



Maricopa County
Air Quality Department

INSTRUCTIONS

FOR REPORTING 2011

ANNUAL AIR POLLUTION EMISSIONS

February 2012

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**Copies of this document, related forms,
and other reference materials are available online at our web site:**
http://www.maricopa.gov/aq/divisions/planning_analysis/emissions_inventory/Default.aspx

TABLE OF CONTENTS

WHAT'S NEW FOR 2011?	1
I. INTRODUCTION	2
Steps to Complete Your 2011 Maricopa County Emissions Inventory	
II. REPORTING REQUIREMENTS	3
- Pollutants to be Reported	
- Emission Calculation Method Hierarchy	
III. CONFIDENTIALITY OF DATA SUBMITTED	5
- Arizona State Statute and Maricopa County Rule	
IV. HELPFUL HINTS AND INFORMATION	6
- What is a Process?	
- Processes and Materials That Do Not Have to be Reported	
- Grouping Materials and/or Equipment Under One Process ID	
- Assigning Identification Numbers (IDs)	
- Industry-Specific Instructions	
- Commonly Used Conversion Factors	
- Additional Resources and Assistance	
V. INSTRUCTIONS AND EXAMPLES FOR EMISSIONS REPORTING FORMS	
Business Form.....	8
Stack Form	9
Control Device Form	10
General Process Form	11
Evaporative Process Form	15
Off-Site Recycling/Disposal Form.....	19
Documentation of Emission Factor Calculations.....	20
Data Certification Form (for NON -Title V sources)	21
How to Calculate an Emission Fee (for Title V sources ONLY).....	22
Data Certification/Fee Calculation Form (for Title V sources ONLY)	23

WHAT'S NEW FOR 2011?

Reporting forms:

- Emission factors for PM-10 for several processes typically found at sand and gravel facilities and/or concrete batch plants, have been revised. The new values are lower than the previous EPA default emission factors, and reflect the more stringent moisture-content requirements required by Maricopa County Rule 316 (Nonmetallic Mineral Processing).
- Some **preprinted information** on your report may be different from last year's version. Please review the enclosed forms carefully, and verify all preprinted information.
- Many of our reporting forms **have changed** in past years. If you develop your own forms, or a computerized reproduction of our forms, the forms used **MUST** conform to the current information requirements and **FORMAT** as supplied on our preprinted forms. "Homemade" reporting forms that vary significantly from the preprinted forms sent to you will **not** be accepted.
- Please **VERIFY THOROUGHLY** that the information you provide on all reporting forms match the information presented on the preprinted forms from MCAQD.

Miscellaneous:

- **Non-operational facilities:** Any facility that has been issued an air quality permit, but that did NOT operate at any time during 2011, must still respond in writing to this request for annual emissions information, as a condition of its air quality permit. Please provide ALL information requested on both the "Business Form" and the "Data Certification Form", and submit these forms, along with a letter certifying that there were no operations at the facility during calendar year 2011, by the due date shown on the Business Form.
- **Emissions fees for Title V facilities:** In accordance with Maricopa County Air Pollution Control Rule 280 (Fees), the 2011 annual emission fee for Title V sources is \$39.83/ton. **NOTE:** Only emissions from Title V sources (those whose air quality permit numbers have a "V" prefix) are subject to this annual emissions fee.

I. INTRODUCTION

An annual emissions inventory is a document submitted by a business that: (1) lists all processes emitting reportable air pollutants and (2) provides details about each of those processes. Submitting the emissions inventory report is **required** as a condition of your Maricopa County Air Quality Permit. A separate emissions report is required for each business location with its own air quality permit.

Follow these steps to complete your 2011 Maricopa County emissions inventory:

STEP 1: Determine which forms are needed for your business. There are eight different forms available, but not all are required for every type of business. For most permitted sources, the packet you received from us contains the necessary preprinted forms based on your site's most recent emissions inventory.

1. **Business Form:** Contains general contact information about the permitted site. This form is required for all businesses.
2. **Stack Form:** Only required if your business location annually emits over 10 tons of a single pollutant (CO, VOC, NO_x, PM₁₀, or SO_x). A "stack" is defined as a stack, pipe, vent or opening through which a significant percentage of emissions (from one or more processes) are released into the atmosphere. See the "Stack Form Instructions" on page 9 for specific requirements.
3. **Control Device Form:** Required only if there is one or more emission control devices used at the business location.
4. **General Process Form** and
5. **Evaporative Process Form:** } Either or both will be required for all businesses.
6. **Off-Site Recycling/Disposal Form:** Required if you want to claim off-site recycling or disposal.
7. **Emission Factor Calculations:** Required as attachment for each process for which you calculated your own emission factors.
8. **Data Certification Form or Data Certification/Fee Calculation Form:** Only sources with a **Title V** (permit number would start with "V") permit are required to pay a fee for their emissions and need to use the Data Certification/Fee Calculation Form. All other sources use the Data Certification Form.

STEP 2: Complete the applicable forms. Verify all preprinted information, and make corrections where necessary. When making corrections, strike out the preprinted data and write in corrections beside it. Please make all changes readily noticeable. Detailed information on how to complete the most common forms is included in this document. The packet you received also contains information about other resources (workshops, one-on-one assistance, etc.) available to help you in completing the necessary forms.

STEP 3: Make a copy of your completed emissions inventory report. Make sure to **KEEP COPIES** of all forms submitted and copies of all records and calculations used in completing the forms. Air pollution control regulations require that you keep all documentation for at least **FIVE YEARS** at the location where pollution is being emitted.

STEP 4: Make sure the Data Certification Form (or Data Certification/Fee Calculation Form for Title V sources) is **signed** by a company representative. **Include your air quality permit number on all correspondence and applicable checks submitted with your report.** Return the **original**, signed copy of your annual emission report, with payment for any applicable emission fees to:

Maricopa County Air Quality Department
Emissions Inventory Unit
1001 North Central Avenue, Suite 125
Phoenix, AZ 85004

II. REPORTING REQUIREMENTS

POLLUTANTS TO BE REPORTED:

Your emissions inventory must include your business's emissions of the following air pollutants:

- CO = Carbon monoxide
- NO_x = Nitrogen oxides
- PM₁₀ = Particulate matter less than 10 microns
- SO_x = Sulfur oxides
- VOC = Volatile organic compounds *
- HAP&NON = Hazardous Air Pollutant (HAP) that is also NOT a volatile organic compound (VOC)**
- NH_x = Ammonia and ammonium compounds
- Pb = Lead

* A **volatile organic compound (VOC)** is defined as any compound of carbon that participates in atmospheric photochemical reactions. This definition **excludes**: carbon monoxide, carbon dioxide, acetone, carbonic acid, metallic carbides or carbonates, and ammonium carbonate, as well as certain other organic compounds. (See Maricopa County Air Pollution Control Rule 100, Sections 200.69 and 200.110 for a full definition.)

EPA has re-designated the chemical **t-butyl acetate (CAS Number 540-88-5)** as a VOC for record-keeping requirements and emissions reporting, but not for emission limitations or content requirements. County Rule 100, Section 200.69b states:

“The following compound(s) are VOC for purposes of all recordkeeping, emissions reporting, photochemical dispersion modeling and inventory requirements which apply to VOC and shall be uniquely identified in emission reports, but are not VOC for purposes of VOC emissions limitations or VOC content requirements: t-butyl acetate (540-88-5).”

Therefore, if your facility uses t-butyl acetate, it is necessary to report t-butyl acetate as a separate material on the evaporative process form, not as part of a grouped material (e.g., solvents, thinners, activators, etc.). T-butyl acetate will continue to be identified as a VOC on your emission report and count towards any applicable emission fees.

** **HAP&NON**: Usage of certain materials that are: (1) a Hazardous Air Pollutant (HAP) **and** (2) **not** also a VOC (that is, not also an ozone precursor) should also be reported if:

- (a) your site is subject to a Federal MACT (Maximum Achievable Control Technology) standard **or**
- (b) your air quality permit contains specific quantitative limits for HAP emissions.

The most common materials categorized as “HAP&NON” include:

- methylene chloride (dichloromethane)
- perchloroethylene
- 111-trichloroethane (111-TCA or methyl chloroform)
- hydrochloric acid
- hydrofluoric acid

NOTE: HAPs that are also considered volatile organic compounds are reported as VOC.

EMISSION CALCULATION METHOD HIERARCHY:

When preparing emission information for your report, the most accurate method for calculating **actual** emissions must be used. The hierarchy listed below outlines the preferred methods for calculating emission estimates (taken from County Rule 280, Section 305.1).

- (1) Whenever available, emissions estimates should be calculated from continuous emissions monitors certified under 40 CFR Part 75, Subpart C, or data quality assured pursuant to Appendix F of 40 CFR, Part 60.
- (2) When sufficient data obtained using the methods described in paragraph 1 is not available, emissions estimates should be calculated from source performance tests conducted pursuant to Rule 270 in Maricopa County's Air Pollution Control Rules and Regulations.
- (3) When sufficient data obtained using the methods described in paragraphs 1 or 2 is not available, emissions estimates should be calculated from material balance using engineering knowledge of the process.
- (4) When sufficient data obtained using the methods described in paragraphs 1 through 3 is not available, emissions estimates shall be calculated using emissions factors from EPA Publication No. AP-42 "Compilation of Air Pollutant Emission Factors," Volume I: Stationary Point and Area Sources.
- (5) When sufficient data obtained using the methods described in paragraphs 1 through 4 is not available, emissions estimates should be calculated by equivalent methods supported by back-up documentation that will substantiate the chosen method.

III. CONFIDENTIALITY OF DATA SUBMITTED

Information submitted in your annual emissions reports must be made available to the public unless it meets certain criteria of Arizona State Statutes and Maricopa County Rules. Applicable excerpts concerning confidentiality of data are reproduced below.

ARS § 49-487 D. ...the following information shall be available to the public:...

2. The chemical constituents, concentrations and amounts of any emission of any air contaminant. ...

MARICOPA COUNTY AIR POLLUTION CONTROL RULES AND REGULATIONS, Rule 100:

§ 200.107 TRADE SECRETS - Information to which all of the following apply:

- a. A person has taken reasonable measures to protect from disclosure and the person intends to continue to take such measures.
- b. The information is not, and has not been, reasonably obtainable without the person's consent by other persons, other than governmental bodies, by use of legitimate means, other than discovery based on a showing of special need in a judicial or quasi-judicial proceeding.
- c. No statute, including ARS §49-487, specifically requires disclosure of the information to the public.
- d. The person has satisfactorily shown that disclosure of the information is likely to cause substantial harm to the business's competitive position.

§ 402 CONFIDENTIALITY OF INFORMATION:

402.2 Any records, reports or information obtained from any person under these rules shall be available to the public ... unless a person:

- a. Precisely identifies the information in the permit(s), records, or reports which is considered confidential.
- b. Provides sufficient supporting information to allow the Control Officer to evaluate whether such information satisfies the requirements related to trade secrets as defined in Section 200.107 of this rule.

For emissions inventory information to be deemed confidential, the following steps must be followed:

- Specific data which you request be held confidential must be identified by marking an "X" in the corresponding gray confidentiality box(es) on the relevant report forms.
- Provide a written explanation which gives factual information satisfactorily describing why releasing this information could cause substantial harm to the business's competitive position.
- Use the gray-shaded boxes on the reporting forms to indicate which data are to be held confidential. Do NOT stamp "Confidential", highlight data, or otherwise mark the page.

No data can be held confidential without proper justification.

IV. HELPFUL HINTS AND INFORMATION

Be sure to verify all preprinted information on forms. If any information is incorrect or blank, please provide correct information. Making a change on the Business Form will **NOT** transfer the permit ownership or location. You must contact the Department's Small Business Assistance Program at (602) 506-5102 or the Engineering & Permitting Division at (602) 506-6094 to accomplish this.

WHAT IS A PROCESS? A *process* is a business activity at your location that emits one or more of the pollutants listed on page 3, and has only *one* material type as input and *one* operating schedule. For each applicable process at your business, you must assign a unique Process ID number to differentiate each process.

PROCESSES AND MATERIALS THAT DO NOT HAVE TO BE REPORTED:

- Welding.
- Acetone usage.
- Fuel use for forklifts or other vehicles. (NOTE: Fuel use in *non-vehicle* engines *is* reportable.)
- Soil remediation activities. (Note: Other periodic reporting requirements may exist; consult your permit.)
- Storage emissions from fuels or organic chemicals in any tank with a capacity of 250 gallons or less.
- Storage emissions of diesel and Jet A fuel in underground tanks of any size.
- Storage emissions of diesel and Jet A fuel in aboveground tanks, with throughput < 4,000,000 gal/yr.
- Routine pesticide usage, housekeeping cleaners, and routine maintenance painting at your facility.

Please group all similar equipment and materials together before applying the following limitations:

- Internal combustion engines (e.g., emergency generators) or external combustion equipment (e.g., boilers and heaters) that operated less than 100 hrs. and burned less than 200 gals. diesel or gas, or less than 100,000 cubic feet of natural gas.
- Materials with usage of less than 15 gallons or 100 pounds per year.

GROUPING MATERIALS AND/OR EQUIPMENT UNDER ONE PROCESS ID:

You can group together under one process ID:

- All internal combustion engines *less than 600 hp* if they burn the same fuel and have similar operating schedules.
- All external combustion equipment (boilers, heaters) with a capacity of *less than 10,000,000 Btu* per hour if they burn the same fuel and have similar operating schedules.
- All similar evaporative materials with similar emission factors that have similar operating schedules and process descriptions. For example, group low-VOC red paint, green paint and white paint together as one material: "Paint: Low-VOC." Do *not* group dissimilar materials together, such as thinners and paints. Attach documentation (see example, p. 20) showing how the grouped emission factor was determined.
- All underground tanks with the same fuel and same type of vapor recovery system.

ASSIGNING IDENTIFICATION NUMBERS (IDs):

Unique IDs are required for the following report elements: Stacks, Control Devices and Processes. For processes, that means a process ID number may be used only once on each General Process form and for each material reported on the Evaporative Process Forms.

These numbers are usually assigned by the person who prepares the original report. If you are adding a new item to a preprinted report, assign a number not already in use. Once an ID number is assigned, continue using the same number for that item each year. If that item is no longer reportable, mark it with 'DELETE' and return the preprinted form with a brief explanation. Do not use that ID number again.

INDUSTRY-SPECIFIC INSTRUCTIONS: Additional help sheets, detailed examples, and special instructions are available for a number of specific processes or industries listed below. To get copies of any of these documents, please call (602) 506-6790, or visit our web site at: http://www.maricopa.gov/aq/divisions/planning_analysis/emissions_inventory/Default.aspx

- Bakeries
- Concrete Batch Plants
- Fuel Storage and Handling
- Incinerators and Crematories
- Lg. Aboveground Storage Tanks
- Natural Gas Boilers/Heaters
- Polyester Resin
- Printing Plants
- Roofing Asphalt
- Sand and Gravel Plants
- Using EPA's TANKS 4.09d Program
- Vehicle Refinishing
- Vehicle Travel on Unpaved Roads
- Woodworking

COMMONLY USED CONVERSION FACTORS:

1 gram/liter	= 0.00834 lbs/gal	1 foot	= 0.0001894 mile
1 liter	= 0.2642 gallon (US)	1 square foot	= 0.000022957 acre
1 therm	= 0.0000952 MMCF	1 pound	= 0.0005 ton

NOTE: MM = 1,000,000 Example: MMCF = 1,000,000 cubic feet
M = 1,000 Example: MGAL = 1,000 gallons

ADDITIONAL RESOURCES AND ASSISTANCE:

The Maricopa County Emissions Inventory web site

at: http://www.maricopa.gov/aq/divisions/planning_analysis/emissions_inventory/Default.aspx

contains additional reference materials, such as:

- blank copies of most emissions reporting forms.
- an updated list of emission factors for a large number of industrial processes, including SCC codes.
- a list of Tier Codes for industrial processes.
- detailed help sheets for a number of specific industries or processes.

To receive any of the above materials by fax or mail, or for additional information or assistance in how to calculate and report your emissions, please call us at (602) 506-6790.

V. INSTRUCTIONS AND EXAMPLES FOR COMPLETING EMISSIONS REPORTING FORMS

Business Form Instructions

Verify all preprinted information, and make corrections where necessary. When making corrections, strike out the preprinted data and write in corrections beside it. Please make all changes readily noticeable.

NOTE: Making a change on the Business Form will **NOT** transfer the permit ownership or location. You must contact the Department's Small Business Assistance Program at (602) 506-5102 or the Engineering & Permitting Division at (602) 506-6094 to accomplish this.

Data fields:

- 6 Number of employees: This should be the annual average number of full-time equivalent (FTE) employee positions *at this business location*.
- 9 NAICS Code: This 5- or 6-digit North American Industrial Classification System (NAICS) code has been introduced to replace the 4-digit Standard Industrial Classification (SIC) codes. Please list the primary and secondary NAICS codes for your business, if known. (Consult our website, at: http://www.maricopa.gov/aq/divisions/planning_analysis/emissions_inventory/Default.aspx, for a link to a full list of NAICS codes.)
- 10 Preparer of the Inventory (primary contact for technical questions concerning this report): This should be the person who knows the most about the data in the report. If this person has an e-mail address used for business purposes, please provide it.
- 11 Who should receive the Annual Emissions Inventory Form next year?: This should be a person who is directly employed with the business. This person should not be a consultant for the business.

Control Device Form Instructions

EXAMPLE Control Device Form Information

1	2	3	4	5	6
Control ID	Installation/ Reconstruction* Date	Size or Rated Capacity**	Control Type Code	Control Device Name/Description	Stack ID
1	05/09/98	25,000.0 cfm	021	Thermal oxidizer	2
4	03/10/97	cfm	153	Watering with water trucks	

Data fields:

- 1 **Control ID:** (See “Assigning Identification Numbers” on page 6.) A unique number (up to three digits) that you assign to identify a specific control device.
- 2 **Installation/Reconstruction Date:** The completion date (given in *mm/dd/yy* format) of installation or the most recent reconstruction of the identified control device. This is not a date on which routine repair or maintenance was done. “Reconstruction” means any component of the control device was replaced and the cost (fixed capital) of the new component(s) was more than half of what it would have cost to purchase or construct a new control device.
- 3 **Size or Rated Capacity:** Report the air or water flow rate in *cubic feet per minute*. Some devices (e.g., water trucks for dust control) will not include a value in this field.
- 4 **Control Type Code:** A 3-digit code designating the type of control device. A complete list of all EPA control device codes can be found on the Web at: http://www.maricopa.gov/aq/divisions/planning_analysis/emissions_inventory/Default.aspx or call (602) 506-6790 for assistance.
- 6 **Stack ID:** Not all businesses require a Stack ID. This is required if the Stack Form is used for your site (see page 9) **and** the control device is vented through that identified stack. This is the ID number shown in column 1 of the Stack Form. The Stack ID can be entered on this form after the Stack Form has been filled out.

General Process Form Instructions

The General Process Form is used to record data on all emissions-producing processes except evaporative processes. A “**general process**” is normally characterized by the burning or handling of a material. One form reports all the pollutants for one process. For example, several pollutants are produced by burning fuel, and PM₁₀ is emitted by processing rock products, processing materials such as wood or cotton, and driving on unpaved areas.

Data fields: (See sample forms on pages 13 and 14.)

- 1 Process ID: A number (up to three digits) that is preprinted or you assign. (See “Assigning Identification Numbers” on page 6.) This Process ID number can not be used for any other process at this location.
- 2 Process Type/Description: Brief details on the type of activity that is occurring.
- 3 Stack ID(s): The stack ID number(s) shown in column 1 of the Stack Form that identify the stack(s) which vent pollution created by this process. Not all businesses are required to report stacks. This is only required if the Stack Form is required for your site (see page 9) **and** the process has a stack.
- 4 Process Tier Code and If these codes are not preprinted on your form, please consult the
5 SCC Code: section “Other Resources” on our web site, or call (602) 506-6790.
- 6 Seasonal Throughput Percent: Enter the percent of total annual operating time that occurred per season, rounded to the nearest percent. For example, “Dec-Feb 30%” means 30% of total annual activity occurred in January, February and December 2011. The total for all four seasons must equal 100%.
- 7 Normal Operating Schedule and These reflect the normal daily, weekly, and annual operating
8 Typical Hours of Operation: parameters of **this process** during 2011.
- 9 Emissions Based on: Provide the **name** of the material used, fuel used, product produced, or whatever was measured for the purpose of calculating emissions, such as “natural gas”, “hours of operation,” “vehicle miles traveled,” or “acres.”
- 10 Used, Produced or Existing: Indicate whether calculated emissions are based on a material type or fuel *used* (an input, such as “paint” or “natural gas”), or an *output* (such as “sawdust produced” or “finished product”). Use “Existing” if the parameter reported on line 9 is not directly used or produced in the process (such as “vehicle miles traveled” or “acres”).
- 11 Annual Amount: The annual amount (a number) of material that was used, fuel combusted, product produced, hours of operation, vehicle miles traveled, or acres.
- 12 Fuel Sulfur Content (in percent): For processes that involve the combustion of oil or diesel fuels, report the sulfur content of the fuel as a decimal value. Example: 0.05 % (= 500 ppm)
- 13 Unit of Measure: Units of the material used, fuel used or product produced shown on line 9. For example: gallons, pounds, tons, therms, acres, vehicle miles traveled, units produced.
- 14 Unit Conversion Factor: You must provide this if you use an emission factor with an emission factor unit (see item 17 below) that is **not** the same as the unit of measure (from line 13). This is the standard number you would multiply your amount (line 11) by to convert it to the units of the emission factor. See page 7 for a list of commonly used conversion factors.

