SO2	0.471	1.29E-03
252004940	Milwaukee	SO2	0.659	1.81E-03
252005380	Milwaukee	SO2	8.902	2.44E-02
252005820	Milwaukee	SO2	0.191	5.23E-04
252005930	Racine	SO2	187.468	5.14E-01
252006370	Racine	SO2	0.624	1.71E-03
252007140	Racine	SO2	0.192	5.27E-04
252007690	Racine	SO2	0.026	7.07E-05
252008460	Racine	SO2	0.033	8.93E-05
252009780	Racine	SO2	0.006	1.73E-05
252011870	Racine	SO2	0.042	1.15E-04
252012090	Racine	SO2	0.186	5.11E-04
252013190	Racine	SO2	0.015	4.16E-05
252013630	Racine	SO2	0.011	2.96E-05
252019900	Racine	SO2	0.055	1.50E-04
252041130	Racine	SO2	0.222	6.08E-04
252075340	Racine	SO2	0.005	1.26E-05
252076990	Racine	SO2	0.648	1.77E-03
252077760	Racine	SO2	0.002	5.25E-06
252078200	Racine	SO2	0.001	3.13E-06
252080070	Racine	SO2	0.003	7.25E-06
252086120	Racine	SO2	0.003	8.91E-06

FID	COUNTY	POLLUTANT	2008(TONS)	2008(TPWD)
252091070	Racine	SO2	0.003	8.53E-06
252103940	Racine	SO2	0.032	8.84E-05
252126380	Racine	SO2	0.001	3.19E-06
252135950	Racine	SO2	0.009	2.48E-05
252194140	Racine	SO2	0.608	1.67E-03
252229670	Racine	SO2	0.001	2.80E-06
252236380	Racine	SO2	0.133	3.65E-04
252237260	Racine	SO2	0.015	4.19E-05
241472770	Milwaukee	SO2	0.001	3.23E-06
268005100	Waukesha	SO2	0.008	2.27E-05
268005430	Waukesha	SO2	0.673	1.85E-03
268006310	Waukesha	SO2	0.031	8.51E-05
268006750	Waukesha	SO2	0.369	1.01E-03
268006970	Waukesha	SO2	1.123	3.08E-03
268007080	Waukesha	SO2	1.195	3.28E-03
268008400	Waukesha	SO2	0.059	1.62E-04
268008510	Waukesha	SO2	0.009	2.57E-05
268008620	Waukesha	SO2	0.003	7.23E-06
268008730	Waukesha	SO2	0.259	7.11E-04
268009500	Waukesha	SO2	0.094	2.58E-04
268010710	Waukesha	SO2	0.012	3.29E-05
268012030	Waukesha	SO2	0.012	3.23E-05
268012250	Waukesha	SO2	0.014	3.87E-05
268012360	Waukesha	SO2	0.012	3.23E-05
268012580	Waukesha	SO2	0.001	2.61E-06
268012800	Waukesha	SO2	0.005	1.39E-05
268012910	Waukesha	SO2	4.814	1.32E-02
268014560	Waukesha	SO2	0.001	2.78E-06
268014670	Waukesha	SO2	0.795	2.18E-03
268014780	Waukesha	SO2	0.001	2.38E-06
268015330	Waukesha	SO2	0.016	4.43E-05
268016100	Waukesha	SO2	0.005	1.47E-05
268016210	Waukesha	SO2	0.005	1.27E-05
268017200	Waukesha	SO2	0.008	2.25E-05
268028200	Waukesha	SO2	1.991	5.45E-03
268028420	Waukesha	SO2	12.066	3.31E-02
268088700	Waukesha	SO2	0.417	1.14E-03
268088920	Waukesha	SO2	2.775	7.60E-03
268089140	Waukesha	SO2	0.232	6.36E-04
268090240	Waukesha	SO2	0.134	3.66E-04
268107620	Waukesha	SO2	0.004	9.91E-06
268142270	Waukesha	SO2	0.005	1.50E-05
268144250	Waukesha	SO2	0.008	2.21E-05
268152500	Waukesha	SO2	0.283	7.76E-04
268152610	Waukesha	SO2	0.199	5.45E-04
268154260	Waukesha	SO2	0.001	2.03E-06
268154370	Waukesha	SO2	0.014	3.93E-05

FID	COUNTY	POLLUTANT	2008(TONS)	2008(TPWD)
268157890	Waukesha	SO2	0.007	2.03E-05
268159210	Waukesha	SO2	0.014	3.75E-05
268162730	Waukesha	SO2	0.004	9.59E-06
268164160	Waukesha	SO2	0.000	1.32E-06
268165370	Waukesha	SO2	0.001	3.14E-06
268168560	Waukesha	SO2	4.775	1.31E-02
268170320	Waukesha	SO2	0.000	1.92E-08
268171310	Waukesha	SO2	0.042	1.16E-04
268173290	Waukesha	SO2	0.000	6.16E-08
268175270	Waukesha	SO2	0.004	1.13E-05
268180660	Waukesha	SO2	0.000	1.29E-06
268183080	Waukesha	SO2	0.060	1.65E-04
268183190	Waukesha	SO2	0.004	1.12E-05
268185610	Waukesha	SO2	3.667	1.00E-02
268186160	Waukesha	SO2	0.000	2.68E-07
268198370	Waukesha	SO2	0.055	1.49E-04
268203430	Waukesha	SO2	0.003	7.65E-06
268204090	Waukesha	SO2	0.005	1.31E-05
268213880	Waukesha	SO2	0.000	7.73E-07
268218170	Waukesha	SO2	0.003	8.16E-06
268219490	Waukesha	SO2	0.045	1.23E-04
268221360	Waukesha	SO2	0.023	6.40E-05
268221910	Waukesha	SO2	0.002	5.48E-06
268227850	Waukesha	SO2	0.002	6.58E-06
268228070	Waukesha	SO2	0.005	1.48E-05
268239290	Waukesha	SO2	0.001	2.56E-06
268244130	Waukesha	SO2	15.599	4.27E-02
268257220	Waukesha	SO2	4.765	1.31E-02
268266020	Waukesha	SO2	0.000	1.26E-06
268270420	Waukesha	SO2	0.001	1.88E-06
268270750	Waukesha	SO2	0.001	2.93E-06
268297590	Waukesha	SO2	0.001	1.51E-06
268353800	Waukesha	SO2	1.088	2.98E-03
268404730	Waukesha	SO2	0.007	1.83E-05
268414850	Waukesha	SO2	0.001	3.83E-06
268423870	Waukesha	SO2	0.011	3.07E-05
268457970	Waukesha	SO2	0.248	6.79E-04
268463800	Waukesha	SO2	0.103	2.82E-04
268504390	Waukesha	SO2	0.001	2.68E-06
268523970	Waukesha	SO2	0.028	7.71E-05
268565440	Waukesha	SO2	0.021	5.72E-05
268572040	Waukesha	SO2	0.299	8.20E-04
268574020	Waukesha	SO2	0.003	7.39E-06
268594920	Waukesha	SO2	0.000	2.58E-07
268600750	Waukesha	SO2	0.006	1.57E-05
268601630	Waukesha	SO2	0.000	8.53E-07
368011050	Waukesha	SO2	0.000	3.23E-07

FID	COUNTY	POLLUTANT	2008(TONS)	2008(TPWD)
241005490	Milwaukee	VOC	2.149	5.89E-03
241005600	Milwaukee	VOC	1.013	2.78E-03
241005710	Milwaukee	VOC	40.544	1.11E-01
241006260	Milwaukee	VOC	93.410	2.56E-01
241006370	Milwaukee	VOC	4.630	1.27E-02
241006810	Milwaukee	VOC	8.050	2.21E-02
241006920	Milwaukee	VOC	14.374	3.94E-02
241007030	Milwaukee	VOC	109.941	3.01E-01
241007690	Milwaukee	VOC	118.681	3.25E-01
241007800	Milwaukee	VOC	26.798	7.34E-02
241008130	Milwaukee	VOC	9.696	2.66E-02
241008240	Milwaukee	VOC	11.723	3.21E-02
241008680	Milwaukee	VOC	37.774	1.03E-01
241009670	Milwaukee	VOC	4.687	1.28E-02
241010770	Milwaukee	VOC	4.215	1.15E-02
241010990	Milwaukee	VOC	14.115	3.87E-02
241011100	Milwaukee	VOC	1.039	2.85E-03
241011760	Milwaukee	VOC	12.921	3.54E-02
241011870	Milwaukee	VOC	19.005	5.21E-02
241012200	Milwaukee	VOC	4.979	1.36E-02
241012310	Milwaukee	VOC	33.918	9.29E-02
241013080	Milwaukee	VOC	12.452	3.41E-02
241014180	Milwaukee	VOC	5.892	1.61E-02
241014620	Milwaukee	VOC	235.492	6.45E-01
241015280	Milwaukee	VOC	0.421	1.15E-03
241015390	Milwaukee	VOC	22.934	6.28E-02
241016710	Milwaukee	VOC	0.064	1.75E-04
241017040	Milwaukee	VOC	2.274	6.23E-03
241017370	Milwaukee	VOC	1.948	5.34E-03
241017590	Milwaukee	VOC	3.230	8.85E-03
241017700	Milwaukee	VOC	9.909	2.71E-02
241017920	Milwaukee	VOC	14.095	3.86E-02
241019350	Milwaukee	VOC	9.468	2.59E-02
241019460	Milwaukee	VOC	14.017	3.84E-02
241019900	Milwaukee	VOC	2.910	7.97E-03
241020780	Milwaukee	VOC	12.747	3.49E-02
241021220	Milwaukee	VOC	68.856	1.89E-01
241021880	Milwaukee	VOC	7.382	2.02E-02
241023640	Milwaukee	VOC	32.018	8.77E-02
241024190	Milwaukee	VOC	0.504	1.38E-03
241024300	Milwaukee	VOC	1.545	4.23E-03
241025070	Milwaukee	VOC	0.580	1.59E-03
241025290	Milwaukee	VOC	0.778	2.13E-03
241025510	Milwaukee	VOC	0.136	3.73E-04
241026060	Milwaukee	VOC	0.372	1.02E-03
241026500	Milwaukee	VOC	5.410	1.48E-02
241027050	Milwaukee	VOC	2.809	7.70E-03

FID	COUNTY	POLLUTANT	2008(TONS)	2008(TPWD)
241027160	Milwaukee	VOC	0.285	7.81E-04
241027380	Milwaukee	VOC	0.135	3.69E-04
241027930	Milwaukee	VOC	0.245	6.71E-04
241028810	Milwaukee	VOC	84.423	2.31E-01
241029030	Milwaukee	VOC	41.123	1.13E-01
241029140	Milwaukee	VOC	0.211	5.78E-04
241029250	Milwaukee	VOC	66.919	1.83E-01
241029470	Milwaukee	VOC	0.004	1.00E-05
241029800	Milwaukee	VOC	37.469	1.03E-01
241031120	Milwaukee	VOC	0.785	2.15E-03
241031450	Milwaukee	VOC	0.048	1.31E-04
241032440	Milwaukee	VOC	0.000	0.00E+00
241032770	Milwaukee	VOC	20.694	5.67E-02
241033210	Milwaukee	VOC	0.456	1.25E-03
241033430	Milwaukee	VOC	26.925	7.38E-02
241033650	Milwaukee	VOC	0.040	1.09E-04
241033760	Milwaukee	VOC	5.368	1.47E-02
241034200	Milwaukee	VOC	1.963	5.38E-03
241036840	Milwaukee	VOC	1.271	3.48E-03
241036950	Milwaukee	VOC	0.099	2.73E-04
241037280	Milwaukee	VOC	0.629	1.72E-03
241038820	Milwaukee	VOC	4.202	1.15E-02
241040690	Milwaukee	VOC	14.181	3.89E-02
241041130	Milwaukee	VOC	24.275	6.65E-02
241041900	Milwaukee	VOC	0.109	3.00E-04
241042670	Milwaukee	VOC	0.068	1.86E-04
241043880	Milwaukee	VOC	6.908	1.89E-02
241045420	Milwaukee	VOC	0.129	3.52E-04
241045750	Milwaukee	VOC	0.404	1.11E-03
241047730	Milwaukee	VOC	3.813	1.04E-02
241049160	Milwaukee	VOC	4.237	1.16E-02
241052680	Milwaukee	VOC	5.715	1.57E-02
241053010	Milwaukee	VOC	2.688	7.36E-03
241053450	Milwaukee	VOC	0.214	5.87E-04
241053560	Milwaukee	VOC	9.515	2.61E-02
241054330	Milwaukee	VOC	1.700	4.66E-03
241055870	Milwaukee	VOC	0.223	6.10E-04
241063570	Milwaukee	VOC	20.897	5.73E-02
241078640	Milwaukee	VOC	21.990	6.02E-02
241094370	Milwaukee	VOC	9.874	2.71E-02
241094700	Milwaukee	VOC	1.273	3.49E-03
241095910	Milwaukee	VOC	0.206	5.65E-04
241116700	Milwaukee	VOC	19.103	5.23E-02
241164770	Milwaukee	VOC	23.424	6.42E-02
241167630	Milwaukee	VOC	0.031	8.45E-05
241168070	Milwaukee	VOC	1.044	2.86E-03
241168180	Milwaukee	VOC	0.447	1.23E-03

FID	COUNTY	POLLUTANT	2008(TONS)	2008(TPWD)
241168510	Milwaukee	VOC	1.245	3.41E-03
241168620	Milwaukee	VOC	6.993	1.92E-02
241174560	Milwaukee	VOC	18.541	5.08E-02
241189520	Milwaukee	VOC	0.095	2.60E-04
241197990	Milwaukee	VOC	5.530	1.52E-02
241202170	Milwaukee	VOC	0.543	1.49E-03
241213720	Milwaukee	VOC	2.534	6.94E-03
241222410	Milwaukee	VOC	1.308	3.58E-03
241222850	Milwaukee	VOC	1.271	3.48E-03
241225710	Milwaukee	VOC	1.368	3.75E-03
241227910	Milwaukee	VOC	6.955	1.91E-02
241228350	Milwaukee	VOC	16.493	4.52E-02
241231760	Milwaukee	VOC	0.016	4.46E-05
241232640	Milwaukee	VOC	3.062	8.39E-03
241235940	Milwaukee	VOC	3.638	9.97E-03
241245180	Milwaukee	VOC	18.592	5.09E-02
241251670	Milwaukee	VOC	2.297	6.29E-03
241254310	Milwaukee	VOC	0.130	3.57E-04
241256730	Milwaukee	VOC	4.062	1.11E-02
241266740	Milwaukee	VOC	35.592	9.75E-02
241276750	Milwaukee	VOC	28.853	7.91E-02
241305790	Milwaukee	VOC	0.011	3.09E-05
241308870	Milwaukee	VOC	6.538	1.79E-02
241309090	Milwaukee	VOC	20.046	5.49E-02
241316020	Milwaukee	VOC	12.800	3.51E-02
241318330	Milwaukee	VOC	1.399	3.83E-03
241321850	Milwaukee	VOC	2.669	7.31E-03
241321960	Milwaukee	VOC	0.037	1.01E-04
241325590	Milwaukee	VOC	24.424	6.69E-02
241334060	Milwaukee	VOC	5.836	1.60E-02
241355400	Milwaukee	VOC	0.065	1.78E-04
241362660	Milwaukee	VOC	3.726	1.02E-02
241370140	Milwaukee	VOC	4.003	1.10E-02
241371350	Milwaukee	VOC	0.064	1.76E-04
241372120	Milwaukee	VOC	8.664	2.37E-02
241413810	Milwaukee	VOC	4.653	1.27E-02
241428550	Milwaukee	VOC	6.164	1.69E-02
241435260	Milwaukee	VOC	28.555	7.82E-02
241442630	Milwaukee	VOC	22.195	6.08E-02
241450440	Milwaukee	VOC	0.307	8.41E-04
241454290	Milwaukee	VOC	5.855	1.60E-02
241455500	Milwaukee	VOC	20.253	5.55E-02
241473650	Milwaukee	VOC	2.791	7.65E-03
241480910	Milwaukee	VOC	3.386	9.28E-03
241514570	Milwaukee	VOC	3.308	9.06E-03
241672090	Milwaukee	VOC	0.086	2.36E-04
241684630	Milwaukee	VOC	1.849	5.07E-03

FID	COUNTY	POLLUTANT	2008(TONS)	2008(TPWD)
241709930	Milwaukee	VOC	1.287	3.53E-03
241714000	Milwaukee	VOC	11.136	3.05E-02
241723240	Milwaukee	VOC	14.142	3.87E-02
241741940	Milwaukee	VOC	4.268	1.17E-02
241757340	Milwaukee	VOC	31.664	8.68E-02
241789350	Milwaukee	VOC	2.062	5.65E-03
241805300	Milwaukee	VOC	7.968	2.18E-02
241832360	Milwaukee	VOC	2.385	6.54E-03
241879550	Milwaukee	VOC	1.134	3.11E-03
241916180	Milwaukee	VOC	2.930	8.03E-03
241961610	Milwaukee	VOC	0.647	1.77E-03
241961720	Milwaukee	VOC	4.750	1.30E-02
241964580	Milwaukee	VOC	8.368	2.29E-02
241967440	Milwaukee	VOC	3.656	1.00E-02
341003300	Waukesha	VOC	3.568	9.78E-03
341005280	Waukesha	VOC	0.045	1.23E-04
341024310	Waukesha	VOC	21.682	5.94E-02
341024420	Waukesha	VOC	10.690	2.93E-02
341027170	Waukesha	VOC	0.593	1.62E-03
341037290	Waukesha	VOC	3.575	9.79E-03
341039270	Waukesha	VOC	5.005	1.37E-02
341062260	Waukesha	VOC	4.057	1.11E-02
341076780	Waukesha	VOC	1.025	2.81E-03
341092510	Waukesha	VOC	1.020	2.79E-03
341112860	Waukesha	VOC	1.874	5.13E-03
252004280	Milwaukee	VOC	0.198	5.42E-04
252004940	Milwaukee	VOC	28.068	7.69E-02
252005380	Milwaukee	VOC	18.398	5.04E-02
252005820	Milwaukee	VOC	0.334	9.16E-04
252005930	Milwaukee	VOC	27.134	7.43E-02
252006370	Milwaukee	VOC	171.282	4.69E-01
252007030	Milwaukee	VOC	0.043	1.18E-04
252007140	Milwaukee	VOC	1.528	4.19E-03
252007690	Milwaukee	VOC	22.063	6.04E-02
252008460	Milwaukee	VOC	17.691	4.85E-02
252009780	Milwaukee	VOC	14.486	3.97E-02
252011870	Milwaukee	VOC	2.379	6.52E-03
252012090	Milwaukee	VOC	1.272	3.48E-03
252013190	Milwaukee	VOC	0.001	1.52E-06
252013630	Milwaukee	VOC	13.717	3.76E-02
252014510	Milwaukee	VOC	1.417	3.88E-03
252016270	Milwaukee	VOC	1.410	3.86E-03
252019900	Milwaukee	VOC	0.441	1.21E-03
252041130	Milwaukee	VOC	9.906	2.71E-02
252075340	Milwaukee	VOC	9.398	2.57E-02
252076990	Milwaukee	VOC	4.552	1.25E-02
252077760	Milwaukee	VOC	4.347	1.19E-02

