Proposal

DELAWARE STATE IMPLEMENTATION PLAN REVISION

BASIC PERFORMANCE STANDARD CERTIFICATION FOR NEW CASTLE COUNTY INSPECTION AND MAINTENANCE PROGRAM

The New Castle County Portion of the Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE Non-attainment Area

Submitted To
U.S. Environmental Protection Agency

By
Delaware Department of Natural Resources and Environmental Control

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Executive Summary

On June 4, 2018, the Environmental Protection Agency (EPA) designated 51 areas of the country as "non-attainment" under the 2015 8-hour ozone National Ambient Air Quality Standard (NAAQS) of 70 parts per billion (ppb). Among those non-attainment areas is the Philadelphia-Wilmington-Atlantic City (PA-NJ-MD-DE) Moderate Non-Attainment Area (NAA). This NAA includes New Castle County in Delaware, five counties in eastern Pennsylvania, one county in Maryland and nine counties in southern New Jersey. According to the federal Clean Air Act (CAA), this entire NAA must attain the 8-hour ozone NAAQS by August 3, 2024.

The 2018-2020 design value for the Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE NAA was 0.074 ppm. The attainment deadline for the marginal NAAs was August 3, 2020. On October 7, 2022,[1] the EPA finalized actions to fulfill its statutory obligation under CAA section 181 to determine whether 31 marginal ozone NAAs attained the 2015 ozone NAAQS by August 3, 2021, the applicable attainment date for such areas. Delaware's New Castle County, along with the greater Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE metropolitan statistical area was redesignated as Moderate Non-attainment for the 2015 Ozone NAAQS based upon the failure of the NAA to record data below the standard.

The effect of failing to attain by the applicable attainment date (August 3, 2021) requires that these areas or portions of areas to be reclassified by operation of law to ''Moderate'' non-attainment for the 2015 ozone NAAQS on November 7, 2022, the effective date of this final rule. Accordingly, the responsible state air agencies are required to submit SIP revisions and implement controls to satisfy the statutory and regulatory requirements for Moderate areas for the 2015 ozone NAAQS according to the deadlines established in the final rule.

Areas reclassified to Moderate face more stringent CAA requirements designed to achieve attainment of the NAAQS by no later than 2024. These requirements include stricter permitting requirements, implementing reasonably available control technology for major sources and sources covered by certain EPA guidance documents, basic vehicle inspection and maintenance (I/M) for urbanized areas, and the submission of a new plan demonstrating how the area will attain expeditiously.

[1] Determinations of Attainment by the Attainment Date, Extensions of the Attainment Date, and Reclassification of Areas Classified as Marginal for the 2015 Ozone National Ambient Air Quality Standards. EPA Final Rule. 87 FR 60897. October 7, 2022. https://www.govinfo.gov/content/pkg/FR-2022-10-07/pdf/2022-20460.pdf

Ground level ozone, one of the principal components of "smog," is a serious air pollutant that harms human health and the environment. High levels of ozone can damage the respiratory system and cause breathing problems, throat irritation, coughing, chest pains, and greater susceptibility to respiratory infection. High levels of ozone also cause serious damage to forests and agricultural crops, resulting in economic losses to logging and farming operations.

This document contains Delaware's State Implementation Plan (SIP) revision for meeting the Moderate non-attainment requirements associated with the 2015 8-hour ozone NAAQS. Specifically, this SIP revision:

- This proposed PSM certification ensures that Delaware's New Castle County will continue to meet all applicable I/M requirements and operate at or above the applicable performance standard level for the corresponding ozone NAAQS.

Table of Contents

Appendices

List of Tables

List of Figures

Acronym List

AQS – Air Quality System
CAA – Clean Air Act
CO – Carbon Monoxide
CFR – Code of Federal Regulations
DMV – Division of Motor Vehicles
DNREC – Department of Natural Resources and Environmental Control
DV – Design Value
EPA – Environmental Protection Agency
EV – Electric Vehicle
FR – Federal Regulations
gpm – Grams per mile
GVWR – Gross Vehicle Weight Rating
HC – Hydrocarbon
I/M – Inspection and Maintenance
LEIM – Low Enhanced Inspection Maintenance
MOVES – Motor Vehicle Emission Simulator
MSA – Metropolitan statistical area
MY – Model Year
NAA – Non-attainment Area
NAAQS – National Air Quality Standard(s)
NOAA – National Oceanic and Atmospheric Administration
NOx – Nitrogen Oxides
NO – Nitric Oxide
NO_2 – Nitrogen Dioxide
O_3 – Ozone
OTR – Ozone Transport Region
OBD – On-board Diagnostic
PFI – Plan for Implementation
ppb – Parts per billion
ppm – Parts per million
PSM – Performance Standard Modeling
SIP – State Implementation Plan
SLAMS – State and Local Air Monitoring Stations
RunSpec – Run Specification
VOC – Volatile Organic Compounds
VMT – Vehicle Miles Traveled

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1.0 Introduction and Background

On October 26, 2015, the EPA issued its final action to revise the NAAQS for ozone to establish a new 8-hour standard.[2] In that action, the EPA promulgated identical tighter primary and secondary ozone standards designed to protect public health and welfare that specified an 8-hour ozone level of 0.070 ppm for the three-year average of the 4th highest 8-hour average ozone concentration. Specifically, the standards require that the 3-year average of the annual fourth highest daily maximum 8-hour average ozone concentration may not exceed 0.070 ppm.

Prior to EPA making the attainment or non-attainment designations, the states provide EPA their recommendations as required by CAA Section 107(d). Delaware submitted its ozone attainment designation recommendations on September 23, 2016. In the letter, Delaware recommended a broad non-attainment area:

> *"Emissions cause ozone non-attainment and Delaware believes it is necessary to establish non-attainment boundaries that encompass enough of these emissions to make attainment feasible and possible goal for the area. To this end Delaware hereby recommends that the non-attainment area borders associated with New Castle County be the borders of the States of Delaware, Illinois, Indiana, Kentucky, Maryland, Michigan, Missouri, New Jersey, New York, North Carolina, Ohio, Pennsylvania, Tennessee, Virginia, West Virginia, and Wisconsin…due to EPA's analysis that these states significantly impact Delaware as part of the CASPR and CASPR Update. If EPA again rejects establishing non-attainment area that is consistent with science to solve the problem, Delaware requests EPA establish New Castle County as a stand-alone non-attainment area under the 2015 8-hour ozone NAAQS."*

The EPA rejected Delaware's recommendation and announced on November 16, 2017,[3] that New Castle County was to be designated non-attainment for ozone and associated it with the greater Philadelphia Metropolitan Area (see 40 CFR 81.15), which consists of New Castle County in Delaware and counties in Maryland, New Jersey, and Pennsylvania, as shown in Figure 1-2. On June 4, 2018 the EPA designated the Philadelphia Metropolitan area as marginal non-attainment for the 2015 ozone NAAQS. EPA based the designations on the most recent three years (2014-2016) of certified ozone air quality monitoring data and on an evaluation of factors to assess contributions to non-attainment in nearby areas. In 2017, New Castle County was found to contribute emissions to the Philadelphia Metropolitan – NAA.

[2] National Ambient Air Quality Standards for Ozone. EPA Final Rule. 80 FR 65292. October 26, 2015. https://www.govinfo.gov/content/pkg/FR-2015-10-26/pdf/2015-26594.pdf

[3] Air Quality Designations for the 2015 Ozone National Ambient Air Quality Standards (NAAQS). EPA Final Rule. 82 FR 54232. November 16, 2017. https://www.govinfo.gov/content/pkg/FR-2017-11-16/pdf/2017-24640.pdf