General Process Form Instructions (continued)

- 15 Pollutant: See page 3 for a list of pollutants that need to be reported.
- 16 Emission Factor (EF): The number to be multiplied by the annual amount (line 11) to determine how much of the pollutant was emitted. If you calculate your own emission factor or change the preprinted emission factor, you must provide details of your calculations in an attachment.
- 17 Emission Factor (EF) Units: Enter the appropriate Emission Factor Units in pounds (lb) per unit; e.g., lb/ton, lb/MMCF, lb/gal.
- 18 Controlled Emission Factor (EF)? YES or NO: Indicate “YES” if: 1) you have your own emission factor from testing **and** included the control device efficiency within the factor, or 2) the emission factor used is clearly identified as a controlled emission factor. A “YES” response requires the use of Formula A (see #25 below). Indicate “NO” if: 1) there is no emission control device, or 2) the emission factor represents emission rates **before** controls. A “NO” response requires the use of Formula B (see #25 below).
- 19 Calculation Method: Enter the number code (listed at the bottom of the General Process Form) which best describes the method you used to obtain this emission factor. Code 5, “AP-42/FIRE Method or Emission Factor” means that the factor comes from EPA documents or software. **NOTE**: If you have continuous emissions monitors (CEM) data or conducted a source test that was required and approved by the County for a specific process or piece of equipment, you **must** use the emission data from the CEM or the test results. Report “1” in this column for CEM data or “4” for performance test data.
- 20 through 24: Leave blank if there is no control device.
- 20 Capture % Efficiency: The percent of the pollutant that is captured and sent to the primary control device in this process. Be sure to list capture efficiency separately for **each** pollutant affected.
- 21 Primary Control Device ID: If this pollutant is being controlled in this process, enter the Control Device ID number which represents the first control device affecting the pollutant.
- 22 Secondary Control Device ID: If this pollutant is being controlled sequentially by 2 devices, enter the Control Device ID number which represents the second control device; otherwise leave this field blank.
- 23 Control Device(s) % Efficiency: Enter the total control efficiency of the control device(s). Be sure to list control device efficiency separately for **each** pollutant affected. If you report control device efficiency, you must **also** show capture efficiency in column 20.
- 24 Efficiency Reference Code: Enter the code (1 through 6) that best describes how you determined the **control device efficiency**. A list of possible codes is included at the bottom of the form.
- 25 Estimated Actual Emissions (in pounds/year): You may round the calculated emissions values to the nearest pound. Calculate as follows:
- A. Emissions with no controls or controls are reflected in the emission factor:
Column 25 = line 11 × line 14 × column 16
- B. Emissions after control:
Column 25 = line 11 × line 14 × column 16 × (1 – [column 20 × column 23])
Use the decimal equivalent for columns 20 and 23. Example: 96.123% = 0.96123

Place an X in any gray cell to mark data requested to be held confidential. See page 5 for requirements for information to be deemed confidential.

1- Process ID 80

2- Process Type/Description: 3 ENGINES FOR CRUSHING (EACH LESS THAN 600 HP)

3- Stack ID(s) (only if required on Stack Form) _____

4- Process TIER Code: 020599 FUEL COMB. INDUSTRIAL: INTERNAL COMBUSTION

5- SCC Code 20200102 (8 digit number) IND:DIESEL-RECIPROCATING

6- Seasonal Throughput Percent: Dec-Feb 25 % Mar-May 25 % Jun-Aug 25 % Sep-Nov 25 %

7- Normal Operating Schedule: Hours/Day 8 Days/Week 5 Hours/Year 2080 Weeks/Year 52

8- Typical Hours of Operation: (military time) Start 0700 End 1530

9- Emissions based on (name of material or other parameter, e.g. "rock", "diesel", "vehicle miles traveled") DIESEL

10- Used (input) or Produced (output) or Existing (e.g. VMT, acres)

11- Annual Amount: (a number) 16,250 12- Fuel Sulfur Content (in percent) 0.05 %

13- Unit of Measure: (for example: tons, gallons, million cu ft, acres, units produced, etc.) GALLONS

14- Unit Conversion Factor (if needed to convert Unit of Measure to correlate with emission factor units) 0.001

Emission Factor (EF) Information				Control Device Information						
15	16	17	18	19	20	21	22	23	24	25
Pollutant	Emission Factor (EF) (number)	Emission Factor Unit (lb per)	Controlled EF? Yes or No	Calculation Method Code*	Capture % Efficiency	Primary Control Device ID	Secondary Control Device ID	Control Device(s) % Efficiency	Efficiency Reference Code**	Estimated Actual Emissions
CO	130	M GALS	N	5						2,113 lbs
NOx	604	M GALS	N	5						9,815 lbs
PM-10	42.5	M GALS	N	5						691 lbs
SOx	39.7	M GALS	N	5						645 lbs
VOC	49.3	M GALS	N	5						801 lbs

* Calculation Method Codes:

- 1 = Continuous Emissions Monitoring Measurements
- 2 = Best Guess / Engineering Judgment
- 3 = Material Balance
- 4 = Source Test Measurements (Stack Test)
- 5 = AP-42 / FIRE Method or Emission Factor

- 6 = State or Local Agency Emission Factor
- 7 = Manufacturer Specifications
- 8 = Site-Specific Emission Factor
- 9 = Vendor Emission Factor
- 10 = Trade Group Emission Factor

** Control Efficiency Reference Codes:

- 1 = Tested efficiency / EPA reference method
- 2 = Tested efficiency / other source test method
- 3 = Design value from manufacturer
- 4 = Best guess / engineering estimate
- 5 = Calculated based on material balance
- 6 = Estimated, based on a published value

Place an X in any gray cell to mark data requested to be held confidential. See page 5 for requirements for information to be deemed confidential.

1- Process ID 28

2- Process Type/Description: UNPAVED ROAD TRAVEL: HEAVY-DUTY TRUCKS @ 15 MPH

3- Stack ID(s) (only if required on Stack Form) _____

4- Process TIER Code: 140799 MISCELLANEOUS: FUGITIVE DUST

5- SCC Code 30502504 (8 digit number) SAND/GRAVEL: HAULING

6- Seasonal Throughput Percent: Dec-Feb 25 % Mar-May 25 % Jun-Aug 25 % Sep-Nov 25 %

7- Normal Operating Schedule: Hours/Day 8 Days/Week 5 Hours/Year 2080 Weeks/Year 52

8- Typical Hours of Operation: (military time) Start 0700 End 1530

9- Emissions based on (name of material or other parameter, e.g. "rock", "diesel", "vehicle miles traveled") VEHICLE MILES TRAVELED (VMT)

10- Used (input) or Produced (output) or Existing (e.g. VMT, acres)

11- Annual Amount: (a number) 7,500 12- Fuel Sulfur Content (in percent) _____%

13- Unit of Measure: (for example: tons, gallons, million cu ft, acres, units produced, etc.) VMT

14- Unit Conversion Factor (if needed to convert Unit of Measure to correlate with emission factor units) _____

Emission Factor (EF) Information					Control Device Information					
15	16	17	18	19	20	21	22	23	24	25
Pollutant	Emission Factor (EF) (number)	Emission Factor Unit (lb per)	Controlled EF? Yes or No	Calculation Method Code*	Capture % Efficiency	Primary Control Device ID	Secondary Control Device ID	Control Device(s) % Efficiency	Efficiency Reference Code**	Estimated Actual Emissions
<i>PM-10</i>	<i>3.2</i>	<i>VMT</i>	<i>N</i>	<i>6</i>	<i>100</i>	<i>4</i>		<i>90</i>	<i>6</i>	<i>2400</i> lbs
										lbs
										lbs
										lbs
										lbs
										lbs

NOTE: Emissions in col. 25 are calculated as follows: (line 11 × col. 16) × (1 - [col. 20 × col. 23])

* Calculation Method Codes:
 1 = Continuous Emissions Monitoring Measurements
 2 = Best Guess / Engineering Judgment
 3 = Material Balance
 4 = Source Test Measurements (Stack Test)
 5 = AP-42 / FIRE Method or Emission Factor

6 = State or Local Agency Emission Factor
 7 = Manufacturer Specifications
 8 = Site-Specific Emission Factor
 9 = Vendor Emission Factor
 10 = Trade Group Emission Factor

** Control Efficiency Reference Codes
 1 = Tested efficiency / EPA reference method
 2 = Tested efficiency / other source test method
 3 = Design value from manufacturer
 4 = Best guess / engineering estimate
 5 = Calculated based on material balance
 6 = Estimated, based on a published value

Evaporative Process Form Instructions

The Evaporative Process Form is used to report all emissions produced by evaporation. Examples include: cleaning with solvents, painting and other coatings, printing, using resin, evaporation of fuels from storage tanks, ammonia use, etc. All other processes should be shown on the General Process Form.

One Evaporative Process Form may be used to report numerous materials, with each material given a separate process ID number, as long as the information on lines 1–5 apply to all items on that form. Use a separate form for each group of materials that has a different Process Type/Description (shown on line 1), different Tier Code (line 2) or different operating schedule (lines 3, 4, or 5).

Data fields: (See sample forms on pages 17 and 18.)

- 1 Process Type/Description: Brief details of the activity in which the listed materials were used.
- 2 Process Tier Code: If this 6-digit code is not preprinted on your form, please refer to the Tier Code list at: http://www.maricopa.gov/aq/divisions/planning_analysis/emissions_inventory/Default.aspx or call (602) 506-6790.
- 3 Seasonal Throughput Percent: Enter the percent of total annual operating time that occurred per season (rounded to the nearest percent). For example, “Dec-Feb 30% ” means 30% of the total annual activity occurred during January, February and December 2011. The total for all four seasons must equal 100%.
- 4 Normal Operating Schedule and
5 Typical Hours of Operation: These represent the usual number of hours, time of day and weeks per year when *this process* occurred during the calendar year.
- 6 Process ID: A number (up to three digits) that represents this specific material (process). Each process on one form must have the same tier code and operating schedule as that shown in the top portion of the form. This Process ID number can *not* be used for any other process at this business location. See page 6 of these instructions for more explanation of ID numbers and for exclusions and guidance on grouping materials.
- 7 Stack ID(s): The stack ID number(s) shown in column 1 of the Stack Form that identify the stack(s) which vent pollution created by this process. Not all businesses are required to report stacks. This is only required if the Stack Form is required for your site (see page 9) *and* the process has a stack.
- 8 Material Type: Provide the name of the material used in this process. Give the chemical name for pure chemicals or a name that reflects its use (paint, ink, etc.), rather than just a brand name or code number. Examples of materials include: paint, thinner, degreasing solvent (plus its common name), ink, fountain solution, ammonia, alcohol, ETO (ethylene oxide), gasoline (in a storage tank).
- 9 Annual Material Usage/Input: Amount of this material used during the year. In most cases, the amount purchased is suitable. Write in “lbs” or “gal” (pounds or gallons).
- 10 Pollutant: The only pollutants reported on this form are VOC, HAP&NON and NH_x (see definitions on page 3). When one process (or material) has more than one of these pollutants, list each pollutant on a separate line, using the same process ID number.

Evaporative Process Form (continued)

- 11 **Emission Factor (EF):** An emission factor is a number used to calculate the pounds of pollutant emitted based on the quantity of material used in a process. Emission factors can be obtained from your supplier (usually provided on a Material Safety Data Sheet or environmental data sheet), and must correspond with the material units reported in column 9. If the material unit is “gal,” then the emission factor must be in pounds of pollutant per gallon. If the material unit is “lb,” then the emission factor must be in pounds of pollutant per pound of material.

Verify (and correct, where necessary) all preprinted emission factors, as the composition of materials used may have changed since your last report. A “lb/gal” emission factor is almost always less than 8 and never greater than 14. A “lb/lb” emission factor is never larger than 1.0.

- 12 **Pounds of pollutant sent off-site:** Required only if you wish to take credit for reduced emissions because waste of this material is sent off-site for recycling or disposal. Only waste generated during the report year may be claimed. The Off-Site Recycling/Disposal Form *must* be completed if you wish to claim a credit. The number of pounds reported in column 12 *must* equal the number of pounds reported on the Off-Site Recycling/Disposal Form(s) for the same Process ID number.

13 and 14: Leave these fields blank if there is no control device present.

- 13 **Capture % Efficiency:** The percent of the pollutant from this process that is captured and sent to the control device.

- 14 **Control ID:** If this pollutant is being controlled in this process, enter the Control Device ID number from column 1 of the Control Device Form.

Control % Efficiency: Enter the percent of this pollutant that is controlled by this control device.

Code: Select the Control Efficiency Reference Code from the list at the bottom of the form.

- 15 **Estimated Emissions (lbs/yr):** Estimated pounds of the pollutant emitted during the year, after off-site recycling/disposal and controls if applicable. **Credit will not be given for off-site recycling/disposal unless it is shown on the Off-Site Recycling/Disposal Form.** Round to the nearest pound. If the answer is 0, give a decimal answer to the first significant digit. Column 15 is calculated as follows:

Emissions without off-site recycling/disposal or controls:

$$\text{Column 15} = \text{column 9} \times \text{column 11}$$

Emissions with off-site recycling/disposal:

$$\text{Column 15} = (\text{column 9} \times \text{column 11}) - \text{column 12}$$

*Emissions with off-site recycling/disposal **and** controls:*

$$\text{Column 15} = ((\text{column 9} \times \text{column 11}) - \text{column 12}) \times (1 - [\text{column 13} \times \text{column 14}])$$

Use the decimal equivalent for columns 13 and 14. Example: 96.123% = 0.96123

EXAMPLE: Coating and Painting

Evaporative Process Form 2011

Permit number(s) v99999

Place an X in any gray cell to mark data requested to be held confidential. See page 5 for requirements for information to be deemed confidential.

1- Process Type/Description: Coating metal parts

2- Process TIER Code: 080415 **SOLVENT USE: SURFACE COATING - MISC METAL PARTS**

3- Seasonal Throughput Percent: Dec-Feb 25 % Mar-May 25 % Jun-Aug 25 % Sep-Nov 25 %

4- Normal Operating Schedule: Hours/Day 8 Days/Week 5 Hours/Year 2080 Weeks/Year 52

5- Typical Hours of Operation (*military time*) Start 0800 End 1700

6	7	8		9		10		11		12	13	14		15		
Process ID	Stack ID(s)	Material Type		Annual Usage Input	lb or gal	VOC, HAP&NON or NHx		Emission Factor		EF Units (lbs per)	Pounds of pollutant* sent off site	Capture Efficiency %	Control ID	Control Efficiency %	Control Efficiency Code**	Estimated Emissions (lbs/yr)
800	1	Lacquer 6455-06		95	gal	VOC		4.7		gal		%		%		447
801	1	lacq thinner		120	gal	VOC		7.1		gal		%		%		852
802	1	Paint red 4039-03		940	gal	VOC		4.2		gal		%		%		3,948
803	1	Toro-Red Paint		707	gal	VOC		7.0		gal		%		%		4,949
803	1	Toro-Red Paint		707	gal	HAP&NON		0.5		gal		%		%		354
804	1	powder paint 8730-11		20,200	lb	VOC		0.001		lb		%		%		20

Note: Do NOT change preprinted Process ID numbers. See page 6 of these instructions for information on how to delete materials that are no longer used, or to assign Process ID numbers for new materials.

* If you have off-site recycling/disposal of any of the materials listed above, you must complete an Off-site Recycling/Disposal Form to receive credit for reduced emissions.

NOTE: Emissions in col. 15 are calculated as follows: $([\text{col. 9} \times \text{col. 11}] - \text{col. 12}) \times (1 - [\text{col. 13} \times \text{col. 14}])$

**** Control Efficiency Reference Codes**

1 = Tested efficiency / EPA reference method

2 = Tested efficiency / other source test method

3 = Design value from manufacturer

4 = Best guess / engineering estimate

5 = Calculated based on material balance

6 = Estimated, based on a published value.

EXAMPLE: Cleaning solvent (with recycling)

Evaporative Process Form 2011

Permit number(s) V99999

Place an X in any gray cell to mark data requested to be held confidential. See page 5 for requirements for information to be deemed confidential.

1- Process Type/Description: CLEANING METAL PARTS

2- Process TIER Code: 080103 **SOLVENT USE: DEGREASING - COLD CLEANING**

3- Seasonal Throughput Percent: Dec-Feb 25 % Mar-May 25 % Jun-Aug 25 % Sep-Nov 25 %

4- Normal Operating Schedule: Hours/Day 8 Days/Week 5 Hours/Year 2080 Weeks/Year 52

5- Typical Hours of Operation (military time) Start 1300 End 1700

6	7	8	9	10	11	12	13	14	15				
Process ID	Stack ID(s)	Material Type	Annual Usage Input	lb or gal	VOC, HAP&NON or NHx	Emission Factor	EF Units (lbs per)	Pounds of pollutant* sent off site	Capture Efficiency %	Control ID	Control Efficiency %	Control Efficiency Code**	Estimated Emissions (lbs/yr)
3	2	SANITIZER	716	lb	VOC	1.0	lb		95 %	1	80 %	3	172
6		GUN CLEANER	180	gal	VOC	7.2	gal	569	%		%		727
7		XYZ STRIPPER	1300	gal	VOC	3.3	gal	1,884	%		%		2,406
8		CLEANING SOLVENTS	358	gal	VOC	6.4	gal	1,006	%		%		1,285
9		MEGASOLVE	2258	gal	VOC	6.8	gal	6,741	%		%		8,613
									%		%		

Note: Do NOT change preprinted Process ID numbers. See page 6 of these instructions for information on how to delete materials that are no longer used, or to assign Process ID numbers for new materials.

* If you have off-site recycling/disposal of any of the materials listed above, you must complete an Off-site Recycling/Disposal Form to receive credit for reduced emissions.

NOTE: This example shows the case where 2,400 of the original 4,096 gallons of materials #6 through 9 were captured for off-site recycling, and the pollutant content of the waste material was estimated to be 75% of the original. The pounds of pollutant sent off-site shown in column 12 is calculated on the example Off-Site Recycling/Disposal Form on the next page.

EXAMPLE

Off-Site Recycling/Disposal Form 2011

Permit number(s) V99999

NOTE: If you need blank copies of this form, call the Emissions Inventory Unit at (602) 506-6790 or consult our web page at http://www.maricopa.gov/aq/divisions/planning_analysis/emissions_inventory/Default.aspx

Provide one off-site recycling/disposal form for each waste stream at your business location. A waste stream is the waste from one or more processes mixed together to make one waste product before it is taken off site for recycling, disposal or combustion.

- 1) Assign a unique two-digit ID number to identify the waste stream that will be described below. 01
 (Start with ID# 01 for first waste stream. Make copies of a blank Off-Site Recycling/Disposal form and use 02 for second, etc.)

Check one:

- 2) What was the quantity of this waste stream in 2011? 2,400 pounds gallons
 Indicate whether this quantity is reported in pounds or gallons. Keep waste disposal company manifests as proof that this amount of waste was taken off-site.

- 3) What was the **average** pollutant content of the waste stream? NOTE: Report in the same units (pounds or gallons) as used in line 2.

VOC 4.25 lbs/unit HAP&NON _____ lbs/unit NHx _____ lbs/unit

NOTE: Waste normally has less pollutant content than the new product. Some of the pollutant evaporates during the use of the product, and there is usually dirt, water or other contaminants in the waste stream. The estimated pollutant content of the waste is usually between 50% and 95% of the new product. This example estimates an average VOC content (on line 3) to be 75% of the original VOC content of 5.67 lbs/gal., to account for evaporation and contaminants. See page 20 to calculate a weighted average.

- 4) Calculate the **total** annual pollutant content of the waste in this waste stream.
 (volume of waste, from Line 2) × (pollutant content, from Line 3) = Total pollutants in waste stream, in lbs/yr.

VOC 10,200 lbs/yr HAP&NON _____ lbs/yr NHx _____ lbs/yr

- 5) List the process ID numbers of the processes contributing to this waste stream. Also estimate the pounds of pollutant that each process contributed to this waste stream.

NOTE: In this example, the amount each process material contributed to total pollutants in the waste stream (Line 4) is based on the percentage, by weight, of each material that contributed to the waste stream (e.g., Process ID #6 contributed 5.6%, therefore 5.6% × 10,200 lbs/yr = 569 lbs. See example on page 20).

NOTE: Column totals in the table below must equal the total for each pollutant type reported on line 4. The quantities you report below for each pollutant and process must also be reported in column 12 on the Evaporative Process Form.

Process ID	Annual VOC (lbs)	Annual HAP&NON (lbs)	Annual NHx (lbs)
6 Contributed about	569 lbs	lbs	lbs
7 Contributed about	1,884 lbs	lbs	lbs
8 Contributed about	1,006 lbs	lbs	lbs
9 Contributed about	6,741 lbs	lbs	lbs

EXAMPLE: Documentation of Emission Factor Calculations

Identify the process ID number(s) and pollutant(s). Show calculations made to obtain the emission factors used for the process(es). Include references to data sources used, including the document name, date published, page numbers, etc.

Emission Factor Calculation

Process ID 201

Permit number V99999

Emission factors derived from source test performed 12/2/00 by XYZ Engineering Company (copy of summary tables also attached).