FID	COUNTY	POLLUTANT	2008(TONS)	2008(TPWD)
252078200	Racine	VOC	0.685	1.88E-03
252080070	Racine	VOC	6.393	1.75E-02
252081390	Racine	VOC	1.451	3.98E-03
252086120	Racine	VOC	7.303	2.00E-02
252091070	Racine	VOC	0.027	7.53E-05
252103940	Racine	VOC	0.440	1.21E-03
252109550	Racine	VOC	7.855	2.15E-02
252126380	Racine	VOC	3.586	9.82E-03
252135950	Racine	VOC	0.145	3.99E-04
252173680	Racine	VOC	15.484	4.24E-02
252194140	Racine	VOC	18.610	5.10E-02
252195350	Racine	VOC	1.176	3.22E-03
252229670	Racine	VOC	5.497	1.51E-02
252236380	Racine	VOC	7.774	2.13E-02
252236490	Racine	VOC	0.227	6.23E-04
252237260	Racine	VOC	0.108	2.95E-04
252237810	Racine	VOC	6.656	1.82E-02
252248700	Racine	VOC	5.734	1.57E-02
252253760	Waukesha	VOC	0.378	1.04E-03
241472770	Milwaukee	VOC	6.714	1.84E-02
268000480	Waukesha	VOC	0.917	2.51E-03
268005100	Waukesha	VOC	0.076	2.08E-04
268005430	Waukesha	VOC	33.269	9.11E-02
268006310	Waukesha	VOC	7.452	2.04E-02
268006750	Waukesha	VOC	13.006	3.56E-02
268006970	Waukesha	VOC	1.328	3.64E-03
268007080	Waukesha	VOC	6.577	1.80E-02
268007410	Waukesha	VOC	8.646	2.37E-02
268008400	Waukesha	VOC	76.677	2.10E-01
268008510	Waukesha	VOC	71.364	1.96E-01
268008620	Waukesha	VOC	46.974	1.29E-01
268008730	Waukesha	VOC	0.197	5.40E-04
268009170	Waukesha	VOC	1.790	4.90E-03
268009500	Waukesha	VOC	2.359	6.46E-03
268010710	Waukesha	VOC	10.273	2.81E-02
268011150	Waukesha	VOC	4.514	1.24E-02
268012030	Waukesha	VOC	21.431	5.87E-02
268012250	Waukesha	VOC	7.474	2.05E-02
268012360	Waukesha	VOC	35.821	9.81E-02
268012580	Waukesha	VOC	6.456	1.77E-02
268012800	Waukesha	VOC	6.590	1.81E-02
268012910	Waukesha	VOC	0.187	5.11E-04
268014560	Waukesha	VOC	11.167	3.06E-02
268014670	Waukesha	VOC	12.804	3.51E-02
268014780	Waukesha	VOC	4.666	1.28E-02
268015330	Waukesha	VOC	3.946	1.08E-02
268016100	Waukesha	VOC	31.583	8.65E-02

FID	COUNTY	POLLUTANT	2008(TONS)	2008(TPWD)
268016210	Waukesha	VOC	23.180	6.35E-02
268017200	Waukesha	VOC	13.945	3.82E-02
268017640	Waukesha	VOC	4.436	1.22E-02
268028200	Waukesha	VOC	0.124	3.39E-04
268028420	Waukesha	VOC	0.072	1.96E-04
268088920	Waukesha	VOC	7.914	2.17E-02
268089140	Waukesha	VOC	0.072	1.96E-04
268090240	Waukesha	VOC	0.061	1.68E-04
268107620	Waukesha	VOC	3.850	1.05E-02
268142270	Waukesha	VOC	5.857	1.60E-02
268144250	Waukesha	VOC	0.046	1.27E-04
268152500	Waukesha	VOC	0.972	2.66E-03
268152610	Waukesha	VOC	0.474	1.30E-03
268154260	Waukesha	VOC	0.350	9.60E-04
268154370	Waukesha	VOC	0.127	3.47E-04
268155250	Waukesha	VOC	26.288	7.20E-02
268157450	Waukesha	VOC	5.037	1.38E-02
268157890	Waukesha	VOC	0.068	1.87E-04
268158110	Waukesha	VOC	2.797	7.66E-03
268158660	Waukesha	VOC	7.389	2.02E-02
268159210	Waukesha	VOC	0.125	3.43E-04
268162730	Waukesha	VOC	36.121	9.90E-02
268164160	Waukesha	VOC	2.334	6.39E-03
268165150	Waukesha	VOC	3.880	1.06E-02
268165370	Waukesha	VOC	1.587	4.35E-03
268168560	Waukesha	VOC	0.043	1.18E-04
268170320	Waukesha	VOC	3.071	8.41E-03
268170760	Waukesha	VOC	6.342	1.74E-02
268171310	Waukesha	VOC	5.174	1.42E-02
268173290	Waukesha	VOC	9.418	2.58E-02
268175270	Waukesha	VOC	8.596	2.36E-02
268175490	Waukesha	VOC	2.183	5.98E-03
268180660	Waukesha	VOC	2.562	7.02E-03
268183080	Waukesha	VOC	73.709	2.02E-01
268183190	Waukesha	VOC	6.676	1.83E-02
268185610	Waukesha	VOC	0.166	4.55E-04
268186160	Waukesha	VOC	41.438	1.14E-01
268198370	Waukesha	VOC	4.876	1.34E-02
268203430	Waukesha	VOC	7.412	2.03E-02
268204090	Waukesha	VOC	3.530	9.67E-03
268213880	Waukesha	VOC	1.202	3.29E-03
268218170	Waukesha	VOC	6.374	1.75E-02
268219490	Waukesha	VOC	4.770	1.31E-02
268221360	Waukesha	VOC	20.987	5.75E-02
268221910	Waukesha	VOC	3.170	8.69E-03
268227850	Waukesha	VOC	7.078	1.94E-02
268228070	Waukesha	VOC	5.673	1.55E-02

FID	COUNTY	POLLUTANT	2008(TONS)	2008(TPWD)
268238190	Waukesha	VOC	2.870	7.86E-03
268239290	Waukesha	VOC	15.615	4.28E-02
268244130	Waukesha	VOC	20.130	5.52E-02
268257220	Waukesha	VOC	7.125	1.95E-02
268257990	Waukesha	VOC	3.991	1.09E-02
268266020	Waukesha	VOC	1.007	2.76E-03
268270420	Waukesha	VOC	5.946	1.63E-02
268270750	Waukesha	VOC	2.534	6.94E-03
268280210	Waukesha	VOC	0.048	1.31E-04
268284280	Waukesha	VOC	6.347	1.74E-02
268290440	Waukesha	VOC	8.456	2.32E-02
268297590	Waukesha	VOC	8.861	2.43E-02
268298250	Waukesha	VOC	18.350	5.03E-02
268306280	Waukesha	VOC	10.441	2.86E-02
268312770	Waukesha	VOC	7.791	2.13E-02
268337080	Waukesha	VOC	8.401	2.30E-02
268342470	Waukesha	VOC	11.322	3.10E-02
268353800	Waukesha	VOC	1.408	3.86E-03
268382620	Waukesha	VOC	10.037	2.75E-02
268393620	Waukesha	VOC	1.402	3.84E-03
268404730	Waukesha	VOC	9.333	2.56E-02
268414850	Waukesha	VOC	6.195	1.70E-02
268423870	Waukesha	VOC	13.923	3.81E-02
268457970	Waukesha	VOC	7.756	2.13E-02
268463800	Waukesha	VOC	0.128	3.50E-04
268504390	Waukesha	VOC	6.147	1.68E-02
268523970	Waukesha	VOC	1.945	5.33E-03
268529360	Waukesha	VOC	2.222	6.09E-03
268560380	Waukesha	VOC	75.150	2.06E-01
268565440	Waukesha	VOC	0.000	8.08E-08
268572040	Waukesha	VOC	0.005	1.39E-05
268574020	Waukesha	VOC	5.766	1.58E-02
268589860	Waukesha	VOC	12.284	3.37E-02
268594920	Waukesha	VOC	3.519	9.64E-03
268600750	Waukesha	VOC	0.020	5.57E-05
268601630	Waukesha	VOC	2.528	6.93E-03
268606690	Waukesha	VOC	2.442	6.69E-03
368011050	Waukesha	VOC	2.523	6.91E-03

Estimated 2006 and 2010 Point Emissions									
COUNTY	FIPS ID	NOx (TPWD)		PM25 (TPWD)		SO2 (TPWD)		VOC (TPWD)	
		2006(est)	2010(est)	2006(est)	2010(est)	2006(est)	2010(est)	2006(est)	2010(est)
Milwaukee	55079	27.82	27.62	0.76	0.02	60.63	61.20	6.76	4.23
Racine	55101	0.78	1.19	0.16	0.00	0.64	0.46	1.19	1.22
Waukesha	55133	0.84	1.17	0.13	0.00	0.16	0.16	3.41	2.67

Calculations for 2006 and 2010 Point Inventories (NOx)

County	2005 Pt	2008 Pt	2006(est)	2010(est)	2010 (mod)*
Milwaukee	28.29	26.88	27.82	25.93	27.62
Racine	0.68	0.99	0.78	1.19	1.19
Waukesha	0.76	1.01	0.84	1.17	1.17

* 2010 estimate is modified to include 2010 actual emissions from WE Energies - Elm Road (FID 241219440), which did not operate in 2008.

Calculations for 2006 and 2010 Point Inventories (PM2.5)

County	2005 Pt	2008 Pt	2006(est)	2010(est)	2010 (mod)*
Milwaukee	1.06	0.17	0.76	0.00	0.02
Racine	0.22	0.04	0.16	0.00	0.00
Waukesha	0.18	0.03	0.13	0.00	0.00

* 2010 estimate is modified to include 2010 actual emissions from WE Energies - Elm Road (FID 241219440), which did not operate in 2008.

Calculations for 2006 and 2010 Point Inventories (SO2)

County	2005 Pt	2008 Pt	2006(est)	2010(est)	2010 (mod)*
Milwaukee	60.57	60.74	60.63	60.84	61.20
Racine	0.68	0.55	0.64	0.46	0.46
Waukesha	0.15	0.16	0.16	0.16	0.16

* 2010 estimate is modified to include 2010 actual emissions from WE Energies - Elm Road (FID 241219440), which did not operate in 2008.

Calculations for 2006 and 2010 Point Inventories (VOC)

County	2005 Pt	2008 Pt	2006(est)	2010(est)	2010 (mod)*
Milwaukee	7.39	5.50	6.76	4.23	4.23
Racine	1.18	1.20	1.19	1.22	1.22
Waukesha	3.59	3.04	3.41	2.67	2.67

* 2010 estimate is modified to include 2010 actual emissions from WE Energies - Elm Road (FID 241219440), which did not operate in 2008.

EGU Point Calculations: WE Energies - Elm Road (FID 241219440)

FIPS ID	FID	DVID	SCC	POLLUTANT	2006 (TONS)	2010 (TONS)	2006 (TPWD)	2010 (TPWD)
55079	241219440	1	1-01-002-22	NOx	0	462.40	0	1.267
55079	241219440	2	1-01-002-22	NOx	0	153.30	0	0.420
55079	241219440	1	1-01-002-22	PM25	0	5.01	0	0.014
55079	241219440	2	1-01-002-22	PM25	0	1.81	0	0.005
55079	241219440	1	1-01-002-22	SO2	0	84.30	0	0.231
55079	241219440	2	1-01-002-22	SO2	0	46.40	0	0.127
55079	241219440	1	1-01-002-22	VOC	0	0.12	0	0.000
55079	241219440	2	1-01-002-22	VOC	0	0.04	0	0.000

Notes:

- 1) AP-42 emission factors used to estimate PM2.5 and VOC emissions (WDNR staff applied ESP, Baghouse and WetFGD control technologies to emission factors).
- 2) We Energies - Elm Road 2010 NOx and SO2 emissions taken from USEPA's Acid Rain database.

APPENDIX 5: 2006, 2010, 2020 AND 2025 AREA SOURCE EMISSIONS

SCC	FIPS	POLLUTANT	2008 (TPWD)	GF-2006	GF-2010	GF-2020	GF-2025	2006 (TPWD)	2010 (TPWD)	2020 (TPWD)	2025 (TPWD)
2102004001	55079	NOx	1.19E-01	1.00	1.00	0.86	0.82	1.19E-01	1.18E-01	1.02E-01	9.76E-02
2102004001	55079	NOx	3.81E-04	1.00	1.00	0.86	0.82	3.82E-04	3.79E-04	3.28E-04	3.13E-04
2102004002	55079	NOx	7.71E-01	1.00	1.00	0.86	0.82	7.74E-01	7.68E-01	6.64E-01	6.33E-01
2102004002	55079	NOx	2.47E-03	1.00	1.00	0.86	0.82	2.48E-03	2.46E-03	2.13E-03	2.03E-03
2102005000	55079	NOx	8.57E-05	0.98	0.99	0.85	0.84	8.37E-05	8.49E-05	7.31E-05	7.18E-05
2102005000	55079	NOx	2.67E-02	0.98	0.99	0.85	0.84	2.61E-02	2.65E-02	2.28E-02	2.24E-02
2102006000	55079	NOx	9.86E-04	0.98	1.04	1.02	1.07	9.67E-04	1.02E-03	1.01E-03	1.05E-03
2102006000	55079	NOx	3.08E-01	0.98	1.04	1.02	1.07	3.02E-01	3.19E-01	3.16E-01	3.29E-01
2102008000	55079	NOx	2.01E-04	0.96	1.06	1.18	1.25	1.92E-04	2.12E-04	2.38E-04	2.52E-04
2102008000	55079	NOx	6.28E-02	0.96	1.06	1.18	1.25	6.00E-02	6.63E-02	7.43E-02	7.86E-02
2102011000	55079	NOx	2.51E-06	0.98	0.98	0.89	0.89	2.47E-06	2.47E-06	2.24E-06	2.25E-06
2102011000	55079	NOx	7.85E-04	0.98	0.98	0.89	0.89	7.70E-04	7.72E-04	6.99E-04	7.01E-04
2103002000	55079	NOx	4.84E-04	1.02	0.99	0.85	0.82	4.91E-04	4.79E-04	4.12E-04	3.97E-04
2103002000	55079	NOx	2.52E-01	1.02	0.99	0.85	0.82	2.56E-01	2.49E-01	2.14E-01	2.06E-01
2103004001	55079	NOx	2.56E-01	1.00	1.00	0.86	0.82	2.57E-01	2.55E-01	2.20E-01	2.10E-01
2103004001	55079	NOx	4.92E-04	1.00	1.00	0.86	0.82	4.94E-04	4.90E-04	4.24E-04	4.04E-04
2103004002	55079	NOx	2.86E+00	1.00	1.00	0.86	0.82	2.87E+00	2.85E+00	2.46E+00	2.35E+00
2103004002	55079	NOx	5.49E-03	1.00	1.00	0.86	0.82	5.52E-03	5.47E-03	4.73E-03	4.51E-03
2103005000	55079	NOx	3.87E-07	0.99	1.03	0.88	0.86	3.84E-07	3.96E-07	3.41E-07	3.32E-07
2103005000	55079	NOx	2.01E-04	0.99	1.03	0.88	0.86	2.00E-04	2.06E-04	1.77E-04	1.73E-04
2103006000	55079	NOx	4.68E-03	0.99	1.01	0.89	0.90	4.63E-03	4.71E-03	4.14E-03	4.21E-03
2103006000	55079	NOx	2.43E+00	0.99	1.01	0.89	0.90	2.41E+00	2.45E+00	2.16E+00	2.19E+00
2103007000	55079	NOx	2.32E-04	0.98	1.00	0.88	0.86	2.28E-04	2.33E-04	2.04E-04	2.00E-04
2103007000	55079	NOx	1.21E-01	0.98	1.00	0.88	0.86	1.19E-01	1.21E-01	1.06E-01	1.04E-01
2103008000	55079	NOx	2.98E-05	1.00	1.00	0.87	0.84	2.98E-05	2.98E-05	2.59E-05	2.50E-05
2103008000	55079	NOx	1.55E-02	1.00	1.00	0.87	0.84	1.55E-02	1.55E-02	1.35E-02	1.30E-02
2103011000	55079	NOx	4.61E-06	0.98	1.00	0.89	0.89	4.51E-06	4.59E-06	4.10E-06	4.09E-06
2103011000	55079	NOx	2.40E-03	0.98	1.00	0.89	0.89	2.35E-03	2.39E-03	2.13E-03	2.13E-03

SCC	FIPS	POLLUTANT	2008 (TPWD)	GF-2006	GF-2010	GF-2020	GF-2025	2006 (TPWD)	2010 (TPWD)	2020 (TPWD)	2025 (TPWD)
2104004000	55079	NOX	2.35E-05	1.01	0.98	0.75	0.65	2.38E-05	2.31E-05	1.77E-05	1.54E-05
2104004000	55079	NOx	2.44E-01	1.01	0.98	0.75	0.65	2.47E-01	2.40E-01	1.83E-01	1.60E-01
2104006000	55079	NOX	3.15E-03	0.98	1.01	0.90	0.88	3.10E-03	3.20E-03	2.85E-03	2.78E-03
2104006000	55079	NOx	4.10E+00	0.98	1.01	0.90	0.88	4.03E+00	4.16E+00	3.70E+00	3.61E+00
2104007000	55079	NOX	5.88E-05	0.98	1.01	0.94	0.93	5.74E-05	5.96E-05	5.56E-05	5.47E-05
2104007000	55079	NOx	7.65E-02	0.98	1.01	0.94	0.93	7.47E-02	7.74E-02	7.22E-02	7.12E-02
2104008100	55079	NOX	2.68E-02	1.00	1.00	0.86	0.82	2.69E-02	2.67E-02	2.31E-02	2.20E-02
2104008210	55079	NOX	5.34E-02	1.00	1.00	0.86	0.82	5.36E-02	5.32E-02	4.60E-02	4.39E-02
2104008220	55079	NOX	1.40E-02	1.00	1.00	0.86	0.82	1.40E-02	1.39E-02	1.20E-02	1.15E-02
2104008230	55079	NOX	4.08E-03	1.00	1.00	0.86	0.82	4.10E-03	4.06E-03	3.52E-03	3.35E-03
2104008310	55079	NOX	3.36E-02	1.00	1.00	0.86	0.82	3.38E-02	3.35E-02	2.90E-02	2.76E-02
2104008320	55079	NOX	8.78E-03	1.00	1.00	0.86	0.82	8.81E-03	8.74E-03	7.56E-03	7.21E-03
2104008330	55079	NOX	2.56E-03	1.00	1.00	0.86	0.82	2.57E-03	2.55E-03	2.21E-03	2.10E-03
2104008400	55079	NOX	2.78E-02	1.00	1.00	0.86	0.82	2.79E-02	2.77E-02	2.40E-02	2.28E-02
2104008510	55079	NOX	6.22E-02	1.00	1.00	0.86	0.82	6.25E-02	6.20E-02	5.36E-02	5.11E-02
2104008610	55079	NOX	3.60E-01	1.00	1.00	0.86	0.82	3.62E-01	3.59E-01	3.10E-01	2.96E-01
2104009000	55079	NOX	1.43E-02	1.00	1.00	0.88	0.85	1.42E-02	1.43E-02	1.26E-02	1.21E-02
2104011000	55079	NOX	1.50E-07	0.98	1.01	0.90	0.88	1.47E-07	1.51E-07	1.35E-07	1.32E-07
2104011000	55079	NOx	1.55E-03	0.98	1.01	0.90	0.88	1.53E-03	1.56E-03	1.40E-03	1.37E-03
2610000100	55079	NOX	0.00E+00	0.99	1.01	0.97	1.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2610000400	55079	NOX	0.00E+00	0.99	1.01	0.97	1.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2610000500	55079	NOX	0.00E+00	0.99	1.01	0.97	1.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2610030000	55079	NOX	0.00E+00	0.99	1.01	0.97	1.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2810030000	55079	NOX	4.98E-04	0.94	1.04	1.01	1.02	4.68E-04	5.16E-04	5.04E-04	5.09E-04
2810030000	55079	NOX	1.37E-06	0.94	1.04	1.01	1.02	1.28E-06	1.42E-06	1.38E-06	1.40E-06
2102004001	55101	NOx	4.00E-02	0.99	1.01	0.92	0.90	3.97E-02	4.04E-02	3.67E-02	3.61E-02
2102004001	55101	NOx	1.28E-04	0.99	1.01	0.92	0.90	1.27E-04	1.30E-04	1.18E-04	1.16E-04
2102004002	55101	NOx	2.60E-01	0.99	1.01	0.92	0.90	2.57E-01	2.62E-01	2.38E-01	2.34E-01
2102004002	55101	NOx	8.33E-04	0.99	1.01	0.92	0.90	8.25E-04	8.40E-04	7.64E-04	7.51E-04
2102005000	55101	NOx	2.89E-05	0.98	0.99	0.85	0.84	2.82E-05	2.86E-05	2.46E-05	2.42E-05