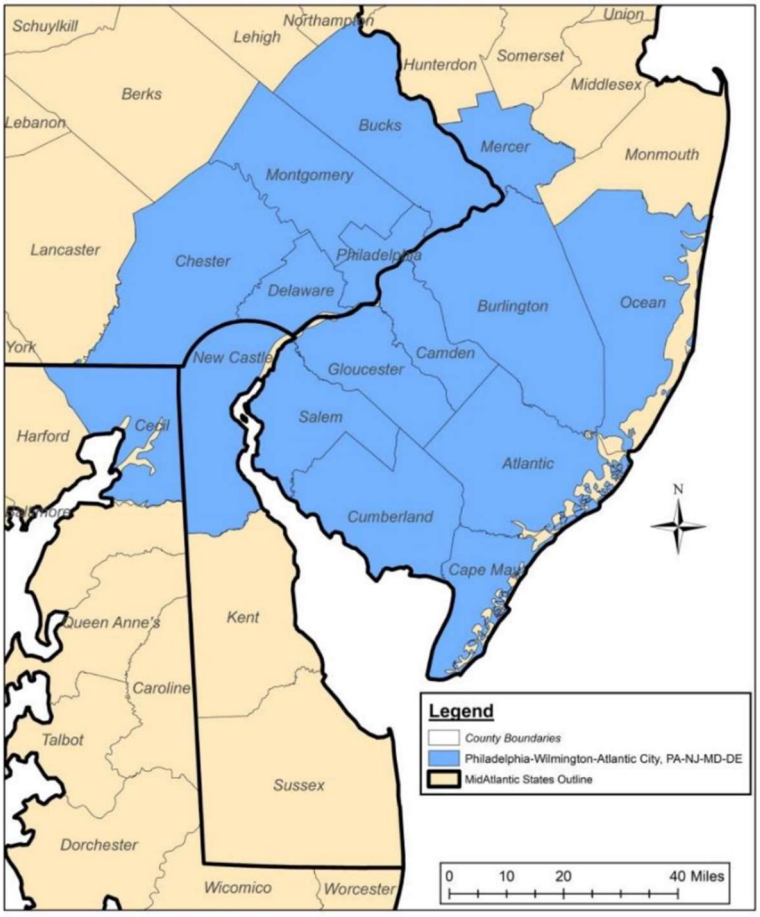

Figure 1. Philadelphia-Wilmington-Atlantic City, PA-DE-MD-NJ Moderate Non-Attainment Area for the 8-Hour Ozone NAAQS

In a final rule dated June 4, 2018,[4] the EPA designated 51 areas (Figure 2-2) in the country as non-attainment for the 2015 8-hour ozone NAAQS. In the same final rule, Kent and Sussex Counties were designated as attainment. The EPA made the designations of all three Delaware counties based on their 2014-2016 design values,[5] and the effective date of the designations was August 3, 2018.

The 2015 Ozone NAAQS is met at an EPA regulatory monitoring site when the design value does not exceed 0.070 ppm. For areas classified as marginal non-attainment for the 2015 Ozone NAAQS, the attainment deadline date was August 3, 2021. Because the design values are based on the three most recent, complete calendar years (2018- 2020), attainment must occur no

[4] Additional Air Quality Designations for the 2015 Ozone National Ambient Air Quality Standards (NAAQS). EPA Final Rule. 83 FR 25776. June 4, 2018. https://www.govinfo.gov/content/pkg/FR-2018-06-04/pdf/2018-11838.pdf

[5] The air quality design value at a monitoring site is defined as the 3-year average annual fourth-highest daily maximum 8-hour average ozone concentration is also the air quality design value for the site. (40 CFR Part 50, Appendix I, Interpretation of the 8-Hour Primary and Secondary National Ambient Air Quality Standards for Ozone)

later than December 31 of the year prior to the attainment date (i.e., December 31, 2020, in the case of marginal NAAs for the 2015 Ozone NAAQS).

Under CAA Section 107(c), within six months of the attainment deadline date (August 3, 2021), the EPA is required to make a determination on the area's air quality as of the attainment date, and whether an area (PA, NJ, MD, DE) attained by that date. If the EPA determines that area failed to attain by the attainment date, EPA is required to publish that determination in the Federal Register per CAA section 107(c)(2). As such the EPA's proposed determinations for each area are based upon the complete, quality assured, and certified ozone monitoring data from calendar years 2018, 2019 and 2020.

The 2018-2020 design value for the Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE NAA was 0.074 ppm, as shown in Table 1-1. The attainment deadline for the marginal NAAs was August 3, 2021. On October 7, 2022,[6] the EPA finalized actions to fulfill its statutory obligation under CAA section 181 to determine whether 31 marginal ozone NAAs attained the 2015 ozone NAAQS by August 3, 2021, the applicable attainment date for such areas. Delaware's New Castle County, along with the greater Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE metropolitan statistical area was redesignated as moderate non-attainment for the 2015 Ozone NAAQS based upon the failure of the NAA to record data below the standard.

The effect of failing to attain by the applicable attainment date (August 3, 2021) requires that these areas or portions of areas to be reclassified by operation of law to ''Moderate'' non-attainment for the 2015 Ozone NAAQS. Accordingly, the responsible state air agencies are required to submit SIP revisions and implement controls to satisfy the statutory and regulatory requirements for Moderate non-attainment areas according to the deadlines established in the final rule.

[6] Determinations of Attainment by the Attainment Date, Extensions of the Attainment Date, and Reclassification of Areas Classified as Marginal for the 2015 Ozone National Ambient Air Quality Standards. EPA Final Rule. 87 FR 60897. October 7, 2022. https://www.govinfo.gov/content/pkg/FR-2022-10-07/pdf/2022-20460.pdf

Table 1-1. Philadelphia-Wilmington-Atlantic City NAA 2018-2020 Design Values - Moderate Reclassification

State Name	County Name	Local Site Name	Valid 2018-2020 Design Value (ppm) [1,2]	2018 4th Highest Daily Max. Value (ppm)	2019 4th Highest Daily Max. Value (ppm)	2020 4th Highest Daily Max. Value (ppm)	Number of Exceedance Days in 2018	Number of Exceedance Days in 2019	Number of Exceedance Days in 2020
Delaware	New Castle	Lums Pond	0.065	0.071	0.064	0.061	4	1	0
Delaware	New Castle	Brandywine Creek State Park	0.063	0.067	0.067	0.057	2	1	0
Delaware	New Castle	Bellevue State Park,	0.066	0.072	0.068	0.060	4	3	0
Delaware	New Castle	MLK Corner Of Mlk Blvd And Justison St	0.067	0.071	0.067	0.063	4	2	2
Maryland	Cecil	Fair Hill Natural Resource Management Area	0.068	0.073	0.068	0.064	7	3	0
New Jersey	Camden	Camden Spruce Street	0.069	0.075	0.070	0.062	5	3	0
New Jersey	Camden	Ancora State Hospital	0.064	0.068	0.067	0.059	1	3	0
New Jersey	Gloucester	Clarksboro	0.069	0.077	0.068	0.064	7	1	1
Pennsylvania	Bucks	Bristol	0.074	0.084	0.067	0.071	12	3	4
Pennsylvania	Chester	Chester County Transport Site Into Philadelphia	0.064	0.065	0.068	0.060	1	1	0
Pennsylvania	Delaware	A420450002lat/Lon Point Is Of Corner Of Trailer	0.068	0.073	0.069	0.062	4	3	1
Pennsylvania	Montgomery	A420910013lat/Lon Point Is Of Corner Of Trailer	0.068	0.073	0.065	0.066	7	1	0
Pennsylvania	Philadelphia	Air Management Services Laboratory	0.067	0.071	0.067	0.064	5	3	0
Pennsylvania	Philadelphia	North East Airport (NEA)	0.073	0.079	0.071	0.070	8	4	3

State Name	County Name	Local Site Name	Valid 2018-2020 Design Value (ppm) [1,2]	2018 4th Highest Daily Max. Value (ppm)	2019 4th Highest Daily Max. Value (ppm)	2020 4th Highest Daily Max. Value (ppm)	Number of Exceedance Days in 2018	Number of Exceedance Days in 2019	Number of Exceedance Days in 2020
Pennsylvania	Philadelphia	North East Waste (New)	0.071	0.076	0.072	0.067	9	4	2

Notes:

1. The level of the 2015 8-hour ozone NAAQS is 0.070 parts per million (ppm). The design value is the 3-year average of the annual 4th highest daily maximum 8-hour ozone concentration.

2. The design values shown here are computed using Federal Reference Method or equivalent data reported by State, Tribal, and Local monitoring agencies to EPA's Air Quality System (AQS) as of May 5, 2021.

This document contains Delaware's State Implementation Plan (SIP) revision for meeting the moderate non-attainment requirements associated with the 2015 8-hour ozone NAAQS. Specifically, this SIP revision:

- This proposed PSM certification ensures that Delaware's New Castle County will continue to meet all applicable I/M requirements and operate at or above the applicable performance standard level for the corresponding ozone NAAQS.

2.0 Inspection and Maintenance Program Background

Motor vehicles are significant contributors of volatile organic compounds (VOC), carbon monoxide (CO) and nitrogen oxide (NOx) emissions. An important control measure to reduce these emissions is the implementation of a motor vehicle I/M program. Despite being subject to the most rigorous vehicle pollution control program in the world, cars and trucks still create toxic contaminants, about half of the ozone air pollution and nearly all of the carbon monoxide air pollution in United States cities. Of all highway vehicles, passenger cars and light-duty trucks emit most of the vehicle-related carbon monoxide and ozone-forming hydrocarbons. They also emit substantial amounts of nitrogen oxides and air toxics.

Although the U.S. has made progress in reducing emissions of these pollutants, total fleet emissions remain high. This is because the number of vehicle miles traveled on U.S. roads has doubled in the last 30 years to over 3 trillion miles per year,[7] offsetting much of the technological progress in vehicle emission control over the same three decades. Projections indicate that the steady growth in vehicle travel will continue.