Outlet (after controls):

$$\begin{aligned} \text{CO} &= 0.43 \text{ lb/hr} \times 1 \text{ hr}/60 \text{ min} \times 1 \text{ min}/77.9 \text{ cu. ft} \times 1,000,000 \text{ cu. ft/MMCF} \\ &= 92.0 \text{ lb/MMCF} \end{aligned}$$

$$\begin{aligned} \text{NOx} &= 0.09 \text{ lb/hr} \times 1 \text{ hr}/60 \text{ min} \times 1 \text{ min}/77.9 \text{ cu. ft} \times 1,000,000 \text{ cu. ft/MMCF} \\ &= 19.3 \text{ lb/MMCF} \end{aligned}$$

Weighted average sample calculation

NOTE: The example below shows how the weighted average of the materials going into the waste stream is calculated. A weighted-average emission factor has been calculated by listing usage amounts and emission factors for each material, summing each column, and then dividing the total emissions by the total gallons used.

In this example: 23,231 lbs ÷ 4,096 gal = 5.67 lb/gal average VOC content. This emission factor is then used to calculate the average pollutant content in the Off-site Recycling/Disposal Form example.

This process can also be used to find the weighted average emission factor for similar materials if you are reporting them together as a single line item on the Evaporative Process form. Refer to the explanation of "grouping" on page 6.

Process ID #	Material Type	2011 Usage	Units	VOC (lbs/unit)	VOC Emissions (= Usage × VOC content)	Percent contributed to waste stream
6	gun cleaner	180	gal	7.2	1,296 lbs.	5.6 %
7	xyz stripper	1,300	gal	3.3	4,290 lbs.	18.5 %
8	cleaning solvent	358	gal	6.4	2,291 lbs.	9.9 %
9	MEGASOLVE	2,258	gal	6.8	15,354 lbs.	66.1 %
	Totals:	4,096	gal		23,231 lbs.	100.0 %

Average VOC content:	$\frac{23,231 \text{ lbs.}}{4,096 \text{ gals}}$	=	5.67 lb/gal
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EXAMPLE (for all sources except Title V sources)

Data Certification Form 2011

Permit number 999999

For EACH pollutant listed, total up all emissions recorded on your General Process and Evaporative Process Forms. Enter these numbers in column 1, "Totals from Process Forms." Report any emissions from accidental releases in column 2. Add the figures in each row across, and enter the result in column 3, "Total Emissions".

NOTE: "Accidental Releases" reported in column 2 should include all excess emissions reported to the Department under Rule 140, Section 500.

Summary of 2011 Annual Emissions:	(1) Totals from Process Forms	(2) + Accidental Releases	(3) = TOTAL 2011 Emissions
CO	2,113	0	2,113
NH _x	0	0	0
Lead	0	0	0
HAP&NON	354	0	354
VOC	24,220	0	24,220
NO _x	9,815	0	9,815
SO _x	645	0	645
PM ₁₀	3,091	0	3,091

NOTE: Review specific requirements for data confidentiality on page 5. We cannot hold any data confidential without the required documentation.

TO COMPLETE YOUR EMISSIONS INVENTORY REPORT:

- Complete the Confidentiality Statement below.
- Sign and date this form below where indicated.
- Send the **original** copy of your completed forms to: Maricopa County Air Quality Dept., Emissions Inventory Unit, 1001 North Central Avenue, Suite 125, Phoenix, AZ 85004.
- Keep a copy of all forms for your records.

CONFIDENTIALITY STATEMENT:

This annual emissions report contains requests to keep some data confidential. YES NO

If you check "YES", you must submit documentation and meet certain requirements before your data can be deemed confidential. See enclosed instructions for further details.

NOTE: The Data Certification form must be signed by a responsible company official.

CERTIFICATION STATEMENT:

I declare under penalty of perjury that the data (e.g. inputs, emission factors, controls, and annual emissions) presented herein represents the best available information and is true, accurate and complete to the best of my knowledge.

Signature of owner/business officer

Date of signature

Telephone number

Type or print full name of owner/business officer

Type or print full title

How to calculate an emission fee (for Title V sources only):

1. For each pollutant listed on the “Data Certification/Fee Calculation” form, total up all emissions recorded on your General Process and Evaporative Process Forms. Enter these numbers in column 1, “Totals from Process Forms.”

NOTE: While most processes that generate PM₁₀ should be reported on line 5 of the Data Certification/Fee Calculation form, “[f]ugitive emissions of PM₁₀ from activities other than crushing, belt transfers, screening, or stacking” (County Rule 280, § 305.2d) are NOT subject to annual emission fees. The most common occurrences of these PM₁₀-producing activities that are NON-billable are listed below:

SCC codes and description of PM₁₀-producing processes that are NOT subject to emission fees

SCC	Major Category	Subcategory	Facility / Process Type	Process Description
30200814	Industrial Processes	Food and Agriculture	Feed Manufacture	Storage
30400737	Industrial Processes	Secondary Metal Production	Steel Foundries	Raw Material Silo
30500120	Industrial Processes	Mineral Products	Asphalt Roofing Manufacture	Storage Bins: Ferric Chloride
30500121	Industrial Processes	Mineral Products	Asphalt Roofing Manufacture	Storage Bins: Mineral Stabilizer
30500134	Industrial Processes	Mineral Products	Asphalt Roofing Manufacture	Blown Saturant Storage
30500135	Industrial Processes	Mineral Products	Asphalt Roofing Manufacture	Blown Coating Storage
30500141	Industrial Processes	Mineral Products	Asphalt Roofing Manufacture	Granules Storage
30500143	Industrial Processes	Mineral Products	Asphalt Roofing Manufacture	Mineral Dust Storage
30500203	Industrial Processes	Mineral Products	Asphalt Concrete	Storage Piles
30500212	Industrial Processes	Mineral Products	Asphalt Concrete	Heated Asphalt Storage Tanks
30500213	Industrial Processes	Mineral Products	Asphalt Concrete	Storage Silo
30500290	Industrial Processes	Mineral Products	Asphalt Concrete	Haul Roads: General
30500303	Industrial Processes	Mineral Products	Brick Manufacture	Storage of Raw Materials
30500608	Industrial Processes	Mineral Products	Cement Manufacturing (Dry Process)	Raw Material Piles
30500708	Industrial Processes	Mineral Products	Cement Manufacturing (Wet Process)	Raw Material Piles
30501710	Industrial Processes	Mineral Products	Mineral Wool	Storage of Oils and Binders
30502007	Industrial Processes	Mineral Products	Stone Quarrying - Processing	Open Storage
30502011	Industrial Processes	Mineral Products	Stone Quarrying - Processing	Hauling
30502504	Industrial Processes	Mineral Products	Construction Sand and Gravel	Hauling
30502507	Industrial Processes	Mineral Products	Construction Sand and Gravel	Storage Piles
30502760	Industrial Processes	Mineral Products	Industrial Sand and Gravel	Sand Handling, Transfer, & Storage
30531090	Industrial Processes	Mineral Products	Coal Mining, Cleaning, Material Handling	Haul Roads: General
30532007	Industrial Processes	Mineral Products	Stone Quarrying - Processing	Open Storage
30704002	Industrial Processes	Pulp and Paper & Wood Pdts.	Bulk Handling and Storage - Wood/Bark	Stockpiles
31100199	Industrial Processes	Building Construction	Construction: Building Contractors	Other Not Classified
31100299	Industrial Processes	Building Construction	Demolitions/Special Trade Contracts	Other Construction/Demolition
50100401	Waste Disposal	Solid Waste Disposal	Landfill Dump	Unpaved Road Traffic
50100402	Waste Disposal	Solid Waste Disposal	Landfill Dump	Fugitive Emissions
50100403	Waste Disposal	Solid Waste Disposal	Landfill Dump	Area Method
50100404	Waste Disposal	Solid Waste Disposal	Landfill Dump	Trench Method
50100405	Waste Disposal	Solid Waste Disposal	Landfill Dump	Ramp Method

2. Report any accidental releases in column 2. Add columns 1 and 2 together for each pollutant, and enter the sum in column 3. Sum lines 1 through 5 together, and enter the total on line 6.
3. Divide your facility's total billable emissions (on line 6) by 2000 to convert pounds into tons. **Round to the nearest ton.** Enter this value on line 7. Multiply this number by **\$39.83**, and enter the result on line 8. This is your 2011 emission fee.

EXAMPLE (for Title V sources only)

Data Certification/Fee Calculation Form 2011

Permit number v99999

For EACH pollutant listed, total up all emissions recorded on your General Process and Evaporative Process Forms. Enter these numbers in column 1, "Totals from Process Forms." Report any emissions from accidental releases in column 2.

Add the figures in each row across, and enter the result in column 3, "Total Emissions".

Carefully follow the instructions on lines 6 through 8 to calculate any emission fee owed.

NOTE: "Accidental Releases" reported in column 2 should include all excess emissions reported to the Department under Rule 140, Section 500.

Summary of 2011 Annual Emissions:	(1) Totals from Process Forms	(2) + Accidental Releases	(3) = TOTAL 2011 Emissions
CO	2,113	0	2,113
NH _x	0	0	0
Lead	0	0	0
PM ₁₀ (non-billable; see page 22)	2,400	0	2,400

Emissions fees are based on your emissions of the following pollutants ONLY:

1	HAP&NON	354	0	354
2	VOC	24,220	0	24,220
3	NO _x	9,815	0	9,815
4	SO _x	645	0	645
5	PM ₁₀ (billable; see page 22)	691	0	691
6	Add "TOTAL" column from lines 1 through 5 ONLY:			35,725 lbs.
7	Divide the total on line 6 by 2000 (pounds per ton) to get tons, and round the number to the nearest ton. (Drop any decimal of .499 or less. Increase to the next whole number any decimal of .500 or more.) Enter the resulting WHOLE NUMBER here.			18 TONS
8	Multiply line 7 (a WHOLE number) by \$ 39.83. This is your 2011 ANNUAL EMISSION FEE.			\$ 716.94

NOTE: Review specific requirements for data confidentiality on page 5. We cannot hold any data confidential without the required documentation.

TO COMPLETE YOUR EMISSIONS INVENTORY REPORT:

- Include a check (made payable to Maricopa County Air Quality Department) for the amount calculated on line 8 above.
- Complete the Confidentiality Statement below.
- Sign and date this form below where indicated.
- Send the **Original** copy of your completed forms along with any emission fee due to: Maricopa County Air Quality Department, Emissions Inventory Unit, 1001 North Central Avenue, Suite 125, Phoenix, AZ 85004.
- Keep a copy of all forms for your records.

CONFIDENTIALITY STATEMENT:

This annual emissions report contains requests to keep some data confidential. YES NO

If you check "YES", you must submit documentation and meet certain requirements before your data can be deemed confidential. See enclosed instructions for further details.

NOTE: The Data Certification form must be signed by a responsible company official.

CERTIFICATION STATEMENT:

I declare under penalty of perjury that the data (e.g. inputs, emission factors, controls, and annual emissions) presented herein represents the best available information and is true, accurate and complete to the best of my knowledge.

Signature of owner/business officer	Date of signature	Telephone number
Type or print full name of owner/business officer	Type or print full title	

Appendix B. Rule Effectiveness (RE) Studies

1. Introduction

Rule effectiveness (RE) studies are designed to assess the success of regulatory rules at controlling their targeted emissions. It is acknowledged that facilities and source categories subject to control techniques and devices mandated by rules do not always achieve 100% compliance with those requirements. Given this reality, the US EPA recommends the use of rule effectiveness studies to improve the quality of emission estimates presented in emission inventories.

Once an RE rate has been calculated, its value is applied to relevant sources at an individual process level, thus adjusting (i.e., increasing) emission estimates to reflect a lower degree of control efficiency. The formulas below illustrate how inclusion of rule effectiveness can significantly affect the resulting emission estimates:

Emissions before the application of rule effectiveness:

$$\begin{array}{rcl} \text{Uncontrolled Emissions} & \times & [1 - (\text{Control Efficiency})] = \text{Emissions with Control} \\ \mathbf{100 \text{ tons}} & \times & [1 - (\mathbf{0.90})] = \mathbf{10.0 \text{ tons}} \end{array}$$

Emissions including the application of rule effectiveness:

$$\begin{array}{rcl} \text{Uncontrolled Emissions} & \times & [1 - (\text{Control Efficiency} \times \text{RE})] = \text{Emissions with Control} \\ \mathbf{100 \text{ tons}} & \times & [1 - (\mathbf{0.90} \times \mathbf{0.83})] = \mathbf{25.3 \text{ tons}} \end{array}$$

In general, the RE rate is applied to all processes where a control device or control technique is in use. There are however some limitations to this blanket rule, as expressed in US EPA's most recent guidance:

...not all emission estimates involving use of a control device or technique need to be adjusted to account for RE... For example, a state or local agency may conclude that a control device that operates in conjunction with a continuous emissions monitor, or is equipped with an automatic shutdown device, may provide a sufficient level of assurance that intended emission reductions will be achieved, and therefore an adjustment for rule effectiveness is not necessary. Another example would be in instances where a direct determination of emissions, such as via a mass balance calculation, can be made. (US EPA, 2005)

Another complication in any attempt to apply a blanket RE percentage rate occurs where control device efficiencies are extremely high. Some categories of control devices routinely operate at efficiencies of 99% or greater (e.g., baghouses, thermal oxidizers). For these activities, even small adjustments through the application of RE can cause a dramatic increase in reported emissions. As an example, a process with a control device of 99.9% efficiency may report controlled emissions of 10 tons. If an RE rate of 85% were applied to this process, the adjusted emissions would total 1,508.5 tons (an increase of nearly 15,000%). In these types of instances, the department evaluated the affected processes on a case-by-case basis to determine the appropriateness of applying an RE adjustment.

2. Calculating Rule Effectiveness Rates for Title V Facilities and Non-Title V Facilities

The observed compliance rate in some cases, such as multi-source Title V and non-Title V facilities, can be better described as a rate at which inspection staff issue violations. Inspection staff has a range of experience and training which influences their proficiency in issuing appropriate violations. There may be instances when a rule violation goes unnoticed by staff, or conversely a violation may be issued in error. Even when a compliance rate has a high statistical measure of accuracy, it can fail to reflect a number of programmatic measures that affect overall rule effectiveness; measures like the strength of rule language, departmental enforcement and penalty actions, inspector training programs, educational and public outreach efforts, etc. This reality is reflected in earlier US EPA guidance:

A percentage effectiveness rating is not enough to describe the compliance effectiveness of a rule for a source category. An SSCD [Stationary Source Compliance Division] study should attempt to link the rating to a regulatory agency's overall effort. The study should address the factors that affect the percentage effectiveness rating such as the compliance rate of the sources in a category, inspection frequency and thoroughness, the language of the rule (i.e., whether or not it has loopholes), and the reporting and recordkeeping by the regulatory agency. Evaluating these factors will provide a more complete evaluation of the effectiveness of a rule. (US EPA, 1994)

In order to incorporate all the salient factors described above, a matrix was created to produce a final RE rate. US EPA's latest guidance (2005) provides a listing of factors that can impact rule effectiveness rates (e.g., inspector training, frequency of inspections, media outreach, enforcement policies, recordkeeping requirements, etc.), grouped into major categories such as most important factors, important factors and other factors. The department used these suggested factors as the basis for developing the RE matrices contained in Tables B-2 and B-3.

In brief, the compliance rate developed from inspection data accounts for 70% of the overall RE rate, while all other factors account for the remaining 30%. Each factor is scored individually, based upon the department's success in implementing that factor. As an example, the score for the factor "Compliance History" is the compliance rate developed from the study period inspection data, while the score for "Enforcement Penalties" is based upon the department's timely response to, and settlement of, observed violations associated with the subject rule or source category. The complete matrices for each applicable rule or source category for which rule effectiveness was addressed, are contained in Tables B-2 and B-3.

The following sections describe in further detail the data and methods used in the development of the remaining RE factors for Title V and non-Title V permitted facilities; results are summarized in Table B-1 below.

Table B-1. Rule effectiveness rate, by source category analyzed.

Source Category	Compliance Rate	Rule Effectiveness (RE) Rate
Title V Facilities	90.45% *	91.81%
Non-Title V Facilities	85.92% *	87.81%

* Compliance rates for both Title V and Non-Title V facilities are based upon 2010-2011 inspection data, and reflect compliance self-monitoring recordkeeping practice, in addition to violation data.

For the remaining emission processes that include a control device or technique that limits ozone formation, separate multi-rule RE rates have been calculated for permitted Title V and non-Title V facilities. Factor-based matrices have been utilized to develop RE rates for Title V and non-Title V facilities. Compliance rates for these sources are based upon two full years of data (2010 through 2011), as compliance information for these sources tends to be more detailed (as reflected in the matrix). The compliance rate for these facilities also includes data on self-monitoring recordkeeping practices in addition to inspection data. The combined scores of the monitoring data and inspection data divided by the 70% of the overall RE rate comprise the ‘compliance rate’ section of the RE calculation matrix. The combined compliance rate for Title V facilities is 90.45% and 85.92% for non-Title V facilities, resulting in RE rates of 91.81% and 87.81% for Title V and non-Title V facilities, respectively, as shown in Tables B–2 and B–3 below.

3 References

US EPA, 1994. Rule Effectiveness Guidance: Integration of Inventory, Compliance and Assessment Applications. EPA Rep. 452/R-94-001, January 1994.

US EPA, 2005. Emissions Inventory Guidance for Implementation of Ozone and Particulate Matter National Ambient Air Quality Standards (NAAQS) and Regional Haze Regulations. EPA Rep. 454/R-05-001, November 2005.

Table B–2. Rule Effectiveness Matrix for Title V Facilities

A. Most important factors (2 criteria, each assigned weighting of 35% of total):

Factor	Range		Midpt. value	Description	Weight	Value assigned to MCAQD	Score (= weight × value)
Monitoring	94%	100%	97%	Source specific monitoring used for compliance purposes, and monitoring records filed with regulatory agency at least every 4 months.			
	87%	93%	90%	Source specific monitoring used as an indicator of compliance, and monitoring records filed with regulatory agency every 6 to 9 months.	35%	90%	31.5%
	81%	86%	84%	Source specific monitoring used as an indicator of compliance, and monitoring records filed with regulatory agency each year.			
	70%	80%	75%	General guidance exists for source specific enhanced monitoring, and monitoring records required but aren't submitted to regulatory agency.			
		< 70%	35%	No requirements for any type of monitoring.			

Compliance History	94%	100%	97%	The facility has been in compliance for the past eight quarters.	35%	12 of 21 facilities	19.4%
	87%	93%	90%	The facility is believed to have been in compliance for the past eight quarters, although inspection frequency is such that this can't be positively confirmed.			
	81%	86%	84%	On schedule; the facility is meeting its compliance schedule.			
	70%	80%	75%	In Violation; facility is in violation of emissions and/or procedural requirements.		7 of 21 facilities	11.3%
		< 70%	35%	High Priority Violator (HPV): the facility is in significant violation of one or more applicable requirement of the CAA.		2 of 21 facilities	1.2%
Sum:							31.8%

Overall Compliance Rate for Title V facilities: **90.45%**

B. Other important factors (4 criteria, each assigned weighting of 3% of total):

Type of Inspection	94%	100%	97%	Inspections involve compliance test methods with a high degree of accuracy, such as stack testing or other types of precise emissions measurement.	3%	97%	2.9%
	87%	93%	90%	Inspections involve detailed review of process parameters & inspection of control equipment.			
	81%	86%	84%	Inspections involve review of process and inspection of control equipment.			
	70%	80%	75%	Inspections generally consist of only a records review.			
		< 70%	35%	Inspections most likely consist of visual inspection (e.g., opacity), or drive by.			

Operation & Maintenance	94%	100%	97%	Control equipment operators follow and sign daily O&M instructions.			
	87%	93%	90%	Control equipment operators follow daily O&M instructions.	3%	90%	2.7%
	81%	86%	84%	Control equipment operators follow daily or weekly O&M instructions.			
	70%	80%	75%	O&M requirements exist, but on no specific schedule.			
		< 70%	35%	No specific O&M requirements.			

Factor	Range		Midpt. value	Description	Weight	Value assigned to MCAQD	Score (= weight × value)
Unannounced Inspections	94%	100%	97%	Routinely conducted.	3%	97%	2.9%
	87%	93%	90%	Sometimes done.			
	81%	86%	84%	Done, but infrequently.			
	70%	80%	75%	Rarely done.			
		< 70%	35%	Never done.			

Enforcement Penalties	94%	100%	97%	Agency has the authority to impose punitive measures, including monetary fines, towards violators such as in delegated Title V Operating Permit programs.	3%	97%	2.91%
	87%	93%	90%	Agency has the authority to impose punitive measures, including monetary fines, towards violators such as in delegated Title V Operating Permit programs.			
	81%	86%	84%	Agency has the authority to impose punitive measures, including monetary fines, towards violators such as in delegated Title V Operating Permit programs.			
	70%	80%	75%	Agency has the authority to impose punitive measures, including monetary fines, towards violators such as in delegated Title V Operating Permit programs.			
		< 70%	35%	Agency does not have sufficient authority to impose punitive measures towards violators.			

C. Other factors (9 criteria, each assigned weighting of 2% of total):

Compliance Certifications	94%	100%	97%	Source subject to Title V or other type of compliance certification.	2%	97%	1.94%
	87%	93%	90%	Source subject to Title V or other type of compliance certification.			
	81%	86%	84%	Source not subject to any type of compliance certification.			
	70%	80%	75%	Source not subject to any type of compliance certification.			
		< 70%	35%	Source not subject to any type of compliance certification.			