SCC	FIPS	POLLUTANT	2008 (TPWD)	GF-2006	GF-2010	GF-2020	GF-2025	2006 (TPWD)	2010 (TPWD)	2020 (TPWD)	2025 (TPWD)
2102005000	55101	NOx	9.01E-03	0.98	0.99	0.85	0.84	8.80E-03	8.93E-03	7.68E-03	7.55E-03
2102006000	55101	NOx	3.32E-04	0.98	1.04	1.02	1.07	3.26E-04	3.45E-04	3.41E-04	3.55E-04
2102006000	55101	NOx	1.04E-01	0.98	1.04	1.02	1.07	1.02E-01	1.08E-01	1.06E-01	1.11E-01
2102008000	55101	NOx	6.78E-05	0.96	1.06	1.18	1.25	6.48E-05	7.16E-05	8.02E-05	8.48E-05
2102008000	55101	NOx	2.12E-02	0.96	1.06	1.18	1.25	2.02E-02	2.23E-02	2.50E-02	2.65E-02
2102011000	55101	NOx	8.47E-07	0.98	0.98	0.89	0.89	8.31E-07	8.33E-07	7.55E-07	7.57E-07
2102011000	55101	NOx	2.64E-04	0.98	0.98	0.89	0.89	2.59E-04	2.60E-04	2.36E-04	2.36E-04
2103002000	55101	NOx	6.35E-05	1.02	0.99	0.85	0.82	6.45E-05	6.28E-05	5.41E-05	5.20E-05
2103002000	55101	NOx	3.30E-02	1.02	0.99	0.85	0.82	3.35E-02	3.27E-02	2.81E-02	2.71E-02
2103004001	55101	NOx	3.36E-02	0.99	1.01	0.92	0.90	3.33E-02	3.39E-02	3.08E-02	3.03E-02
2103004001	55101	NOx	6.45E-05	0.99	1.01	0.92	0.90	6.39E-05	6.51E-05	5.92E-05	5.82E-05
2103004002	55101	NOx	3.75E-01	0.99	1.01	0.92	0.90	3.71E-01	3.78E-01	3.44E-01	3.38E-01
2103004002	55101	NOx	7.21E-04	0.99	1.01	0.92	0.90	7.14E-04	7.28E-04	6.61E-04	6.50E-04
2103005000	55101	NOx	5.07E-08	0.99	1.03	0.88	0.86	5.04E-08	5.20E-08	4.48E-08	4.36E-08
2103005000	55101	NOx	2.64E-05	0.99	1.03	0.88	0.86	2.62E-05	2.70E-05	2.33E-05	2.27E-05
2103006000	55101	NOx	6.13E-04	0.99	1.01	0.89	0.90	6.07E-04	6.17E-04	5.44E-04	5.52E-04
2103006000	55101	NOx	3.19E-01	0.99	1.01	0.89	0.90	3.16E-01	3.21E-01	2.83E-01	2.87E-01
2103007000	55101	NOx	3.05E-05	0.98	1.00	0.88	0.86	2.99E-05	3.05E-05	2.67E-05	2.63E-05
2103007000	55101	NOx	1.58E-02	0.98	1.00	0.88	0.86	1.56E-02	1.59E-02	1.39E-02	1.37E-02
2103008000	55101	NOx	3.91E-06	1.00	1.00	0.87	0.84	3.91E-06	3.91E-06	3.40E-06	3.28E-06
2103008000	55101	NOx	2.03E-03	1.00	1.00	0.87	0.84	2.03E-03	2.03E-03	1.77E-03	1.71E-03
2103011000	55101	NOx	6.05E-07	0.98	1.00	0.89	0.89	5.92E-07	6.03E-07	5.38E-07	5.37E-07
2103011000	55101	NOx	3.15E-04	0.98	1.00	0.89	0.89	3.08E-04	3.13E-04	2.80E-04	2.79E-04
2104004000	55101	NOX	4.98E-06	1.01	0.98	0.75	0.65	5.03E-06	4.89E-06	3.74E-06	3.26E-06
2104004000	55101	NOx	5.17E-02	1.01	0.98	0.75	0.65	5.22E-02	5.08E-02	3.88E-02	3.38E-02
2104006000	55101	NOX	5.69E-04	0.98	1.01	0.90	0.88	5.60E-04	5.77E-04	5.14E-04	5.01E-04
2104006000	55101	NOx	7.39E-01	0.98	1.01	0.90	0.88	7.27E-01	7.50E-01	6.68E-01	6.51E-01
2104007000	55101	NOX	2.43E-05	0.98	1.01	0.94	0.93	2.37E-05	2.46E-05	2.29E-05	2.26E-05
2104007000	55101	NOx	3.16E-02	0.98	1.01	0.94	0.93	3.08E-02	3.20E-02	2.98E-02	2.94E-02
2104008100	55101	NOX	1.61E-02	0.99	1.01	0.92	0.90	1.60E-02	1.63E-02	1.48E-02	1.45E-02

SCC	FIPS	POLLUTANT	2008 (TPWD)	GF-2006	GF-2010	GF-2020	GF-2025	2006 (TPWD)	2010 (TPWD)	2020 (TPWD)	2025 (TPWD)
2104008210	55101	NOX	1.08E-02	0.99	1.01	0.92	0.90	1.07E-02	1.09E-02	9.88E-03	9.71E-03
2104008220	55101	NOX	3.71E-03	0.99	1.01	0.92	0.90	3.67E-03	3.74E-03	3.40E-03	3.34E-03
2104008230	55101	NOX	1.05E-03	0.99	1.01	0.92	0.90	1.04E-03	1.06E-03	9.65E-04	9.49E-04
2104008310	55101	NOX	4.72E-02	0.99	1.01	0.92	0.90	4.68E-02	4.77E-02	4.33E-02	4.26E-02
2104008320	55101	NOX	1.22E-02	0.99	1.01	0.92	0.90	1.20E-02	1.23E-02	1.12E-02	1.10E-02
2104008330	55101	NOX	1.18E-02	0.99	1.01	0.92	0.90	1.17E-02	1.19E-02	1.08E-02	1.06E-02
2104008400	55101	NOX	1.19E-02	0.99	1.01	0.92	0.90	1.18E-02	1.20E-02	1.09E-02	1.07E-02
2104008510	55101	NOX	2.70E-02	0.99	1.01	0.92	0.90	2.68E-02	2.73E-02	2.48E-02	2.44E-02
2104008610	55101	NOX	6.37E-02	0.99	1.01	0.92	0.90	6.31E-02	6.43E-02	5.85E-02	5.75E-02
2104008700	55101	NOX	2.76E-02	0.99	1.01	0.92	0.90	2.73E-02	2.78E-02	2.53E-02	2.49E-02
2104009000	55101	NOX	4.35E-04	1.00	1.00	0.88	0.85	4.33E-04	4.35E-04	3.83E-04	3.69E-04
2104011000	55101	NOX	3.17E-08	0.98	1.01	0.90	0.88	3.11E-08	3.18E-08	2.85E-08	2.79E-08
2104011000	55101	NOx	3.29E-04	0.98	1.01	0.90	0.88	3.23E-04	3.31E-04	2.96E-04	2.90E-04
2610000100	55101	NOX	0.00E+00	0.99	1.01	0.97	1.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2610000400	55101	NOX	0.00E+00	0.99	1.01	0.97	1.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2610000500	55101	NOX	0.00E+00	0.99	1.01	0.97	1.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2610030000	55101	NOX	0.00E+00	0.99	1.01	0.97	1.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2810030000	55101	NOX	4.83E-04	0.94	1.04	1.01	1.02	4.53E-04	5.00E-04	4.88E-04	4.93E-04
2810030000	55101	NOX	1.33E-06	0.94	1.04	1.01	1.02	1.24E-06	1.37E-06	1.34E-06	1.35E-06
2102004001	55133	NOx	1.26E-01	0.99	1.01	0.95	0.94	1.24E-01	1.27E-01	1.19E-01	1.19E-01
2102004001	55133	NOx	4.03E-04	0.99	1.01	0.95	0.94	3.97E-04	4.09E-04	3.82E-04	3.80E-04
2102004002	55133	NOx	8.15E-01	0.99	1.01	0.95	0.94	8.03E-01	8.27E-01	7.73E-01	7.70E-01
2102004002	55133	NOx	2.61E-03	0.99	1.01	0.95	0.94	2.57E-03	2.65E-03	2.48E-03	2.47E-03
2102005000	55133	NOx	9.06E-05	0.98	0.99	0.85	0.84	8.85E-05	8.98E-05	7.72E-05	7.59E-05
2102005000	55133	NOx	2.83E-02	0.98	0.99	0.85	0.84	2.76E-02	2.80E-02	2.41E-02	2.37E-02
2102006000	55133	NOx	1.04E-03	0.98	1.04	1.02	1.07	1.02E-03	1.08E-03	1.07E-03	1.11E-03
2102006000	55133	NOx	3.26E-01	0.98	1.04	1.02	1.07	3.19E-01	3.37E-01	3.34E-01	3.47E-01
2102008000	55133	NOx	2.13E-04	0.96	1.06	1.18	1.25	2.03E-04	2.25E-04	2.52E-04	2.66E-04
2102008000	55133	NOx	6.64E-02	0.96	1.06	1.18	1.25	6.35E-02	7.01E-02	7.85E-02	8.31E-02
2102011000	55133	NOx	2.66E-06	0.98	0.98	0.89	0.89	2.61E-06	2.61E-06	2.37E-06	2.38E-06

SCC	FIPS	POLLUTANT	2008 (TPWD)	GF-2006	GF-2010	GF-2020	GF-2025	2006 (TPWD)	2010 (TPWD)	2020 (TPWD)	2025 (TPWD)
2102011000	55133	NOx	8.30E-04	0.98	0.98	0.89	0.89	8.14E-04	8.16E-04	7.39E-04	7.42E-04
2103002000	55133	NOx	2.04E-04	1.02	0.99	0.85	0.82	2.07E-04	2.02E-04	1.74E-04	1.67E-04
2103002000	55133	NOx	1.06E-01	1.02	0.99	0.85	0.82	1.08E-01	1.05E-01	9.04E-02	8.69E-02
2103004001	55133	NOx	1.08E-01	0.99	1.01	0.95	0.94	1.06E-01	1.09E-01	1.02E-01	1.02E-01
2103004001	55133	NOx	2.07E-04	0.99	1.01	0.95	0.94	2.04E-04	2.10E-04	1.97E-04	1.96E-04
2103004002	55133	NOx	1.20E+00	0.99	1.01	0.95	0.94	1.19E+00	1.22E+00	1.14E+00	1.14E+00
2103004002	55133	NOx	2.32E-03	0.99	1.01	0.95	0.94	2.28E-03	2.35E-03	2.20E-03	2.19E-03
2103005000	55133	NOx	1.63E-07	0.99	1.03	0.88	0.86	1.62E-07	1.67E-07	1.44E-07	1.40E-07
2103005000	55133	NOx	8.47E-05	0.99	1.03	0.88	0.86	8.42E-05	8.69E-05	7.48E-05	7.29E-05
2103006000	55133	NOx	1.97E-03	0.99	1.01	0.89	0.90	1.95E-03	1.98E-03	1.75E-03	1.77E-03
2103006000	55133	NOx	1.02E+00	0.99	1.01	0.89	0.90	1.02E+00	1.03E+00	9.09E-01	9.22E-01
2103007000	55133	NOx	9.79E-05	0.98	1.00	0.88	0.86	9.62E-05	9.80E-05	8.59E-05	8.44E-05
2103007000	55133	NOx	5.09E-02	0.98	1.00	0.88	0.86	5.00E-02	5.10E-02	4.47E-02	4.39E-02
2103008000	55133	NOx	1.26E-05	1.00	1.00	0.87	0.84	1.26E-05	1.26E-05	1.09E-05	1.05E-05
2103008000	55133	NOx	6.53E-03	1.00	1.00	0.87	0.84	6.53E-03	6.53E-03	5.68E-03	5.48E-03
2103011000	55133	NOx	1.94E-06	0.98	1.00	0.89	0.89	1.90E-06	1.94E-06	1.73E-06	1.73E-06
2103011000	55133	NOx	1.01E-03	0.98	1.00	0.89	0.89	9.90E-04	1.01E-03	8.99E-04	8.98E-04
2104004000	55133	NOX	1.32E-05	1.01	0.98	0.75	0.65	1.33E-05	1.29E-05	9.88E-06	8.61E-06
2104004000	55133	NOx	1.37E-01	1.01	0.98	0.75	0.65	1.38E-01	1.34E-01	1.03E-01	8.94E-02
2104006000	55133	NOX	1.09E-03	0.98	1.01	0.90	0.88	1.08E-03	1.11E-03	9.88E-04	9.63E-04
2104006000	55133	NOx	1.42E+00	0.98	1.01	0.90	0.88	1.40E+00	1.44E+00	1.28E+00	1.25E+00
2104007000	55133	NOX	2.65E-05	0.98	1.01	0.94	0.93	2.59E-05	2.69E-05	2.51E-05	2.47E-05
2104007000	55133	NOx	3.45E-02	0.98	1.01	0.94	0.93	3.37E-02	3.49E-02	3.26E-02	3.21E-02
2104008100	55133	NOX	9.80E-03	0.99	1.01	0.95	0.94	9.66E-03	9.95E-03	9.30E-03	9.26E-03
2104008210	55133	NOX	1.95E-02	0.99	1.01	0.95	0.94	1.92E-02	1.98E-02	1.85E-02	1.84E-02
2104008220	55133	NOX	5.10E-03	0.99	1.01	0.95	0.94	5.02E-03	5.17E-03	4.84E-03	4.82E-03
2104008230	55133	NOX	1.49E-03	0.99	1.01	0.95	0.94	1.47E-03	1.51E-03	1.41E-03	1.41E-03
2104008310	55133	NOX	1.23E-02	0.99	1.01	0.95	0.94	1.21E-02	1.25E-02	1.16E-02	1.16E-02
2104008320	55133	NOX	3.21E-03	0.99	1.01	0.95	0.94	3.16E-03	3.25E-03	3.04E-03	3.03E-03
2104008330	55133	NOX	9.39E-04	0.99	1.01	0.95	0.94	9.25E-04	9.53E-04	8.91E-04	8.87E-04

SCC	FIPS	POLLUTANT	2008 (TPWD)	GF-2006	GF-2010	GF-2020	GF-2025	2006 (TPWD)	2010 (TPWD)	2020 (TPWD)	2025 (TPWD)
2104008400	55133	NOX	1.08E-02	0.99	1.01	0.95	0.94	1.06E-02	1.09E-02	1.02E-02	1.02E-02
2104008510	55133	NOX	2.25E-02	0.99	1.01	0.95	0.94	2.21E-02	2.28E-02	2.13E-02	2.12E-02
2104008610	55133	NOX	1.31E-01	0.99	1.01	0.95	0.94	1.30E-01	1.33E-01	1.25E-01	1.24E-01
2104009000	55133	NOX	5.54E-03	1.00	1.00	0.88	0.85	5.52E-03	5.54E-03	4.87E-03	4.69E-03
2104011000	55133	NOX	8.37E-08	0.98	1.01	0.90	0.88	8.23E-08	8.41E-08	7.53E-08	7.37E-08
2104011000	55133	NOx	8.69E-04	0.98	1.01	0.90	0.88	8.54E-04	8.74E-04	7.82E-04	7.65E-04
2610000100	55133	NOX	0.00E+00	0.99	1.01	0.97	1.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2610000400	55133	NOX	0.00E+00	0.99	1.01	0.97	1.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2610000500	55133	NOX	0.00E+00	0.99	1.01	0.97	1.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2610030000	55133	NOX	0.00E+00	0.99	1.01	0.97	1.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2810030000	55133	NOX	6.24E-04	0.94	1.04	1.01	1.02	5.86E-04	6.46E-04	6.31E-04	6.37E-04
2810030000	55133	NOX	1.71E-06	0.94	1.04	1.01	1.02	1.61E-06	1.78E-06	1.73E-06	1.75E-06
2104008100	55079	PM25	2.44E-01	1.00	1.00	0.86	0.82	2.45E-01	2.43E-01	2.10E-01	2.00E-01
2104008210	55079	PM25	5.84E-01	1.00	1.00	0.86	0.82	5.86E-01	5.82E-01	5.03E-01	4.79E-01
2104008220	55079	PM25	1.20E-01	1.00	1.00	0.86	0.82	1.20E-01	1.19E-01	1.03E-01	9.85E-02
2104008230	55079	PM25	4.16E-02	1.00	1.00	0.86	0.82	4.18E-02	4.14E-02	3.59E-02	3.42E-02
2104008310	55079	PM25	3.67E-01	1.00	1.00	0.86	0.82	3.69E-01	3.66E-01	3.17E-01	3.02E-01
2104008320	55079	PM25	7.55E-02	1.00	1.00	0.86	0.82	7.58E-02	7.52E-02	6.50E-02	6.20E-02
2104008330	55079	PM25	2.61E-02	1.00	1.00	0.86	0.82	2.62E-02	2.60E-02	2.25E-02	2.15E-02
2104008400	55079	PM25	2.24E-02	1.00	1.00	0.86	0.82	2.25E-02	2.23E-02	1.93E-02	1.84E-02
2104008510	55079	PM25	9.33E-01	1.00	1.00	0.86	0.82	9.36E-01	9.29E-01	8.03E-01	7.66E-01
2104008610	55079	PM25	5.40E+00	1.00	1.00	0.86	0.82	5.42E+00	5.38E+00	4.65E+00	4.43E+00
2104009000	55079	PM25	5.28E-02	1.00	1.00	0.88	0.85	5.25E-02	5.27E-02	4.64E-02	4.47E-02
2294000000	55079	PM25	7.70E-01	0.99	1.01	0.97	1.00	7.61E-01	7.80E-01	7.48E-01	7.67E-01
2296000000	55079	PM25	0.00E+00	0.97	1.03	1.03	1.05	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2302002100	55079	PM25	6.30E-02	0.97	1.03	1.03	1.05	6.14E-02	6.48E-02	6.46E-02	6.62E-02
2302002200	55079	PM25	4.46E-01	0.97	1.03	1.03	1.05	4.35E-01	4.59E-01	4.57E-01	4.68E-01
2302003100	55079	PM25	1.02E-01	0.97	1.03	1.03	1.05	9.97E-02	1.05E-01	1.05E-01	1.07E-01
2302003200	55079	PM25	7.72E-03	0.97	1.03	1.03	1.05	7.52E-03	7.94E-03	7.91E-03	8.11E-03
2311010000	55079	PM25	8.89E-03	0.98	1.02	1.05	1.09	8.73E-03	9.06E-03	9.31E-03	9.70E-03
2311020000	55079	PM25	5.72E-01	0.98	1.02	1.05	1.09	5.62E-01	5.83E-01	5.99E-01	6.25E-01
2311030000	55079	PM25	9.97E-02	0.98	1.02	1.05	1.09	9.79E-02	1.02E-01	1.04E-01	1.09E-01