Ongoing efforts to reduce emissions from individual vehicles are necessary to achieve and maintain our air quality goals. Today's cars are absolutely dependent on properly functioning emission controls to keep pollution levels low. Minor malfunctions in the emission control system can increase emissions significantly, and the average car on the road emits three to four times the new car standard.

Major malfunctions in the emission control system can cause emissions to increase above the vehicle emissions standards. As a result, 10 to 30 percent of cars are causing the majority of the vehicle-related pollution problem. Unfortunately, it is rarely obvious which cars fall into this category, as the emissions themselves may not be noticeable and emission control malfunctions do not necessarily affect vehicle drivability.

Effective I/M programs, however, can identify these problem cars and assure their repair. I/M programs ensure that cars are properly maintained during customer use. I/M produces emission reduction results soon after the program is put in place. The Clean Air Act (CAA) as amended in 1990 requires that most polluted areas adopt either ''basic'' or ''enhanced'' I/M programs, depending on the severity of the problem and the population of the area. The Moderate ozone nonattainment areas, plus marginal ozone areas with existing or previously required I/M programs, fall under the ''basic'' I/M requirements.

[7] Bureau of Transportation Statistics. 2020. Retrieved from https://www.bts.gov/content/highway-profile on 09/19/2022.

Federal Program

The Environmental Protection Agency (EPA) has had oversight and policy development responsibility for vehicle inspection and maintenance (I/M) programs since the passage of the Clean Air Act in 1970, which included I/M as an option for improving air quality. The first I/M program was implemented in New Jersey in 1974 and consisted of an annual idle test of 1968 and newer light-duty gasoline-powered vehicles conducted at a centralized facility. No tampering checks were performed and no repair waivers were allowed.

I/M was first mandated for areas with long term air quality problems beginning with the Clean Air Act Amendments of 1977. EPA issued its first guidance for such programs in 1978; the guidance addressed State Implementation Plan (SIP) elements such as minimum emission reduction requirements, administrative requirements, and implementation schedules. The original I/M guidance was quite broad and difficult to enforce, given EPA's lack of legal authority to establish minimum I/M implementation. The lack of regulatory authority - and the state-to-state inconsistency with regard to I/M program design that resulted from it -- was cited in audits of EPA's oversight of the I/M requirement conducted by both the Agency's own Inspector General, as well as the General Accounting Office.

In response to the above-cited deficiencies, the 1990 Amendments to the Clean Air Act (CAA) signed into law on November 15, 1990 were much more prescriptive with regard to I/M requirements while also expanding I/M's role as an attainment strategy. The CAA required EPA to develop federally enforceable guidance[8] for two levels of I/M program: "basic" I/M for areas designated as Moderate non-attainment, and "enhanced " I/M for serious and worse non-attainment areas, as well as for areas within an Ozone Transport Region (OTR), regardless of attainment status.

In response to the CAA, EPA published its I/M rule[9] on November 5, 1992, which established the minimum procedural and administrative requirements to be met by basic and enhanced I/M programs. This rule also included a performance standard for basic I/M based upon the original New Jersey I/M program and a separate performance standard for enhanced I/M, based on the following program elements:

- Centralized, annual testing of MY 1968 and newer light-duty vehicles (LDVs) and light duty trucks (LDTs) rated up to 8,500 pounds GVWR.
- Tailpipe test: MY1968-1980 - idle; MY1981-1985 - two-speed idle; MY1986 and newer -IM240.

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[8] USEPA - Vehicle Emissions Inspection and Maintenance (I/M): Policy and Technical Guidance. 2022. Retrieved from https://www.epa.gov/state-and-local-transportation/vehicle-emissions-inspection-and-maintenance-im-policy-and-technical .

[9] USEPA – Chronological List of Rulemakings. 2022. Retrieved from https://www.epa.gov/state-and-local-transportation/vehicle-emissions-inspection-and-maintenance-im-general-information#chronological.

- Evaporative system test: MY1983 and newer - pressure; MY1986 and newer - purge test.
- Visual inspection: MY1984 and newer - catalyst and fuel inlet restrictor.

Enhanced programs are required in serious, severe, and extreme ozone nonattainment areas with urbanized populations of 200,000 or more; CO areas that exceed a 12.7 parts per million (ppm) design value 1 with urbanized populations of 100,000 or more in the Northeast Ozone Transport Region (OTR).[10]

‘‘Basic’’ and ‘‘enhanced’’ I/M programs both achieve their objective by identifying vehicles that have high emissions as a result of one or more malfunctions, and by requiring them to be repaired. An ‘‘enhanced’’ program covers more of the vehicles in operation, employs inspection methods that are better at finding high emitting vehicles, and has additional features to better assure that all vehicles are tested properly and effectively repaired.

EPA’s rules for I/M established a low and high enhanced standard. The high enhanced I/M program achieves a greater reduction in emissions (approximately 36%) and uses a highly technical test method. The low enhanced I/M performance standard provides flexibility for nonattainment areas that are required to implement enhanced I/M programs but which can meet the CAA’s emission reduction requirements for reasonable further progress (commonly referred to as 15% plans) and attainment from other sources without the stringency of the high enhanced I/M performance standard (60 FR 48029). All other provisions of the November 5, 1992 I/M rule, except as revised in 60 FR 48029 for extension of waivers and expenditure requirements, remain applicable to states available for low enhanced I/M. 40 CFR 51.35(g) provides that states may select the low enhanced performance standard if they have an approved SIP for 15%.

The CAA also revised and strengthened EPA’s authority to prescribe vehicle inspection and maintenance (I/M) programs for ozone nonattainment areas. Section 182 of the CAA requires EPA to review, revise, and republish I/ M program requirements, taking into consideration investigations and audits of I/M programs, and the I/M requirements established in the CAA. One of these program requirements is inspection of vehicle OBD systems. The CAA requires that On-Board Diagnostic (OBD) inspections be incorporated into all basic and enhanced I/M programs once vehicles with mandated OBD systems become part of the fleet. Section 182(c)(3)(vii) requires that I/M programs include ‘‘inspection of emission control diagnostic systems and the maintenance or repair of malfunctions or systems deterioration identified by or affecting such diagnostic systems.”

[10] The Act also established the OTR in the Northeastern United States which includes the States of Maine, Vermont, New Hampshire, Massachusetts, Rhode Island, Connecticut, Pennsylvania, New York, New Jersey, Delaware, Maryland, and Northern Virginia and the District of Columbia.

Sections 182(a)(2) and 202(m)(3) required states to amend I/M program implementation plans to incorporate the inspection of on-board diagnostic systems within two years after promulgation of regulations requiring such inspection.

EPA's initial rule implementing section 182's I/M requirements (the I/M rule) was promulgated on November 5, 1992. It established performance standards and other requirements for basic and enhanced vehicle I/M programs.

Performance Standards

The I/M regulation also establishes requirements for the following: Network type and program evaluation; adequate tools and resources; test frequency and convenience; vehicle coverage; test procedures and standards; test equipment; quality control; waivers and compliance via diagnostic inspection; motorist compliance enforcement; motorist compliance enforcement program oversight; quality assurance; enforcement against contractors, stations and inspectors; data collection; data analysis and reporting; inspector training and licensing or certification; public information and consumer protection; improving repair effectiveness; compliance with recall notices; on-road testing; SIP revisions; and implementation deadlines.

The performance standard for the high enhanced I/M program is different from the low enhanced program in that the high enhanced performance standard is based on high-technology transient test, known as IM240, for new technology vehicles (i.e, those with closed-loop control and especially, fuel injected engines), including a transient loaded exhaust short test incorporating hydrocarbons (HC), CO and NOx cut-points, and evaporative system integrity (pressure) test and an evaporative system performance (purge) test. The low enhanced performance standard, however, allows for idle testing in place of high-tech testing.

Note that the phrase "performance standard" used above was initially used in the CAA and is misleading in that it more accurately describes program design. Adhering to the "performance standard" does not guarantee an I/M program will meet a specific level of emissions reductions. Therefore, the performance standard is not what is required to be implemented, it is the bar against which a program is to be compared.

States new to I/M must demonstrate their program's ability to meet the relevant performance standard when the program is first proposed as part of the I/M SIP. Existing I/M program areas which have not been redesignated to attainment must also do performance standard modeling whenever they revise their I/M SIP in a way that is likely to change the level of emission reductions achieved by the program.

The CAA also includes I/M requirements for metropolitan statistical areas (MSAs) within the OTR with populations of 100,000 or more, regardless of attainment status for ozone. It is not likely that any area in the OTR would be newly required to adopt an I/M program based upon classification under a new or subsequent ozone standard because the enhanced I/M requirement for the OTR is tied to population threshold only, and not to attainment status. It is possible, however, that an existing OTR I/M program might need to be upgraded if its status changed from attainment to serious or worse nonattainment for ozone.