Inspection Frequency	94%	100%	97%	Source(s) are inspected once every 2 years or more frequently.	2%	97%	1.94%
	87%	93%	90%	Source(s) are inspected once every 3 years or more frequently.			
	81%	86%	84%	Source(s) are inspected once every 5 years or more frequently.			
	70%	80%	75%	Inspection of source(s) infrequent; > every 5 years.			
		< 70%	35%	Inspections rarely, if ever, performed.			

EPA HPV Enforcement	94%	100%	97%	Agency has sufficient resources to implement EPA's 12/22/98 HPV policy.	2%	97%	1.94%
	87%	93%	90%	Agency's resources allow it to implement EPA's 12/22/98 HPV policy in most instances.			
	81%	86%	84%	Agency's resources allow it to implement EPA's 12/22/98 HPV policy in most instances.			
	70%	80%	75%	Agency's resources allow it to implement EPA's 12/22/98 HPV policy more often than not.			
		< 70%	35%	Resource constraints prohibit agency from implementing EPA's 12/22/98 HPV policy in most instances.			

Factor	Range		Midpt. value	Description	Weight	Value assigned to MCAQD	Score (= weight × value)
Operator Training	94%	100%	97%	Control equipment operators complete a formal training program on use of the equipment, and such program is kept up to date and has been reviewed by the regulatory agency.			
	87%	93%	90%	Control equipment operators complete formal training program, and such program is kept up to date and available for review by the regulatory agency upon request.			
	81%	86%	84%	Control equipment operators complete some amount of formal training.	2%	84%	1.68%
	70%	0.8	75%	Control equipment operators receive only on the job training.			
		< 70%	35%	Control equipment operators receive no specific training.			
Media Publicity	94%	100%	97%	Media publicity of enforcement actions.	2%	97%	1.94%
	87%	93%	90%	Media publicity of enforcement actions.			
	81%	86%	84%	Media publicity of enforcement actions.			
	70%	80%	75%	Media publicity of enforcement actions.			
		< 70%	35%	No media publicity of enforcement actions.			
Regulatory Workshops	94%	100%	97%	Regulatory workshops are available annually, and/or the implementing agency mails regulatory information packages each year.	2%	97%	1.94%
	87%	93%	90%	Regulatory workshops are available every 1-2 years, and/or the implementing agency mails regulatory information packages every 1-2 years.			
	81%	86%	84%	Regulatory workshops are available every 2-3 years, and/or the implementing agency mails regulatory information packages once every 2-3 years.			
	70%	80%	75%	Regulatory workshop not routinely available, but implementing agency mails regulatory information packages out about once every 2-3 years.			
		< 70%	35%	Regulatory workshops not routinely available. Implementing agency mails regulatory information packages infrequently, if ever.			
Inspector Training	94%	100%	97%	Inspectors must undergo 2 weeks of comprehensive basic training, and 1 to 2 weeks of source specific training, and such training is updated each year.			
	87%	93%	90%	Inspectors must undergo 1 to 2 weeks of basic training and 1 week of source specific training and such training is updated every 1-2 years.	2%	90%	1.80%
	81%	86%	84%	Inspectors must undergo 1 to 2 weeks of basic training and 3 to 5 days of source specific training, and such training is updated every 1-2 years.			
	70%	80%	75%	Inspectors must undergo 1 to 2 weeks of basic training and 1 to 3 days of source specific training, and such training is updated every 1-2 years.			
		< 70%	35%	Inspectors must undergo less than 5 days of basic training less than 3 days of source specific training, and such training is updated only every 2 years or less frequently.			

Factor	Range		Midpt. value	Description	Weight	Value assigned to MCAQD	Score (= weight × value)
Testing Guidelines	94%	100%	97%	Specific guidelines and schedule for testing and test methods exist.	2%	97%	1.94%
	87%	93%	90%	Specific guidelines on testing and test methods exist, but no schedule for testing.			
	81%	86%	84%	Specific guidelines on testing and test methods exist, but no schedule for testing.			
	70%	80%	75%	Specific guidelines on testing and test methods, but no schedule for testing.			
		< 70%	35%	Only general guidance on testing, or no mention of testing requirements.			

Follow-up Inspections	94%	100%	97%	Follow-up inspections always or almost always conducted (90 % of the time or more).	2%	97%	1.94%
	87%	93%	90%	Follow-up inspections usually conducted (approximately 75% of the time).			
	81%	86%	84%	Follow-up inspections sometimes conducted (approximately 50% of the time).			
	70%	80%	75%	Follow-up inspections infrequently conducted (approximately 25% of the time).			
		< 70%	35%	Follow-up inspections rarely or never conducted (10% of the time or less)			

Overall rule effectiveness score for Title V facilities:

91.81%

Table B-3. Rule Effectiveness Matrix for Non-Title V Facilities

A. Most important factors (2 criteria, each assigned weighting of 35% of total):

Factor	Range		Midpt. value	Description	Weight	Value assigned to MCAQD	Score (= weight × value)
Monitoring	94%	100%	97%	Source specific monitoring used for compliance purposes, and monitoring records filed with regulatory agency at least every 4 months.			
	87%	93%	90%	Source specific monitoring used as an indicator of compliance, and monitoring records filed with regulatory agency every 6 to 9 months.			
	81%	86%	84%	Source specific monitoring used as an indicator of compliance, and monitoring records filed with regulatory agency each year.			
	70%	80%	75%	General guidance exists for source specific enhanced monitoring, and monitoring records required but aren't submitted to regulatory agency.	35%	75%	26.3%
		< 70%	35%	No requirements for any type of monitoring.			

Compliance History	94%	100%	97%	The facility has been in compliance for the past eight quarters.	35%	191 of 268 facilities	24.2%
	87%	93%	90%	The facility is believed to have been in compliance for the past eight quarters, although inspection frequency is such that this can't be positively confirmed.		19 of 268 facilities	2.2%
	81%	86%	84%	On schedule; the facility is meeting its compliance schedule.			
	70%	80%	75%	In Violation; facility is in violation of emissions and/or procedural requirements.		77 of 268 facilities	7.5%
		< 70%	35%	High Priority Violator (HPV): the facility is in significant violation of one or more applicable requirement of the CAA.		0 of 268 facilities	0.0%
Sum:							33.9%

Overall Compliance Rate for Non-Title V facilities: 85.92%

B. Other important factors (4 criteria, each assigned weighting of 3% of total):

Type of Inspection	94%	100%	97%	Inspections involve compliance test methods with a high degree of accuracy, such as stack testing or other types of precise emissions measurement.			
	87%	93%	90%	Inspections involve detailed review of process parameters & inspection of control equipment.	3%	90%	2.7%
	81%	86%	84%	Inspections involve review of process and inspection of control equipment.			
	70%	80%	75%	Inspections generally consist of only a records review.			
		< 70%	35%	Inspections most likely consist of visual inspection (e.g., opacity), or drive by.			

Operation & Maintenance	94%	100%	97%	Control equipment operators follow and sign daily O&M instructions.			
	87%	93%	90%	Control equipment operators follow daily O&M instructions.	3%	90%	2.7%
	81%	86%	84%	Control equipment operators follow daily or weekly O&M instructions.			
	70%	80%	75%	O&M requirements exist, but on no specific schedule.			
		< 70%	35%	No specific O&M requirements.			

Factor	Range		Midpt. value	Description	Weight	Value assigned to MCAQD	Score (= weight × value)
Unannounced Inspections	94%	100%	97%	Routinely conducted.	3%	97%	2.91%
	87%	93%	90%	Sometimes done.			
	81%	86%	84%	Done, but infrequently.			
	70%	80%	75%	Rarely done.			
		< 70%	35%	Never done.			

Enforcement Penalties	94%	100%	97%	Agency has the authority to impose punitive measures, including monetary fines, towards violators such as in delegated Title V Operating Permit programs.	3%	97%	2.91%
	87%	93%	90%	Agency has the authority to impose punitive measures, including monetary fines, towards violators such as in delegated Title V Operating Permit programs.			
	81%	86%	84%	Agency has the authority to impose punitive measures, including monetary fines, towards violators such as in delegated Title V Operating Permit programs.			
	70%	80%	75%	Agency has the authority to impose punitive measures, including monetary fines, towards violators such as in delegated Title V Operating Permit programs.			
		< 70%	35%	Agency does not have sufficient authority to impose punitive measures towards violators.			

C. Other factors (9 criteria, each assigned weighting of 2% of total):

Compliance Certifications	94%	100%	97%	Source subject to Title V or other type of compliance certification.	2%	75%	1.5%
	87%	93%	90%	Source subject to Title V or other type of compliance certification.			
	81%	86%	84%	Source not subject to any type of compliance certification.			
	70%	80%	75%	Source not subject to any type of compliance certification.			
		< 70%	35%	Source not subject to any type of compliance certification.			

Inspection Frequency	94%	100%	97%	Source(s) are inspected once every 2 years or more frequently.	2%	97%	1.94%
	87%	93%	90%	Source(s) inspected every 3 years or more frequently.			
	81%	86%	84%	Source(s) inspected every 5 years or more frequently.			
	70%	80%	75%	Inspection of source(s) infrequent; > every 5 years.			
		< 70%	35%	Inspections rarely, if ever, performed.			

EPA HPV Enforcement	94%	100%	97%	Agency has sufficient resources to implement EPA's 12/22/98 HPV policy.	2%	97%	1.94%
	87%	93%	90%	Agency's resources allow it to implement EPA's 12/22/98 HPV policy in most instances.			
	81%	86%	84%	Agency's resources allow it to implement EPA's 12/22/98 HPV policy in most instances.			
	70%	80%	75%	Agency's resources allow it to implement EPA's 12/22/98 HPV policy more often than not.			
		< 70%	35%	Resource constraints prohibit agency from implementing EPA's 12/22/98 HPV policy in most instances.			

Factor	Range		Midpt. value	Description	Weight	Value assigned to MCAQD	Score(= weight × value)
Operator Training	94%	100%	97%	Control equipment operators complete a formal training program on use of the equipment; the program is kept up to date and has been reviewed by the regulatory agency.			
	87%	93%	90%	Control equipment operators complete formal training program, and such program is kept up to date and available for review by the regulatory agency upon request.			
	81%	86%	84%	Control equipment operators complete some amount of formal training.			
	70%	0.8	75%	Control equipment operators receive only on the job training.	2%	75%	1.50%
		< 70%	35%	Control equipment operators receive no specific training.			

Media Publicity	94%	100%	97%	Media publicity of enforcement actions.	2%	97%	1.94%
	87%	93%	90%	Media publicity of enforcement actions.			
	81%	86%	84%	Media publicity of enforcement actions.			
	70%	80%	75%	Media publicity of enforcement actions.			
		< 70%	35%	No media publicity of enforcement actions.			

Regulatory Workshops	94%	100%	97%	Regulatory workshops are available annually, and/or the implementing agency mails regulatory information packages each year.	2%	97%	1.94%
	87%	93%	90%	Regulatory workshops are available every 1-2 years, and/or the implementing agency mails regulatory information packages every 1-2 years.			
	81%	86%	84%	Regulatory workshops are available every 2-3 years, and/or the implementing agency mails regulatory information packages once every 2-3 years.			
	70%	80%	75%	Regulatory workshop not routinely available, but implementing agency mails regulatory information packages out about once every 2-3 years.			
		< 70%	35%	Regulatory workshops not routinely available. The implementing agency mails regulatory information packages infrequently, if ever.			

Inspector Training	94%	100%	97%	Inspectors must undergo 2 weeks of comprehensive basic training, and 1 to 2 weeks of source specific training, and such training is updated each year.			
	87%	93%	90%	Inspectors must undergo 1 to 2 weeks of basic training and 1 week of source specific training and such training is updated every 1-2 years.	2%	90%	1.80%
	81%	86%	84%	Inspectors must undergo 1 to 2 weeks of basic training and 3 to 5 days of source specific training, and such training is updated every 1-2 years.			
	70%	80%	75%	Inspectors must undergo 1 to 2 weeks of basic training and 1 to 3 days of source specific training, and such training is updated every 1-2 years.			
		< 70%	35%	Inspectors must undergo less than 5 days of basic training less than 3 days of source specific training, and such training is updated only every 2 years or less frequently.			

Factor	Range		Midpt. value	Description	Weight	Value assigned to MCAQD	Score(= weight × value)
Testing Guidelines	94%	100%	97%	Specific guidelines and schedule for testing and test methods exist.	2%	97%	1.94%
	87%	93%	90%	Specific guidelines on testing and test methods exist, but no schedule for testing.			
	81%	86%	84%	Specific guidelines on testing and test methods exist, but no schedule for testing.			
	70%	80%	75%	Specific guidelines on testing and test methods, but no schedule for testing.			
		< 70%	35%	Only general guidance on testing, or no mention of testing requirements.			

Follow-up Inspections	94%	100%	97%	Follow-up inspections always or almost always conducted (90 % of the time or more).	2%	97%	1.94%
	87%	93%	90%	Follow-up inspections usually conducted (approximately 75% of the time).			
	81%	86%	84%	Follow-up inspections sometimes conducted (approximately 50% of the time).			
	70%	80%	75%	Follow-up inspections infrequently conducted (approximately 25% of the time).			
		< 70%	35%	Follow-up inspections rarely or never conducted (10% of the time or less)			

Overall rule effectiveness score for non-Title V facilities:

87.81%

Appendix C. MOVES2010b Local Input Data and RunSpecs

In order to calculate the 2011 annual and ozone season-day onroad source emissions, MOVES2010b was executed using local input data for each month of the year and each geographical area (the eight-hour ozone NAA and Maricopa County).

A portion of the MOVES2010b RunSpec Summary, RunSpec, and local input data for Maricopa County are provided in this appendix as an example.

MOVES2010b RunSpec Summary (Maricopa County, December 2011)

* Output Database Server Name: [using default]

* Scale:

Domain/Scale: County
Calculation Type: Inventory

* Time Spans:

Time Aggregation Level: Hour
Years: 2011
Months: December
Days: Weekend & Weekdays
Hours: Start Hour 00:00 - 00:59 | End Hour 23:00 - 23:59

* Geographic Bounds:

Region: County
Selections: ARIZONA - Maricopa County
Domain Input Database: pei_mc_2011_may2011_m2010b_in_v1

* Vehicles/Equipment

On Road Vehicle Equipment:
Diesel Fuel - Combination Long-haul Truck
Diesel Fuel - Combination Short-haul Truck
Diesel Fuel - Intercity Bus
Diesel Fuel - Light Commercial Truck
Diesel Fuel - Motor Home
Diesel Fuel - Motorcycle
Diesel Fuel - Passenger Car
Diesel Fuel - Passenger Truck
Diesel Fuel - Refuse Truck
Diesel Fuel - School Bus
Diesel Fuel - Single Unit Long-haul Truck
Diesel Fuel - Single Unit Short-haul Truck
Diesel Fuel - Transit Bus
Gasoline - Combination Long-haul Truck
Gasoline - Combination Short-haul Truck
Gasoline - Intercity Bus
Gasoline - Light Commercial Truck
Gasoline - Motor Home
Gasoline - Motorcycle
Gasoline - Passenger Car
Gasoline - Passenger Truck
Gasoline - Refuse Truck
Gasoline - School Bus
Gasoline - Single Unit Long-haul Truck
Gasoline - Single Unit Short-haul Truck
Gasoline - Transit Bus
Compressed natural Gas (CNG) - Combination Long-haul Truck
Compressed natural Gas (CNG) - Combination Short-haul Truck
Compressed natural Gas (CNG) - Intercity Bus
Compressed natural Gas (CNG) - Light Commercial Truck
Compressed natural Gas (CNG) - Motor Home
Compressed natural Gas (CNG) - Motorcycle
Compressed natural Gas (CNG) - Passenger Car
Compressed natural Gas (CNG) - Passenger Truck
Compressed natural Gas (CNG) - Refuse Truck
Compressed natural Gas (CNG) - School Bus
Compressed natural Gas (CNG) - Single Unit Long-haul Truck
Compressed natural Gas (CNG) - Single Unit Short-haul Truck
Compressed natural Gas (CNG) - Transit Bus

* Road Type

Off-Network
Rural Restricted Access
Rural Unrestricted Access
Urban Restricted Access
Urban Unrestricted Access

* Pollutants and Processes

Total Gaseous Hydrocarbons - Running Exhaust
Total Gaseous Hydrocarbons - Start Exhaust
Total Gaseous Hydrocarbons - Evap Permeation
Total Gaseous Hydrocarbons - Evap Fuel Vapor Venting
Total Gaseous Hydrocarbons - Evap Fuel Leaks
Total Gaseous Hydrocarbons - Crankcase Running Exhaust
Total Gaseous Hydrocarbons - Crankcase Start Exhaust
Total Gaseous Hydrocarbons - Crankcase Extended Idle Exhaust
Total Gaseous Hydrocarbons - Refueling Displacement Vapor Loss
Total Gaseous Hydrocarbons - Refueling Spillage Loss
Total Gaseous Hydrocarbons - Extended Idle Exhaust
Carbon Monoxide (CO) - Running Exhaust
Carbon Monoxide (CO) - Start Exhaust
Carbon Monoxide (CO) - Crankcase Running Exhaust
Carbon Monoxide (CO) - Crankcase Start Exhaust
Carbon Monoxide (CO) - Crankcase Extended Idle Exhaust
Carbon Monoxide (CO) - Extended Idle Exhaust
Oxides of Nitrogen (NOx) - Running Exhaust
Oxides of Nitrogen (NOx) - Start Exhaust
Oxides of Nitrogen (NOx) - Crankcase Running Exhaust
Oxides of Nitrogen (NOx) - Crankcase Start Exhaust
Oxides of Nitrogen (NOx) - Crankcase Extended Idle Exhaust
Oxides of Nitrogen (NOx) - Extended Idle Exhaust
Methane (CH4) - Running Exhaust
Methane (CH4) - Start Exhaust
Methane (CH4) - Crankcase Running Exhaust
Methane (CH4) - Crankcase Start Exhaust
Methane (CH4) - Crankcase Extended Idle Exhaust
Methane (CH4) - Refueling Displacement Vapor Loss
Methane (CH4) - Refueling Spillage Loss
Methane (CH4) - Extended Idle Exhaust
Non-Methane Hydrocarbons - Running Exhaust
Non-Methane Hydrocarbons - Start Exhaust
Non-Methane Hydrocarbons - Evap Permeation
Non-Methane Hydrocarbons - Evap Fuel Vapor Venting
Non-Methane Hydrocarbons - Evap Fuel Leaks
Non-Methane Hydrocarbons - Crankcase Running Exhaust
Non-Methane Hydrocarbons - Crankcase Start Exhaust
Non-Methane Hydrocarbons - Crankcase Extended Idle Exhaust
Non-Methane Hydrocarbons - Refueling Displacement Vapor Loss
Non-Methane Hydrocarbons - Refueling Spillage Loss
Non-Methane Hydrocarbons - Extended Idle Exhaust
Non-Methane Organic Gases - Running Exhaust
Non-Methane Organic Gases - Start Exhaust
Non-Methane Organic Gases - Evap Permeation
Non-Methane Organic Gases - Evap Fuel Vapor Venting
Non-Methane Organic Gases - Evap Fuel Leaks
Non-Methane Organic Gases - Crankcase Running Exhaust
Non-Methane Organic Gases - Crankcase Start Exhaust
Non-Methane Organic Gases - Crankcase Extended Idle Exhaust
Non-Methane Organic Gases - Refueling Displacement Vapor Loss
Non-Methane Organic Gases - Refueling Spillage Loss
Non-Methane Organic Gases - Extended Idle Exhaust
Total Organic Gases - Running Exhaust
Total Organic Gases - Start Exhaust
Total Organic Gases - Evap Permeation
Total Organic Gases - Evap Fuel Vapor Venting
Total Organic Gases - Evap Fuel Leaks
Total Organic Gases - Crankcase Running Exhaust
Total Organic Gases - Crankcase Start Exhaust
Total Organic Gases - Crankcase Extended Idle Exhaust
Total Organic Gases - Refueling Displacement Vapor Loss
Total Organic Gases - Refueling Spillage Loss
Total Organic Gases - Extended Idle Exhaust
Volatile Organic Compounds - Running Exhaust
Volatile Organic Compounds - Start Exhaust
Volatile Organic Compounds - Evap Permeation
Volatile Organic Compounds - Evap Fuel Vapor Venting
Volatile Organic Compounds - Evap Fuel Leaks
Volatile Organic Compounds - Crankcase Running Exhaust

Volatile Organic Compounds - Crankcase Start Exhaust
Volatile Organic Compounds - Crankcase Extended Idle Exhaust
Volatile Organic Compounds - Refueling Displacement Vapor
Loss
Volatile Organic Compounds - Refueling Spillage Loss
Volatile Organic Compounds - Extended Idle Exhaust

* Manage Input Data Sets
Selections: / StageII_Input / Stage II Refueling Input

* Output
General Output:

Output Database: pei_mc_2011_may2011_m2010b_out_v1
Units: Mass Units (Grams) | Energy Units (Joules) | Distance
Units (Miles)

Activity: Distance Traveled | Source Hours | Source Hours
Idling | Source Hours Operating | Source Hours
Parked | Population | Starts

Output Emissions Detail:

Always: Time (Month) | Location (NATION) | Pollutant
For All Vehicle/Equipment Categories: Fuel Type | Emission
Process