SCC	FIPS	POLLUTANT	2008 (TPWD)	GF-2006	GF-2010	GF-2020	GF-2025	2006 (TPWD)	2010 (TPWD)	2020 (TPWD)	2025 (TPWD)
2610000100	55079	PM25	0.00E+00	0.99	1.01	0.97	1.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2610000400	55079	PM25	0.00E+00	0.99	1.01	0.97	1.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2610000500	55079	PM25	0.00E+00	0.99	1.01	0.97	1.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2610030000	55079	PM25	0.00E+00	0.99	1.01	0.97	1.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2104008100	55101	PM25	1.46E-01	0.99	1.01	0.92	0.90	1.45E-01	1.48E-01	1.34E-01	1.32E-01
2104008210	55101	PM25	1.18E-01	0.99	1.01	0.92	0.90	1.17E-01	1.19E-01	1.08E-01	1.06E-01
2104008220	55101	PM25	3.19E-02	0.99	1.01	0.92	0.90	3.16E-02	3.22E-02	2.92E-02	2.87E-02
2104008230	55101	PM25	1.07E-02	0.99	1.01	0.92	0.90	1.06E-02	1.08E-02	9.85E-03	9.68E-03
2104008310	55101	PM25	5.16E-01	0.99	1.01	0.92	0.90	5.11E-01	5.21E-01	4.74E-01	4.66E-01
2104008320	55101	PM25	1.04E-01	0.99	1.01	0.92	0.90	1.04E-01	1.05E-01	9.59E-02	9.42E-02
2104008330	55101	PM25	1.20E-01	0.99	1.01	0.92	0.90	1.19E-01	1.21E-01	1.10E-01	1.08E-01
2104008400	55101	PM25	9.58E-03	0.99	1.01	0.92	0.90	9.49E-03	9.66E-03	8.79E-03	8.64E-03
2104008510	55101	PM25	4.05E-01	0.99	1.01	0.92	0.90	4.01E-01	4.08E-01	3.71E-01	3.65E-01
2104008610	55101	PM25	9.55E-01	0.99	1.01	0.92	0.90	9.46E-01	9.64E-01	8.76E-01	8.61E-01
2104008700	55101	PM25	2.50E-01	0.99	1.01	0.92	0.90	2.48E-01	2.53E-01	2.30E-01	2.26E-01
2104009000	55101	PM25	1.61E-03	1.00	1.00	0.88	0.85	1.60E-03	1.61E-03	1.41E-03	1.36E-03
2294000000	55101	PM25	2.55E-01	0.99	1.01	0.97	1.00	2.52E-01	2.58E-01	2.48E-01	2.54E-01
2296000000	55101	PM25	1.94E-01	0.97	1.03	1.03	1.05	1.89E-01	2.00E-01	1.99E-01	2.04E-01
2302002100	55101	PM25	1.32E-02	0.97	1.03	1.03	1.05	1.29E-02	1.36E-02	1.35E-02	1.39E-02
2302002200	55101	PM25	9.33E-02	0.97	1.03	1.03	1.05	9.09E-02	9.60E-02	9.57E-02	9.80E-02
2302003100	55101	PM25	2.14E-02	0.97	1.03	1.03	1.05	2.09E-02	2.20E-02	2.20E-02	2.25E-02
2302003200	55101	PM25	1.62E-03	0.97	1.03	1.03	1.05	1.57E-03	1.66E-03	1.66E-03	1.70E-03
2311010000	55101	PM25	7.84E-03	0.98	1.02	1.05	1.09	7.70E-03	7.99E-03	8.21E-03	8.55E-03
2311020000	55101	PM25	2.29E-01	0.98	1.02	1.05	1.09	2.25E-01	2.34E-01	2.40E-01	2.50E-01
2311030000	55101	PM25	1.28E-01	0.98	1.02	1.05	1.09	1.25E-01	1.30E-01	1.34E-01	1.39E-01
2610000100	55101	PM25	0.00E+00	0.99	1.01	0.97	1.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2610000400	55101	PM25	0.00E+00	0.99	1.01	0.97	1.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2610000500	55101	PM25	0.00E+00	0.99	1.01	0.97	1.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2610030000	55101	PM25	0.00E+00	0.99	1.01	0.97	1.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2104008100	55133	PM25	8.90E-02	0.99	1.01	0.95	0.94	8.77E-02	9.03E-02	8.44E-02	8.41E-02
2104008210	55133	PM25	2.13E-01	0.99	1.01	0.95	0.94	2.10E-01	2.16E-01	2.02E-01	2.01E-01
2104008220	55133	PM25	4.38E-02	0.99	1.01	0.95	0.94	4.32E-02	4.45E-02	4.16E-02	4.14E-02
2104008230	55133	PM25	1.52E-02	0.99	1.01	0.95	0.94	1.50E-02	1.54E-02	1.44E-02	1.44E-02
2104008310	55133	PM25	1.34E-01	0.99	1.01	0.95	0.94	1.32E-01	1.36E-01	1.27E-01	1.27E-01

SCC	FIPS	POLLUTANT	2008 (TPWD)	GF-2006	GF-2010	GF-2020	GF-2025	2006 (TPWD)	2010 (TPWD)	2020 (TPWD)	2025 (TPWD)
2104008320	55133	PM25	2.76E-02	0.99	1.01	0.95	0.94	2.72E-02	2.80E-02	2.62E-02	2.60E-02
2104008330	55133	PM25	9.57E-03	0.99	1.01	0.95	0.94	9.43E-03	9.72E-03	9.08E-03	9.05E-03
2104008400	55133	PM25	8.67E-03	0.99	1.01	0.95	0.94	8.55E-03	8.80E-03	8.23E-03	8.20E-03
2104008510	55133	PM25	3.37E-01	0.99	1.01	0.95	0.94	3.32E-01	3.42E-01	3.19E-01	3.18E-01
2104008610	55133	PM25	1.97E+00	0.99	1.01	0.95	0.94	1.94E+00	2.00E+00	1.87E+00	1.86E+00
2104009000	55133	PM25	2.05E-02	1.00	1.00	0.88	0.85	2.04E-02	2.05E-02	1.80E-02	1.73E-02
2294000000	55133	PM25	5.63E-01	0.99	1.01	0.97	1.00	5.56E-01	5.70E-01	5.47E-01	5.61E-01
2296000000	55133	PM25	3.60E-01	0.97	1.03	1.03	1.05	3.51E-01	3.71E-01	3.69E-01	3.78E-01
2302002100	55133	PM25	2.52E-02	0.97	1.03	1.03	1.05	2.45E-02	2.59E-02	2.58E-02	2.64E-02
2302002200	55133	PM25	1.78E-01	0.97	1.03	1.03	1.05	1.74E-01	1.83E-01	1.83E-01	1.87E-01
2302003100	55133	PM25	4.08E-02	0.97	1.03	1.03	1.05	3.98E-02	4.20E-02	4.19E-02	4.29E-02
2302003200	55133	PM25	3.08E-03	0.97	1.03	1.03	1.05	3.00E-03	3.17E-03	3.16E-03	3.24E-03
2311010000	55133	PM25	1.47E-02	0.98	1.02	1.05	1.09	1.44E-02	1.50E-02	1.54E-02	1.60E-02
2311020000	55133	PM25	9.08E-01	0.98	1.02	1.05	1.09	8.92E-01	9.25E-01	9.51E-01	9.91E-01
2311030000	55133	PM25	2.42E-01	0.98	1.02	1.05	1.09	2.38E-01	2.47E-01	2.53E-01	2.64E-01
2610000100	55133	PM25	0.00E+00	0.99	1.01	0.97	1.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2610000400	55133	PM25	0.00E+00	0.99	1.01	0.97	1.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2610000500	55133	PM25	0.00E+00	0.99	1.01	0.97	1.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2610030000	55133	PM25	0.00E+00	0.99	1.01	0.97	1.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2102004001	55079	SO2	1.93E-01	1.00	1.00	0.86	0.82	1.93E-01	1.92E-01	1.66E-01	1.58E-01
2102004002	55079	SO2	5.07E-02	1.00	1.00	0.86	0.82	5.09E-02	5.05E-02	4.37E-02	4.16E-02
2102005000	55079	SO2	1.71E-01	0.98	0.99	0.85	0.84	1.67E-01	1.69E-01	1.45E-01	1.43E-01
2102006000	55079	SO2	1.85E-03	0.98	1.04	1.02	1.07	1.81E-03	1.91E-03	1.89E-03	1.97E-03
2102008000	55079	SO2	7.14E-03	0.96	1.06	1.18	1.25	6.82E-03	7.53E-03	8.44E-03	8.93E-03
2102011000	55079	SO2	1.27E-06	0.98	0.98	0.89	0.89	1.25E-06	1.25E-06	1.13E-06	1.14E-06
2103002000	55079	SO2	6.60E-01	1.02	0.99	0.85	0.82	6.70E-01	6.52E-01	5.62E-01	5.40E-01
2103004001	55079	SO2	2.17E-01	1.00	1.00	0.86	0.82	2.17E-01	2.16E-01	1.87E-01	1.78E-01
2103004002	55079	SO2	1.88E-01	1.00	1.00	0.86	0.82	1.89E-01	1.87E-01	1.62E-01	1.54E-01
2103005000	55079	SO2	5.51E-04	0.99	1.03	0.88	0.86	5.48E-04	5.65E-04	4.86E-04	4.74E-04
2103006000	55079	SO2	1.46E-02	0.99	1.01	0.89	0.90	1.44E-02	1.47E-02	1.29E-02	1.31E-02
2103007000	55079	SO2	7.24E-04	0.98	1.00	0.88	0.86	7.12E-04	7.26E-04	6.36E-04	6.25E-04
2103008000	55079	SO2	1.76E-03	1.00	1.00	0.87	0.84	1.76E-03	1.76E-03	1.53E-03	1.48E-03
2103011000	55079	SO2	5.69E-04	0.98	1.00	0.89	0.89	5.57E-04	5.66E-04	5.05E-04	5.05E-04
2104004000	55079	SO2	5.78E-01	1.01	0.98	0.75	0.65	5.84E-01	5.68E-01	4.34E-01	3.79E-01

SCC	FIPS	POLLUTANT	2008 (TPWD)	GF-2006	GF-2010	GF-2020	GF-2025	2006 (TPWD)	2010 (TPWD)	2020 (TPWD)	2025 (TPWD)
2104006000	55079	SO2	2.62E-02	0.98	1.01	0.90	0.88	2.57E-02	2.65E-02	2.36E-02	2.30E-02
2104007000	55079	SO2	3.25E-04	0.98	1.01	0.94	0.93	3.17E-04	3.29E-04	3.07E-04	3.02E-04
2104008100	55079	SO2	4.13E-03	1.00	1.00	0.86	0.82	4.15E-03	4.11E-03	3.56E-03	3.39E-03
2104008210	55079	SO2	7.63E-03	1.00	1.00	0.86	0.82	7.66E-03	7.60E-03	6.58E-03	6.27E-03
2104008220	55079	SO2	2.45E-03	1.00	1.00	0.86	0.82	2.46E-03	2.44E-03	2.11E-03	2.01E-03
2104008230	55079	SO2	8.16E-04	1.00	1.00	0.86	0.82	8.19E-04	8.13E-04	7.03E-04	6.70E-04
2104008310	55079	SO2	4.80E-03	1.00	1.00	0.86	0.82	4.82E-03	4.78E-03	4.14E-03	3.94E-03
2104008320	55079	SO2	1.54E-03	1.00	1.00	0.86	0.82	1.55E-03	1.53E-03	1.33E-03	1.26E-03
2104008330	55079	SO2	5.13E-04	1.00	1.00	0.86	0.82	5.15E-04	5.11E-04	4.42E-04	4.21E-04
2104008400	55079	SO2	2.34E-03	1.00	1.00	0.86	0.82	2.35E-03	2.33E-03	2.02E-03	1.92E-03
2104008510	55079	SO2	6.86E-02	1.00	1.00	0.86	0.82	6.89E-02	6.83E-02	5.91E-02	5.63E-02
2104008610	55079	SO2	3.97E-01	1.00	1.00	0.86	0.82	3.99E-01	3.95E-01	3.42E-01	3.26E-01
2104011000	55079	SO2	3.68E-03	0.98	1.01	0.90	0.88	3.62E-03	3.70E-03	3.31E-03	3.24E-03
2610000100	55079	SO2	0.00E+00	0.99	1.01	0.97	1.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2610000400	55079	SO2	0.00E+00	0.99	1.01	0.97	1.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2610030000	55079	SO2	0.00E+00	0.99	1.01	0.97	1.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2102004001	55101	SO2	6.49E-02	0.99	1.01	0.92	0.90	6.43E-02	6.55E-02	5.96E-02	5.86E-02
2102004002	55101	SO2	1.71E-02	0.99	1.01	0.92	0.90	1.69E-02	1.72E-02	1.57E-02	1.54E-02
2102005000	55101	SO2	5.75E-02	0.98	0.99	0.85	0.84	5.61E-02	5.70E-02	4.90E-02	4.82E-02
2102006000	55101	SO2	6.23E-04	0.98	1.04	1.02	1.07	6.11E-04	6.45E-04	6.38E-04	6.65E-04
2102008000	55101	SO2	2.40E-03	0.96	1.06	1.18	1.25	2.30E-03	2.54E-03	2.84E-03	3.01E-03
2102011000	55101	SO2	4.29E-07	0.98	0.98	0.89	0.89	4.21E-07	4.22E-07	3.82E-07	3.83E-07
2103002000	55101	SO2	8.65E-02	1.02	0.99	0.85	0.82	8.79E-02	8.56E-02	7.37E-02	7.09E-02
2103004001	55101	SO2	2.84E-02	0.99	1.01	0.92	0.90	2.81E-02	2.87E-02	2.61E-02	2.56E-02
2103004002	55101	SO2	2.46E-02	0.99	1.01	0.92	0.90	2.44E-02	2.49E-02	2.26E-02	2.22E-02
2103005000	55101	SO2	7.23E-05	0.99	1.03	0.88	0.86	7.18E-05	7.41E-05	6.38E-05	6.22E-05
2103006000	55101	SO2	1.91E-03	0.99	1.01	0.89	0.90	1.90E-03	1.93E-03	1.70E-03	1.72E-03
2103007000	55101	SO2	9.50E-05	0.98	1.00	0.88	0.86	9.34E-05	9.52E-05	8.35E-05	8.19E-05
2103008000	55101	SO2	2.31E-04	1.00	1.00	0.87	0.84	2.31E-04	2.31E-04	2.01E-04	1.94E-04
2103011000	55101	SO2	7.46E-05	0.98	1.00	0.89	0.89	7.30E-05	7.43E-05	6.63E-05	6.62E-05
2104004000	55101	SO2	1.22E-01	1.01	0.98	0.75	0.65	1.24E-01	1.20E-01	9.19E-02	8.01E-02
2104006000	55101	SO2	4.72E-03	0.98	1.01	0.90	0.88	4.64E-03	4.78E-03	4.26E-03	4.16E-03
2104007000	55101	SO2	1.34E-04	0.98	1.01	0.94	0.93	1.31E-04	1.36E-04	1.27E-04	1.25E-04
2104008100	55101	SO2	2.48E-03	0.99	1.01	0.92	0.90	2.46E-03	2.50E-03	2.27E-03	2.24E-03

SCC	FIPS	POLLUTANT	2008 (TPWD)	GF-2006	GF-2010	GF-2020	GF-2025	2006 (TPWD)	2010 (TPWD)	2020 (TPWD)	2025 (TPWD)
2104008210	55101	SO2	1.54E-03	0.99	1.01	0.92	0.90	1.52E-03	1.55E-03	1.41E-03	1.39E-03
2104008220	55101	SO2	6.50E-04	0.99	1.01	0.92	0.90	6.44E-04	6.56E-04	5.97E-04	5.86E-04
2104008230	55101	SO2	2.10E-04	0.99	1.01	0.92	0.90	2.08E-04	2.12E-04	1.93E-04	1.90E-04
2104008310	55101	SO2	6.75E-03	0.99	1.01	0.92	0.90	6.68E-03	6.81E-03	6.19E-03	6.09E-03
2104008320	55101	SO2	2.13E-03	0.99	1.01	0.92	0.90	2.11E-03	2.15E-03	1.96E-03	1.92E-03
2104008330	55101	SO2	2.36E-03	0.99	1.01	0.92	0.90	2.34E-03	2.38E-03	2.16E-03	2.13E-03
2104008400	55101	SO2	1.00E-03	0.99	1.01	0.92	0.90	9.92E-04	1.01E-03	9.19E-04	9.03E-04
2104008510	55101	SO2	2.98E-02	0.99	1.01	0.92	0.90	2.95E-02	3.00E-02	2.73E-02	2.68E-02
2104008610	55101	SO2	7.02E-02	0.99	1.01	0.92	0.90	6.96E-02	7.09E-02	6.45E-02	6.34E-02
2104008700	55101	SO2	4.24E-03	0.99	1.01	0.92	0.90	4.20E-03	4.28E-03	3.89E-03	3.83E-03
2104011000	55101	SO2	7.78E-04	0.98	1.01	0.90	0.88	7.65E-04	7.82E-04	7.00E-04	6.85E-04
2610000100	55101	SO2	0.00E+00	0.99	1.01	0.97	1.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2610000400	55101	SO2	0.00E+00	0.99	1.01	0.97	1.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2610030000	55101	SO2	0.00E+00	0.99	1.01	0.97	1.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2102004001	55133	SO2	2.04E-01	0.99	1.01	0.95	0.94	2.01E-01	2.07E-01	1.93E-01	1.92E-01
2102004002	55133	SO2	5.36E-02	0.99	1.01	0.95	0.94	5.28E-02	5.44E-02	5.08E-02	5.06E-02
2102005000	55133	SO2	1.80E-01	0.98	0.99	0.85	0.84	1.76E-01	1.79E-01	1.54E-01	1.51E-01
2102006000	55133	SO2	1.95E-03	0.98	1.04	1.02	1.07	1.92E-03	2.02E-03	2.00E-03	2.08E-03
2102008000	55133	SO2	7.54E-03	0.96	1.06	1.18	1.25	7.21E-03	7.96E-03	8.92E-03	9.44E-03
2102011000	55133	SO2	1.35E-06	0.98	0.98	0.89	0.89	1.32E-06	1.32E-06	1.20E-06	1.20E-06
2103002000	55133	SO2	2.78E-01	1.02	0.99	0.85	0.82	2.82E-01	2.75E-01	2.37E-01	2.28E-01
2103004001	55133	SO2	9.13E-02	0.99	1.01	0.95	0.94	8.99E-02	9.26E-02	8.66E-02	8.63E-02
2103004002	55133	SO2	7.92E-02	0.99	1.01	0.95	0.94	7.80E-02	8.03E-02	7.51E-02	7.48E-02
2103005000	55133	SO2	2.32E-04	0.99	1.03	0.88	0.86	2.31E-04	2.38E-04	2.05E-04	2.00E-04
2103006000	55133	SO2	6.15E-03	0.99	1.01	0.89	0.90	6.09E-03	6.19E-03	5.45E-03	5.53E-03
2103007000	55133	SO2	3.05E-04	0.98	1.00	0.88	0.86	3.00E-04	3.06E-04	2.68E-04	2.63E-04
2103008000	55133	SO2	7.42E-04	1.00	1.00	0.87	0.84	7.42E-04	7.42E-04	6.45E-04	6.23E-04
2103011000	55133	SO2	2.40E-04	0.98	1.00	0.89	0.89	2.35E-04	2.39E-04	2.13E-04	2.13E-04
2104004000	55133	SO2	3.23E-01	1.01	0.98	0.75	0.65	3.26E-01	3.17E-01	2.43E-01	2.12E-01
2104006000	55133	SO2	9.07E-03	0.98	1.01	0.90	0.88	8.93E-03	9.20E-03	8.20E-03	7.99E-03
2104007000	55133	SO2	1.47E-04	0.98	1.01	0.94	0.93	1.43E-04	1.48E-04	1.38E-04	1.36E-04
2104008100	55133	SO2	1.51E-03	0.99	1.01	0.95	0.94	1.49E-03	1.53E-03	1.43E-03	1.42E-03
2104008210	55133	SO2	2.79E-03	0.99	1.01	0.95	0.94	2.75E-03	2.83E-03	2.64E-03	2.63E-03
2104008220	55133	SO2	8.94E-04	0.99	1.01	0.95	0.94	8.81E-04	9.08E-04	8.49E-04	8.45E-04