Delaware has chosen to meet the performance standards for the Alternate Low Enhanced I/M program in Kent and New Castle Counties with a Basic Program in Sussex County.

Table 2-1. EPA Performance Standard Comparison – Basic vs Low Enhanced

I/M Program Parameter	Basic I/M per 40 CFR 51.352 (a)	Low Enhanced I/M per 40 CFR 51.351 (g)-Low Enhanced I/M Performance Standard
Network Type	Centralized testing.	Centralized testing.
Start Date	For areas with existing I/M programs, 1983. For areas newly subject, 1994.	For areas with existing I/M programs, 1983. For areas newly subject, 1995.
Test Frequency	Annual testing.	Annual testing.
Model Year Coverage	Testing of 1968 and later model year vehicles.	Testing of 1968 and newer vehicles.
Vehicle Type Coverage	Light duty vehicles.	Light duty vehicles, and light duty trucks, rated up to 8,500 pounds GVWR.
Emission Test Type	Idle test.	Idle testing of all covered vehicles (as described in appendix B of subpart S).
Emission Standards	No weaker than specified in 40 CFR part 85, subpart W.	Those specified in 40 CFR part 85, subpart W.
Emission Control Device Inspection	None.	Visual inspection of the positive crankcase ventilation valve on all 1968 through 1971 model year vehicles, inclusive, and of the exhaust gas recirculation valve on all 1972 and newer model year vehicles.
Evaporative System Function Checks	None	None.
Stringency	A 20% emission test failure rate among pre-1981 model year vehicles.	A 20% emission test failure rate among pre-1981 model year vehicles.
Waiver Rate	A 0% waiver rate.	A 3% waiver rate, as a percentage of failed vehicles.
Compliance Rate	A 100% compliance rate.	A 96% compliance rate.
Evaluation Date	Basic I/M programs shall be shown to obtain the same or lower emission levels as the model inputs by 1997 for ozone nonattainment areas and 1996 for CO nonattainment areas; and, for serious or worse ozone nonattainment areas, on each applicable milestone and attainment deadline, thereafter.	Enhanced I/M program areas subject to the provisions of this paragraph (g) shall be shown to obtain the same or lower emission levels as the model program described in this paragraph by January 1, 2002 to within ±0.02 grams per mile (gpm). Subject programs shall demonstrate through modeling the ability to maintain this level of emission reduction (or better) through their attainment deadline for the applicable National Ambient Air Quality Standard(s) (NAAQS).

2.1 Delaware's Inspection & Maintenance Program

The State of Delaware is covered by an emission inspection program that tests approximately 273,000 vehicles each year. The purpose of Delaware's emissions testing program is to identify vehicles that exceed tailpipe exhaust and evaporative emissions standards and prevent registration or renewals until vehicles meet emission standards. The inspections are performed by the State's Department of Transportation Division of Motor Vehicles. Delaware administers two I/M areas with different requirements governed by 7 **DE Admin. Code** 1126 (Sussex County) and 7 **DE Admin. Code** 1131 (Kent/New Castle Counties). New Castle and Kent Counties meet the Low Enhanced I/M (LEIM) requirements due to prior NAAQS designation for ozone, while Sussex County implements a Basic I/M program as an additional control measure for meeting the ozone NAAQS.

On January 11, 2023, Delaware implemented a statewide program in which each county has the same requirements. The amendments to Delaware's Vehicle Inspection and Maintenance Program included:

- expanding the model year exemption from five to seven years;
- expanding the vehicles covered by the program to include vehicles weighing 8,501 pounds to 14,000 pounds gross vehicle weight beginning with model year 2008;
- changing the older vehicle testing requirements to include curb idle and gas cap tests;
- dropping the two speed idle test from Kent and New Castle Counties,
- phase in an increased cost of repairs for receiving a program waiver in Sussex County and adding anti-tampering language thus ensuring a statewide program.

The updated test requirements are summarized in Table 2-2.

Table 2-2. Delaware Statewide I/M Program

I/M Program	Vehicle (MYs)	I/M Test	7 DE Admin Code Reg 1131 & 1126
Vehicles weighing up to 8,500 lb. GVWR	1968 – 1995	Unloaded Idle test	Yes
		Two Speed Idle test	NA
		Gas Cap Testing	Yes
	1975 – 1995	Evaporative System Pressure check	NA
	1996 and newer	OBD-II testing	Yes
Vehicles weighing between 8,501 and 14,000 lb. GVWR	2008 and newer	OBD-II testing	Yes
Vehicle inspections exemption years			7

The I/M Program in Delaware is a centralized system operated and administered by the Division of Motor Vehicles (DMV). Delaware's I/M Program is implemented at four testing facilities located in Wilmington, Delaware City, Dover, and Georgetown. The program utilizes 31 total inspection lanes, and 51 DMV inspection associates. The I/M program inspection schedule is biennial, requiring vehicles to pass an emissions inspection every two years. The current regulations provide an exemption for vehicles less than 7 years old.[11] A vehicle must either pass inspection or be granted a waiver before its registration can be renewed.

[11] Delaware State Code Title 21 § 2143 was amended on 9/21/2017 to change the exemption for new vehicles from 5 to 7 years.

3.0 Performance Standard Certification Introduction

In October 2022, EPA's final rule to reclassify certain ozone nonattainment areas from marginal to moderate for the 2015 ozone NAAQS was published, and those areas are required by the CAA Section 182 to implement Basic I/M programs.[12] Delaware is required to certify that it has met the performance standard for their New Castle County nonattainment area for the ozone NAAQS. With this submittal to EPA, Delaware is certifying that its current I/M program for New Castle County has met the Basic performance standard. The following analysis details how Delaware determined that it meets the requirements for the Basic I/M performance standard.

Performance Standard Modeling (PSM) is used to demonstrate that a proposed or existing vehicle emission inspection and maintenance (I/M) program meets the applicable performance standard, as defined within the I/M regulations (40 CFR Part 51, subpart S). The performance standard provides a gauge by which EPA can evaluate the effectiveness of a state's I/M program. States are required to demonstrate and certify that their I/M programs achieve emission levels that are equal to, or lower than, those which would be achieved by the implementation of the performance standard model program.

EPA provided guidance for performing a PSM analysis in their October 2022 release of *Performance Standard Modeling for New and Existing Vehicle Inspection and Maintenance (I/M) Programs Using the MOVES Mobile Source Emissions Model,*[13] ("*EPA's PSM Analysis Guidance*"). It states that the PSM analysis is required for an area meeting the criteria for a Basic I/M program upon its reclassification from marginal to moderate for the 2015 or subsequent ozone NAAQS regardless of whether the area already operates an existing I/M program under a prior NAAQS.

The obligations to perform a PSM were further clarified in EPA's final rule (87 FR 60897) published October 2022 that reclassified certain ozone nonattainment areas from marginal to moderate for the 2015 ozone NAAQS. This rulemaking explained that states with existing I/M programs would need to conduct and submit a PSM analysis as well as make any necessary program revisions as part of their moderate area SIP submissions to ensure that I/M programs are operating at or above the Basic I/M performance standard level for the 2015 ozone NAAQS.

[12] Ibid.
[13] Performance Standard Modeling for New and Existing Vehicle Inspection and Maintenance (I/M) Programs Using the MOVES Mobile Source Emissions Model. EPA. January 2014. Retrieved from https://nepis.epa.gov/Exe/ZyPdf.cgi?Dockey=P100HHMP.pdf

Therefore, Delaware is required to certify that it has met the performance standard for their nonattainment area (which is New Castle County) for the 2015 ozone NAAQS. The modeling and certification requirement is fulfilled in this section of the report following *EPA's PSM Analysis Guidance*.

3.1 Performance Standard Certification Modeling Procedures

Delaware used EPA's latest version of the Motor Vehicle Emission Simulator (MOVES3.1.0) for the performance standard certification modeling. Since the analysis requires comparing Delaware's New Castle County I/M program to EPA's Basic I/M performance standard, two scenarios were modeled. The first scenario ("New Castle") was representative of New Castle's I/M program for the attainment year 2023. The second scenario was the Basic performance standard benchmark ("Basic Performance Standard"), which represents the EPA requirements defined in 40 CFR 50.352(e).

Delaware developed a MOVES RunSpec for both scenarios, created a separate input database for each scenario, and executed the MOVES run for each scenario. The RunSpec is used to define key elements such as analysis year, geographical area, source types, and pollutants/processes modeled. The RunSpec also directs the model to the respective input/output databases. Delaware followed Section 3.1 of *EPA's PSM Analysis Guidance* for selecting the appropriate parameters.

Unique input databases were created for the different scenario types; Statewide Plan and the Basic Performance Standard. The input database includes the county specific parameters of the onroad fleet such as vehicle miles traveled, age distribution of 13 EPA vehicle types, fuel types, and the I/M program data. Table 3-1 shows all the RunSpec parameters along with the key assumptions for the input databases used for both scenarios.