On Road: SCC

MOVES2010b RunSpec (Maricopa County, December 2011)

```
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  <onroadvehicleselection fueltypeid="1" fueltypedesc="Gasoline" sourcetypeid="41" sourcetyname="Intercity Bus"/>
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  <onroadvehicleselection fueltypeid="1" fueltypedesc="Gasoline" sourcetypeid="43" sourcetyname="School Bus"/>
  <onroadvehicleselection fueltypeid="1" fueltypedesc="Gasoline" sourcetypeid="51" sourcetyname="Refuse Truck"/>
  <onroadvehicleselection fueltypeid="1" fueltypedesc="Gasoline" sourcetypeid="52" sourcetyname="Single Unit Short-haul Truck"/>
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Vapor Venting"/>

<pollutantprocessassociation pollutantkey="1" pollutantname="Total Gaseous Hydrocarbons" processkey="13" processname="Evap Fuel Leaks"/>

<pollutantprocessassociation pollutantkey="1" pollutantname="Total Gaseous Hydrocarbons" processkey="15" processname="Crankcase Running Exhaust"/>

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<pollutantprocessassociation pollutantkey="1" pollutantname="Total Gaseous Hydrocarbons" processkey="18" processname="Refueling Displacement Vapor Loss"/>

<pollutantprocessassociation pollutantkey="1" pollutantname="Total Gaseous Hydrocarbons" processkey="19" processname="Refueling Spillage Loss"/>

<pollutantprocessassociation pollutantkey="1" pollutantname="Total Gaseous Hydrocarbons" processkey="90" processname="Extended Idle Exhaust"/>

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<pollutantprocessassociation pollutantkey="5" pollutantname="Methane (CH4)" processkey="16" processname="Crankcase Start Exhaust"/>

<pollutantprocessassociation pollutantkey="5" pollutantname="Methane (CH4)" processkey="17" processname="Crankcase Extended Idle Exhaust"/>

<pollutantprocessassociation pollutantkey="5" pollutantname="Methane (CH4)" processkey="18" processname="Refueling Displacement Vapor Loss"/>

<pollutantprocessassociation pollutantkey="5" pollutantname="Methane (CH4)" processkey="19" processname="Refueling Spillage Loss"/>

<pollutantprocessassociation pollutantkey="5" pollutantname="Methane (CH4)" processkey="90" processname="Extended Idle Exhaust"/>

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<pollutantprocessassociation pollutantkey="79" pollutantname="Non-Methane Hydrocarbons" processkey="13" processname="Evap Fuel Leaks"/>

<pollutantprocessassociation pollutantkey="79" pollutantname="Non-Methane Hydrocarbons" processkey="15" processname="Crankcase Running Exhaust"/>

<pollutantprocessassociation pollutantkey="79" pollutantname="Non-Methane Hydrocarbons" processkey="16" processname="Crankcase Start Exhaust"/>

<pollutantprocessassociation pollutantkey="79" pollutantname="Non-Methane Hydrocarbons" processkey="17" processname="Crankcase Extended Idle Exhaust"/>


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```

MOVES2010b Local Input Data (Maricopa County, December 2011)

[FuelFormulation]

Fuel Formulation	Fuel Subtype	RVP	Sulfur Level	ETOH Volume	MTBE Volume	ETBE Volume	TAME Volume	Aromatic Content	Olefin Content	Benzen e Content	e20 0	e30 0	volToWt PercentOxy	BioDiese l Ester	Cetane Index	PAH Content	T50	T90
11100	12	8.02	20.2	10.	0	0.00194	0.05179	19.6	9.2	1.2	47.9	88.0	2.1717	0	0	0	197.721	309.431
11101	12	8.81	15.4	10.	0	0	0	17.5	6.5	0.9	53.3	90.7	3.7575	0	0	0	185.333	295.25
11102	13	8.79	14.7	10.	0	0	0	20.1	9.1	0.9	54.6	89.4	3.1457	0	0	0	177.636	302.727
11103	12	10.7	15.0	10.	0	0	0	31.9	14.	1.9	54.0	86.0	3.5900	0	0	0	170	317
11104	14	6.94	24.6	10.	0	0.00428	0.11395	19.6	9.9	0.9	42.7	86.7	0.7805	0	0	0	212.908	315.856
11105	12	8.02	26.0	10.	0	0	0	19.9	6.8	0.8	46.0	90.0	3.7400	0	0	0	210	297
11106	11	6.54	22.0	10.	0	0	0	17.6	10.	0.7	45.0	85.5	0.0000	0	0	0	209	320
11107	14	6.80	23.3	10.	0	0	0.36666	21.4	10.	1.2	44.3	86.0	0.1000	0	0	0	212	322
11108	11	6.64	27.2	10.	0	0.02142	0.08571	19.9	11.	0.8	39.0	86.3	0.0171	0	0	0	217	319
11109	14	6.69	24.5	10.	0	0	0.11739	19.2	10.	0.7	39.3	85.8	0.0454	0	0	0	216.543	321.282
11110	13	8.16	19.3	10.	0	0	0	17.0	8.5	0.9	47.8	88.3	2.6418	0	0	0	195.941	310.647
11111	13	8.49	18.7	10.	0	0	0	15.2	6.4	0.8	51.5	90.1	3.2706	0	0	0	191.117	300.294
11112	12	8.53	16.3	10.	0	0	0	16.0	6.4	3.7	51.6	90.3	3.5806	0	0	0	190.363	298.545
21100	12	8.02	20.2	0.0	0	0.00194	0.05179	19.6	9.2	1.2	47.9	88.0	2.1717	0	0	0	197.721	309.431
21101	12	8.81	15.4	0.0	0	0	0	17.5	6.5	0.9	53.3	90.7	3.7575	0	0	0	185.333	295.25
21102	13	8.79	14.7	0.0	0	0	0	20.1	9.1	0.9	54.6	89.4	3.1457	0	0	0	177.636	302.727
21103	12	10.7	15.0	0.0	0	0	0	31.9	14.	1.9	54.0	86.0	3.5900	0	0	0	170	317
21104	14	6.94	24.6	0.0	0	0.00428	0.11395	19.6	9.9	0.9	42.7	86.7	0.7805	0	0	0	212.908	315.856
21105	12	8.02	26.0	0.0	0	0	0	19.9	6.8	0.8	46.0	90.0	3.7400	0	0	0	210	297
21106	11	6.54	22.0	0.0	0	0	0	17.6	10.	0.7	45.0	85.5	0.0000	0	0	0	209	320
21107	14	6.80	23.3	0.0	0	0	0.36666	21.4	10.	1.2	44.3	86.0	0.1000	0	0	0	212	322
21108	11	6.64	27.2	0.0	0	0.02142	0.08571	19.9	11.	0.8	39.0	86.3	0.0171	0	0	0	217	319
21109	14	6.69	24.5	0.0	0	0	0.11739	19.2	10.	0.7	39.3	85.8	0.0454	0	0	0	216.543	321.282
21110	13	8.16	19.3	0.0	0	0	0	17.0	8.5	0.9	47.8	88.3	2.6418	0	0	0	195.941	310.647
21111	13	8.49	18.7	0.0	0	0	0	15.2	6.4	0.8	51.5	90.1	3.2706	0	0	0	191.117	300.294
21112	12	8.53	16.3	0.0	0	0	0	16.0	6.4	3.7	51.6	90.3	3.5806	0	0	0	190.363	298.545
31000	20	0	5.71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31001	20	0	5.25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31002	20	0	5.58	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31003	20	0	5.88	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31004	20	0	5.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31005	20	0	5.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31006	20	0	5.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31007	20	0	5.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31008	20	0	5.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31009	20	0	5.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31010	20	0	5.88	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31011	20	0	7.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31012	20	0	5.60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

[HPMSvTypeYear]

HPMSvTypeID	yearID	VMTGrowthFactor	HPMSBaseYearVMT	baseYearOffNetVMT
10	2011	0	623037600.1	0
20	2011	0	15806675171	0
30	2011	0	12967244959	0
40	2011	0	118381498.4	0
50	2011	0	1281267928	0
60	2011	0	1646318085	0

[SourceTypeYear]

yearID	sourceTypeID	sourceTypePopulation
2011	11	75309
2011	21	2044983
2011	31	440595.7
2011	32	172099
2011	41	1172.42
2011	42	718.58
2011	43	7592.578
2011	51	585.7895
2011	52	21663.06
2011	53	1344.71
2011	54	3344.705
2011	61	9859.552
2011	62	8092.895

[FuelSupply]

countyID	fuelYearID	monthGroupID	fuelFormulationID	marketShare	marketShareCV
4013	2011	1	21101	0.05	0.5
4013	2011	1	11101	0.95	0.5
4013	2011	1	31001	1	0.5
4013	2011	1	30	1	0.5
4013	2011	2	21102	0.05	0.5
4013	2011	2	11102	0.95	0.5
4013	2011	2	31002	1	0.5
4013	2011	2	30	1	0.5
4013	2011	3	21103	0.05	0.5
4013	2011	3	11103	0.95	0.5
4013	2011	3	31003	1	0.5
4013	2011	3	30	1	0.5
4013	2011	4	21104	0.05	0.5
4013	2011	4	11104	0.95	0.5
4013	2011	4	31004	1	0.5
4013	2011	4	30	1	0.5
4013	2011	5	21105	0.05	0.5
4013	2011	5	11105	0.95	0.5
4013	2011	5	31005	1	0.5
4013	2011	5	30	1	0.5
4013	2011	6	21106	0.05	0.5
4013	2011	6	11106	0.95	0.5
4013	2011	6	31006	1	0.5
4013	2011	6	30	1	0.5
4013	2011	7	21107	0.05	0.5
4013	2011	7	11107	0.95	0.5
4013	2011	7	31007	1	0.5
4013	2011	7	30	1	0.5
4013	2011	8	21108	0.05	0.5
4013	2011	8	11108	0.95	0.5
4013	2011	8	31008	1	0.5
4013	2011	8	30	1	0.5
4013	2011	9	21109	0.05	0.5
4013	2011	9	11109	0.95	0.5
4013	2011	9	31009	1	0.5
4013	2011	9	30	1	0.5
4013	2011	10	21110	0.05	0.5
4013	2011	10	11110	0.95	0.5
4013	2011	10	31010	1	0.5
4013	2011	10	30	1	0.5
4013	2011	11	21111	0.05	0.5
4013	2011	11	11111	0.95	0.5
4013	2011	11	31011	1	0.5
4013	2011	11	30	1	0.5
4013	2011	12	21112	0.05	0.5
4013	2011	12	11112	0.95	0.5
4013	2011	12	31012	1	0.5
4013	2011	12	30	1	0.5

[ZoneMonthHour]

monthID	zoneID	HourID	temperature	relHumidity
12	40130	1	48	62
12	40130	2	47	65
12	40130	3	47	64
12	40130	4	47	64
12	40130	5	46	66
12	40130	6	46	66
12	40130	7	45	68
12	40130	8	46	67
12	40130	9	48	62
12	40130	10	52	54
12	40130	11	55	48
12	40130	12	57	43
12	40130	13	59	40
12	40130	14	60	38
12	40130	15	61	36
12	40130	16	62	35
12	40130	17	61	37
12	40130	18	58	42
12	40130	19	56	47
12	40130	20	54	51
12	40130	21	53	52
12	40130	22	52	56
12	40130	23	50	59
12	40130	24	49	60
12	40130	1	48	62

[Source Type Age Distribution]

Source TypeID	YearID	AgeID	AgeFraction
11	2011	0	0.029892
11	2011	1	0.036417
11	2011	2	0.083781
11	2011	3	0.101569
11	2011	4	0.116094
11	2011	5	0.105884
11	2011	6	0.081115
11	2011	7	0.058941
11	2011	8	0.067783
11	2011	9	0.054942
11	2011	10	0.046522
11	2011	11	0.038838
11	2011	12	0.031681
11	2011	13	0.023471
11	2011	14	0.018524
11	2011	15	0.017472
11	2011	16	0.014525
11	2011	17	0.011157
11	2011	18	0.010525
11	2011	19	0.007262
11	2011	20	0.005157
11	2011	21	0.005263
11	2011	22	0.005052
11	2011	23	0.004631
11	2011	24	0.004245
11	2011	25	0.003891
11	2011	26	0.003567
11	2011	27	0.00327
11	2011	28	0.002997
11	2011	29	0.002748
11	2011	30	0.002748
21	2011	0	0.043696
21	2011	1	0.053295
21	2011	2	0.042596
21	2011	3	0.068793
21	2011	4	0.083192
21	2011	5	0.080592
21	2011	6	0.077392
21	2011	7	0.070493
21	2011	8	0.065393
21	2011	9	0.061294
21	2011	10	0.056294
21	2011	11	0.051995
21	2011	12	0.043696
21	2011	13	0.034097
21	2011	14	0.029997
21	2011	15	0.022198
21	2011	16	0.021098
21	2011	17	0.015798
21	2011	18	0.012199
21	2011	19	0.009499
21	2011	20	0.008099
21	2011	21	0.006399
21	2011	22	0.005299
21	2011	23	0.004
21	2011	24	0.003019
21	2011	25	0.002278
21	2011	26	0.001719
21	2011	27	0.001298
21	2011	28	0.000979
21	2011	29	0.000739
21	2011	30	0.022565
31	2011	0	0.040367
31	2011	1	0.036952
31	2011	2	0.023272
31	2011	3	0.060977
31	2011	4	0.080902
31	2011	5	0.086168
31	2011	6	0.070426
31	2011	7	0.071799
31	2011	8	0.060662
31	2011	9	0.054761
31	2011	10	0.061661
31	2011	11	0.055069
31	2011	12	0.041776
31	2011	13	0.034756
31	2011	14	0.036143
31	2011	15	0.02573
31	2011	16	0.02484
31	2011	17	0.022254
31	2011	18	0.014775
31	2011	19	0.010328
31	2011	20	0.008996
31	2011	21	0.007982
31	2011	22	0.008785

Source TypeID	YearID	AgeID	AgeFraction
31	2011	23	0.006661
31	2011	24	0.005076
31	2011	25	0.003888
31	2011	26	0.003002
31	2011	27	0.002329
31	2011	28	0.001818
31	2011	29	0.001418
31	2011	30	0.036429
32	2011	0	0.043709
32	2011	1	0.037275
32	2011	2	0.024506
32	2011	3	0.063116
32	2011	4	0.086828
32	2011	5	0.091952
32	2011	6	0.071425
32	2011	7	0.069687
32	2011	8	0.057689
32	2011	9	0.051358
32	2011	10	0.058053
32	2011	11	0.055657
32	2011	12	0.041337
32	2011	13	0.03425
32	2011	14	0.036441
32	2011	15	0.02487
32	2011	16	0.023712
32	2011	17	0.02089
32	2011	18	0.013959
32	2011	19	0.009727
32	2011	20	0.008543
32	2011	21	0.007639
32	2011	22	0.00826
32	2011	23	0.006259
32	2011	24	0.004777
32	2011	25	0.00368
32	2011	26	0.002847
32	2011	27	0.002226
32	2011	28	0.001755
32	2011	29	0.001411
32	2011	30	0.036162
41	2011	0	0.038296
41	2011	1	0.015698
41	2011	2	0.027397
41	2011	3	0.064494
41	2011	4	0.149585
41	2011	5	0.139386
41	2011	6	0.09579
41	2011	7	0.060294
41	2011	8	0.043396
41	2011	9	0.034397
41	2011	10	0.044396
41	2011	11	0.055294
41	2011	12	0.052495
41	2011	13	0.028097
41	2011	14	0.027297
41	2011	15	0.025797
41	2011	16	0.024298
41	2011	17	0.014999
41	2011	18	0.009599
41	2011	19	0.007199
41	2011	20	0.006299
41	2011	21	0.009299
41	2011	22	0.006299
41	2011	23	0.0048
41	2011	24	0.003657
41	2011	25	0.002786
41	2011	26	0.002123
41	2011	27	0.001617
41	2011	28	0.001232
41	2011	29	0.000939
41	2011	30	0.002744
42	2011	0	0.038296
42	2011	1	0.015698
42	2011	2	0.027397
42	2011	3	0.064494
42	2011	4	0.149585
42	2011	5	0.139386
42	2011	6	0.09579
42	2011	7	0.060294
42	2011	8	0.043396
42	2011	9	0.034397
42	2011	10	0.044396
42	2011	11	0.055294
42	2011	12	0.052495
42	2011	13	0.028097
42	2011	14	0.027297

Source TypeID	YearID	AgeID	AgeFraction
42	2011	15	0.025797
42	2011	16	0.024298
42	2011	17	0.014999
42	2011	18	0.009599
42	2011	19	0.007199
42	2011	20	0.006299
42	2011	21	0.009299
42	2011	22	0.006299
42	2011	23	0.0048
42	2011	24	0.003657
42	2011	25	0.002786
42	2011	26	0.002123
42	2011	27	0.001617
42	2011	28	0.001232
42	2011	29	0.000939
42	2011	30	0.002744
43	2011	0	0.075389
43	2011	1	0.040094
43	2011	2	0.037195
43	2011	3	0.085088
43	2011	4	0.147379
43	2011	5	0.151778
43	2011	6	0.083488
43	2011	7	0.051493
43	2011	8	0.030696
43	2011	9	0.020197
43	2011	10	0.024996
43	2011	11	0.063691
43	2011	12	0.038794
43	2011	13	0.030796
43	2011	14	0.041094
43	2011	15	0.017397
43	2011	16	0.013008
43	2011	17	0.00801
43	2011	18	0.005722
43	2011	19	0.003933
43	2011	20	0.004121
43	2011	21	0.004475
43	2011	22	0.003412
43	2011	23	0.002644
43	2011	24	0.002026
43	2011	25	0.001526
43	2011	26	0.001172
43	2011	27	0.000893
43	2011	28	0.000686
43	2011	29	0.000527
43	2011	30	0.008281
51	2011	0	0.075401
51	2011	1	0.0401
51	2011	2	0.0372
51	2011	3	0.085101
51	2011	4	0.147402
51	2011	5	0.151802
51	2011	6	0.083501
51	2011	7	0.051501
51	2011	8	0.0307
51	2011	9	0.0202
51	2011	10	0.025
51	2011	11	0.063701
51	2011	12	0.0388
51	2011	13	0.0308
51	2011	14	0.0411
51	2011	15	0.0174
51	2011	16	0.013199
51	2011	17	0.008099
51	2011	18	0.0059
51	2011	19	0.003999
51	2011	20	0.004199
51	2011	21	0.004499
51	2011	22	0.003399
51	2011	23	0.002599
51	2011	24	0.001988
51	2011	25	0.00152
51	2011	26	0.001162
51	2011	27	0.000889
51	2011	28	0.00068
51	2011	29	0.00052
51	2011	30	0.007638
52	2011	0	0.066214
52	2011	1	0.039334
52	2011	2	0.03318
52	2011	3	0.078132
52	2011	4	0.128378
52	2011	5	0.132775
52	2011	6	0.079084

Source TypeID	YearID	AgeID	AgeFraction
52	2011	7	0.056074
52	2011	8	0.038042
52	2011	9	0.02878
52	2011	10	0.034102
52	2011	11	0.060507
52	2011	12	0.038954
52	2011	13	0.031317
52	2011	14	0.039113
52	2011	15	0.019306
52	2011	16	0.016191
52	2011	17	0.011791
52	2011	18	0.008363
52	2011	19	0.005691
52	2011	20	0.005513
52	2011	21	0.005414
52	2011	22	0.004802
52	2011	23	0.003655
52	2011	24	0.00283
52	2011	25	0.002259