SCC	FIPS	POLLUTANT	2008 (TPWD)	GF-2006	GF-2010	GF-2020	GF-2025	2006 (TPWD)	2010 (TPWD)	2020 (TPWD)	2025 (TPWD)
2104008230	55133	SO2	2.98E-04	0.99	1.01	0.95	0.94	2.94E-04	3.02E-04	2.83E-04	2.81E-04
2104008310	55133	SO2	1.75E-03	0.99	1.01	0.95	0.94	1.73E-03	1.78E-03	1.66E-03	1.66E-03
2104008320	55133	SO2	5.62E-04	0.99	1.01	0.95	0.94	5.54E-04	5.71E-04	5.34E-04	5.31E-04
2104008330	55133	SO2	1.88E-04	0.99	1.01	0.95	0.94	1.85E-04	1.91E-04	1.78E-04	1.77E-04
2104008400	55133	SO2	9.07E-04	0.99	1.01	0.95	0.94	8.94E-04	9.21E-04	8.61E-04	8.57E-04
2104008510	55133	SO2	2.48E-02	0.99	1.01	0.95	0.94	2.44E-02	2.51E-02	2.35E-02	2.34E-02
2104008610	55133	SO2	1.45E-01	0.99	1.01	0.95	0.94	1.43E-01	1.47E-01	1.38E-01	1.37E-01
2104011000	55133	SO2	2.06E-03	0.98	1.01	0.90	0.88	2.02E-03	2.07E-03	1.85E-03	1.81E-03
2610000100	55133	SO2	0.00E+00	0.99	1.01	0.97	1.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2610000400	55133	SO2	0.00E+00	0.99	1.01	0.97	1.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2610030000	55133	SO2	0.00E+00	0.99	1.01	0.97	1.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2102004001	55079	VOC	1.19E-03	1.00	1.00	0.86	0.82	1.19E-03	1.18E-03	1.02E-03	9.76E-04
2102004001	55079	VOC	3.81E-06	1.00	1.00	0.86	0.82	3.82E-06	3.79E-06	3.28E-06	3.13E-06
2102004002	55079	VOC	6.94E-04	1.00	1.00	0.86	0.82	6.97E-04	6.92E-04	5.98E-04	5.70E-04
2102004002	55079	VOC	2.23E-06	1.00	1.00	0.86	0.82	2.23E-06	2.22E-06	1.92E-06	1.83E-06
2102005000	55079	VOC	4.36E-07	0.98	0.99	0.85	0.84	4.26E-07	4.32E-07	3.72E-07	3.66E-07
2102005000	55079	VOC	1.36E-04	0.98	0.99	0.85	0.84	1.33E-04	1.35E-04	1.16E-04	1.14E-04
2102006000	55079	VOC	5.43E-05	0.98	1.04	1.02	1.07	5.32E-05	5.62E-05	5.56E-05	5.79E-05
2102006000	55079	VOC	1.69E-02	0.98	1.04	1.02	1.07	1.66E-02	1.76E-02	1.74E-02	1.81E-02
2102008000	55079	VOC	1.55E-05	0.96	1.06	1.18	1.25	1.49E-05	1.64E-05	1.84E-05	1.95E-05
2102008000	55079	VOC	4.85E-03	0.96	1.06	1.18	1.25	4.64E-03	5.12E-03	5.74E-03	6.07E-03
2102011000	55079	VOC	2.48E-08	0.98	0.98	0.89	0.89	2.43E-08	2.43E-08	2.21E-08	2.21E-08
2102011000	55079	VOC	7.73E-06	0.98	0.98	0.89	0.89	7.58E-06	7.60E-06	6.89E-06	6.91E-06
2103002000	55079	VOC	2.20E-06	1.02	0.99	0.85	0.82	2.23E-06	2.18E-06	1.87E-06	1.80E-06
2103002000	55079	VOC	1.14E-03	1.02	0.99	0.85	0.82	1.16E-03	1.13E-03	9.74E-04	9.37E-04
2103004001	55079	VOC	4.92E-06	1.00	1.00	0.86	0.82	4.94E-06	4.90E-06	4.24E-06	4.04E-06
2103004001	55079	VOC	2.56E-03	1.00	1.00	0.86	0.82	2.57E-03	2.55E-03	2.20E-03	2.10E-03
2103004002	55079	VOC	2.49E-03	1.00	1.00	0.86	0.82	2.50E-03	2.48E-03	2.14E-03	2.04E-03
2103004002	55079	VOC	4.79E-06	1.00	1.00	0.86	0.82	4.80E-06	4.77E-06	4.12E-06	3.93E-06
2103005000	55079	VOC	7.94E-09	0.99	1.03	0.88	0.86	7.89E-09	8.15E-09	7.01E-09	6.83E-09
2103005000	55079	VOC	4.13E-06	0.99	1.03	0.88	0.86	4.10E-06	4.24E-06	3.64E-06	3.55E-06
2103006000	55079	VOC	2.57E-04	0.99	1.01	0.89	0.90	2.55E-04	2.59E-04	2.28E-04	2.31E-04
2103006000	55079	VOC	1.34E-01	0.99	1.01	0.89	0.90	1.32E-01	1.35E-01	1.19E-01	1.20E-01
2103007000	55079	VOC	1.28E-05	0.98	1.00	0.88	0.86	1.25E-05	1.28E-05	1.12E-05	1.10E-05

SCC	FIPS	POLLUTANT	2008 (TPWD)	GF-2006	GF-2010	GF-2020	GF-2025	2006 (TPWD)	2010 (TPWD)	2020 (TPWD)	2025 (TPWD)
2103007000	55079	VOC	6.64E-03	0.98	1.00	0.88	0.86	6.52E-03	6.65E-03	5.83E-03	5.73E-03
2103008000	55079	VOC	2.30E-06	1.00	1.00	0.87	0.84	2.30E-06	2.30E-06	2.00E-06	1.93E-06
2103008000	55079	VOC	1.20E-03	1.00	1.00	0.87	0.84	1.20E-03	1.20E-03	1.04E-03	1.01E-03
2103011000	55079	VOC	4.54E-08	0.98	1.00	0.89	0.89	4.45E-08	4.52E-08	4.04E-08	4.03E-08
2103011000	55079	VOC	2.36E-05	0.98	1.00	0.89	0.89	2.31E-05	2.35E-05	2.10E-05	2.10E-05
2104004000	55079	VOC	9.15E-07	1.01	0.98	0.75	0.65	9.24E-07	8.99E-07	6.87E-07	5.99E-07
2104004000	55079	VOC	9.50E-03	1.01	0.98	0.75	0.65	9.59E-03	9.33E-03	7.13E-03	6.22E-03
2104006000	55079	VOC	1.85E-04	0.98	1.01	0.90	0.88	1.82E-04	1.87E-04	1.67E-04	1.62E-04
2104006000	55079	VOC	2.40E-01	0.98	1.01	0.90	0.88	2.36E-01	2.43E-01	2.17E-01	2.11E-01
2104007000	55079	VOC	2.29E-06	0.98	1.01	0.94	0.93	2.24E-06	2.32E-06	2.16E-06	2.13E-06
2104007000	55079	VOC	2.98E-03	0.98	1.01	0.94	0.93	2.91E-03	3.01E-03	2.81E-03	2.77E-03
2104008100	55079	VOC	1.95E-01	1.00	1.00	0.86	0.82	1.96E-01	1.94E-01	1.68E-01	1.60E-01
2104008210	55079	VOC	1.01E+00	1.00	1.00	0.86	0.82	1.02E+00	1.01E+00	8.71E-01	8.30E-01
2104008220	55079	VOC	7.34E-02	1.00	1.00	0.86	0.82	7.37E-02	7.31E-02	6.33E-02	6.03E-02
2104008230	55079	VOC	3.06E-02	1.00	1.00	0.86	0.82	3.07E-02	3.05E-02	2.64E-02	2.51E-02
2104008310	55079	VOC	6.36E-01	1.00	1.00	0.86	0.82	6.39E-01	6.34E-01	5.48E-01	5.23E-01
2104008320	55079	VOC	4.62E-02	1.00	1.00	0.86	0.82	4.64E-02	4.60E-02	3.98E-02	3.79E-02
2104008330	55079	VOC	1.92E-02	1.00	1.00	0.86	0.82	1.93E-02	1.91E-02	1.66E-02	1.58E-02
2104008400	55079	VOC	3.00E-04	1.00	1.00	0.86	0.82	3.01E-04	2.99E-04	2.59E-04	2.46E-04
2104008510	55079	VOC	3.99E-01	1.00	1.00	0.86	0.82	4.00E-01	3.97E-01	3.44E-01	3.27E-01
2104008610	55079	VOC	2.31E+00	1.00	1.00	0.86	0.82	2.32E+00	2.30E+00	1.99E+00	1.90E+00
2104009000	55079	VOC	7.35E-02	1.00	1.00	0.88	0.85	7.32E-02	7.35E-02	6.46E-02	6.23E-02
2104011000	55079	VOC	5.82E-09	0.98	1.01	0.90	0.88	5.72E-09	5.85E-09	5.24E-09	5.13E-09
2104011000	55079	VOC	6.04E-05	0.98	1.01	0.90	0.88	5.94E-05	6.08E-05	5.44E-05	5.32E-05
2302002100	55079	VOC	1.57E-02	0.97	1.03	1.03	1.05	1.53E-02	1.62E-02	1.61E-02	1.65E-02
2302002200	55079	VOC	5.42E-02	0.97	1.03	1.03	1.05	5.28E-02	5.57E-02	5.55E-02	5.69E-02
2302003000	55079	VOC	1.65E-02	0.97	1.03	1.03	1.05	1.60E-02	1.69E-02	1.69E-02	1.73E-02
2302003100	55079	VOC	7.76E-03	0.97	1.03	1.03	1.05	7.56E-03	7.98E-03	7.96E-03	8.15E-03
2302003200	55079	VOC	3.02E-04	0.97	1.03	1.03	1.05	2.95E-04	3.11E-04	3.10E-04	3.18E-04
2401001000	55079	VOC	3.94E+00	0.96	1.04	1.08	1.11	3.78E+00	4.12E+00	4.24E+00	4.37E+00
2401005000	55079	VOC	6.15E-01	0.97	1.03	1.05	1.10	5.96E-01	6.32E-01	6.48E-01	6.80E-01
2401005000	55079	VOC	2.37E-03	0.97	1.03	1.05	1.10	2.29E-03	2.43E-03	2.49E-03	2.61E-03
2401008000	55079	VOC	3.56E-03	1.00	1.00	0.83	0.76	3.55E-03	3.57E-03	2.94E-03	2.71E-03
2401008000	55079	VOC	1.86E-05	1.00	1.00	0.83	0.76	1.86E-05	1.87E-05	1.54E-05	1.42E-05

SCC	FIPS	POLLUTANT	2008 (TPWD)	GF-2006	GF-2010	GF-2020	GF-2025	2006 (TPWD)	2010 (TPWD)	2020 (TPWD)	2025 (TPWD)
2401020000	55079	VOC	2.18E-01	0.98	0.98	1.08	1.26	2.12E-01	2.14E-01	2.36E-01	2.75E-01
2401020000	55079	VOC	8.38E-04	0.98	0.98	1.08	1.26	8.17E-04	8.22E-04	9.09E-04	1.06E-03
2401025000	55079	VOC	2.68E-01	0.98	0.98	1.08	1.26	2.61E-01	2.63E-01	2.90E-01	3.38E-01
2401025000	55079	VOC	1.03E-03	0.98	0.98	1.08	1.26	1.00E-03	1.01E-03	1.12E-03	1.30E-03
2401030000	55079	VOC	8.38E-02	1.04	0.96	0.94	1.01	8.70E-02	8.04E-02	7.89E-02	8.45E-02
2401030000	55079	VOC	3.22E-04	1.04	0.96	0.94	1.01	3.34E-04	3.09E-04	3.03E-04	3.25E-04
2401040000	55079	VOC	6.78E-01	0.97	1.01	1.09	1.19	6.60E-01	6.88E-01	7.36E-01	8.07E-01
2401040000	55079	VOC	2.61E-03	0.97	1.01	1.09	1.19	2.54E-03	2.65E-03	2.83E-03	3.11E-03
2401045000	55079	VOC	9.44E-01	0.97	1.01	1.09	1.19	9.19E-01	9.58E-01	1.03E+00	1.12E+00
2401045000	55079	VOC	3.63E-03	0.97	1.01	1.09	1.19	3.53E-03	3.69E-03	3.94E-03	4.33E-03
2401055000	55079	VOC	5.26E-01	0.86	1.14	1.62	1.94	4.55E-01	6.00E-01	8.53E-01	1.02E+00
2401055000	55079	VOC	2.02E-03	0.86	1.14	1.62	1.94	1.75E-03	2.31E-03	3.28E-03	3.92E-03
2401060000	55079	VOC	5.51E-02	0.98	0.99	1.08	1.23	5.40E-02	5.47E-02	5.94E-02	6.77E-02
2401060000	55079	VOC	2.12E-04	0.98	0.99	1.08	1.23	2.08E-04	2.10E-04	2.28E-04	2.60E-04
2401065000	55079	VOC	3.23E-03	0.98	0.99	1.08	1.23	3.16E-03	3.20E-03	3.48E-03	3.96E-03
2401065000	55079	VOC	1.24E-05	0.98	0.99	1.08	1.23	1.22E-05	1.23E-05	1.34E-05	1.52E-05
2401070000	55079	VOC	4.33E-01	0.95	1.04	1.12	1.24	4.10E-01	4.49E-01	4.86E-01	5.38E-01
2401070000	55079	VOC	1.66E-03	0.95	1.04	1.12	1.24	1.58E-03	1.73E-03	1.87E-03	2.07E-03
2401075000	55079	VOC	0.00E+00	0.97	1.00	1.00	1.08	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2401075000	55079	VOC	0.00E+00	0.97	1.00	1.00	1.08	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2401080000	55079	VOC	7.23E-03	0.97	1.00	1.00	1.08	7.05E-03	7.20E-03	7.24E-03	7.81E-03
2401080000	55079	VOC	2.78E-05	0.97	1.00	1.00	1.08	2.71E-05	2.77E-05	2.79E-05	3.00E-05
2401085000	55079	VOC	3.12E-02	0.96	1.04	1.12	1.20	2.99E-02	3.25E-02	3.49E-02	3.76E-02
2401085000	55079	VOC	1.20E-04	0.96	1.04	1.12	1.20	1.15E-04	1.25E-04	1.34E-04	1.44E-04
2401090000	55079	VOC	3.19E-01	0.97	1.02	1.05	1.13	3.08E-01	3.24E-01	3.33E-01	3.61E-01
2401090000	55079	VOC	1.23E-03	0.97	1.02	1.05	1.13	1.19E-03	1.25E-03	1.28E-03	1.39E-03
2401100000	55079	VOC	1.44E+00	0.93	1.07	1.30	1.48	1.33E+00	1.54E+00	1.87E+00	2.13E+00
2401200000	55079	VOC	9.14E-03	1.00	0.99	1.00	1.07	9.12E-03	9.08E-03	9.15E-03	9.74E-03
2415000000	55079	VOC	2.09E+00	0.98	1.00	1.04	1.15	2.05E+00	2.08E+00	2.17E+00	2.40E+00
2415000000	55079	VOC	6.69E-03	0.98	1.00	1.04	1.15	6.58E-03	6.67E-03	6.96E-03	7.69E-03
2425000000	55079	VOC	8.50E+00	1.02	0.97	0.97	1.04	8.66E+00	8.26E+00	8.25E+00	8.87E+00
2425000000	55079	VOC	2.72E-02	1.02	0.97	0.97	1.04	2.77E-02	2.65E-02	2.64E-02	2.84E-02
2460100000	55079	VOC	2.48E+00	0.99	1.01	0.97	1.00	2.45E+00	2.51E+00	2.41E+00	2.47E+00
2460200000	55079	VOC	2.35E+00	0.99	1.01	0.97	1.00	2.32E+00	2.38E+00	2.28E+00	2.34E+00

SCC	FIPS	POLLUTANT	2008 (TPWD)	GF-2006	GF-2010	GF-2020	GF-2025	2006 (TPWD)	2010 (TPWD)	2020 (TPWD)	2025 (TPWD)
2460400000	55079	VOC	1.78E+00	0.99	1.01	0.97	1.00	1.75E+00	1.80E+00	1.72E+00	1.77E+00
2460500000	55079	VOC	1.24E+00	0.99	1.01	0.97	1.00	1.23E+00	1.26E+00	1.20E+00	1.24E+00
2460600000	55079	VOC	7.44E-01	0.99	1.01	0.97	1.00	7.35E-01	7.54E-01	7.23E-01	7.41E-01
2460800000	55079	VOC	2.32E+00	0.99	1.01	0.97	1.00	2.30E+00	2.35E+00	2.26E+00	2.31E+00
2460900000	55079	VOC	9.14E-02	0.99	1.01	0.97	1.00	9.03E-02	9.25E-02	8.87E-02	9.10E-02
2461021000	55079	VOC	9.04E-01	0.95	1.05	1.16	1.25	8.55E-01	9.52E-01	1.05E+00	1.13E+00
2461022000	55079	VOC	2.18E-01	0.95	1.05	1.16	1.25	2.07E-01	2.30E-01	2.54E-01	2.74E-01
2461800000	55079	VOC	1.11E-02	0.99	1.01	0.97	1.00	1.09E-02	1.12E-02	1.07E-02	1.10E-02
2461800000	55079	VOC	5.21E-05	0.99	1.01	0.97	1.00	5.15E-05	5.28E-05	5.06E-05	5.19E-05
2501011011	55079	VOC	3.96E-01	1.00	1.00	0.86	0.82	3.97E-01	3.94E-01	3.41E-01	3.25E-01
2501011012	55079	VOC	7.72E-01	1.00	1.00	0.86	0.82	7.75E-01	7.69E-01	6.65E-01	6.34E-01
2501011013	55079	VOC	9.92E-02	1.00	1.00	0.86	0.82	9.96E-02	9.88E-02	8.54E-02	8.14E-02
2501011014	55079	VOC	2.96E-02	1.00	1.00	0.86	0.82	2.97E-02	2.95E-02	2.55E-02	2.43E-02
2501011015	55079	VOC	2.72E-03	1.00	1.00	0.86	0.82	2.73E-03	2.71E-03	2.34E-03	2.23E-03
2501012011	55079	VOC	1.26E-02	1.00	1.00	0.86	0.82	1.27E-02	1.26E-02	1.09E-02	1.04E-02
2501012012	55079	VOC	2.47E-02	1.00	1.00	0.86	0.82	2.48E-02	2.46E-02	2.13E-02	2.03E-02
2501012013	55079	VOC	1.35E-01	1.00	1.00	0.86	0.82	1.36E-01	1.35E-01	1.17E-01	1.11E-01
2501012014	55079	VOC	5.70E-02	1.00	1.00	0.86	0.82	5.73E-02	5.68E-02	4.91E-02	4.68E-02
2501012015	55079	VOC	5.24E-03	1.00	1.00	0.86	0.82	5.26E-03	5.21E-03	4.51E-03	4.30E-03
2501050120	55079	VOC	2.70E-01	1.00	1.00	0.83	0.76	2.70E-01	2.71E-01	2.24E-01	2.06E-01
2501050120	55079	VOC	8.67E-04	1.00	1.00	0.83	0.76	8.65E-04	8.70E-04	7.18E-04	6.61E-04
2501055120	55079	VOC	0.00E+00	1.00	1.00	0.86	0.82	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2501055120	55079	VOC	0.00E+00	1.00	1.00	0.86	0.82	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2501060050	55079	VOC	8.49E-01	1.00	1.00	0.83	0.76	8.48E-01	8.53E-01	7.03E-01	6.47E-01
2501060050	55079	VOC	2.71E-03	1.00	1.00	0.83	0.76	2.71E-03	2.72E-03	2.25E-03	2.07E-03
2501060100	55079	VOC	6.54E-01	1.00	1.00	0.83	0.76	6.53E-01	6.56E-01	5.42E-01	4.98E-01
2501060100	55079	VOC	1.71E-03	1.00	1.00	0.83	0.76	1.71E-03	1.72E-03	1.42E-03	1.30E-03
2501060201	55079	VOC	7.31E-02	1.00	1.00	0.83	0.76	7.29E-02	7.33E-02	6.05E-02	5.57E-02
2501060201	55079	VOC	2.18E-04	1.00	1.00	0.83	0.76	2.18E-04	2.19E-04	1.81E-04	1.66E-04
2501080050	55079	VOC	1.24E-01	0.93	1.07	1.19	1.28	1.16E-01	1.33E-01	1.48E-01	1.59E-01
2501080050	55079	VOC	3.98E-04	0.93	1.07	1.19	1.28	3.71E-04	4.25E-04	4.73E-04	5.10E-04
2501080100	55079	VOC	2.68E-02	0.93	1.07	1.19	1.28	2.50E-02	2.87E-02	3.19E-02	3.43E-02
2501080100	55079	VOC	7.36E-05	0.93	1.07	1.19	1.28	6.86E-05	7.87E-05	8.75E-05	9.44E-05
2505030120	55079	VOC	2.68E-02	1.00	1.00	0.83	0.76	2.68E-02	2.69E-02	2.22E-02	2.05E-02