Table 3-1. 2023 Modeling for Performance Standard Certification-Inputs and Assumptions

Data Item	2023 Modeling for Performance Standard Certification - Inputs and assumptions
MOVES RunSpec	
Emission Model	MOVES3.1.0 (default database: MOVESDB20221007)
Scale/Calculation Type	County Scale Inventory Run
Analysis Years	2023
Analysis Months	July
Analysis Days	Weekdays
Analysis Hours	All
Geographic Bounds	New Castle, DE (10003)
Pollutants	VOC, NOx + Necessary Precursors
Fuel Types	Compressed Natural Gas (CNG), Diesel, Electricity, Ethanol (E-85), Gasoline
Traffic Data	
Vehicle Miles Traveled (VMT) Growth Forecast	Used the Federal Highway Administration (FHWA) forecast growth rate for 2019 to 2049 (1.007733). Applied this to the 2019 data to get the projected 2023 VMT. https://www.fhwa.dot.gov/policyinformation/tables/vmt/
County Database Inputs	
Source Type Year VMT	Grew the 2019 VMT data to 2023, using a growth factor of 1.00733 per annum. Used the same distribution as was used in the EPA data set for the 2020NEI. This distribution was applied to the 13 MOVES vehicle types to allocate the VMT.
Month VMT Fractions	Used the month VMT from the 2017 NEI
Day VMT Fractions	Used the day VMT from the 2017 NEI
Hourly VMT Fractions	Used the hourly VMT from the 2017 NEI
I/M Parameters – Statewide Plan Scenario	Used the unified statewide plan adopting the January 2023 changes to Delaware's regulations 1126 and 1131
I/M Parameters – Basic Performance Standard Scenario	Basic I/M per 40 CFR 51.352 (e) or Enhanced 40 CFR 51.351(i)
Road Type Distribution	Used the analysis of the 2020 DelDOT tables: https://deldot.gov/Publications/reports/hpms/index.shtml?dc=hpms_2020As well as yielding VMT, this data also yields road type distributions
Source Type Year (Population)	Using Vehicle Population data (R45CAM07), we collected the data from years 2017 to 2022, and projected this data forward to 2023 using a linear regression model
Vehicle Age Distribution	Analysis of 2022 R45CAM07 data. The distribution was grown to 2023 using the EPA's spreadsheet tool: moves3-age-distribution-projection-tool-202104051.xls
Average Speed Distribution	Used the CRCA100 data set
Fuel Supply	MOVES3.1 default tables
Fuel Formulation	MOVES3.1 default tables
Fuel Usage Fraction	MOVES3.1 default tables, Set Flex Fuel Vehicle E85 usage to zero
Alternative Vehicle Fuel Table (AVFT)	MOVES3.1 Default Tables, edited by using Delaware's EV registration data from 2010 to 2022. We used the same EV proportions for future years. MOVES3.1 only accepts Electric vehicles for Source Use Types 21,31 and 32.
ZoneMonthHour	Average hourly data by month from years 2020, 2021 and 2022 meteorological datasets maintained by NOAA
MOVES Inputs - Advanced	
N/A	Not applicable as indicated in following *EPA's PSM Analysis Guidance*

For the Basic Performance Standard scenario, Delaware used the performance standard input table template developed by EPA for the Basic I/M Standard referenced in Section 3.2 of *EPA's PSM Analysis Guidance.* The standard includes all the program elements required by I/M regulation 40 CFR 50.352(e) (Table 3-2).

Table 3-2. Basic I/M Performance Standard (Basic Performance Standard)

Basic I/M Performance Standard Default MOVES3 Input Table

Pollutant Process ID	State ID	County ID	Year ID	Source Type ID	Fuel Type ID	IM Program ID	Inspection Frequency	Test Standards ID	Beginning Model Year ID	Ending Model Year ID	Use IM Parameter Y (yes) or N (no)	Compliance Factor
101	10	10003	2023	21	1	111	1	11	1968	2000	y	100
102	10	10003	2023	21	1	111	1	11	1968	2000	y	100
301	10	10003	2023	21	1	111	1	11	1968	2000	y	100
302	10	10003	2023	21	1	111	1	11	1968	2000	y	100
101	10	10003	2023	21	1	151	1	51	2001	2022	y	100
102	10	10003	2023	21	1	151	1	51	2001	2022	y	100
301	10	10003	2023	21	1	151	1	51	2001	2022	y	100
302	10	10003	2023	21	1	151	1	51	2001	2022	y	100
112	10	10003	2023	21	1	143	1	43	2001	2022	y	100
101	10	10003	2023	21	5	111	1	11	1968	2000	y	100
102	10	10003	2023	21	5	111	1	11	1968	2000	y	100
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101	10	10003	2023	21	5	151	1	51	2001	2022	y	100
102	10	10003	2023	21	5	151	1	51	2001	2022	y	100
301	10	10003	2023	21	5	151	1	51	2001	2022	y	100
302	10	10003	2023	21	5	151	1	51	2001	2022	y	100
112	10	10003	2023	21	5	143	1	43	2001	2022	y	100

The output database houses the modeling results after MOVES3.1.0 is executed. The structure of the output database is determined in the RunSpec and is important for post processing. Delaware selected the key output database parameters suggested in Section 3.1 of *EPA's PSM Analysis Guidance*, so the output data was in a format that made it easier to calculate the emissions rates. Table 3-3 lists the MOVES run scenario type along with the RunSpec file and input and output databases associated with each run. These move run spec (.mrs) files can be found in Appendix A.

Table 3-3. Input/Output Database and RunSpec for New Castle County

Scenario	Statewide Plan	Basic Performance Standard
Output Database	psm_20230327_y2023_c10003_02_out	psm_20230327_y2023_c10003_01_out
Input Database	psm_20230327_y2023_c10003_02_in	psm_20230327_y2023_c10003_01_in
RunSpec	psm_20230327_y2023_c10003_02.mrs	psm_20230327_y2023_c10003_01.mrs

3.2 Performance Standard Certification Modeling Analysis Results

The pollutants analyzed by this modeling include NOx and VOCs. Nitrogen oxides (NOx) refers to nitric oxide (NO) and NO_2. Since NOx includes NO_2, NO_2 does not need to be reviewed separately. NOx and VOC are shown as emission rates in grams per mile for an ozone summer season (July) weekday. These rates were calculated by dividing the mass of pollutants by the distance traveled.

An I/M program has met the performance standard if the grams per mile emission rate for VOCs and NOx are equal to, or less than the emission rate calculated for the relevant performance standard. Since New Castle County needs to adhere to the Basic I/M program, there is no allowance for exceeding the standard. The modeling analysis results are shown in Table 3-4. More detail can be found in Appendix B.

Table 3-4. Performance Standard Modeling Analysis Results

Equations:	A	B	B - A	Is B - A >= 0?
Pollutant	**Statewide Plan Emission Rate**	**Basic Performance Std. Emission Rate**	**Difference**	**Meets Basic Performance Std**
	g/mile	**g/mile**	**g/mile**	**Yes/No**
VOC	0.2085	0.2148	0.0062	Yes
NOx	0.3733	0.3811	0.0079	Yes

New Castle County has an emission rate that is lower than the basic performance standard for NOx and VOC. As a result, Delaware's current I/M program achieves the performance standard.

3.3 Performance Standard Certification - Modeling Analysis Conclusion

As indicated in *EPA's PSM Analysis Guidance*, "States may determine through the PSM analysis that an existing SIP-approved program would meet the performance standard for purposes of the 2015 ozone NAAQS without modification. In this case, the state could submit a SIP revision with the associated PSM and a written statement certifying their determination in lieu of submitting new revised regulations."

For the purposes of the 2015 ozone NAAQS, the PSM analysis shows New Castle's I/M program meets the Basic performance standard without modification or revision required of the regulation. Table 3-5 provides program performance information and compares the adopted January 2023 Delaware Statewide plan I/M program to the federal requirements.