52	2011	26	0.00176
52	2011	27	0.001429
52	2011	28	0.001176
52	2011	29	0.001073
52	2011	30	0.002476
53	2011	0	0.074869
53	2011	1	0.040084
53	2011	2	0.036613
53	2011	3	0.08406
53	2011	4	0.144792
53	2011	5	0.148968
53	2011	6	0.082261
53	2011	7	0.050975
53	2011	8	0.030557
53	2011	9	0.02016
53	2011	10	0.024955
53	2011	11	0.062595
53	2011	12	0.038177
53	2011	13	0.030303
53	2011	14	0.040308
53	2011	15	0.017217
53	2011	16	0.013996
53	2011	17	0.008668
53	2011	18	0.006817
53	2011	19	0.004401
53	2011	20	0.004658
53	2011	21	0.004706
53	2011	22	0.003492
53	2011	23	0.002575
53	2011	24	0.002017
53	2011	25	0.001726
53	2011	26	0.001332

Source TypeID	YearID	AgeID	AgeFraction
53	2011	27	0.001106
53	2011	28	0.000916
53	2011	29	0.000861
53	2011	30	0.015836
54	2011	0	0.075419
54	2011	1	0.04011
54	2011	2	0.037209
54	2011	3	0.085122
54	2011	4	0.147438
54	2011	5	0.151839
54	2011	6	0.083521
54	2011	7	0.051513
54	2011	8	0.030708
54	2011	9	0.020205
54	2011	10	0.025006
54	2011	11	0.063716
54	2011	12	0.03881
54	2011	13	0.030808
54	2011	14	0.04111
54	2011	15	0.017404
54	2011	16	0.012531
54	2011	17	0.007698
54	2011	18	0.005268
54	2011	19	0.003727
54	2011	20	0.003917
54	2011	21	0.004384
54	2011	22	0.003365
54	2011	23	0.002681
54	2011	24	0.002082
54	2011	25	0.001515
54	2011	26	0.00117
54	2011	27	0.000884
54	2011	28	0.000678
54	2011	29	0.000526
54	2011	30	0.009633
61	2011	0	0.075521
61	2011	1	0.040164
61	2011	2	0.03726
61	2011	3	0.085237
61	2011	4	0.147637
61	2011	5	0.152044
61	2011	6	0.083634
61	2011	7	0.051583
61	2011	8	0.030749
61	2011	9	0.020232
61	2011	10	0.02504
61	2011	11	0.063802
61	2011	12	0.038862
61	2011	13	0.030849
61	2011	14	0.041166
61	2011	15	0.017428

Source TypeID	YearID	AgeID	AgeFraction
61	2011	16	0.013144
61	2011	17	0.00788
61	2011	18	0.005826
61	2011	19	0.003897
61	2011	20	0.004157
61	2011	21	0.004432
61	2011	22	0.003239
61	2011	23	0.002455
61	2011	24	0.001916
61	2011	25	0.001465
61	2011	26	0.001114
61	2011	27	0.000846
61	2011	28	0.00063
61	2011	29	0.000485
61	2011	30	0.007306
62	2011	0	0.075452
62	2011	1	0.040127
62	2011	2	0.037225
62	2011	3	0.085158
62	2011	4	0.147501
62	2011	5	0.151904
62	2011	6	0.083557
62	2011	7	0.051535
62	2011	8	0.030721
62	2011	9	0.020214
62	2011	10	0.025017
62	2011	11	0.063744
62	2011	12	0.038827
62	2011	13	0.030821
62	2011	14	0.041128
62	2011	15	0.017412
62	2011	16	0.013178
62	2011	17	0.008015
62	2011	18	0.005871
62	2011	19	0.003959
62	2011	20	0.00418
62	2011	21	0.00447
62	2011	22	0.003336
62	2011	23	0.00254
62	2011	24	0.001955
62	2011	25	0.001495
62	2011	26	0.001141
62	2011	27	0.00087
62	2011	28	0.000659
62	2011	29	0.000505
62	2011	30	0.007485

[IMCoverage]

polProcess ID	State ID	County ID	yearID	sourceTypeID	fuelTypeID	IMProgramID	Beg ModelYearID	End ModelYearID	inspectFreq	Test StandardsID	useMyn	Compliance Factor
101	4	4013	2011	21	1	3	1967	1980	1	13	N	95.8845
101	4	4013	2011	21	1	6	1981	1995	2	33	N	95.8845
101	4	4013	2011	21	1	10	1996	2005	2	51	N	95.8845
101	4	4013	2011	31	1	3	1967	1980	1	13	N	95.8845
101	4	4013	2011	31	1	6	1981	1995	2	33	N	95.8845
101	4	4013	2011	31	1	10	1996	2005	2	51	N	95.8845
101	4	4013	2011	32	1	3	1967	1980	1	13	N	95.8845
101	4	4013	2011	32	1	6	1981	1995	2	33	N	95.8845
101	4	4013	2011	32	1	10	1996	2005	2	51	N	95.8845
101	4	4013	2011	52	1	3	1967	2005	1	13	N	95.8845
102	4	4013	2011	21	1	3	1967	1980	1	13	N	95.8845
102	4	4013	2011	21	1	6	1981	1995	2	33	N	95.8845
102	4	4013	2011	21	1	10	1996	2005	2	51	N	95.8845
102	4	4013	2011	31	1	3	1967	1980	1	13	N	95.8845
102	4	4013	2011	31	1	6	1981	1995	2	33	N	95.8845
102	4	4013	2011	31	1	10	1996	2005	2	51	N	95.8845
102	4	4013	2011	32	1	3	1967	1980	1	13	N	95.8845
102	4	4013	2011	32	1	6	1981	1995	2	33	N	95.8845
102	4	4013	2011	32	1	10	1996	2005	2	51	N	95.8845
102	4	4013	2011	52	1	3	1967	2005	1	13	N	95.8845
112	4	4013	2011	21	1	8	1996	2005	2	43	N	95.8845
112	4	4013	2011	21	1	9	1981	1995	1	44	N	95.8845
112	4	4013	2011	31	1	8	1996	2005	2	43	N	95.8845
112	4	4013	2011	31	1	9	1981	1995	1	44	N	95.8845
112	4	4013	2011	32	1	8	1996	2005	2	43	N	95.8845
112	4	4013	2011	32	1	9	1981	1995	1	44	N	95.8845
112	4	4013	2011	52	1	7	1967	2005	1	41	N	95.8845
113	4	4013	2011	21	1	8	1996	2005	2	43	N	95.8845
113	4	4013	2011	21	1	9	1981	1995	1	44	N	95.8845
113	4	4013	2011	31	1	8	1996	2005	2	43	N	95.8845
113	4	4013	2011	31	1	9	1981	1995	1	44	N	95.8845
113	4	4013	2011	32	1	8	1996	2005	2	43	N	95.8845
113	4	4013	2011	32	1	9	1981	1995	1	44	N	95.8845
113	4	4013	2011	52	1	7	1967	2005	1	41	N	95.8845
201	4	4013	2011	21	1	3	1967	1980	1	13	N	95.8845
201	4	4013	2011	21	1	6	1981	1995	2	33	N	95.8845
201	4	4013	2011	21	1	10	1996	2005	2	51	N	95.8845
201	4	4013	2011	31	1	3	1967	1980	1	13	N	95.8845
201	4	4013	2011	31	1	6	1981	1995	2	33	N	95.8845
201	4	4013	2011	31	1	10	1996	2005	2	51	N	95.8845
201	4	4013	2011	32	1	3	1967	1980	1	13	N	95.8845
201	4	4013	2011	32	1	6	1981	1995	2	33	N	95.8845
201	4	4013	2011	32	1	10	1996	2005	2	51	N	95.8845
201	4	4013	2011	52	1	3	1967	2005	1	13	N	95.8845
202	4	4013	2011	21	1	3	1967	1980	1	13	N	95.8845
202	4	4013	2011	21	1	6	1981	1995	2	33	N	95.8845
202	4	4013	2011	21	1	10	1996	2005	2	51	N	95.8845
202	4	4013	2011	31	1	3	1967	1980	1	13	N	95.8845
202	4	4013	2011	31	1	6	1981	1995	2	33	N	95.8845
202	4	4013	2011	31	1	10	1996	2005	2	51	N	95.8845
202	4	4013	2011	32	1	3	1967	1980	1	13	N	95.8845
202	4	4013	2011	32	1	6	1981	1995	2	33	N	95.8845
202	4	4013	2011	32	1	10	1996	2005	2	51	N	95.8845
202	4	4013	2011	52	1	3	1967	2005	1	13	N	95.8845
301	4	4013	2011	21	1	3	1967	1980	1	13	N	95.8845
301	4	4013	2011	21	1	6	1981	1995	2	33	N	95.8845
301	4	4013	2011	21	1	10	1996	2005	2	51	N	95.8845
301	4	4013	2011	31	1	3	1967	1980	1	13	N	95.8845
301	4	4013	2011	31	1	6	1981	1995	2	33	N	95.8845
301	4	4013	2011	31	1	10	1996	2005	2	51	N	95.8845
301	4	4013	2011	32	1	3	1967	1980	1	13	N	95.8845
301	4	4013	2011	32	1	6	1981	1995	2	33	N	95.8845
301	4	4013	2011	32	1	10	1996	2005	2	51	N	95.8845
301	4	4013	2011	52	1	3	1967	2005	1	13	N	95.8845
302	4	4013	2011	21	1	3	1967	1980	1	13	N	95.8845
302	4	4013	2011	21	1	6	1981	1995	2	33	N	95.8845
302	4	4013	2011	21	1	10	1996	2005	2	51	N	95.8845
302	4	4013	2011	31	1	3	1967	1980	1	13	N	95.8845
302	4	4013	2011	31	1	6	1981	1995	2	33	N	95.8845
302	4	4013	2011	31	1	10	1996	2005	2	51	N	95.8845
302	4	4013	2011	32	1	3	1967	1980	1	13	N	95.8845
302	4	4013	2011	32	1	6	1981	1995	2	33	N	95.8845
302	4	4013	2011	32	1	10	1996	2005	2	51	N	95.8845
302	4	4013	2011	52	1	3	1967	2005	1	13	N	95.8845
101	4	4013	2011	21	1	103	1967	1980	1	13	Y	57.6164
101	4	4013	2011	21	1	106	1981	1995	2	31	Y	64.12
101	4	4013	2011	21	1	110	1996	2007	2	51	Y	90.0428
101	4	4013	2011	31	1	103	1967	1980	1	13	Y	57.6164
101	4	4013	2011	31	1	106	1981	1995	2	31	Y	64.12
101	4	4013	2011	31	1	110	1996	2007	2	51	Y	90.0428
101	4	4013	2011	32	1	103	1967	1980	1	13	Y	57.6164
101	4	4013	2011	32	1	106	1981	1995	2	31	Y	64.12
101	4	4013	2011	32	1	110	1996	2007	2	51	Y	90.0428
102	4	4013	2011	21	1	103	1967	1980	1	13	Y	57.6164
102	4	4013	2011	21	1	106	1981	1995	2	31	Y	64.12
102	4	4013	2011	21	1	110	1996	2007	2	51	Y	90.0428
102	4	4013	2011	31	1	103	1967	1980	1	13	Y	57.6164
102	4	4013	2011	31	1	106	1981	1995	2	31	Y	64.12
102	4	4013	2011	31	1	110	1996	2007	2	51	Y	90.0428
102	4	4013	2011	32	1	103	1967	1980	1	13	Y	57.6164

polProcess ID	State ID	County ID	yearID	sourceTypeID	fuelTypeID	IMProgramID	Beg ModelYearID	End ModelYearID	inspectFreq	Test StandardsID	uselMyn	Compliance Factor
102	4	4013	2011	32	1	106	1981	1995	2	31	Y	64.12
102	4	4013	2011	32	1	110	1996	2007	2	51	Y	90.0428
102	4	4013	2011	52	1	103	1967	2007	1	13	Y	87.2032
112	4	4013	2011	21	1	108	1996	2007	2	43	Y	83.814
112	4	4013	2011	21	1	109	1981	1995	2	44	Y	64.12
112	4	4013	2011	31	1	108	1996	2007	2	43	Y	83.814
112	4	4013	2011	31	1	109	1981	1995	2	44	Y	64.12
112	4	4013	2011	32	1	108	1996	2007	2	43	Y	83.814
112	4	4013	2011	32	1	109	1981	1995	2	44	Y	64.12
112	4	4013	2011	52	1	107	1981	2007	1	41	Y	86.2872
113	4	4013	2011	21	1	108	1996	2007	2	43	Y	83.814
113	4	4013	2011	21	1	109	1981	1995	2	44	Y	64.12
113	4	4013	2011	31	1	108	1996	2007	2	43	Y	83.814
113	4	4013	2011	31	1	109	1981	1995	2	44	Y	64.12
113	4	4013	2011	32	1	108	1996	2007	2	43	Y	83.814
113	4	4013	2011	32	1	109	1981	1995	2	44	Y	64.12
113	4	4013	2011	52	1	107	1981	2007	1	41	Y	86.2872
201	4	4013	2011	21	1	103	1967	1980	1	13	Y	57.6164
201	4	4013	2011	21	1	106	1981	1995	2	31	Y	64.12
201	4	4013	2011	21	1	110	1996	2007	2	51	Y	90.0428
201	4	4013	2011	31	1	103	1967	1980	1	13	Y	57.6164
201	4	4013	2011	31	1	106	1981	1995	2	31	Y	64.12
201	4	4013	2011	31	1	110	1996	2007	2	51	Y	90.0428
201	4	4013	2011	32	1	103	1967	1980	1	13	Y	57.6164
201	4	4013	2011	32	1	106	1981	1995	2	31	Y	64.12
201	4	4013	2011	32	1	110	1996	2007	2	51	Y	90.0428
201	4	4013	2011	52	1	103	1967	2007	1	13	Y	87.2032
202	4	4013	2011	21	1	103	1967	1980	1	13	Y	57.6164
202	4	4013	2011	21	1	106	1981	1995	2	31	Y	64.12
202	4	4013	2011	21	1	110	1996	2007	2	51	Y	90.0428
202	4	4013	2011	31	1	103	1967	1980	1	13	Y	57.6164
202	4	4013	2011	31	1	106	1981	1995	2	31	Y	64.12
202	4	4013	2011	31	1	110	1996	2007	2	51	Y	90.0428
202	4	4013	2011	32	1	103	1967	1980	1	13	Y	57.6164
202	4	4013	2011	32	1	106	1981	1995	2	31	Y	64.12
202	4	4013	2011	32	1	110	1996	2007	2	51	Y	90.0428
202	4	4013	2011	52	1	103	1967	2007	1	13	Y	87.2032
301	4	4013	2011	21	1	103	1967	1980	1	13	Y	57.6164
301	4	4013	2011	21	1	106	1981	1995	2	31	Y	64.12
301	4	4013	2011	21	1	110	1996	2007	2	51	Y	90.0428
301	4	4013	2011	31	1	103	1967	1980	1	13	Y	57.6164
301	4	4013	2011	31	1	106	1981	1995	2	31	Y	64.12
301	4	4013	2011	31	1	110	1996	2007	2	51	Y	90.0428
301	4	4013	2011	32	1	103	1967	1980	1	13	Y	57.6164
301	4	4013	2011	32	1	106	1981	1995	2	31	Y	64.12
301	4	4013	2011	32	1	110	1996	2007	2	51	Y	90.0428
301	4	4013	2011	52	1	103	1967	2007	1	13	Y	87.2032
302	4	4013	2011	21	1	103	1967	1980	1	13	Y	57.6164
302	4	4013	2011	21	1	106	1981	1995	2	31	Y	64.12
302	4	4013	2011	21	1	110	1996	2007	2	51	Y	90.0428
302	4	4013	2011	31	1	103	1967	1980	1	13	Y	57.6164
302	4	4013	2011	31	1	106	1981	1995	2	31	Y	64.12
302	4	4013	2011	31	1	110	1996	2007	2	51	Y	90.0428
302	4	4013	2011	32	1	103	1967	1980	1	13	Y	57.6164
302	4	4013	2011	32	1	106	1981	1995	2	31	Y	64.12
302	4	4013	2011	32	1	110	1996	2007	2	51	Y	90.0428
302	4	4013	2011	52	1	103	1967	2007	1	13	Y	87.2032

[RoadType]

roadTypeID	rampFraction
2	0.054636
4	0.111569

[RoadTypeDistribution]

sourceTypeID	roadTypeID	roadTypeVMTFraction
11	1	0
11	2	0.013318
11	3	0.05643
11	4	0.290786
11	5	0.639467
21	1	0
21	2	0.021036
21	3	0.039609
21	4	0.296909
21	5	0.642446
31	1	0
31	2	0.050257
31	3	0.044142
31	4	0.371289
31	5	0.534312
32	1	0
32	2	0.050257
32	3	0.044142
32	4	0.371289
32	5	0.534312
41	1	0
41	2	0.030808
41	3	0.032603
41	4	0.500175
41	5	0.436415
42	1	0
42	2	0.030808
42	3	0.032603
42	4	0.500175
42	5	0.436415
43	1	0
43	2	0.030808
43	3	0.032603
43	4	0.500175
43	5	0.436415
51	1	0
51	2	0.043408
51	3	0.027296
51	4	0.52444
51	5	0.404856
52	1	0
52	2	0.043408
52	3	0.027296
52	4	0.52444
52	5	0.404856
53	1	0
53	2	0.043408
53	3	0.027296
53	4	0.52444
53	5	0.404856
54	1	0
54	2	0.043408
54	3	0.027296
54	4	0.52444
54	5	0.404856
61	1	0
61	2	0.081128
61	3	0.02854
61	4	0.528464
61	5	0.361868
62	1	0
62	2	0.081128
62	3	0.02854
62	4	0.528464
62	5	0.361868

[MonthVMTFraction]

sourceTypeID	isLeapYear	monthID	monthVMTFraction
11	N	12	0.083229
21	N	12	0.083229
31	N	12	0.083229
32	N	12	0.083229
41	N	12	0.083229
42	N	12	0.083229
43	N	12	0.083229
51	N	12	0.083229
52	N	12	0.083229
53	N	12	0.083229
54	N	12	0.083229
61	N	12	0.083229
62	N	12	0.083229

[DayVMTFraction]

Source TypeID	Month ID	Road TypeID	dayID	Day VMTFraction
11	12	1	5	0.767488
21	12	1	5	0.767488
31	12	1	5	0.767488
32	12	1	5	0.767488
41	12	1	5	0.767488
42	12	1	5	0.767488
43	12	1	5	0.767488
51	12	1	5	0.767488
52	12	1	5	0.767488
53	12	1	5	0.767488
54	12	1	5	0.767488
61	12	1	5	0.767488
62	12	1	5	0.767488
11	12	2	5	0.768458
21	12	2	5	0.768458
31	12	2	5	0.768458
32	12	2	5	0.768458
41	12	2	5	0.768458
42	12	2	5	0.768458
43	12	2	5	0.768458
51	12	2	5	0.768458
52	12	2	5	0.768458
53	12	2	5	0.768458
54	12	2	5	0.768458
61	12	2	5	0.768458
62	12	2	5	0.768458
11	12	3	5	0.766507
21	12	3	5	0.766507
31	12	3	5	0.766507
32	12	3	5	0.766507
41	12	3	5	0.766507
42	12	3	5	0.766507
43	12	3	5	0.766507
51	12	3	5	0.766507
52	12	3	5	0.766507
53	12	3	5	0.766507
54	12	3	5	0.766507
61	12	3	5	0.766507
62	12	3	5	0.766507
11	12	4	5	0.768458
21	12	4	5	0.768458
31	12	4	5	0.768458
32	12	4	5	0.768458
41	12	4	5	0.768458
42	12	4	5	0.768458

Source TypeID	Month ID	Road TypeID	dayID	Day VMTFraction
43	12	4	5	0.768458
51	12	4	5	0.768458
52	12	4	5	0.768458
53	12	4	5	0.768458
54	12	4	5	0.768458
61	12	4	5	0.768458
62	12	4	5	0.768458
11	12	5	5	0.766507
21	12	5	5	0.766507
31	12	5	5	0.766507
32	12	5	5	0.766507
41	12	5	5	0.766507
42	12	5	5	0.766507
43	12	5	5	0.766507
51	12	5	5	0.766507
52	12	5	5	0.766507
53	12	5	5	0.766507
54	12	5	5	0.766507
61	12	5	5	0.766507
62	12	5	5	0.766507
11	12	1	2	0.232512
21	12	1	2	0.232512
31	12	1	2	0.232512
32	12	1	2	0.232512
41	12	1	2	0.232512
42	12	1	2	0.232512
43	12	1	2	0.232512
51	12	1	2	0.232512
52	12	1	2	0.232512
53	12	1	2	0.232512
54	12	1	2	0.232512
61	12	1	2	0.232512
62	12	1	2	0.232512
11	12	2	2	0.231542
21	12	2	2	0.231542
31	12	2	2	0.231542
32	12	2	2	0.231542
41	12	2	2	0.231542
42	12	2	2	0.231542
43	12	2	2	0.231542
51	12	2	2	0.231542
52	12	2	2	0.231542
53	12	2	2	0.231542
54	12	2	2	0.231542
61	12	2	2	0.231542

Source TypeID	Month ID	Road TypeID	dayID	Day VMTFraction
62	12	2	2	0.231542
11	12	3	2	0.233493
21	12	3	2	0.233493
31	12	3	2	0.233493
32	12	3	2	0.233493
41	12	3	2	0.233493
42	12	3	2	0.233493
43	12	3	2	0.233493
51	12	3	2	0.233493
52	12	3	2	0.233493
53	12	3	2	0.233493
54	12	3	2	0.233493
61	12	3	2	0.233493
62	12	3	2	0.233493
11	12	4	2	0.231542
21	12	4	2	0.231542
31	12	4	2	0.231542
32	12	4	2	0.231542
41	12	4	2	0.231542
42	12	4	2	0.231542
43	12	4	2	0.231542
51	12	4	2	0.231542
52	12	4	2	0.231542
53	12	4	2	0.231542
54	12	4	2	0.231542
61	12	4	2	0.231542
62	12	4	2	0.231542
11	12	5	2	0.233493
21	12	5	2	0.233493
31	12	5	2	0.233493
32	12	5	2	0.233493
41	12	5	2	0.233493
42	12	5	2	0.233493
43	12	5	2	0.233493
51	12	5	2	0.233493
52	12	5	2	0.233493
53	12	5	2	0.233493
54	12	5	2	0.233493
61	12	5	2	0.233493
62	12	5	2	0.233493

[HourVMTFraction] (SourceTypeID 21: Passenger Car)