SCC	FIPS	POLLUTANT	2008 (TPWD)	GF-2006	GF-2010	GF-2020	GF-2025	2006 (TPWD)	2010 (TPWD)	2020 (TPWD)	2025 (TPWD)
2505030120	55079	VOC	9.36E-05	1.00	1.00	0.83	0.76	9.34E-05	9.40E-05	7.75E-05	7.13E-05
2610000100	55079	VOC	0.00E+00	0.99	1.01	0.97	1.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2610000400	55079	VOC	0.00E+00	0.99	1.01	0.97	1.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2610000500	55079	VOC	0.00E+00	0.99	1.01	0.97	1.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2610030000	55079	VOC	0.00E+00	0.99	1.01	0.97	1.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2630010000	55079	VOC	1.24E-02	0.95	1.04	1.19	1.34	1.18E-02	1.29E-02	1.48E-02	1.66E-02
2630010000	55079	VOC	5.57E-05	0.95	1.04	1.19	1.34	5.30E-05	5.81E-05	6.65E-05	7.46E-05
2630020000	55079	VOC	0.00E+00	0.98	1.02	1.04	1.08	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2630020000	55079	VOC	0.00E+00	0.98	1.02	1.04	1.08	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2640000000	55079	VOC	2.99E-06	0.98	1.02	1.04	1.08	2.91E-06	3.05E-06	3.10E-06	3.24E-06
2640000000	55079	VOC	8.22E-09	0.98	1.02	1.04	1.08	8.02E-09	8.40E-09	8.54E-09	8.92E-09
2810030000	55079	VOC	3.92E-03	0.94	1.04	1.01	1.02	3.67E-03	4.06E-03	3.96E-03	4.00E-03
2810030000	55079	VOC	1.08E-05	0.94	1.04	1.01	1.02	1.01E-05	1.11E-05	1.09E-05	1.10E-05
2102004001	55101	VOC	4.00E-04	0.99	1.01	0.92	0.90	3.97E-04	4.04E-04	3.67E-04	3.61E-04
2102004001	55101	VOC	1.28E-06	0.99	1.01	0.92	0.90	1.27E-06	1.30E-06	1.18E-06	1.16E-06
2102004002	55101	VOC	2.34E-04	0.99	1.01	0.92	0.90	2.32E-04	2.36E-04	2.15E-04	2.11E-04
2102004002	55101	VOC	7.50E-07	0.99	1.01	0.92	0.90	7.43E-07	7.57E-07	6.88E-07	6.76E-07
2102005000	55101	VOC	1.47E-07	0.98	0.99	0.85	0.84	1.44E-07	1.46E-07	1.25E-07	1.23E-07
2102005000	55101	VOC	4.59E-05	0.98	0.99	0.85	0.84	4.48E-05	4.55E-05	3.91E-05	3.85E-05
2102006000	55101	VOC	1.83E-05	0.98	1.04	1.02	1.07	1.79E-05	1.90E-05	1.87E-05	1.95E-05
2102006000	55101	VOC	5.71E-03	0.98	1.04	1.02	1.07	5.60E-03	5.92E-03	5.85E-03	6.09E-03
2102008000	55101	VOC	5.24E-06	0.96	1.06	1.18	1.25	5.01E-06	5.53E-06	6.20E-06	6.56E-06
2102008000	55101	VOC	1.64E-03	0.96	1.06	1.18	1.25	1.56E-03	1.73E-03	1.93E-03	2.05E-03
2102011000	55101	VOC	8.35E-09	0.98	0.98	0.89	0.89	8.19E-09	8.21E-09	7.44E-09	7.46E-09
2102011000	55101	VOC	2.60E-06	0.98	0.98	0.89	0.89	2.56E-06	2.56E-06	2.32E-06	2.33E-06
2103002000	55101	VOC	2.89E-07	1.02	0.99	0.85	0.82	2.93E-07	2.86E-07	2.46E-07	2.37E-07
2103002000	55101	VOC	1.50E-04	1.02	0.99	0.85	0.82	1.52E-04	1.48E-04	1.28E-04	1.23E-04
2103004001	55101	VOC	6.45E-07	0.99	1.01	0.92	0.90	6.39E-07	6.51E-07	5.92E-07	5.82E-07
2103004001	55101	VOC	3.36E-04	0.99	1.01	0.92	0.90	3.33E-04	3.39E-04	3.08E-04	3.03E-04
2103004002	55101	VOC	3.26E-04	0.99	1.01	0.92	0.90	3.23E-04	3.29E-04	3.00E-04	2.94E-04
2103004002	55101	VOC	6.28E-07	0.99	1.01	0.92	0.90	6.22E-07	6.34E-07	5.76E-07	5.66E-07
2103005000	55101	VOC	1.04E-09	0.99	1.03	0.88	0.86	1.04E-09	1.07E-09	9.20E-10	8.96E-10
2103005000	55101	VOC	5.42E-07	0.99	1.03	0.88	0.86	5.38E-07	5.56E-07	4.78E-07	4.66E-07
2103006000	55101	VOC	3.37E-05	0.99	1.01	0.89	0.90	3.34E-05	3.40E-05	2.99E-05	3.04E-05

SCC	FIPS	POLLUTANT	2008 (TPWD)	GF-2006	GF-2010	GF-2020	GF-2025	2006 (TPWD)	2010 (TPWD)	2020 (TPWD)	2025 (TPWD)
2103006000	55101	VOC	1.75E-02	0.99	1.01	0.89	0.90	1.74E-02	1.77E-02	1.56E-02	1.58E-02
2103007000	55101	VOC	1.68E-06	0.98	1.00	0.88	0.86	1.65E-06	1.68E-06	1.47E-06	1.44E-06
2103007000	55101	VOC	8.71E-04	0.98	1.00	0.88	0.86	8.56E-04	8.73E-04	7.65E-04	7.51E-04
2103008000	55101	VOC	3.02E-07	1.00	1.00	0.87	0.84	3.02E-07	3.02E-07	2.63E-07	2.54E-07
2103008000	55101	VOC	1.57E-04	1.00	1.00	0.87	0.84	1.57E-04	1.57E-04	1.37E-04	1.32E-04
2103011000	55101	VOC	5.96E-09	0.98	1.00	0.89	0.89	5.83E-09	5.94E-09	5.30E-09	5.29E-09
2103011000	55101	VOC	3.10E-06	0.98	1.00	0.89	0.89	3.03E-06	3.09E-06	2.75E-06	2.75E-06
2104004000	55101	VOC	1.94E-07	1.01	0.98	0.75	0.65	1.96E-07	1.90E-07	1.45E-07	1.27E-07
2104004000	55101	VOC	2.01E-03	1.01	0.98	0.75	0.65	2.03E-03	1.97E-03	1.51E-03	1.32E-03
2104006000	55101	VOC	3.33E-05	0.98	1.01	0.90	0.88	3.27E-05	3.37E-05	3.01E-05	2.93E-05
2104006000	55101	VOC	4.33E-02	0.98	1.01	0.90	0.88	4.26E-02	4.39E-02	3.91E-02	3.81E-02
2104007000	55101	VOC	9.46E-07	0.98	1.01	0.94	0.93	9.23E-07	9.57E-07	8.93E-07	8.80E-07
2104007000	55101	VOC	1.23E-03	0.98	1.01	0.94	0.93	1.20E-03	1.24E-03	1.16E-03	1.14E-03
2104008100	55101	VOC	1.17E-01	0.99	1.01	0.92	0.90	1.16E-01	1.18E-01	1.07E-01	1.06E-01
2104008210	55101	VOC	2.04E-01	0.99	1.01	0.92	0.90	2.02E-01	2.06E-01	1.87E-01	1.84E-01
2104008220	55101	VOC	1.95E-02	0.99	1.01	0.92	0.90	1.93E-02	1.97E-02	1.79E-02	1.76E-02
2104008230	55101	VOC	7.89E-03	0.99	1.01	0.92	0.90	7.82E-03	7.96E-03	7.24E-03	7.12E-03
2104008310	55101	VOC	8.94E-01	0.99	1.01	0.92	0.90	8.86E-01	9.02E-01	8.20E-01	8.06E-01
2104008320	55101	VOC	6.40E-02	0.99	1.01	0.92	0.90	6.34E-02	6.46E-02	5.87E-02	5.77E-02
2104008330	55101	VOC	8.84E-02	0.99	1.01	0.92	0.90	8.76E-02	8.92E-02	8.11E-02	7.97E-02
2104008400	55101	VOC	1.28E-04	0.99	1.01	0.92	0.90	1.27E-04	1.29E-04	1.18E-04	1.16E-04
2104008510	55101	VOC	1.73E-01	0.99	1.01	0.92	0.90	1.71E-01	1.75E-01	1.59E-01	1.56E-01
2104008610	55101	VOC	4.08E-01	0.99	1.01	0.92	0.90	4.05E-01	4.12E-01	3.75E-01	3.68E-01
2104008700	55101	VOC	2.01E-01	0.99	1.01	0.92	0.90	1.99E-01	2.02E-01	1.84E-01	1.81E-01
2104009000	55101	VOC	2.24E-03	1.00	1.00	0.88	0.85	2.23E-03	2.24E-03	1.97E-03	1.90E-03
2104011000	55101	VOC	1.23E-09	0.98	1.01	0.90	0.88	1.21E-09	1.24E-09	1.11E-09	1.08E-09
2104011000	55101	VOC	1.28E-05	0.98	1.01	0.90	0.88	1.26E-05	1.29E-05	1.15E-05	1.13E-05
2302002100	55101	VOC	3.29E-03	0.97	1.03	1.03	1.05	3.21E-03	3.39E-03	3.38E-03	3.46E-03
2302002200	55101	VOC	1.13E-02	0.97	1.03	1.03	1.05	1.10E-02	1.17E-02	1.16E-02	1.19E-02
2302003000	55101	VOC	3.45E-03	0.97	1.03	1.03	1.05	3.36E-03	3.54E-03	3.53E-03	3.62E-03
2302003100	55101	VOC	1.62E-03	0.97	1.03	1.03	1.05	1.58E-03	1.67E-03	1.67E-03	1.71E-03
2302003200	55101	VOC	6.33E-05	0.97	1.03	1.03	1.05	6.17E-05	6.51E-05	6.49E-05	6.65E-05
2401001000	55101	VOC	8.25E-01	0.96	1.04	1.08	1.11	7.91E-01	8.62E-01	8.88E-01	9.15E-01
2401005000	55101	VOC	1.29E-01	0.97	1.03	1.05	1.10	1.25E-01	1.33E-01	1.36E-01	1.43E-01

SCC	FIPS	POLLUTANT	2008 (TPWD)	GF-2006	GF-2010	GF-2020	GF-2025	2006 (TPWD)	2010 (TPWD)	2020 (TPWD)	2025 (TPWD)
2401005000	55101	VOC	4.97E-04	0.97	1.03	1.05	1.10	4.81E-04	5.10E-04	5.23E-04	5.48E-04
2401008000	55101	VOC	1.56E-03	1.00	1.00	0.83	0.76	1.56E-03	1.57E-03	1.30E-03	1.19E-03
2401008000	55101	VOC	8.18E-06	1.00	1.00	0.83	0.76	8.16E-06	8.21E-06	6.77E-06	6.24E-06
2401015000	55101	VOC	1.14E-02	0.96	1.03	1.07	1.12	1.10E-02	1.18E-02	1.22E-02	1.28E-02
2401015000	55101	VOC	4.40E-05	0.96	1.03	1.07	1.12	4.23E-05	4.55E-05	4.69E-05	4.92E-05
2401020000	55101	VOC	8.59E-02	0.98	0.98	1.08	1.26	8.37E-02	8.43E-02	9.32E-02	1.09E-01
2401020000	55101	VOC	3.30E-04	0.98	0.98	1.08	1.26	3.22E-04	3.24E-04	3.58E-04	4.17E-04
2401025000	55101	VOC	2.07E-01	0.98	0.98	1.08	1.26	2.02E-01	2.03E-01	2.24E-01	2.62E-01
2401025000	55101	VOC	7.96E-04	0.98	0.98	1.08	1.26	7.76E-04	7.81E-04	8.63E-04	1.01E-03
2401030000	55101	VOC	6.86E-02	1.04	0.96	0.94	1.01	7.12E-02	6.58E-02	6.46E-02	6.92E-02
2401030000	55101	VOC	2.64E-04	1.04	0.96	0.94	1.01	2.74E-04	2.53E-04	2.48E-04	2.66E-04
2401040000	55101	VOC	0.00E+00	0.97	1.01	1.09	1.19	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2401040000	55101	VOC	0.00E+00	0.97	1.01	1.09	1.19	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2401045000	55101	VOC	4.74E-01	0.97	1.01	1.09	1.19	4.61E-01	4.81E-01	5.15E-01	5.65E-01
2401045000	55101	VOC	1.82E-03	0.97	1.01	1.09	1.19	1.77E-03	1.85E-03	1.98E-03	2.17E-03
2401055000	55101	VOC	1.57E-01	0.86	1.14	1.62	1.94	1.36E-01	1.79E-01	2.55E-01	3.04E-01
2401055000	55101	VOC	6.04E-04	0.86	1.14	1.62	1.94	5.22E-04	6.88E-04	9.79E-04	1.17E-03
2401060000	55101	VOC	5.51E-01	0.98	0.99	1.08	1.23	5.40E-01	5.47E-01	5.94E-01	6.77E-01
2401060000	55101	VOC	2.12E-03	0.98	0.99	1.08	1.23	2.08E-03	2.10E-03	2.28E-03	2.60E-03
2401065000	55101	VOC	0.00E+00	0.98	0.99	1.08	1.23	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2401065000	55101	VOC	0.00E+00	0.98	0.99	1.08	1.23	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2401070000	55101	VOC	1.43E-01	0.95	1.04	1.12	1.24	1.35E-01	1.48E-01	1.60E-01	1.77E-01
2401070000	55101	VOC	5.49E-04	0.95	1.04	1.12	1.24	5.20E-04	5.69E-04	6.17E-04	6.82E-04
2401075000	55101	VOC	1.63E-03	0.97	1.00	1.00	1.08	1.58E-03	1.62E-03	1.63E-03	1.76E-03
2401075000	55101	VOC	6.25E-06	0.97	1.00	1.00	1.08	6.09E-06	6.23E-06	6.26E-06	6.75E-06
2401080000	55101	VOC	0.00E+00	0.97	1.00	1.00	1.08	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2401080000	55101	VOC	0.00E+00	0.97	1.00	1.00	1.08	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2401085000	55101	VOC	1.33E-02	0.96	1.04	1.12	1.20	1.27E-02	1.38E-02	1.49E-02	1.60E-02
2401085000	55101	VOC	5.12E-05	0.96	1.04	1.12	1.20	4.90E-05	5.32E-05	5.73E-05	6.16E-05
2401090000	55101	VOC	1.84E-01	0.97	1.02	1.05	1.13	1.78E-01	1.88E-01	1.93E-01	2.09E-01
2401090000	55101	VOC	7.09E-04	0.97	1.02	1.05	1.13	6.87E-04	7.21E-04	7.42E-04	8.03E-04
2401100000	55101	VOC	3.01E-01	0.93	1.07	1.30	1.48	2.79E-01	3.22E-01	3.91E-01	4.45E-01
2401200000	55101	VOC	1.91E-03	1.00	0.99	1.00	1.07	1.91E-03	1.90E-03	1.91E-03	2.04E-03
2415000000	55101	VOC	4.91E-01	0.98	1.00	1.04	1.15	4.83E-01	4.89E-01	5.11E-01	5.65E-01