Table 3-5. Performance Standards: Federal I/M compared to Statewide Plan

I/M Program Parameter	Basic I/M per 40 CFR 51.352 (e) (Basic Performance Standard)	New Castle County I/M Program (Statewide Plan)
Network Type	Centralized testing.	Centralized testing.
Start Date	4 years after the effective date of designation and classification under the 8-hour ozone standard.	New Castle - 1983.
Test Frequency	Annual testing.	Biennial.
Model Year Coverage	Testing of 1968 and newer vehicles.	Testing of 1968 and newer with 7 year new model exemption
Vehicle Type Coverage	Light duty vehicles.	Light Duty Vehicles and Medium Duty Vehicles from 8,501 up to 14,000 pounds GVWR.
Emission Test Type	Idle testing (as described in appendix B of this subpart) for 1968-2000 vehicles; onboard diagnostic checks on 2001 and newer vehicles.	Curb idle test 1968-1995 vehicles; OBD test, 1996 and newer with 7 year new model exemption, and 2008 or newer for vehicles up to 14,000 pounds GVWR.
Emission Standards	Those specified in 40 CFR part 85, subpart W.	1981 and newer 1.2% CO 1981 and newer 220 ppm HC
Emission Control Device Inspection	None.	1981 and newer Catalytic converter
OBD II	None.	1996 and newer with 7 year new model exemption, and 2008 or newer for vehicles up to 14,000 pounds GVWR.
Evaporative System Function Checks	None, with the exception of those performed by the OBD system on vehicles so-equipped and only for model year 2001 and newer vehicles.	1975-1995 gas cap pressure check
Stringency	20% emission test failure rate among pre-1981 model year vehicles.	NA
Waiver Rate	A 0% waiver rate, as a percentage of failed vehicles.	3%
Compliance Rate	A 100% compliance rate.	See Appendix A spreadsheets in *Motor Vehicle Emissions Inspection Program; Plan for Implementation (PFI) for 7 DE Admin Code 1126 and 7 DE Admin. Code 1131*
Evaluation Date	Basic I/M program areas subject to the provisions of this paragraph (e) shall be shown to obtain the same or lower emission levels as the model program described in this paragraph by an evaluation date set 6 years after the effective date of designation and classification under the 8-hour ozone standard (rounded to the nearest July) for the applicable ozone precursor(s).	2023 (fulfilled in this report)

The following statement certifies the determination:

Department of Natural Resource and Environmental Control Division of Air Quality attests that Delaware's current I/M SIP (*Motor Vehicle Emissions Inspection Program; Plan for Implementation (PFI) for 7 DE Admin Code 1126 and 7 DE Admin. Code 1131*) meets the I/M regulations at 40 CFR 51.372 required elements outlined in (a)(1)-(8). A summary of the addressed elements is shown below in Table 3-6.

Table 3-6. I/M Program Regulatory Requirements

40 CFR 51.372	Regulatory Requirements of I/M Program	Satisfied Element (yes/no)
(a)(1)	A schedule for I/M program implementation and interim milestones leading to mandatory testing;	**Yes**: Motor Vehicle Emissions Inspection Program; Plan for Implementation (PFI) for 7 DE Admin Code 1126 and 7 DE Admin. Code 1131: *Section 1 -Applicability (c)* & *Section 2 - Low Enhanced I/M Performance Standard (b)*
(a)(2)	a Performance Standard Modeling analysis of the proposed I/M program;	**Yes**: Fulfilled in this report
(a)(3)	the geographic applicability of the I/M program;	**Yes**: Motor Vehicle Emissions Inspection Program; Plan for Implementation (PFI) for 7 DE Admin Code 1126 and 7 DE Admin. Code 1131: *Section 1 – Applicability (a) & (b)*
(a)(4)	a detailed discussion of each of the required design elements;	**Yes**: Motor Vehicle Emissions Inspection Program; Plan for Implementation (PFI) for 7 DE Admin Code 1126 and 7 DE Admin. Code 1131: *Section 2 – Low Enhanced I/M Performance Standard*
(a)(5)	legal authority requiring or allowing implementation of the I/M program and providing either broad or specific authority to perform all required elements of the program;	**Yes**: Motor Vehicle Emissions Inspection Program; Plan for Implementation (PFI) for 7 DE Admin Code 1126 and 7 DE Admin. Code 1131: *Section 6 – Vehicle coverage* & *Appendix F*
(a)(6)	legal authority for I/M program operation until such time as it is no longer necessary;	**Yes**: Motor Vehicle Emissions Inspection Program; Plan for Implementation (PFI) for 7 DE Admin Code 1126 and 7 DE Admin. Code 1131: *Section 6 – Vehicle coverage* & *Appendix F*
(a)(7)	implementing regulations, interagency agreements, and memoranda of understanding; and,	**Yes**: *7 Title DE Code Section 6701. Emissions standards require for inspection and Section 6708. Implementation; Department's standards*
(a)(8)	evidence of adequate funding and resources to implement all aspects of the program.	**Yes**: Motor Vehicle Emissions Inspection Program; Plan for Implementation (PFI) for 7 DE Admin Code 1126 and 7 DE Admin. Code 1131: *Section 4 - Adequate tools and resources*

ATTACHMENTS

Proposal

DELAWARE STATE IMPLEMENTATION PLAN REVISION

BASIC PERFORMANCE STANDARD CERTIFICATION FOR NEW CASTLE COUNTY INSPECTION AND MAINTENANCE PROGRAM

The New Castle County Portion of the Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE Non-attainment Area

Submitted To
U.S. Environmental Protection Agency

By

Delaware Department of Natural Resources and Environmental Control

November 1, 2023

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Appendix A

Basic Performance Standard – Run Specification (MRS): psm_20230327_y2023_c10003_01

New Castle County, Weekdays, Summer.

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New Castle County
01 - Basic Performance Standard

SSWD
July
Weekdays only

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Performance Standard – Run Specification (MRS):
psm_20230327_y2023_c10003_02

New Castle County, Weekdays, Summer.

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Calendar Year 2023
New Castle County
02 - POR Statewide Plan

SSWD
July
Weekdays Only

Output Aggregation 24hr day]]></description>
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Appendix B

Pivot table from MOVES Output Data Tab	Average of Pollutant (g/mile)	Pollutant	
	Description	NOx	VOC
	Statewide Program	0.37328	0.20854
	Basic Performance Std	0.38113	0.21478

Compare	Does the Statewide Program yield <= Basic Performance Std	Yes	Yes
		Pass	Pass

Database	Description	MOVESRunID	iterationID	yearID	monthID	dayID	stateID	countyID	pollutantID	emissionQuant	Pollutant	Distance (Miles)	Pollutant (g/mile)
psm_20230327_y2023_c10003_01_out	Basic Performance Std	1	1	2023	7	5	10	10003	87	4032030	VOC	18,773,000	0.21478
psm_20230327_y2023_c10003_01_out	Basic Performance Std	1	1	2023	7	5	10	10003	79	3831430	NMHC	18,773,000	0.20409
psm_20230327_y2023_c10003_01_out	Basic Performance Std	1	1	2023	7	5	10	10003	3	7154900	NOx	18,773,000	0.38113
psm_20230327_y2023_c10003_01_out	Basic Performance Std	1	1	2023	7	5	10	10003	2	81517200	CO	18,773,000	4.34226
psm_20230327_y2023_c10003_01_out	Basic Performance Std	1	1	2023	7	5	10	10003	1	4508820	Total Gas HC	18,773,000	0.24018
psm_20230327_y2023_c10003_02_out	Statewide Program	1	1	2023	7	5	10	10003	87	3915010	VOC	18,773,000	0.20854
psm_20230327_y2023_c10003_02_out	Statewide Program	1	1	2023	7	5	10	10003	79	3716020	NMHC	18,773,000	0.19794
psm_20230327_y2023_c10003_02_out	Statewide Program	1	1	2023	7	5	10	10003	3	7007600	NOx	18,773,000	0.37328
psm_20230327_y2023_c10003_02_out	Statewide Program	1	1	2023	7	5	10	10003	2	70883200	CO	18,773,000	3.77581
psm_20230327_y2023_c10003_02_out	Statewide Program	1	1	2023	7	5	10	10003	1	4373350	Total Gas HC	18,773,000	0.23296

Database	Description	MOVESRunID	iterationID	yearID	monthID	dayID	hourID	stateID	countyID	zoneID	linkID	sourceTypeID	regClassID	fuelTypeID	fuelSubTypeID	modelYearID	roadTypeID	SCC	engTechID	sectorID	hpID	activityTypeID	activity	activityMean	activitySigma	ActivityType
psm_20230327_y2023_c10003_01_out	Basic Performance Std	1	1	2023	7	5		10	10003													1	18773000			distance
psm_20230327_y2023_c10003_02_out	Statewide Program	1	1	2023	7	5		10	10003													1	18773000			distance

Output Database	MOVESRunID	outputTimePeriod	timeUnits	distanceUnits	massUnits	energyUnits	runSpecFileName	runSpecDescription	runSpecFileDateTime	runDateTime	scale	minutesDuration	defaultDatabaseUsed	masterVersion	masterComputerID	masterIDNumber	domain	domainCountyID	domainCountyName	domainDatabaseServer	domainDatabaseName	expectedDONEFiles	retrievedDONEFiles	models
psm_20230327_y2023_c10003_01_out	1	Day	day	mi	g	J	rs\psm_20230327_y2023_c10003_01.mrs	PSM Analy	3/27/2023 15:51	3/27/2023 18:29	Inv	6.55	movesdb2	MOVES3.1.0	DNRECL1R	1.17E+19	SINGLE	10003	New Castl	localhost	psm_20230327_y2023_c10003_01_in	27	27	onroad
psm_20230327_y2023_c10003_02_out	1	Day	day	mi	g	J	rs\psm_20230327_y2023_c10003_02.mrs	PSM Analy	3/27/2023 15:52	3/27/2023 21:26	Inv	6.47	movesdb2	MOVES3.1.0	DNRECL1R	4.68E+18	SINGLE	10003	New Castl	localhost	psm_20230327_y2023_c10003_02_in	27	27	onroad