Source TypeID	Road TypeID	dayID	hourID	hourVMT Fraction
21	1	5	1	0.007957
21	1	5	2	0.005448
21	1	5	3	0.004973
21	1	5	4	0.006014
21	1	5	5	0.013468
21	1	5	6	0.034281
21	1	5	7	0.054676
21	1	5	8	0.064666
21	1	5	9	0.060292
21	1	5	10	0.052697
21	1	5	11	0.050973
21	1	5	12	0.054873
21	1	5	13	0.057626
21	1	5	14	0.059009
21	1	5	15	0.064762
21	1	5	16	0.06924
21	1	5	17	0.070039
21	1	5	18	0.07009
21	1	5	19	0.05904
21	1	5	20	0.04192
21	1	5	21	0.033428
21	1	5	22	0.029157
21	1	5	23	0.02144
21	1	5	24	0.013936
21	2	5	1	0.009807
21	2	5	2	0.006923
21	2	5	3	0.00651
21	2	5	4	0.007961
21	2	5	5	0.017302
21	2	5	6	0.042783
21	2	5	7	0.060321
21	2	5	8	0.059377
21	2	5	9	0.057361
21	2	5	10	0.055026
21	2	5	11	0.052104
21	2	5	12	0.05478
21	2	5	13	0.05683
21	2	5	14	0.059985
21	2	5	15	0.065538
21	2	5	16	0.065523
21	2	5	17	0.061668
21	2	5	18	0.059173
21	2	5	19	0.054281
21	2	5	20	0.040837
21	2	5	21	0.033031
21	2	5	22	0.030836
21	2	5	23	0.024921
21	2	5	24	0.021721
21	3	5	1	0.006081
21	3	5	2	0.003952
21	3	5	3	0.003413
21	3	5	4	0.004039
21	3	5	5	0.009578
21	3	5	6	0.025656
21	3	5	7	0.04895
21	3	5	8	0.07002
21	3	5	9	0.063264
21	3	5	10	0.050335
21	3	5	11	0.049826
21	3	5	12	0.054967
21	3	5	13	0.058433
21	3	5	14	0.058019
21	3	5	15	0.063976
21	3	5	16	0.073011
21	3	5	17	0.07853
21	3	5	18	0.081166
21	3	5	19	0.063868
21	3	5	20	0.043018
21	3	5	21	0.033831
21	3	5	22	0.027454
21	3	5	23	0.017909
21	3	5	24	0.010705
21	4	5	1	0.009807
21	4	5	2	0.006923
21	4	5	3	0.00651
21	4	5	4	0.007961
21	4	5	5	0.017302
21	4	5	6	0.042783
21	4	5	7	0.060321
21	4	5	8	0.059377
21	4	5	9	0.057361
21	4	5	10	0.055026
21	4	5	11	0.052104
21	4	5	12	0.05478
21	4	5	13	0.05683

Source TypeID	Road TypeID	dayID	hourID	hourVMT Fraction
21	4	5	14	0.059985
21	4	5	15	0.065538
21	4	5	16	0.065523
21	4	5	17	0.061668
21	4	5	18	0.059173
21	4	5	19	0.054281
21	4	5	20	0.040837
21	4	5	21	0.033031
21	4	5	22	0.030836
21	4	5	23	0.024921
21	4	5	24	0.017121
21	5	5	1	0.006081
21	5	5	2	0.003952
21	5	5	3	0.003413
21	5	5	4	0.004039
21	5	5	5	0.009578
21	5	5	6	0.025656
21	5	5	7	0.04895
21	5	5	8	0.07002
21	5	5	9	0.063264
21	5	5	10	0.050335
21	5	5	11	0.049826
21	5	5	12	0.054967
21	5	5	13	0.058433
21	5	5	14	0.058019
21	5	5	15	0.063976
21	5	5	16	0.073011
21	5	5	17	0.07853
21	5	5	18	0.081166
21	5	5	19	0.063868
21	5	5	20	0.043018
21	5	5	21	0.033831
21	5	5	22	0.027454
21	5	5	23	0.017909
21	5	5	24	0.010705
21	1	2	1	0.020872
21	1	2	2	0.014804
21	1	2	3	0.013016
21	1	2	4	0.010079
21	1	2	5	0.011715
21	1	2	6	0.018691
21	1	2	7	0.027033
21	1	2	8	0.033174
21	1	2	9	0.040089
21	1	2	10	0.048519
21	1	2	11	0.05524
21	1	2	12	0.060009
21	1	2	13	0.064796
21	1	2	14	0.06555
21	1	2	15	0.064719
21	1	2	16	0.064355
21	1	2	17	0.064852
21	1	2	18	0.064713
21	1	2	19	0.061678
21	1	2	20	0.050477
21	1	2	21	0.043519
21	1	2	22	0.040777
21	1	2	23	0.035718
21	1	2	24	0.025605
21	2	2	1	0.020431
21	2	2	2	0.014508
21	2	2	3	0.012577
21	2	2	4	0.009828
21	2	2	5	0.011013
21	2	2	6	0.01751
21	2	2	7	0.025995
21	2	2	8	0.031456
21	2	2	9	0.038799
21	2	2	10	0.047714
21	2	2	11	0.054712
21	2	2	12	0.060251
21	2	2	13	0.065575
21	2	2	14	0.066506
21	2	2	15	0.065746
21	2	2	16	0.065312
21	2	2	17	0.065948
21	2	2	18	0.066767
21	2	2	19	0.064137
21	2	2	20	0.050196
21	2	2	21	0.042573
21	2	2	22	0.040589
21	2	2	23	0.036012
21	2	2	24	0.025845
21	3	2	1	0.021315
21	3	2	2	0.015101

Source TypeID	Road TypeID	dayID	hourID	hourVMT Fraction
21	3	2	3	0.013457
21	3	2	4	0.010331
21	3	2	5	0.01242
21	3	2	6	0.019876
21	3	2	7	0.028075
21	3	2	8	0.034899
21	3	2	9	0.041383
21	3	2	10	0.049326
21	3	2	11	0.05577
21	3	2	12	0.059766
21	3	2	13	0.064014
21	3	2	14	0.064591
21	3	2	15	0.063689
21	3	2	16	0.063394
21	3	2	17	0.063753
21	3	2	18	0.062652
21	3	2	19	0.05921
21	3	2	20	0.050759
21	3	2	21	0.044469
21	3	2	22	0.040966
21	3	2	23	0.035423
21	3	2	24	0.025364
21	4	2	1	0.020431
21	4	2	2	0.014508
21	4	2	3	0.012577
21	4	2	4	0.009828
21	4	2	5	0.011013
21	4	2	6	0.01751
21	4	2	7	0.025995
21	4	2	8	0.031456
21	4	2	9	0.038799
21	4	2	10	0.047714
21	4	2	11	0.054712
21	4	2	12	0.060251
21	4	2	13	0.065575
21	4	2	14	0.066506
21	4	2	15	0.065746
21	4	2	16	0.065312
21	4	2	17	0.065948
21	4	2	18	0.066767
21	4	2	19	0.064137
21	4	2	20	0.050196
21	4	2	21	0.042573
21	4	2	22	0.040589
21	4	2	23	0.036012
21	4	2	24	0.025845
21	5	2	1	0.021315
21	5	2	2	0.015101
21	5	2	3	0.013457
21	5	2	4	0.010331
21	5	2	5	0.01242
21	5	2	6	0.019876
21	5	2	7	0.028075
21	5	2	8	0.034899
21	5	2	9	0.041383
21	5	2	10	0.049326
21	5	2	11	0.05577
21	5	2	12	0.059766
21	5	2	13	0.064014
21	5	2	14	0.064591
21	5	2	15	0.063689
21	5	2	16	0.063394
21	5	2	17	0.063753
21	5	2	18	0.062652
21	5	2	19	0.05921
21	5	2	20	0.050759
21	5	2	21	0.044469
21	5	2	22	0.040966
21	5	2	23	0.035423
21	5	2	24	0.025364

[AvgSpeedDistribution] (SourceTypeID 21: Passenger Car and RoadTypeID 2: Rural Restricted Access)

Source TypeID	Road TypeID	Hour DayID	avgSpeed BinID	avgSpeed Fraction
21	2	15	1	2.51E-05
21	2	15	2	0

Source TypeID	Road TypeID	Hour DayID	avgSpeed BinID	avgSpeed Fraction
21	2	15	3	0
21	2	15	4	0

Source TypeID	Road TypeID	Hour DayID	avgSpeed BinID	avgSpeed Fraction
21	2	15	5	0
21	2	15	6	0

Source TypeID	Road TypeID	Hour DayID	avgSpeed BinID	avgSpeed Fraction
21	2	15	7	0.019619
21	2	15	8	0.097646
21	2	15	9	0.131977
21	2	15	10	0.203234
21	2	15	11	0.087838
21	2	15	12	0.07357
21	2	15	13	0.039194
21	2	15	14	0.083438
21	2	15	15	0.102646
21	2	15	16	0.160812
21	2	25	1	2.51E-05
21	2	25	2	0
21	2	25	3	0
21	2	25	4	0
21	2	25	5	0
21	2	25	6	0
21	2	25	7	0.019619
21	2	25	8	0.097646
21	2	25	9	0.131977
21	2	25	10	0.203234
21	2	25	11	0.087838
21	2	25	12	0.07357
21	2	25	13	0.039194
21	2	25	14	0.083438
21	2	25	15	0.102646
21	2	25	16	0.160812
21	2	35	1	2.51E-05
21	2	35	2	0
21	2	35	3	0
21	2	35	4	0
21	2	35	5	0
21	2	35	6	0
21	2	35	7	0.019619
21	2	35	8	0.097646
21	2	35	9	0.131977
21	2	35	10	0.203234
21	2	35	11	0.087838
21	2	35	12	0.07357
21	2	35	13	0.039194
21	2	35	14	0.083438
21	2	35	15	0.102646
21	2	35	16	0.160812
21	2	45	1	2.51E-05
21	2	45	2	0
21	2	45	3	0
21	2	45	4	0
21	2	45	5	0
21	2	45	6	0
21	2	45	7	0.019619
21	2	45	8	0.097646
21	2	45	9	0.131977
21	2	45	10	0.203234
21	2	45	11	0.087838
21	2	45	12	0.07357
21	2	45	13	0.039194
21	2	45	14	0.083438
21	2	45	15	0.102646
21	2	45	16	0.160812
21	2	55	1	2.51E-05
21	2	55	2	0
21	2	55	3	0
21	2	55	4	0
21	2	55	5	0
21	2	55	6	0
21	2	55	7	0.019619
21	2	55	8	0.097646
21	2	55	9	0.131977
21	2	55	10	0.203234
21	2	55	11	0.087838
21	2	55	12	0.07357
21	2	55	13	0.039194
21	2	55	14	0.083438
21	2	55	15	0.102646
21	2	55	16	0.160812
21	2	65	1	2.51E-05
21	2	65	2	0
21	2	65	3	0
21	2	65	4	0
21	2	65	5	0
21	2	65	6	0
21	2	65	7	0.019619
21	2	65	8	0.097646
21	2	65	9	0.131977
21	2	65	10	0.203234
21	2	65	11	0.087838
21	2	65	12	0.07357
21	2	65	13	0.039194

Source TypeID	Road TypeID	Hour DayID	avgSpeed BinID	avgSpeed Fraction
21	2	65	14	0.083438
21	2	65	15	0.102646
21	2	65	16	0.160812
21	2	75	1	1.98E-05
21	2	75	2	0
21	2	75	3	0
21	2	75	4	0
21	2	75	5	0
21	2	75	6	0
21	2	75	7	0
21	2	75	8	0
21	2	75	9	0
21	2	75	10	0.057069
21	2	75	11	0.140623
21	2	75	12	0.248507
21	2	75	13	0.169045
21	2	75	14	0.075169
21	2	75	15	0.111641
21	2	75	16	0.197927
21	2	85	1	1.98E-05
21	2	85	2	0
21	2	85	3	0
21	2	85	4	0
21	2	85	5	0
21	2	85	6	0
21	2	85	7	0
21	2	85	8	0
21	2	85	9	0
21	2	85	10	0.057069
21	2	85	11	0.140623
21	2	85	12	0.248507
21	2	85	13	0.169045
21	2	85	14	0.075169
21	2	85	15	0.111641
21	2	85	16	0.197927
21	2	95	1	1.98E-05
21	2	95	2	0
21	2	95	3	0
21	2	95	4	0
21	2	95	5	0
21	2	95	6	0
21	2	95	7	0
21	2	95	8	0
21	2	95	9	0
21	2	95	10	0.057069
21	2	95	11	0.140623
21	2	95	12	0.248507
21	2	95	13	0.169045
21	2	95	14	0.075169
21	2	95	15	0.111641
21	2	95	16	0.197927
21	2	105	1	1.78E-05
21	2	105	2	0
21	2	105	3	0
21	2	105	4	0
21	2	105	5	0
21	2	105	6	0
21	2	105	7	0
21	2	105	8	0
21	2	105	9	0
21	2	105	10	0.059729
21	2	105	11	0.129919
21	2	105	12	0.24385
21	2	105	13	0.049713
21	2	105	14	0.140357
21	2	105	15	0.191024
21	2	105	16	0.18539
21	2	115	1	1.78E-05
21	2	115	2	0
21	2	115	3	0
21	2	115	4	0
21	2	115	5	0
21	2	115	6	0
21	2	115	7	0
21	2	115	8	0
21	2	115	9	0
21	2	115	10	0.059729
21	2	115	11	0.129919
21	2	115	12	0.24385
21	2	115	13	0.049713
21	2	115	14	0.140357
21	2	115	15	0.191024
21	2	125	1	1.78E-05
21	2	125	2	0
21	2	125	3	0
21	2	125	4	0

Source TypeID	Road TypeID	Hour DayID	avgSpeed BinID	avgSpeed Fraction
21	2	125	5	0
21	2	125	6	0
21	2	125	7	0
21	2	125	8	0
21	2	125	9	0
21	2	125	10	0.059729
21	2	125	11	0.129919
21	2	125	12	0.24385
21	2	125	13	0.049713
21	2	125	14	0.140357
21	2	125	15	0.191024
21	2	125	16	0.18539
21	2	135	1	1.78E-05
21	2	135	2	0
21	2	135	3	0
21	2	135	4	0
21	2	135	5	0
21	2	135	6	0
21	2	135	7	0
21	2	135	8	0
21	2	135	9	0
21	2	135	10	0.059729
21	2	135	11	0.129919
21	2	135	12	0.24385
21	2	135	13	0.049713
21	2	135	14	0.140357
21	2	135	15	0.191024
21	2	135	16	0.18539
21	2	145	1	1.78E-05
21	2	145	2	0
21	2	145	3	0
21	2	145	4	0
21	2	145	5	0
21	2	145	6	0
21	2	145	7	0
21	2	145	8	0
21	2	145	9	0
21	2	145	10	0.059729
21	2	145	11	0.129919
21	2	145	12	0.24385
21	2	145	13	0.049713
21	2	145	14	0.140357
21	2	145	15	0.191024
21	2	145	16	0.18539
21	2	155	1	1.78E-05
21	2	155	2	0
21	2	155	3	0
21	2	155	4	0
21	2	155	5	0
21	2	155	6	0
21	2	155	7	0
21	2	155	8	0
21	2	155	9	0
21	2	155	10	0.059729
21	2	155	11	0.129919
21	2	155	12	0.24385
21	2	155	13	0.049713
21	2	155	14	0.140357
21	2	155	15	0.191024
21	2	155	16	0.18539
21	2	165	1	1.69E-05
21	2	165	2	0
21	2	165	3	0
21	2	165	4	0
21	2	165	5	0
21	2	165	6	0
21	2	165	7	0
21	2	165	8	0
21	2	165	9	0
21	2	165	10	0
21	2	165	11	0
21	2	165	12	0.000288
21	2	165	13	0.094046
21	2	165	14	0.274366
21	2	165	15	0.241766
21	2	165	16	0.389518
21	2	175	1	1.69E-05
21	2	175	2	0
21	2	175	3	0
21	2	175	4	0
21	2	175	5	0
21	2	175	6	0
21	2	175	7	0
21	2	175	8	0
21	2	175	9	0
21	2	175	10	0
21	2	175	11	0

Source TypeID	Road TypeID	Hour DayID	avgSpeed BinID	avgSpeed Fraction
21	2	175	12	0.000288
21	2	175	13	0.094046
21	2	175	14	0.274366
21	2	175	15	0.241766
21	2	175	16	0.389518
21	2	185	1	1.69E-05
21	2	185	2	0
21	2	185	3	0
21	2	185	4	0
21	2	185	5	0
21	2	185	6	0
21	2	185	7	0
21	2	185	8	0
21	2	185	9	0
21	2	185	10	0
21	2	185	11	0
21	2	185	12	0.000288
21	2	185	13	0.094046
21	2	185	14	0.274366
21	2	185	15	0.241766
21	2	185	16	0.389518
21	2	195	1	2.51E-05
21	2	195	2	0
21	2	195	3	0
21	2	195	4	0
21	2	195	5	0
21	2	195	6	0
21	2	195	7	0.019619
21	2	195	8	0.097646
21	2	195	9	0.131977
21	2	195	10	0.203234
21	2	195	11	0.087838
21	2	195	12	0.07357
21	2	195	13	0.039194
21	2	195	14	0.083438
21	2	195	15	0.102646
21	2	195	16	0.160812
21	2	205	1	2.51E-05
21	2	205	2	0
21	2	205	3	0
21	2	205	4	0
21	2	205	5	0
21	2	205	6	0
21	2	205	7	0.019619
21	2	205	8	0.097646
21	2	205	9	0.131977
21	2	205	10	0.203234
21	2	205	11	0.087838
21	2	205	12	0.07357
21	2	205	13	0.039194
21	2	205	14	0.083438
21	2	205	15	0.102646
21	2	205	16	0.160812
21	2	215	1	2.51E-05
21	2	215	2	0
21	2	215	3	0
21	2	215	4	0
21	2	215	5	0
21	2	215	6	0
21	2	215	7	0.019619
21	2	215	8	0.097646
21	2	215	9	0.131977
21	2	215	10	0.203234
21	2	215	11	0.087838
21	2	215	12	0.07357
21	2	215	13	0.039194
21	2	215	14	0.083438
21	2	215	15	0.102646
21	2	215	16	0.160812
21	2	225	1	2.51E-05
21	2	225	2	0
21	2	225	3	0
21	2	225	4	0
21	2	225	5	0
21	2	225	6	0
21	2	225	7	0.019619
21	2	225	8	0.097646
21	2	225	9	0.131977
21	2	225	10	0.203234
21	2	225	11	0.087838
21	2	225	12	0.07357
21	2	225	13	0.039194
21	2	225	14	0.083438
21	2	225	15	0.102646
21	2	225	16	0.160812
21	2	235	1	2.51E-05
21	2	235	2	0

Source TypeID	Road TypeID	Hour DayID	avgSpeed BinID	avgSpeed Fraction
21	2	235	3	0
21	2	235	4	0
21	2	235	5	0
21	2	235	6	0
21	2	235	7	0.019619
21	2	235	8	0.097646
21	2	235	9	0.131977
21	2	235	10	0.203234
21	2	235	11	0.087838
21	2	235	12	0.07357
21	2	235	13	0.039194
21	2	235	14	0.083438
21	2	235	15	0.102646
21	2	235	16	0.160812
21	2	245	1	2.51E-05
21	2	245	2	0
21	2	245	3	0
21	2	245	4	0
21	2	245	5	0
21	2	245	6	0
21	2	245	7	0.019619
21	2	245	8	0.097646
21	2	245	9	0.131977
21	2	245	10	0.203234
21	2	245	11	0.087838
21	2	245	12	0.07357
21	2	245	13	0.039194
21	2	245	14	0.083438
21	2	245	15	0.102646
21	2	245	16	0.160812
21	2	12	1	2.51E-05
21	2	12	2	0
21	2	12	3	0
21	2	12	4	0
21	2	12	5	0
21	2	12	6	0
21	2	12	7	0.019619
21	2	12	8	0.097646
21	2	12	9	0.131977
21	2	12	10	0.203234
21	2	12	11	0.087838
21	2	12	12	0.07357
21	2	12	13	0.039194
21	2	12	14	0.083438
21	2	12	15	0.102646
21	2	12	16	0.160812
21	2	22	1	2.51E-05
21	2	22	2	0
21	2	22	3	0
21	2	22	4	0
21	2	22	5	0
21	2	22	6	0
21	2	22	7	0.019619
21	2	22	8	0.097646
21	2	22	9	0.131977
21	2	22	10	0.203234
21	2	22	11	0.087838
21	2	22	12	0.07357
21	2	22	13	0.039194
21	2	22	14	0.083438
21	2	22	15	0.102646
21	2	22	16	0.160812
21	2	32	1	2.51E-05
21	2	32	2	0
21	2	32	3	0
21	2	32	4	0
21	2	32	5	0
21	2	32	6	0
21	2	32	7	0.019619
21	2	32	8	0.097646
21	2	32	9	0.131977
21	2	32	10	0.203234
21	2	32	11	0.087838
21	2	32	12	0.07357
21	2	32	13	0.039194
21	2	32	14	0.083438
21	2	32	15	0.102646
21	2	32	16	0.160812
21	2	42	1	2.51E-05
21	2	42	2	0
21	2	42	3	0
21	2	42	4	0
21	2	42	5	0
21	2	42	6	0
21	2	42	7	0.019619
21	2	42	8	0.097646
21	2	42	9	0.131977
21	2	42	10	0.203234
21	2	42	11	0.087838
21	2	42	12	0.07357
21	2	42	13	0.039194
21	2	42	14	0.083438
21	2	42	15	0.102646
21	2	42	16	0.160812

Source TypeID	Road TypeID	Hour DayID	avgSpeed BinID	avgSpeed Fraction
21	2	42	10	0.203234
21	2	42	11	0.087838
21	2	42	12	0.07357
21	2	42	13	0.039194
21	2	42	14	0.083438
21	2	42	15	0.102646
21	2	42	16	0.160812
21	2	52	1	2.51E-05
21	2	52	2	0
21	2	52	3	0
21	2	52	4	0
21	2	52	5	0
21	2	52	6	0
21	2	52	7	0.019619
21	2	52	8	0.097646
21	2	52	9	0.131977
21	2	52	10	0.203234
21	2	52	11	0.087838
21	2	52	12	0.07357
21	2	52	13	0.039194
21	2	52	14	0.083438
21	2	52	15	0.102646
21	2	52	16	0.160812
21	2	62	1	2.51E-05
21	2	62	2	0
21	2	62	3	0
21	2	62	4	0
21	2	62	5	0
21	2	62	6	0
21	2	62	7	0.019619
21	2	62	8	0.097646
21	2	62	9	0.131977
21	2	62	10	0.203234
21	2	62	11	0.087838
21	2	62	12	0.07357
21	2	62	13	0.039194
21	2	62	14	0.083438
21	2	62	15	0.102646
21	2	62	16	0.160812
21	2	72	1	2.51E-05
21	2	72	2	0
21	2	72	3	0
21	2	72	4	0
21	2	72	5	0
21	2	72	6	0
21	2	72	7	0.019619
21	2	72	8	0.097646
21	2	72	9	0.131977
21	2	72	10	0.203234
21	2	72	11	0.087838
21	2	72	12	0.07357
21	2	72	13	0.039194
21	2	72	14	0.083438
21	2	72	15	0.102646
21	2	72	16	0.160812
21	2	82	1	2.51E-05
21	2	82	2	0
21	2	82	3	0
21	2	82	4	0
21	2	82	5	0
21	2	82	6	0
21	2	82	7	0.019619
21	2	82	8	0.097646