SCC	FIPS	POLLUTANT	2008 (TPWD)	GF-2006	GF-2010	GF-2020	GF-2025	2006 (TPWD)	2010 (TPWD)	2020 (TPWD)	2025 (TPWD)
2415000000	55101	VOC	1.57E-03	0.98	1.00	1.04	1.15	1.55E-03	1.57E-03	1.64E-03	1.81E-03
2425000000	55101	VOC	1.33E+00	1.02	0.97	0.97	1.04	1.36E+00	1.30E+00	1.30E+00	1.39E+00
2425000000	55101	VOC	4.28E-03	1.02	0.97	0.97	1.04	4.36E-03	4.16E-03	4.15E-03	4.46E-03
2460100000	55101	VOC	5.19E-01	0.99	1.01	0.97	1.00	5.13E-01	5.26E-01	5.04E-01	5.17E-01
2460200000	55101	VOC	4.92E-01	0.99	1.01	0.97	1.00	4.86E-01	4.98E-01	4.78E-01	4.90E-01
2460400000	55101	VOC	3.72E-01	0.99	1.01	0.97	1.00	3.67E-01	3.76E-01	3.61E-01	3.70E-01
2460500000	55101	VOC	2.60E-01	0.99	1.01	0.97	1.00	2.56E-01	2.63E-01	2.52E-01	2.58E-01
2460600000	55101	VOC	1.56E-01	0.99	1.01	0.97	1.00	1.54E-01	1.58E-01	1.51E-01	1.55E-01
2460800000	55101	VOC	4.86E-01	0.99	1.01	0.97	1.00	4.80E-01	4.92E-01	4.72E-01	4.84E-01
2460900000	55101	VOC	1.91E-02	0.99	1.01	0.97	1.00	1.89E-02	1.94E-02	1.86E-02	1.90E-02
2461021000	55101	VOC	1.36E-01	0.95	1.05	1.16	1.25	1.29E-01	1.43E-01	1.58E-01	1.70E-01
2461022000	55101	VOC	3.28E-02	0.95	1.05	1.16	1.25	3.11E-02	3.46E-02	3.82E-02	4.12E-02
2461800000	55101	VOC	5.13E-02	0.99	1.01	0.97	1.00	5.06E-02	5.19E-02	4.98E-02	5.10E-02
2461800000	55101	VOC	2.41E-04	0.99	1.01	0.97	1.00	2.38E-04	2.44E-04	2.34E-04	2.40E-04
2501011011	55101	VOC	7.08E-02	0.99	1.01	0.92	0.90	7.02E-02	7.15E-02	6.50E-02	6.39E-02
2501011012	55101	VOC	1.38E-01	0.99	1.01	0.92	0.90	1.37E-01	1.40E-01	1.27E-01	1.25E-01
2501011013	55101	VOC	1.78E-02	0.99	1.01	0.92	0.90	1.76E-02	1.79E-02	1.63E-02	1.60E-02
2501011014	55101	VOC	5.30E-03	0.99	1.01	0.92	0.90	5.25E-03	5.35E-03	4.86E-03	4.78E-03
2501011015	55101	VOC	4.87E-04	0.99	1.01	0.92	0.90	4.83E-04	4.92E-04	4.47E-04	4.39E-04
2501012011	55101	VOC	2.26E-03	0.99	1.01	0.92	0.90	2.24E-03	2.28E-03	2.08E-03	2.04E-03
2501012012	55101	VOC	4.42E-03	0.99	1.01	0.92	0.90	4.38E-03	4.46E-03	4.05E-03	3.98E-03
2501012013	55101	VOC	2.42E-02	0.99	1.01	0.92	0.90	2.40E-02	2.44E-02	2.22E-02	2.18E-02
2501012014	55101	VOC	1.02E-02	0.99	1.01	0.92	0.90	1.01E-02	1.03E-02	9.37E-03	9.21E-03
2501012015	55101	VOC	9.37E-04	0.99	1.01	0.92	0.90	9.29E-04	9.46E-04	8.60E-04	8.45E-04
2501050120	55101	VOC	4.52E-02	1.00	1.00	0.83	0.76	4.51E-02	4.54E-02	3.74E-02	3.44E-02
2501050120	55101	VOC	1.45E-04	1.00	1.00	0.83	0.76	1.45E-04	1.45E-04	1.20E-04	1.10E-04
2501055120	55101	VOC	1.42E-02	0.99	1.01	0.92	0.90	1.41E-02	1.43E-02	1.30E-02	1.28E-02
2501055120	55101	VOC	4.55E-05	0.99	1.01	0.92	0.90	4.51E-05	4.59E-05	4.17E-05	4.10E-05
2501060050	55101	VOC	2.04E-01	1.00	1.00	0.83	0.76	2.03E-01	2.04E-01	1.69E-01	1.55E-01
2501060050	55101	VOC	6.50E-04	1.00	1.00	0.83	0.76	6.49E-04	6.53E-04	5.39E-04	4.96E-04
2501060100	55101	VOC	1.57E-01	1.00	1.00	0.83	0.76	1.57E-01	1.57E-01	1.30E-01	1.20E-01
2501060100	55101	VOC	4.10E-04	1.00	1.00	0.83	0.76	4.09E-04	4.12E-04	3.40E-04	3.13E-04
2501060201	55101	VOC	1.75E-02	1.00	1.00	0.83	0.76	1.75E-02	1.76E-02	1.45E-02	1.34E-02
2501060201	55101	VOC	5.24E-05	1.00	1.00	0.83	0.76	5.23E-05	5.26E-05	4.34E-05	3.99E-05

SCC	FIPS	POLLUTANT	2008 (TPWD)	GF-2006	GF-2010	GF-2020	GF-2025	2006 (TPWD)	2010 (TPWD)	2020 (TPWD)	2025 (TPWD)
2501080050	55101	VOC	1.28E-01	0.93	1.07	1.19	1.28	1.19E-01	1.37E-01	1.52E-01	1.64E-01
2501080050	55101	VOC	4.09E-04	0.93	1.07	1.19	1.28	3.81E-04	4.38E-04	4.87E-04	5.25E-04
2501080100	55101	VOC	2.76E-02	0.93	1.07	1.19	1.28	2.57E-02	2.95E-02	3.28E-02	3.53E-02
2501080100	55101	VOC	7.58E-05	0.93	1.07	1.19	1.28	7.06E-05	8.10E-05	9.01E-05	9.71E-05
2505030120	55101	VOC	6.44E-03	1.00	1.00	0.83	0.76	6.42E-03	6.46E-03	5.33E-03	4.91E-03
2505030120	55101	VOC	2.25E-05	1.00	1.00	0.83	0.76	2.24E-05	2.25E-05	1.86E-05	1.71E-05
2610000100	55101	VOC	0.00E+00	0.99	1.01	0.97	1.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2610000400	55101	VOC	0.00E+00	0.99	1.01	0.97	1.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2610000500	55101	VOC	0.00E+00	0.99	1.01	0.97	1.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2610030000	55101	VOC	0.00E+00	0.99	1.01	0.97	1.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2630010000	55101	VOC	0.00E+00	0.95	1.04	1.19	1.34	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2630010000	55101	VOC	0.00E+00	0.95	1.04	1.19	1.34	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2630020000	55101	VOC	1.15E-02	0.98	1.02	1.04	1.08	1.13E-02	1.18E-02	1.20E-02	1.25E-02
2630020000	55101	VOC	4.44E-05	0.98	1.02	1.04	1.08	4.33E-05	4.54E-05	4.61E-05	4.82E-05
2640000000	55101	VOC	4.02E-06	0.98	1.02	1.04	1.08	3.93E-06	4.11E-06	4.18E-06	4.36E-06
2640000000	55101	VOC	1.10E-08	0.98	1.02	1.04	1.08	1.08E-08	1.13E-08	1.15E-08	1.20E-08
2810030000	55101	VOC	3.80E-03	0.94	1.04	1.01	1.02	3.56E-03	3.93E-03	3.84E-03	3.87E-03
2810030000	55101	VOC	1.04E-05	0.94	1.04	1.01	1.02	9.78E-06	1.08E-05	1.05E-05	1.06E-05
2102004001	55133	VOC	1.26E-03	0.99	1.01	0.95	0.94	1.24E-03	1.27E-03	1.19E-03	1.19E-03
2102004001	55133	VOC	4.03E-06	0.99	1.01	0.95	0.94	3.97E-06	4.09E-06	3.82E-06	3.80E-06
2102004002	55133	VOC	7.34E-04	0.99	1.01	0.95	0.94	7.23E-04	7.45E-04	6.97E-04	6.94E-04
2102004002	55133	VOC	2.35E-06	0.99	1.01	0.95	0.94	2.32E-06	2.39E-06	2.23E-06	2.22E-06
2102005000	55133	VOC	4.61E-07	0.98	0.99	0.85	0.84	4.50E-07	4.57E-07	3.93E-07	3.87E-07
2102005000	55133	VOC	1.44E-04	0.98	0.99	0.85	0.84	1.41E-04	1.43E-04	1.23E-04	1.21E-04
2102006000	55133	VOC	5.74E-05	0.98	1.04	1.02	1.07	5.63E-05	5.95E-05	5.88E-05	6.12E-05
2102006000	55133	VOC	1.79E-02	0.98	1.04	1.02	1.07	1.76E-02	1.86E-02	1.84E-02	1.91E-02
2102008000	55133	VOC	1.64E-05	0.96	1.06	1.18	1.25	1.57E-05	1.74E-05	1.94E-05	2.06E-05
2102008000	55133	VOC	5.13E-03	0.96	1.06	1.18	1.25	4.90E-03	5.42E-03	6.07E-03	6.42E-03
2102011000	55133	VOC	2.62E-08	0.98	0.98	0.89	0.89	2.57E-08	2.57E-08	2.33E-08	2.34E-08
2102011000	55133	VOC	8.17E-06	0.98	0.98	0.89	0.89	8.02E-06	8.04E-06	7.28E-06	7.30E-06
2103002000	55133	VOC	9.28E-07	1.02	0.99	0.85	0.82	9.42E-07	9.17E-07	7.90E-07	7.60E-07
2103002000	55133	VOC	4.82E-04	1.02	0.99	0.85	0.82	4.90E-04	4.77E-04	4.11E-04	3.95E-04
2103004001	55133	VOC	2.07E-06	0.99	1.01	0.95	0.94	2.04E-06	2.10E-06	1.97E-06	1.96E-06
2103004001	55133	VOC	1.08E-03	0.99	1.01	0.95	0.94	1.06E-03	1.09E-03	1.02E-03	1.02E-03

SCC	FIPS	POLLUTANT	2008 (TPWD)	GF-2006	GF-2010	GF-2020	GF-2025	2006 (TPWD)	2010 (TPWD)	2020 (TPWD)	2025 (TPWD)
2103004002	55133	VOC	1.05E-03	0.99	1.01	0.95	0.94	1.03E-03	1.06E-03	9.95E-04	9.91E-04
2103004002	55133	VOC	2.02E-06	0.99	1.01	0.95	0.94	1.99E-06	2.05E-06	1.91E-06	1.91E-06
2103005000	55133	VOC	3.35E-09	0.99	1.03	0.88	0.86	3.33E-09	3.43E-09	2.95E-09	2.88E-09
2103005000	55133	VOC	1.74E-06	0.99	1.03	0.88	0.86	1.73E-06	1.79E-06	1.54E-06	1.50E-06
2103006000	55133	VOC	1.08E-04	0.99	1.01	0.89	0.90	1.07E-04	1.09E-04	9.61E-05	9.76E-05
2103006000	55133	VOC	5.64E-02	0.99	1.01	0.89	0.90	5.58E-02	5.67E-02	5.00E-02	5.07E-02
2103007000	55133	VOC	5.38E-06	0.98	1.00	0.88	0.86	5.29E-06	5.39E-06	4.73E-06	4.64E-06
2103007000	55133	VOC	2.80E-03	0.98	1.00	0.88	0.86	2.75E-03	2.80E-03	2.46E-03	2.41E-03
2103008000	55133	VOC	9.70E-07	1.00	1.00	0.87	0.84	9.70E-07	9.70E-07	8.44E-07	8.15E-07
2103008000	55133	VOC	5.04E-04	1.00	1.00	0.87	0.84	5.04E-04	5.04E-04	4.39E-04	4.24E-04
2103011000	55133	VOC	1.91E-08	0.98	1.00	0.89	0.89	1.87E-08	1.91E-08	1.70E-08	1.70E-08
2103011000	55133	VOC	9.96E-06	0.98	1.00	0.89	0.89	9.75E-06	9.92E-06	8.85E-06	8.84E-06
2104004000	55133	VOC	5.12E-07	1.01	0.98	0.75	0.65	5.17E-07	5.02E-07	3.84E-07	3.35E-07
2104004000	55133	VOC	5.31E-03	1.01	0.98	0.75	0.65	5.36E-03	5.22E-03	3.99E-03	3.48E-03
2104006000	55133	VOC	6.40E-05	0.98	1.01	0.90	0.88	6.29E-05	6.48E-05	5.78E-05	5.63E-05
2104006000	55133	VOC	8.32E-02	0.98	1.01	0.90	0.88	8.18E-02	8.43E-02	7.51E-02	7.32E-02
2104007000	55133	VOC	1.03E-06	0.98	1.01	0.94	0.93	1.01E-06	1.05E-06	9.76E-07	9.62E-07
2104007000	55133	VOC	1.34E-03	0.98	1.01	0.94	0.93	1.31E-03	1.36E-03	1.27E-03	1.25E-03
2104008100	55133	VOC	7.13E-02	0.99	1.01	0.95	0.94	7.02E-02	7.23E-02	6.76E-02	6.73E-02
2104008210	55133	VOC	3.69E-01	0.99	1.01	0.95	0.94	3.64E-01	3.75E-01	3.50E-01	3.49E-01
2104008220	55133	VOC	2.68E-02	0.99	1.01	0.95	0.94	2.64E-02	2.72E-02	2.55E-02	2.53E-02
2104008230	55133	VOC	1.12E-02	0.99	1.01	0.95	0.94	1.10E-02	1.13E-02	1.06E-02	1.06E-02
2104008310	55133	VOC	2.32E-01	0.99	1.01	0.95	0.94	2.29E-01	2.36E-01	2.21E-01	2.20E-01
2104008320	55133	VOC	1.69E-02	0.99	1.01	0.95	0.94	1.66E-02	1.71E-02	1.60E-02	1.59E-02
2104008330	55133	VOC	7.04E-03	0.99	1.01	0.95	0.94	6.94E-03	7.14E-03	6.68E-03	6.65E-03
2104008400	55133	VOC	1.16E-04	0.99	1.01	0.95	0.94	1.15E-04	1.18E-04	1.10E-04	1.10E-04
2104008510	55133	VOC	1.44E-01	0.99	1.01	0.95	0.94	1.42E-01	1.46E-01	1.37E-01	1.36E-01
2104008610	55133	VOC	8.43E-01	0.99	1.01	0.95	0.94	8.30E-01	8.55E-01	7.99E-01	7.96E-01
2104009000	55133	VOC	2.85E-02	1.00	1.00	0.88	0.85	2.84E-02	2.85E-02	2.51E-02	2.42E-02
2104011000	55133	VOC	3.38E-05	0.98	1.01	0.90	0.88	3.32E-05	3.40E-05	3.04E-05	2.98E-05
2104011000	55133	VOC	3.26E-09	0.98	1.01	0.90	0.88	3.20E-09	3.27E-09	2.93E-09	2.87E-09
2302002100	55133	VOC	6.29E-03	0.97	1.03	1.03	1.05	6.13E-03	6.47E-03	6.44E-03	6.60E-03
2302002200	55133	VOC	2.16E-02	0.97	1.03	1.03	1.05	2.11E-02	2.22E-02	2.22E-02	2.27E-02
2302003000	55133	VOC	6.57E-03	0.97	1.03	1.03	1.05	6.41E-03	6.76E-03	6.74E-03	6.90E-03

SCC	FIPS	POLLUTANT	2008 (TPWD)	GF-2006	GF-2010	GF-2020	GF-2025	2006 (TPWD)	2010 (TPWD)	2020 (TPWD)	2025 (TPWD)
2302003100	55133	VOC	3.10E-03	0.97	1.03	1.03	1.05	3.02E-03	3.19E-03	3.18E-03	3.25E-03
2302003200	55133	VOC	1.21E-04	0.97	1.03	1.03	1.05	1.18E-04	1.24E-04	1.24E-04	1.27E-04
2401001000	55133	VOC	1.57E+00	0.96	1.04	1.08	1.11	1.51E+00	1.64E+00	1.69E+00	1.75E+00
2401005000	55133	VOC	3.32E-01	0.97	1.03	1.05	1.10	3.22E-01	3.42E-01	3.50E-01	3.67E-01
2401005000	55133	VOC	1.28E-03	0.97	1.03	1.05	1.10	1.24E-03	1.31E-03	1.35E-03	1.41E-03
2401008000	55133	VOC	3.58E-03	1.00	1.00	0.83	0.76	3.57E-03	3.60E-03	2.97E-03	2.73E-03
2401008000	55133	VOC	1.87E-05	1.00	1.00	0.83	0.76	1.87E-05	1.88E-05	1.55E-05	1.43E-05
2401015000	55133	VOC	3.85E-02	0.96	1.03	1.07	1.12	3.71E-02	3.99E-02	4.11E-02	4.32E-02
2401015000	55133	VOC	1.48E-04	0.96	1.03	1.07	1.12	1.43E-04	1.53E-04	1.58E-04	1.66E-04
2401020000	55133	VOC	1.99E-01	0.98	0.98	1.08	1.26	1.94E-01	1.96E-01	2.16E-01	2.52E-01
2401020000	55133	VOC	7.66E-04	0.98	0.98	1.08	1.26	7.47E-04	7.52E-04	8.31E-04	9.69E-04
2401025000	55133	VOC	8.65E-02	0.98	0.98	1.08	1.26	8.43E-02	8.48E-02	9.38E-02	1.09E-01
2401025000	55133	VOC	3.33E-04	0.98	0.98	1.08	1.26	3.24E-04	3.26E-04	3.61E-04	4.20E-04
2401030000	55133	VOC	7.10E-02	1.04	0.96	0.94	1.01	7.36E-02	6.81E-02	6.68E-02	7.15E-02
2401030000	55133	VOC	2.73E-04	1.04	0.96	0.94	1.01	2.83E-04	2.62E-04	2.57E-04	2.75E-04
2401040000	55133	VOC	4.98E-01	0.97	1.01	1.09	1.19	4.84E-01	5.05E-01	5.40E-01	5.93E-01
2401040000	55133	VOC	1.91E-03	0.97	1.01	1.09	1.19	1.86E-03	1.94E-03	2.08E-03	2.28E-03
2401045000	55133	VOC	6.37E-01	0.97	1.01	1.09	1.19	6.20E-01	6.47E-01	6.92E-01	7.59E-01
2401045000	55133	VOC	2.45E-03	0.97	1.01	1.09	1.19	2.39E-03	2.49E-03	2.66E-03	2.92E-03
2401055000	55133	VOC	3.35E-01	0.86	1.14	1.62	1.94	2.89E-01	3.81E-01	5.42E-01	6.48E-01
2401055000	55133	VOC	1.29E-03	0.86	1.14	1.62	1.94	1.11E-03	1.47E-03	2.09E-03	2.49E-03
2401060000	55133	VOC	3.15E-03	0.98	0.99	1.08	1.23	3.09E-03	3.13E-03	3.39E-03	3.87E-03
2401060000	55133	VOC	1.21E-05	0.98	0.99	1.08	1.23	1.19E-05	1.20E-05	1.31E-05	1.49E-05
2401065000	55133	VOC	2.07E-02	0.98	0.99	1.08	1.23	2.03E-02	2.06E-02	2.23E-02	2.55E-02
2401065000	55133	VOC	7.98E-05	0.98	0.99	1.08	1.23	7.81E-05	7.91E-05	8.59E-05	9.79E-05
2401070000	55133	VOC	1.33E-01	0.95	1.04	1.12	1.24	1.26E-01	1.38E-01	1.49E-01	1.65E-01
2401070000	55133	VOC	5.11E-04	0.95	1.04	1.12	1.24	4.84E-04	5.30E-04	5.74E-04	6.35E-04
2401075000	55133	VOC	9.98E-04	0.97	1.00	1.00	1.08	9.72E-04	9.93E-04	9.99E-04	1.08E-03
2401075000	55133	VOC	3.84E-06	0.97	1.00	1.00	1.08	3.74E-06	3.82E-06	3.84E-06	4.14E-06
2401085000	55133	VOC	2.22E-03	0.96	1.04	1.12	1.20	2.12E-03	2.31E-03	2.48E-03	2.67E-03
2401085000	55133	VOC	8.53E-06	0.96	1.04	1.12	1.20	8.16E-06	8.87E-06	9.55E-06	1.03E-05
2401090000	55133	VOC	2.96E-01	0.97	1.02	1.05	1.13	2.86E-01	3.01E-01	3.09E-01	3.35E-01
2401090000	55133	VOC	1.14E-03	0.97	1.02	1.05	1.13	1.10E-03	1.16E-03	1.19E-03	1.29E-03
2401100000	55133	VOC	5.74E-01	0.93	1.07	1.30	1.48	5.33E-01	6.14E-01	7.46E-01	8.49E-01