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1	distance	Distance traveled
2	sourcehours	Source Hours
3	extidle	Extended Idle Hours
4	sho	Source Hours Operating
5	shp	Source Hours Parked
6	population	Population
7	starts	Starts
9	avghp	Average Horsepower
10	retrofrac	Fraction Retrofitted
11	retrocnt	Number Units Retrofitted
12	loadfactor	Load Factor
13	hotellingAux	Hotelling Diesel Aux
14	hotellingElectric	Hotelling Battery or AC
15	hotellingOff	Hotelling All Engines Off

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2	Carbon Monoxide (CO)	mass		CO	36
3	Oxides of Nitrogen (NOx)	mass		NOX	37
5	Methane (CH4)	mass	25	CH4	35
6	Nitrous Oxide (N2O)	mass	298	N2O	42
20	Benzene	mass		71432	57
21	Ethanol	mass			58
23	Naphthalene particle	mass		91203	65
24	1,3-Butadiene	mass		106990	60
25	Formaldehyde	mass		50000	61
26	Acetaldehyde	mass		75070	62
27	Acrolein	mass		107028	63
30	Ammonia (NH3)	mass		NH3	41
31	Sulfur Dioxide (SO2)	mass		SO2	50
32	Nitrogen Oxide (NO)	mass		NO	38
33	Nitrogen Dioxide (NO2)	mass		NO2	39
34	Nitrous Acid (HONO)	mass		7782-77-6	40
35	Nitrate (NO3)	mass		PM25_PRI	44
36	Ammonium (NH4)	mass		PM25_PRI	44
40	2,2,4-Trimethylpentane	mass		540841	64
41	Ethyl Benzene	mass		100414	64
42	Hexane	mass		110543	64
43	Propionaldehyde	mass		123386	64
44	Styrene	mass		100425	64
45	Toluene	mass		108883	64
46	Xylene	mass		1330207	64
51	Chloride	mass		PM25_PRI	44
52	Sodium	mass		PM25_PRI	44
53	Potassium	mass		PM25_PRI	44
54	Magnesium	mass		PM25_PRI	44
55	Calcium	mass		PM25_PRI	44
56	Titanium	mass		PM25_PRI	44
57	Silicon	mass		PM25_PRI	44
58	Aluminum	mass		PM25_PRI	44
59	Iron	mass		PM25_PRI	44
60	Mercury Elemental Gaseous	mass		200	66
61	Mercury Divalent Gaseous	mass		201	66
62	Mercury Particulate	mass		202	66

63	Arsenic Compounds	mass		7440382	66
65	Chromium 6+	mass		18540299	66
66	Manganese Compounds	mass		7439965	44
67	Nickel Compounds	mass		7440020	66
68	Dibenzo(a,h)anthracene particle	mass		53703	65
69	Fluoranthene particle	mass		206440	65
70	Acenaphthene particle	mass		83329	65
71	Acenaphthylene particle	mass		208968	65
72	Anthracene particle	mass		120127	65
73	Benz(a)anthracene particle	mass		56553	65
74	Benzo(a)pyrene particle	mass		50328	65
75	Benzo(b)fluoranthene particle	mass		205992	65
76	Benzo(g,h,i)perylene particle	mass		191242	65
77	Benzo(k)fluoranthene particle	mass		207089	65
78	Chrysene particle	mass		218019	65
79	Non-Methane Hydrocarbons	mass		NMHC	31
80	Non-Methane Organic Gases	mass		NMOG	32
81	Fluorene particle	mass		86737	65
82	Indeno(1,2,3,c,d)pyrene particle	mass		193395	65
83	Phenanthrene particle	mass		85018	65
84	Pyrene particle	mass		129000	65
86	Total Organic Gases	mass		TOG	33
87	Volatile Organic Compounds	mass		VOC	34
88	NonHAPTOG	mass		NHTOG	-70
90	Atmospheric CO2	mass	1	CO2	55
91	Total Energy Consumption	energy			51
98	CO2 Equivalent	mass		CO2	56
99	Brake Specific Fuel Consumption (BSFC)	mass			54
100	Primary Exhaust PM10 - Total	mass		PM10-PRI	47
106	Primary PM10 - Brakewear Particulate	mass		PM10_PRI	48
107	Primary PM10 - Tirewear Particulate	mass		PM10_PRI	49
110	Primary Exhaust PM2.5 - Total	mass		PM25-PRI	43
111	Organic Carbon	mass		PM25_PRI	44
112	Elemental Carbon	mass		PM25_PRI	44
115	Sulfate Particulate	mass		PM25_PRI	44
116	Primary PM2.5 - Brakewear Particulate	mass		PM25_PRI	45
117	Primary PM2.5 - Tirewear Particulate	mass		PM25_PRI	46
118	Composite - NonECPM	mass		PM25_PRI	44
119	H2O (aerosol)	mass		PM25_PRI	44
120	Primary PM2.5 - NonECNonSO4PM	mass		PM25_PRI	-1
121	CMAQ5.0 Unspeciated (PMOTHR)	mass		PM25_PRI	44
122	Non-carbon Organic Matter (NCOM)	mass		PM25_PRI	44
123	Total Organic Matter (TOM)	mass			44
124	Residual PM (NonECNonSO4NonOM)	mass			44
130	1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin	mass		19408743	67
131	Octachlorodibenzo-p-dioxin	mass		3268879	67
132	1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin	mass		35822469	67

133	Octachlorodibenzofuran	mass		39001020	67
134	1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin	mass		39227286	67
135	1,2,3,7,8-Pentachlorodibenzo-p-Dioxin	mass		40321764	67
136	2,3,7,8-Tetrachlorodibenzofuran	mass		51207319	67
137	1,2,3,4,7,8,9-Heptachlorodibenzofuran	mass		55673897	67
138	2,3,4,7,8-Pentachlorodibenzofuran	mass		57117314	67
139	1,2,3,7,8-Pentachlorodibenzofuran	mass		57117416	67
140	1,2,3,6,7,8-Hexachlorodibenzofuran	mass		57117449	67
141	1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin	mass		57653857	67
142	2,3,7,8-Tetrachlorodibenzo-p-Dioxin	mass		1746016	67
143	2,3,4,6,7,8-Hexachlorodibenzofuran	mass		60851345	67
144	1,2,3,4,6,7,8-Heptachlorodibenzofuran	mass		67562394	67
145	1,2,3,4,7,8-Hexachlorodibenzofuran	mass		70648269	67
146	1,2,3,7,8,9-Hexachlorodibenzofuran	mass		72918219	67
168	Dibenzo(a,h)anthracene gas	mass		53703	65
169	Fluoranthene gas	mass		206440	65
170	Acenaphthene gas	mass		83329	65
171	Acenaphthylene gas	mass		208968	65
172	Anthracene gas	mass		120127	65
173	Benz(a)anthracene gas	mass		56553	65
174	Benzo(a)pyrene gas	mass		50328	65
175	Benzo(b)fluoranthene gas	mass		205992	65
176	Benzo(g,h,i)perylene gas	mass		191242	65
177	Benzo(k)fluoranthene gas	mass		207089	65
178	Chrysene gas	mass		218019	65
181	Fluorene gas	mass		86737	65
182	Indeno(1,2,3,c,d)pyrene gas	mass		193395	65
183	Phenanthrene gas	mass		85018	65
184	Pyrene gas	mass		129000	65
185	Naphthalene gas	mass		91203	65
1000	CB05 Mechanism	gmole			-1
1001	CB05_ALD2	gmole			-1
1002	CB05_ALDX	gmole			-1
1003	CB05_BENZENE	gmole			-1
1004	CB05_CH4	gmole			-1
1005	CB05_ETH	gmole			-1
1006	CB05_ETHA	gmole			-1
1007	CB05_ETOH	gmole			-1
1008	CB05_FORM	gmole			-1
1009	CB05_IOLE	gmole			-1
1010	CB05_ISOP	gmole			-1
1011	CB05_MEOH	gmole			-1
1012	CB05_OLE	gmole			-1
1013	CB05_PAR	gmole			-1
1014	CB05_TERP	gmole			-1
1015	CB05_TOL	gmole			-1
1017	CB05_UNR	gmole			-1