21	2	82	9	0.131977
21	2	82	10	0.203234
21	2	82	11	0.087838
21	2	82	12	0.07357
21	2	82	13	0.039194
21	2	82	14	0.083438
21	2	82	15	0.102646
21	2	82	16	0.160812
21	2	92	1	2.51E-05
21	2	92	2	0
21	2	92	3	0
21	2	92	4	0
21	2	92	5	0
21	2	92	6	0
21	2	92	7	0.019619
21	2	92	8	0.097646
21	2	92	9	0.131977
21	2	92	10	0.203234
21	2	92	11	0.087838
21	2	92	12	0.07357
21	2	92	13	0.039194
21	2	92	14	0.083438
21	2	92	15	0.102646
21	2	92	16	0.160812

Source TypeID	Road TypeID	Hour DayID	avgSpeed BinID	avgSpeed Fraction
21	2	102	1	2.51E-05
21	2	102	2	0
21	2	102	3	0
21	2	102	4	0
21	2	102	5	0
21	2	102	6	0
21	2	102	7	0.019619
21	2	102	8	0.097646
21	2	102	9	0.131977
21	2	102	10	0.203234
21	2	102	11	0.087838
21	2	102	12	0.07357
21	2	102	13	0.039194
21	2	102	14	0.083438
21	2	102	15	0.102646
21	2	102	16	0.160812
21	2	112	1	2.51E-05
21	2	112	2	0
21	2	112	3	0
21	2	112	4	0
21	2	112	5	0
21	2	112	6	0
21	2	112	7	0.019619
21	2	112	8	0.097646
21	2	112	9	0.131977
21	2	112	10	0.203234
21	2	112	11	0.087838
21	2	112	12	0.07357
21	2	112	13	0.039194
21	2	112	14	0.083438
21	2	112	15	0.102646
21	2	112	16	0.160812
21	2	122	1	2.51E-05
21	2	122	2	0
21	2	122	3	0
21	2	122	4	0
21	2	122	5	0
21	2	122	6	0
21	2	122	7	0.019619
21	2	122	8	0.097646
21	2	122	9	0.131977
21	2	122	10	0.203234
21	2	122	11	0.087838
21	2	122	12	0.07357
21	2	122	13	0.039194
21	2	122	14	0.083438
21	2	122	15	0.102646
21	2	122	16	0.160812
21	2	132	1	2.51E-05
21	2	132	2	0
21	2	132	3	0
21	2	132	4	0
21	2	132	5	0
21	2	132	6	0
21	2	132	7	0.019619
21	2	132	8	0.097646
21	2	132	9	0.131977
21	2	132	10	0.203234
21	2	132	11	0.087838
21	2	132	12	0.07357
21	2	132	13	0.039194
21	2	132	14	0.083438
21	2	132	15	0.102646
21	2	132	16	0.160812
21	2	142	1	2.51E-05
21	2	142	2	0
21	2	142	3	0
21	2	142	4	0
21	2	142	5	0
21	2	142	6	0
21	2	142	7	0.019619
21	2	142	8	0.097646
21	2	142	9	0.131977
21	2	142	10	0.203234
21	2	142	11	0.087838
21	2	142	12	0.07357
21	2	142	13	0.039194
21	2	142	14	0.083438
21	2	142	15	0.102646
21	2	142	16	0.160812
21	2	152	1	2.51E-05
21	2	152	2	0
21	2	152	3	0
21	2	152	4	0
21	2	152	5	0

Source TypeID	Road TypeID	Hour DayID	avgSpeed BinID	avgSpeed Fraction
21	2	152	6	0
21	2	152	7	0.019619
21	2	152	8	0.097646
21	2	152	9	0.131977
21	2	152	10	0.203234
21	2	152	11	0.087838
21	2	152	12	0.07357
21	2	152	13	0.039194
21	2	152	14	0.083438
21	2	152	15	0.102646
21	2	152	16	0.160812
21	2	162	1	2.51E-05
21	2	162	2	0
21	2	162	3	0
21	2	162	4	0
21	2	162	5	0
21	2	162	6	0
21	2	162	7	0.019619
21	2	162	8	0.097646
21	2	162	9	0.131977
21	2	162	10	0.203234
21	2	162	11	0.087838
21	2	162	12	0.07357
21	2	162	13	0.039194
21	2	162	14	0.083438
21	2	162	15	0.102646
21	2	162	16	0.160812
21	2	172	1	2.51E-05
21	2	172	2	0
21	2	172	3	0
21	2	172	4	0
21	2	172	5	0
21	2	172	6	0
21	2	172	7	0.019619
21	2	172	8	0.097646
21	2	172	9	0.131977
21	2	172	10	0.203234
21	2	172	11	0.087838
21	2	172	12	0.07357
21	2	172	13	0.039194
21	2	172	14	0.083438
21	2	172	15	0.102646
21	2	172	16	0.160812
21	2	182	1	2.51E-05
21	2	182	2	0
21	2	182	3	0
21	2	182	4	0
21	2	182	5	0
21	2	182	6	0
21	2	182	7	0.019619
21	2	182	8	0.097646
21	2	182	9	0.131977
21	2	182	10	0.203234
21	2	182	11	0.087838
21	2	182	12	0.07357
21	2	182	13	0.039194
21	2	182	14	0.083438
21	2	182	15	0.102646
21	2	182	16	0.160812
21	2	192	1	2.51E-05
21	2	192	2	0
21	2	192	3	0
21	2	192	4	0
21	2	192	5	0
21	2	192	6	0
21	2	192	7	0.019619
21	2	192	8	0.097646
21	2	192	9	0.131977
21	2	192	10	0.203234
21	2	192	11	0.087838
21	2	192	12	0.07357
21	2	192	13	0.039194
21	2	192	14	0.083438
21	2	192	15	0.102646
21	2	192	16	0.160812
21	2	202	1	2.51E-05
21	2	202	2	0
21	2	202	3	0
21	2	202	4	0
21	2	202	5	0
21	2	202	6	0
21	2	202	7	0.019619
21	2	202	8	0.097646
21	2	202	9	0.131977
21	2	202	10	0.203234

Source TypeID	Road TypeID	Hour DayID	avgSpeed BinID	avgSpeed Fraction
21	2	202	11	0.087838
21	2	202	12	0.07357
21	2	202	13	0.039194
21	2	202	14	0.083438
21	2	202	15	0.102646
21	2	202	16	0.160812
21	2	212	1	2.51E-05
21	2	212	2	0
21	2	212	3	0
21	2	212	4	0
21	2	212	5	0
21	2	212	6	0
21	2	212	7	0.019619
21	2	212	8	0.097646
21	2	212	9	0.131977
21	2	212	10	0.203234
21	2	212	11	0.087838
21	2	212	12	0.07357
21	2	212	13	0.039194
21	2	212	14	0.083438
21	2	212	15	0.102646
21	2	212	16	0.160812
21	2	222	1	2.51E-05
21	2	222	2	0
21	2	222	3	0
21	2	222	4	0
21	2	222	5	0
21	2	222	6	0
21	2	222	7	0.019619
21	2	222	8	0.097646
21	2	222	9	0.131977
21	2	222	10	0.203234
21	2	222	11	0.087838
21	2	222	12	0.07357
21	2	222	13	0.039194
21	2	222	14	0.083438
21	2	222	15	0.102646
21	2	222	16	0.160812
21	2	232	1	2.51E-05
21	2	232	2	0
21	2	232	3	0
21	2	232	4	0
21	2	232	5	0
21	2	232	6	0
21	2	232	7	0.019619
21	2	232	8	0.097646
21	2	232	9	0.131977
21	2	232	10	0.203234
21	2	232	11	0.087838
21	2	232	12	0.07357
21	2	232	13	0.039194
21	2	232	14	0.083438
21	2	232	15	0.102646
21	2	232	16	0.160812
21	2	242	1	2.51E-05
21	2	242	2	0
21	2	242	3	0
21	2	242	4	0
21	2	242	5	0
21	2	242	6	0
21	2	242	7	0.019619
21	2	242	8	0.097646
21	2	242	9	0.131977
21	2	242	10	0.203234
21	2	242	11	0.087838
21	2	242	12	0.07357
21	2	242	13	0.039194
21	2	242	14	0.083438
21	2	242	15	0.102646
21	2	242	16	0.160812

[AVFT] (SourceTypeID 42: Transit Bus)

Source TypeID	Model YearID	Fuel TypeID	Eng TechID	fuelEng Fraction
42	1960	2	1	1
42	1961	2	1	1
42	1962	2	1	1
42	1963	2	1	1
42	1964	2	1	1
42	1965	2	1	1
42	1966	2	1	1
42	1967	2	1	1
42	1968	2	1	1
42	1969	2	1	1
42	1970	2	1	1
42	1971	2	1	1
42	1972	2	1	1
42	1973	2	1	1
42	1974	2	1	1
42	1975	2	1	1
42	1976	2	1	1
42	1977	2	1	1
42	1978	2	1	1
42	1979	2	1	1
42	1980	2	1	1
42	1981	2	1	1
42	1982	2	1	1
42	1983	2	1	1
42	1984	2	1	1
42	1985	2	1	1
42	1986	2	1	1
42	1987	2	1	1
42	1988	2	1	1
42	1989	2	1	1
42	1990	2	1	0.993
42	1990	3	1	0.007
42	1991	2	1	0.982
42	1991	3	1	0.018
42	1992	1	1	0.01
42	1992	2	1	0.944
42	1992	3	1	0.046
42	1993	1	1	0.01
42	1993	2	1	0.914
42	1993	3	1	0.076
42	1994	1	1	0.01
42	1994	2	1	0.905
42	1994	3	1	0.085
42	1995	1	1	0.01
42	1995	2	1	0.837
42	1995	3	1	0.153
42	1996	1	1	0.01
42	1996	2	1	0.892
42	1996	3	1	0.098
42	1997	1	1	0
42	1997	2	1	1
42	1997	3	1	0
42	1998	1	1	0
42	1998	2	1	0
42	1998	3	1	1
42	1999	1	1	0
42	1999	2	1	0
42	1999	3	1	1
42	2000	1	1	0
42	2000	2	1	0
42	2000	3	1	1
42	2001	1	1	0
42	2001	2	1	0
42	2001	3	1	1
42	2002	1	1	0
42	2002	2	1	0
42	2002	3	1	1
42	2003	1	1	0
42	2003	2	1	0.08
42	2003	3	1	0.92
42	2004	1	1	0
42	2004	2	1	0.397059
42	2004	3	1	0.602941
42	2005	1	1	0
42	2005	2	1	1

Source TypeID	Model YearID	Fuel TypeID	Eng TechID	fuelEng Fraction
42	2005	3	1	0
42	2006	1	1	0.089744
42	2006	2	1	0.128205
42	2006	3	1	0.782051
42	2007	1	1	0.149533
42	2007	2	1	0.850467
42	2007	3	1	0
42	2008	1	1	0
42	2008	2	1	0.479592
42	2008	3	1	0.520408
42	2009	1	1	0.121212
42	2009	2	1	0.030303
42	2009	3	1	0.848485
42	2010	1	1	0
42	2010	2	1	1
42	2010	3	1	0
42	2011	1	1	0
42	2011	2	1	1
42	2011	3	1	0
42	2012	1	1	0
42	2012	2	1	1
42	2012	3	1	0
42	2013	1	1	0
42	2013	2	1	1
42	2013	3	1	0
42	2014	1	1	0
42	2014	2	1	1
42	2014	3	1	0
42	2015	1	1	0
42	2015	2	1	1
42	2015	3	1	0
42	2016	1	1	0
42	2016	2	1	1
42	2016	3	1	0
42	2017	1	1	0
42	2017	2	1	1
42	2017	3	1	0
42	2018	1	1	0
42	2018	2	1	1
42	2018	3	1	0
42	2019	1	1	0
42	2019	2	1	1
42	2019	3	1	0
42	2020	1	1	0
42	2020	2	1	1
42	2020	3	1	0
42	2021	1	1	0
42	2021	2	1	1
42	2021	3	1	0
42	2022	1	1	0
42	2022	2	1	1
42	2022	3	1	0
42	2023	1	1	0
42	2023	2	1	1
42	2023	3	1	0
42	2024	1	1	0
42	2024	2	1	1
42	2024	3	1	0
42	2025	1	1	0
42	2025	2	1	1
42	2025	3	1	0
42	2026	1	1	0
42	2026	2	1	1
42	2026	3	1	0
42	2027	1	1	0
42	2027	2	1	1
42	2027	3	1	0
42	2028	1	1	0
42	2028	2	1	1
42	2028	3	1	0
42	2029	1	1	0
42	2029	2	1	1
42	2029	3	1	0
42	2030	1	1	0
42	2030	2	1	1

Source TypeID	Model YearID	Fuel TypeID	Eng TechID	fuelEng Fraction
42	2030	3	1	0
42	2031	1	1	0
42	2031	2	1	1
42	2031	3	1	0
42	2032	1	1	0
42	2032	2	1	1
42	2032	3	1	0
42	2033	1	1	0
42	2033	2	1	1
42	2033	3	1	0
42	2034	1	1	0
42	2034	2	1	1
42	2034	3	1	0
42	2035	1	1	0
42	2035	2	1	1
42	2035	3	1	0
42	2036	1	1	0
42	2036	2	1	1
42	2036	3	1	0
42	2037	1	1	0
42	2037	2	1	1
42	2037	3	1	0
42	2038	1	1	0
42	2038	2	1	1
42	2038	3	1	0
42	2039	1	1	0
42	2039	2	1	1
42	2039	3	1	0
42	2040	1	1	0
42	2040	2	1	1
42	2040	3	1	0
42	2041	1	1	0
42	2041	2	1	1
42	2041	3	1	0
42	2042	1	1	0
42	2042	2	1	1
42	2042	3	1	0
42	2043	1	1	0
42	2043	2	1	1
42	2043	3	1	0
42	2044	1	1	0
42	2044	2	1	1
42	2044	3	1	0
42	2045	1	1	0
42	2045	2	1	1
42	2045	3	1	0
42	2046	1	1	0
42	2046	2	1	1
42	2046	3	1	0
42	2047	1	1	0
42	2047	2	1	1
42	2047	3	1	0
42	2048	1	1	0
42	2048	2	1	1
42	2048	3	1	0
42	2049	1	1	0
42	2049	2	1	1
42	2049	3	1	0
42	2050	1	1	0
42	2050	2	1	1
42	2050	3	1	0

[CountyYear]

countyID	yearID	refuelingVaporProgramAdjust	refuelingSpillProgramAdjust
4013	1999	0.46	0.46
4013	2000	0.46	0.46
4013	2001	0.46	0.46
4013	2002	0.46	0.46
4013	2003	0.46	0.46
4013	2004	0.46	0.46
4013	2005	0.46	0.46
4013	2006	0.46	0.46
4013	2007	0.46	0.46
4013	2008	0.46	0.46
4013	2009	0.46	0.46
4013	2010	0.46	0.46
4013	2011	0.46	0.46
4013	2012	0.46	0.46
4013	2013	0.46	0.46
4013	2014	0.46	0.46
4013	2015	0.46	0.46
4013	2016	0.46	0.46
4013	2017	0.46	0.46
4013	2018	0.46	0.46
4013	2019	0.46	0.46
4013	2020	0.46	0.46
4013	2021	0.46	0.46
4013	2022	0.46	0.46
4013	2023	0.46	0.46
4013	2024	0.46	0.46
4013	2025	0.46	0.46
4013	2026	0.46	0.46
4013	2027	0.46	0.46
4013	2028	0.46	0.46
4013	2029	0.46	0.46
4013	2030	0.46	0.46
4013	2031	0.46	0.46
4013	2032	0.46	0.46
4013	2033	0.46	0.46
4013	2034	0.46	0.46
4013	2035	0.46	0.46
4013	2036	0.46	0.46
4013	2037	0.46	0.46
4013	2038	0.46	0.46
4013	2039	0.46	0.46
4013	2040	0.46	0.46
4013	2041	0.46	0.46
4013	2042	0.46	0.46
4013	2043	0.46	0.46
4013	2044	0.46	0.46
4013	2045	0.46	0.46
4013	2046	0.46	0.46
4013	2047	0.46	0.46
4013	2048	0.46	0.46
4013	2049	0.46	0.46
4013	2050	0.46	0.46

NEWS

for immediate release



MARICOPA COUNTY

[Air Quality Department, Bob Huhn, PIO](#)

1001 North Central Avenue

Phoenix, AZ 85004

Ph 602-506-6713

www.maricopa.gov

Emissions Inventory Public Review Draft Released

PHOENIX, January 22, 2014 – The Maricopa County Air Quality Department (MCAQD) today released its draft **2011 Periodic Emissions Inventory for Ozone Precursors**. The inventory includes emission estimates for volatile organic compounds (VOC), nitrogen oxides (NO_x) and carbon monoxide (CO). Emissions are calculated for both Maricopa County and the eight-hour ozone nonattainment area. Annual totals as well as season-day emissions are provided for all source categories.

The emissions inventory report will now undergo a 30-day public review period. The document is available in electronic format (PDF files) on the department’s website at:

http://www.maricopa.gov/aq/divisions/planning_analysis/emissions_inventory/Default.aspx

The main body of the report consists of six chapters:

- Chapter 1:** Introduction (overview and summary of all source categories)
- Chapter 2:** Point sources (large manufacturing facilities, power plants, etc.)
- Chapter 3:** Area sources (widespread similar sources, such as fuel combustion, fires, etc.)
- Chapter 4:** Nonroad mobile sources (aircraft, locomotives, lawn mowers, tractors, etc.)
- Chapter 5:** Onroad mobile sources (cars, trucks, other vehicles, etc.)
- Chapter 6:** Biogenic sources (crops, indigenous vegetation, landscaping, etc.)

MCAQD will hold a public workshop to discuss the draft emissions inventory report on Friday, February 14, 2014. The workshop will begin at 2:00 PM in the fifth-floor classroom (Suite 560) at the department’s offices at 1001 N. Central Ave. in Phoenix.

**All visitors to the MCAQD office located at 1001 N. Central Ave. will need to check-in at the reception area in suite 125 and then proceed to the 5th floor classroom.*

The department is also accepting written comments on the draft report through the close of business on Friday, February 21, 2014. Written comments may be submitted (via US mail or email) to:

Maricopa County Air Quality Department
Emissions Inventory Unit
1001 N. Central Ave. Suite 595
Phoenix, AZ 85004
E-mail: EmisInv@mail.maricopa.gov

###

About Maricopa County Air Quality Department

The Maricopa County Air Quality Department is a regulatory agency whose goal is to ensure federal clean air standards are achieved and maintained for the residents and visitors of Maricopa County. The department is governed by the Maricopa County Board of Supervisors and follows air quality standards set forth by the federal Clean Air Act.



News

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M-info

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S	M	T	W	T	F	S
26	27	28	29	30	31	1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	1
2	3	4	5	6	7	8

Calendar

Public Workshop

Air Quality Department, Bob Huhn, PIO

The Maricopa County Air Quality Department is holding a public workshop to discuss the draft 2011 Periodic Emissions Inventory for Ozone Precursors, published in January 2014.

The inventory includes emissions estimates for volatile organic compounds (VOC), nitrogen oxides (NOx) and carbon monoxide (CO). Emissions are calculated for both Maricopa County and the eight-hour ozone nonattainment area. Annual totals as well as season-day emissions are provided for all source categories.

The emissions inventory report will undergo a 30-day public review period. The document is available in electronic format (PDF files) on the department's website (see link below).

The department is accepting written comments on the draft emissions inventory report through the close of business on Friday, February 21, 2014.

The public workshop is an informal meeting for all interested parties, is free of charge, and requires no advance registration or RSVP.

*All visitors to the MCAQD offices at 1001 N. Central Ave, Phoenix, AZ are kindly requested to check in at the reception area in Suite 125.

Date: 2/14/2014

Time: 2:00 PM

Registration Required: No

Fee: None

More

Info: http://www.maricopa.gov/aa/divisions/planning_analysis/emissions_inventory/reports/Default.aspx

Contact: Bob Downing
Emissions Inventory Unit Manager
602-506-6790
bdowning@mail.maricopa.gov

Location: Maricopa County Air Quality Department

Address:

1001 N. Central Ave. Suite 125
Phoenix, AZ 85004

Maricopa County Air Quality Department 1001 North Central Avenue, Suite 125, Phoenix AZ 85004 (602) 506-6010