SCC	FIPS	POLLUTANT	2008 (TPWD)	GF-2006	GF-2010	GF-2020	GF-2025	2006 (TPWD)	2010 (TPWD)	2020 (TPWD)	2025 (TPWD)
2401200000	55133	VOC	3.65E-03	1.00	0.99	1.00	1.07	3.64E-03	3.63E-03	3.65E-03	3.89E-03
2415000000	55133	VOC	1.60E+00	0.98	1.00	1.04	1.15	1.57E+00	1.59E+00	1.66E+00	1.84E+00
2415000000	55133	VOC	5.12E-03	0.98	1.00	1.04	1.15	5.04E-03	5.10E-03	5.33E-03	5.89E-03
2425000000	55133	VOC	3.66E+00	1.02	0.97	0.97	1.04	3.73E+00	3.56E+00	3.56E+00	3.82E+00
2425000000	55133	VOC	1.17E-02	1.02	0.97	0.97	1.04	1.20E-02	1.14E-02	1.14E-02	1.22E-02
2460100000	55133	VOC	9.91E-01	0.99	1.01	0.97	1.00	9.78E-01	1.00E+00	9.62E-01	9.86E-01
2460200000	55133	VOC	9.39E-01	0.99	1.01	0.97	1.00	9.27E-01	9.50E-01	9.11E-01	9.34E-01
2460400000	55133	VOC	7.09E-01	0.99	1.01	0.97	1.00	7.00E-01	7.18E-01	6.88E-01	7.06E-01
2460500000	55133	VOC	4.95E-01	0.99	1.01	0.97	1.00	4.89E-01	5.01E-01	4.81E-01	4.93E-01
2460600000	55133	VOC	2.97E-01	0.99	1.01	0.97	1.00	2.94E-01	3.01E-01	2.88E-01	2.96E-01
2460800000	55133	VOC	9.28E-01	0.99	1.01	0.97	1.00	9.17E-01	9.40E-01	9.01E-01	9.24E-01
2460900000	55133	VOC	3.65E-02	0.99	1.01	0.97	1.00	3.60E-02	3.69E-02	3.54E-02	3.63E-02
2461021000	55133	VOC	3.42E-01	0.95	1.05	1.16	1.25	3.24E-01	3.60E-01	3.97E-01	4.29E-01
2461022000	55133	VOC	8.26E-02	0.95	1.05	1.16	1.25	7.82E-02	8.70E-02	9.60E-02	1.04E-01
2461800000	55133	VOC	3.52E-02	0.99	1.01	0.97	1.00	3.48E-02	3.57E-02	3.42E-02	3.51E-02
2461800000	55133	VOC	1.66E-04	0.99	1.01	0.97	1.00	1.64E-04	1.68E-04	1.61E-04	1.65E-04
2501011011	55133	VOC	3.10E-01	0.99	1.01	0.95	0.94	3.06E-01	3.15E-01	2.94E-01	2.93E-01
2501011012	55133	VOC	6.06E-01	0.99	1.01	0.95	0.94	5.97E-01	6.14E-01	5.75E-01	5.72E-01
2501011013	55133	VOC	7.77E-02	0.99	1.01	0.95	0.94	7.66E-02	7.89E-02	7.38E-02	7.34E-02
2501011014	55133	VOC	2.32E-02	0.99	1.01	0.95	0.94	2.29E-02	2.35E-02	2.20E-02	2.19E-02
2501011015	55133	VOC	2.13E-03	0.99	1.01	0.95	0.94	2.10E-03	2.16E-03	2.02E-03	2.02E-03
2501012011	55133	VOC	9.91E-03	0.99	1.01	0.95	0.94	9.76E-03	1.01E-02	9.40E-03	9.36E-03
2501012012	55133	VOC	1.93E-02	0.99	1.01	0.95	0.94	1.91E-02	1.96E-02	1.83E-02	1.83E-02
2501012013	55133	VOC	1.06E-01	0.99	1.01	0.95	0.94	1.04E-01	1.08E-01	1.01E-01	1.00E-01
2501012014	55133	VOC	4.47E-02	0.99	1.01	0.95	0.94	4.40E-02	4.54E-02	4.24E-02	4.22E-02
2501012015	55133	VOC	4.10E-03	0.99	1.01	0.95	0.94	4.04E-03	4.17E-03	3.89E-03	3.88E-03
2501050120	55133	VOC	3.23E-01	1.00	1.00	0.83	0.76	3.22E-01	3.24E-01	2.68E-01	2.46E-01
2501050120	55133	VOC	1.04E-03	1.00	1.00	0.83	0.76	1.03E-03	1.04E-03	8.58E-04	7.89E-04
2501055120	55133	VOC	1.01E-01	0.99	1.01	0.95	0.94	9.99E-02	1.03E-01	9.62E-02	9.58E-02
2501055120	55133	VOC	3.25E-04	0.99	1.01	0.95	0.94	3.20E-04	3.30E-04	3.08E-04	3.07E-04
2501060050	55133	VOC	5.00E-01	1.00	1.00	0.83	0.76	4.99E-01	5.02E-01	4.14E-01	3.81E-01
2501060050	55133	VOC	1.60E-03	1.00	1.00	0.83	0.76	1.59E-03	1.60E-03	1.32E-03	1.22E-03
2501060100	55133	VOC	3.85E-01	1.00	1.00	0.83	0.76	3.84E-01	3.86E-01	3.19E-01	2.93E-01
2501060100	55133	VOC	1.01E-03	1.00	1.00	0.83	0.76	1.00E-03	1.01E-03	8.34E-04	7.67E-04

SCC	FIPS	POLLUTANT	2008 (TPWD)	GF-2006	GF-2010	GF-2020	GF-2025	2006 (TPWD)	2010 (TPWD)	2020 (TPWD)	2025 (TPWD)
2501060201	55133	VOC	4.30E-02	1.00	1.00	0.83	0.76	4.29E-02	4.32E-02	3.56E-02	3.28E-02
2501060201	55133	VOC	1.29E-04	1.00	1.00	0.83	0.76	1.28E-04	1.29E-04	1.06E-04	9.79E-05
2501080050	55133	VOC	1.22E-01	0.93	1.07	1.19	1.28	1.14E-01	1.31E-01	1.45E-01	1.57E-01
2501080050	55133	VOC	3.92E-04	0.93	1.07	1.19	1.28	3.65E-04	4.19E-04	4.66E-04	5.03E-04
2501080100	55133	VOC	2.64E-02	0.93	1.07	1.19	1.28	2.46E-02	2.83E-02	3.14E-02	3.39E-02
2501080100	55133	VOC	7.26E-05	0.93	1.07	1.19	1.28	6.76E-05	7.76E-05	8.63E-05	9.30E-05
2505030120	55133	VOC	1.58E-02	1.00	1.00	0.83	0.76	1.58E-02	1.59E-02	1.31E-02	1.20E-02
2505030120	55133	VOC	5.51E-05	1.00	1.00	0.83	0.76	5.50E-05	5.53E-05	4.56E-05	4.20E-05
2610000100	55133	VOC	0.00E+00	0.99	1.01	0.97	1.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2610000400	55133	VOC	0.00E+00	0.99	1.01	0.97	1.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2610000500	55133	VOC	0.00E+00	0.99	1.01	0.97	1.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2610030000	55133	VOC	0.00E+00	0.99	1.01	0.97	1.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2630010000	55133	VOC	0.00E+00	0.95	1.04	1.19	1.34	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2630010000	55133	VOC	0.00E+00	0.95	1.04	1.19	1.34	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2630020000	55133	VOC	1.30E-02	0.98	1.02	1.04	1.08	1.27E-02	1.33E-02	1.35E-02	1.41E-02
2630020000	55133	VOC	5.01E-05	0.98	1.02	1.04	1.08	4.89E-05	5.12E-05	5.21E-05	5.44E-05
2640000000	55133	VOC	4.50E-05	0.98	1.02	1.04	1.08	4.39E-05	4.60E-05	4.67E-05	4.88E-05
2640000000	55133	VOC	1.23E-07	0.98	1.02	1.04	1.08	1.20E-07	1.26E-07	1.28E-07	1.34E-07
2810030000	55133	VOC	4.90E-03	0.94	1.04	1.01	1.02	4.60E-03	5.08E-03	4.96E-03	5.00E-03
2810030000	55133	VOC	1.35E-05	0.94	1.04	1.01	1.02	1.26E-05	1.40E-05	1.36E-05	1.37E-05

Red font indicates population growth factors.

Population Estimates						
GeoName	PopAll2005	PopAll2006 (est)	PopAll2008 (est)	PopAll2010	PopAll2020	PopAll2025
MILWAUKEE	938,497	936,639	932,924	929,208	923,910	912,020
RACINE	193,573	194,484	196,307	198,130	207,041	210,772
WAUKESHA	377,905	380,764	386,481	392,198	421,489	434,657

<http://www.doa.state.wi.us/docview.asp?locid=9&docid=2107>

Population Estimated Growth Factors				
GeoName	2006	2010	2020	2025
MILWAUKEE	1.0040	0.9960	0.9903	0.9776
RACINE	0.9907	1.0093	1.0547	1.0737
WAUKESHA	0.9852	1.0148	1.0906	1.1247

COUNTY	FIPS
MILWAUKEE	55079
RACINE	55101
WAUKESHA	55133

Energy Consumption (Quadrillion Btu / Year)				
Year	2010	2015	2020	2025
2004 AEO	111.77	119.75	127.92	136.48
2008 AEO	103.34	107.26	110.85	114.54
2009 AEO	99.06	102.08	104.67	108.16
2010 AEO	96.61	101.61	105.00	108.26
2011 AEO	97.77	102.02	104.92	107.95
2012 AEO	98.16	97.66	100.93	102.93

Percent Change from 2004 AEO	
2020	2025
-	-
-13.34%	-16.08%
-18.18%	-20.75%
-17.92%	-20.68%
-17.98%	-20.90%
-21.10%	-24.58%

<http://www.eia.gov/forecasts/aeo/index.cfm>

Conclusions

- * The EGAS growth factors are based on the 2004 Annual Energy Outlook from the U.S. Department of Energy.
- * Based on the 2008 - 2012 AEO reports, energy consumption projections for 2020 have decreased by 13.34 - 21.10%.
- * Based on the 2008 - 2012 AEO reports, energy consumption projections for 2025 have decreased by 16.08 - 24.58%.
- * To reflect these reduced energy consumption projections, the 2020 and 2025 growth factors were conservatively reduced by 13% and 16%, respectively.

APPENDIX 6

Summary of Onroad Emissions for PM2.5 Redesignation SIP Inventory
Using U.S. EPA's MOVES2010a Model

2006	FIPS Code	NOx (tons per Jan. wkdy)	PM2.5 (tons per Jan. wkdy)	SO2 (tons per Jan. wkdy)	VOC (tons per Jan. wkdy)	January Weekday VMT	Vehicle Population
Milwaukee Co.	55079	53.93	2.74	0.88	26.68	18,013,879	551,282
Racine Co.	55101	10.48	0.49	0.16	5.62	3,968,227	123,581
Waukesha Co.	55133	28.69	1.39	0.45	15.26	10,705,254	330,439
2010	FIPS Code	NOx (tons per Jan. wkdy)	PM2.5 (tons per Jan. wkdy)	SO2 (tons per Jan. wkdy)	VOC (tons per Jan. wkdy)	January Weekday VMT	Vehicle Population
Milwaukee Co.	55079	34.73	1.86	0.25	19.17	17,052,240	527,225
Racine Co.	55101	7.96	0.40	0.06	4.63	4,258,146	133,003
Waukesha Co.	55133	23.02	1.19	0.16	13.44	12,234,608	379,442
2020	FIPS Code	NOx (tons per Jan. wkdy)	PM2.5 (tons per Jan. wkdy)	SO2 (tons per Jan. wkdy)	VOC (tons per Jan. wkdy)	January Weekday VMT	Vehicle Population
Milwaukee Co.	55079	18.60	1.32	0.22	8.72	21,490,660	650,395
Racine Co.	55101	3.91	0.28	0.05	2.01	5,170,693	159,714
Waukesha Co.	55133	10.11	0.73	0.12	5.16	13,127,292	401,771
2025	FIPS Code	NOx (tons per Jan. wkdy)	PM2.5 (tons per Jan. wkdy)	SO2 (tons per Jan. wkdy)	VOC (tons per Jan. wkdy)	January Weekday VMT	Vehicle Population
Milwaukee Co.	55079	16.32	1.22	0.21	6.63	22,698,923	678,923
Racine Co.	55101	3.45	0.26	0.05	1.52	5,461,397	166,850
Waukesha Co.	55133	8.92	0.68	0.12	3.83	13,865,343	419,575

NOTES:

- The emission values include a "safety margin" of 7.5% for the years 2020 and 2025.
- VOC emissions do not include those from vehicle refueling. Those emissions are accounted for in the area source inventory.
- MOVES input files can be obtained by contacting Mr. Christopher Bovee (Christopher.Bovee@wisconsin.gov or 608-266-5542)

February 24, 2012

APPENDIX 7: 2020 AND 2025 POINT SOURCE EMISSIONS CALCULATIONS

Projected Point Emissions								
County	FIPS ID	NOx (TPWD)		PM25 (TPWD)		SO2 (TPWD)		VOC (TPWD)
		2020 (est)	2025 (est)	2020 (est)	2025 (est)	2020 (est)	2025 (est)	2015 (est)
Milwaukee	55079	21.23	17.08	0.23	0.30	27.00	9.52	5.79
Racine	55101	1.16	1.15	0.05	0.08	0.68	0.78	1.30
Waukesha	55133	1.55	1.74	0.04	0.06	0.16	0.15	3.22
								3.49

Calculations for 2020 and 2025 Inventories (NOx)							
County	2018 EGU NOx	2018 Non-EGU NOx	2018 Point NOx	2020(est)	2025(est)	2020 est (mod)	2025 est (mod)
Milwaukee	14.97	4.56	19.53	17.93	13.93	21.23	17.08
Racine	N/A	1.17	1.17	1.16	1.15	1.16	1.15
Waukesha	N/A	1.47	1.47	1.55	1.74	1.55	1.74

Notes:

2018 Non-EGU estimates based on LADCO Base C, Version 7 modeling.

EGU 2018 estimates based on LADCO Base M 5B modeling (includes NOx RACT). Excludes We Energies - Elm Road (FID 241219440).

2020 and 2025 estimates are modified to include projected emissions from We Energies - Elm Road (FID 241219440) - as well as EGU PM2.5 emissions - which were not included in the 2018 LADCO projections.

Point Source NOx total 2010:

Milwaukee	25.93
Racine	1.19
Waukesha	1.17

Calculations for 2020 and 2025 Inventories (PM25)							
County	2018 EGU PM25	2018 Non-EGU PM2.5	2018 Point PM2.5	2020(est)	2025(est)	2020 est (mod)	2025 est (mod)
Milwaukee	0.00	0.12	0.12	0.15	0.23	0.23	0.30
Racine	N/A	0.04	0.04	0.05	0.08	0.05	0.08
Waukesha	N/A	0.03	0.03	0.04	0.06	0.04	0.06

Notes:

2018 Non-EGU estimates based on LADCO Base C, Version 7 modeling.

EGU 2018 estimates based on LADCO Base M 5B modeling (includes NOx RACT). Excludes We Energies - Elm Road (FID 241219440).

2020 and 2025 estimates are modified to include projected emissions from We Energies - Elm Road (FID 241219440) - as well as EGU PM2.5 emissions - which were not included in the 2018 LADCO projections.

Point Source PM2.5 total 2010:

Milwaukee	0.00
Racine	0.00
Waukesha	0.00

Calculations for 2020 and 2025 Inventories (SO2)							
County	2018 EGU SO2	2018 Non-EGU SO2	2018 Point SO2	2020(est)	2025(est)	2020 est (mod)	2025 est (mod)
Milwaukee	32.40	0.55	32.94	25.97	8.53	27.00	9.52
Racine	N/A	0.63	0.63	0.68	0.78	0.68	0.78
Waukesha	N/A	0.16	0.16	0.16	0.15	0.16	0.15

Notes:

2018 Non-EGU estimates based on LADCO Base C, Version 7 modeling.

EGU 2018 estimates based on LADCO Base M 5B modeling (includes NOx RACT). Excludes We Energies - Elm Road (FID 241219440).

2020 and 2025 estimates are modified to include projected emissions from We Energies - Elm Road (FID 241219440) which were not included in the 2018 LADCO projections.

Point Source SO2 total 2010:

Milwaukee	60.84
Racine	0.46
Waukesha	0.16

Calculations for 2020 and 2025 Inventories (VOC)							
County	2018 EGU VOC	2018 Non-EGU VOC	2018 Point VOC	2020(est)	2025(est)	2020 est (mod)	2025 est (mod)
Milwaukee	0.44	5.04	5.48	5.79	6.57	5.79	6.57
Racine	N/A	1.28	1.28	1.30	1.34	1.30	1.34
Waukesha	N/A	3.11	3.11	3.22	3.49	3.22	3.49

Notes:

2018 Non-EGU estimates based on LADCO Base C, Version 7 modeling.

EGU 2018 estimates based on LADCO Base M 5B modeling (includes NOx RACT). Excludes We Energies - Elm Road (FID 241219440).

2020 and 2025 estimates are modified to include projected emissions from We Energies - Elm Road (FID 241219440) which were not included in the 2018 LADCO projections.

Point Source VOC total 2010:

Milwaukee	4.23
Racine	1.22
Waukesha	2.67

2020 and 2025 Point Source EGU Emissions – Modifications ^a												
FID	COUNTY	DVID	SCC	POLLUTANT	2008 (TPWD)	2011 (TPWD)	GF- 2020	GF- 2025	GF- 2020 (mod)	GF- 2025 (mod)	2020 (TPWD)	2025 (TPWD)
241219440	Milwaukee	1	1-01-002-22	NOX	---	1.639	1.091	1.08	0.949	0.907	1.556	1.487
241219440	Milwaukee	2	1-01-002-22	NOX	---	1.839	1.091	1.08	0.949	0.907	1.746	1.668
241007690	Milwaukee	B25	1-01-002-22	PM25	0.007	---	1.091	1.08	0.949	0.907	0.006	0.006
241007690	Milwaukee	B26	1-01-002-22	PM25	0.008	---	1.091	1.08	0.949	0.907	0.008	0.007
241007690	Milwaukee	B27	1-01-002-26	PM25	0.005	---	1.091	1.08	0.949	0.907	0.005	0.004
241007690	Milwaukee	B28	1-01-002-26	PM25	0.012	---	1.091	1.08	0.949	0.907	0.012	0.011
241007800	Milwaukee	B21	1-01-002-02	PM25	0.005	---	1.091	1.08	0.949	0.907	0.005	0.005
241007800	Milwaukee	B22	1-01-002-02	PM25	0.004	---	1.091	1.08	0.949	0.907	0.004	0.004
241007800	Milwaukee	B23	1-01-002-02	PM25	0.002	---	1.091	1.08	0.949	0.907	0.002	0.002
241007800	Milwaukee	B24	1-01-002-02	PM25	0.004	---	1.091	1.08	0.949	0.907	0.004	0.004
241027050	Milwaukee	B22	1-01-002-04	PM25	0	---	1.091	1.08	0.949	0.907	0	0
241027050	Milwaukee	B23	1-01-002-04	PM25	0	---	1.091	1.08	0.949	0.907	0	0
241219440	Milwaukee	1	1-01-002-22	PM25	---	0.017	1.091	1.08	0.949	0.907	0.016	0.015
241219440	Milwaukee	2	1-01-002-22	PM25	---	0.02	1.091	1.08	0.949	0.907	0.019	0.018
241219440	Milwaukee	1	1-01-002-22	SO2	---	0.563	1.091	1.08	0.949	0.907	0.534	0.51
241219440	Milwaukee	2	1-01-002-22	SO2	---	0.523	1.091	1.08	0.949	0.907	0.496	0.474
241219440	Milwaukee	1	1-01-002-22	VOC	---	0	1.091	1.08	0.949	0.907	0	0
241219440	Milwaukee	2	1-01-002-22	VOC	---	0	1.091	1.08	0.949	0.907	0	0

Appendix 8

Annual 98th Percentile FRM PM_{2.5} Concentrations and 24-Hour PM_{2.5} Design Values

Site Name:	16th St. Health Ctr	SER HQ	College Ave / FAA	Cleveland St.
County:	Milwaukee	Milwaukee	Milwaukee	Waukesha
Site ID #:	550790010	550790026	550790058/59	551330027
2008 98th%-ile Conc.:	27.3	27.5	26.9	29.9
2009 98th%-ile Conc.:	39.1	39.0	33.0	32.0
2010 98th%-ile Conc.:	30.9	31.9	35.3	35.9
2011 98th%-ile Conc.:	27.0	25.7	25.4	25.3
2008–2010 Design Value	32	33	32	33
2009–2011 Design Value	32	32	29	31