1018	CB05_XYL	gmole			-1
1500	CB6CMAQ Mechanism	gmole			-1
1501	CB6CMAQ_ALD2	gmole			-1
1502	CB6CMAQ_ALDX	gmole			-1
1504	CB6CMAQ_CH4	gmole			-1
1505	CB6CMAQ_ETH	gmole			-1
1506	CB6CMAQ_ETHA	gmole			-1
1507	CB6CMAQ_ETOH	gmole			-1
1508	CB6CMAQ_FORM	gmole			-1
1509	CB6CMAQ_IOLE	gmole			-1
1510	CB6CMAQ_ISOP	gmole			-1
1511	CB6CMAQ_MEOH	gmole			-1
1512	CB6CMAQ_OLE	gmole			-1
1513	CB6CMAQ_PAR	gmole			-1
1514	CB6CMAQ_TERP	gmole			-1
1515	CB6CMAQ_TOL	gmole			-1
1517	CB6CMAQ_UNR	gmole			-1
1519	CB6CMAQ_ACET	gmole			-1
1520	CB6CMAQ_BENZ	gmole			-1
1521	CB6CMAQ_ETHY	gmole			-1
1522	CB6CMAQ_KET	gmole			-1
1523	CB6CMAQ_PRPA	gmole			-1
1547	CB6CMAQ_NAPH	gmole			-1
1558	CB6CMAQ_SOAALK	gmole			-1
1560	CB6CMAQ_XYLMN	gmole			-1
2000	SAPRC07T Mechanism	gmole			-1
2004	SAPRC07T_CH4	gmole			-1
2007	SAPRC07T_ETOH	gmole			-1
2010	SAPRC07T_ISOP	gmole			-1
2011	SAPRC07T_MEOH	gmole			-1
2014	SAPRC07T_TERP	gmole			-1
2016	SAPRC07T_UNK	gmole			-1
2019	SAPRC07T_ACET	gmole			-1
2020	SAPRC07T_BENZ	gmole			-1
2024	SAPRC07T_ACRO	gmole			-1
2025	SAPRC07T_ACYE	gmole			-1
2026	SAPRC07T_ALK1	gmole			-1
2027	SAPRC07T_ALK2	gmole			-1
2028	SAPRC07T_ALK3	gmole			-1
2029	SAPRC07T_ALK4	gmole			-1
2030	SAPRC07T_ALK5	gmole			-1
2031	SAPRC07T_APIN	gmole			-1
2032	SAPRC07T_ARO1	gmole			-1
2033	SAPRC07T_ARO2MN	gmole			-1
2034	SAPRC07T_B124	gmole			-1
2035	SAPRC07T_BALD	gmole			-1
2036	SAPRC07T_BDE13	gmole			-1

2037	SAPRC07T_CCHO	gmole			-1
2038	SAPRC07T_CRES	gmole			-1
2039	SAPRC07T_ETHE	gmole			-1
2040	SAPRC07T_GLY	gmole			-1
2041	SAPRC07T_HCHO	gmole			-1
2042	SAPRC07T_IPRD	gmole			-1
2043	SAPRC07T_MACR	gmole			-1
2044	SAPRC07T_MEK	gmole			-1
2045	SAPRC07T_MVK	gmole			-1
2046	SAPRC07T_MXYL	gmole			-1
2048	SAPRC07T_NAPHTH	gmole			-1
2049	SAPRC07T_NROG	gmole			-1
2050	SAPRC07T_OLE1	gmole			-1
2051	SAPRC07T_OLE2	gmole			-1
2052	SAPRC07T_OXYL	gmole			-1
2053	SAPRC07T_PACD	gmole			-1
2054	SAPRC07T_PRD2	gmole			-1
2055	SAPRC07T_PRPE	gmole			-1
2056	SAPRC07T_PXYL	gmole			-1
2057	SAPRC07T_RCHO	gmole			-1
2058	SAPRC07T_SOAALK	gmole			-1
2059	SAPRC07T_TOLU	gmole			-1
2500	CB6AE7 Mechanism	gmole			-1
2501	CB6AE7_ALD2	gmole			-1
2502	CB6AE7_ALDX	gmole			-1
2504	CB6AE7_CH4	gmole			-1
2505	CB6AE7_ETH	gmole			-1
2506	CB6AE7_ETHA	gmole			-1
2507	CB6AE7_ETOH	gmole			-1
2508	CB6AE7_FORM	gmole			-1
2509	CB6AE7_IOLE	gmole			-1
2510	CB6AE7_ISOP	gmole			-1
2511	CB6AE7_MEOH	gmole			-1
2512	CB6AE7_OLE	gmole			-1
2513	CB6AE7_PAR	gmole			-1
2514	CB6AE7_TERP	gmole			-1
2515	CB6AE7_TOL	gmole			-1
2517	CB6AE7_UNR	gmole			-1
2519	CB6AE7_ACET	gmole			-1
2520	CB6AE7_BENZ	gmole			-1
2521	CB6AE7_ETHY	gmole			-1
2522	CB6AE7_KET	gmole			-1
2523	CB6AE7_PRPA	gmole			-1
2531	CB6AE7_APIN	gmole			-1
2547	CB6AE7_NAPH	gmole			-1
2558	CB6AE7_SOAALK	gmole			-1
2560	CB6AE7_XYLMN	gmole			-1

2561	CB6AE7_IVOC	gmole			-1
3000	NonHAPTOG Mechanism	gmole			68

shortName	isAffectedByOnroad	isAffectedByNonroad
Total Gas HC	1	1
CO	1	1
NOx	1	1
Methane (CH4)	1	1
N2O	1	0
Benzene	1	1
Ethanol	1	1
Naphthalene P	1	1
1,3-Butadiene	1	1
Formaldehyde	1	1
Acetaldehyde	1	1
Acrolein	1	1
NH3	1	1
SO2	1	1
NO	1	0
NO2	1	0
HONO	1	0
PM2.5 NO3	1	0
PM2.5 NH4	1	0
2,2,4-Trimethylpentane	1	1
Ethyl Benzene	1	1
Hexane	1	1
Propionaldehyde	1	1
Styrene	1	1
Toluene	1	1
Xylene	1	1
PM2.5 Cl	1	0
PM2.5 Na	1	0
PM2.5 K	1	0
PM2.5 Mg	1	0
PM2.5 Ca	1	0
PM2.5 Ti	1	0
PM2.5 Si	1	0
PM2.5 Al	1	0
PM2.5 Fe	1	0
Hg Egas	1	1
Hg Dgas	1	1
Hg Part	1	1

As	1	1
Cr+6	1	1
Mn	1	1
Ni	1	1
Dibenzo(a,h)anthracene P	1	1
Fluoranthene P	1	1
Acenaphthene P	1	1
Acenaphthylene P	1	1
Anthracene P	1	1
Benz(a)anthracene P	1	1
Benzo(a)pyrene P	1	1
Benzo(b)fluoranthene P	1	1
Benzo(g,h,i)perylene P	1	1
Benzo(k)fluoranthene P	1	1
Chrysene P	1	1
NMHC	1	1
NMOG	1	1
Fluorene P	1	1
Indeno(1,2,3,c,d)pyrene P	1	1
Phenanthrene P	1	1
Pyrene P	1	1
TOG	1	1
VOC	1	1
NHTOG	1	1
Atmospheric CO2	1	1
Total Energy	1	0
CO2 Equivalent	1	0
BSFC	0	1
PM10 Total Exh	1	1
PM10 Brakewear	1	0
PM10 Tirewear	1	0
PM2.5 Total Exh	1	1
PM2.5 OC	1	0
PM2.5 EC	1	0
PM2.5 Sulfate	1	0
PM2.5 Brakewear	1	0
PM2.5 Tirewear	1	0
PM2.5 NonECPM	1	0
PM2.5 H2O Aero	1	0
PM2.5 NonECNonSO4	1	0
PM2.5 PMOTHR	1	0
PM2.5 NCOM	1	0
TOM	1	0
NonECNonSO4NonOM PM	1	0
1,2,3,7,8,9-Hexachlorodibenzo-p-Dioxin	1	1
Octachlorodibenzo-p-dioxin	1	1
1,2,3,4,6,7,8-Heptachlorodibenzo-p-Dioxin	1	1

Octachlorodibenzofuran	1	1
1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin	1	1
1,2,3,7,8-Pentachlorodibenzo-p-Dioxin	1	1
2,3,7,8-Tetrachlorodibenzofuran	1	1
1,2,3,4,7,8,9-Heptachlorodibenzofuran	1	1
2,3,4,7,8-Pentachlorodibenzofuran	1	1
1,2,3,7,8-Pentachlorodibenzofuran	1	1
1,2,3,6,7,8-Hexachlorodibenzofuran	1	1
1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin	1	1
2,3,7,8-Tetrachlorodibenzo-p-Dioxin	1	1
2,3,4,6,7,8-Hexachlorodibenzofuran	1	1
1,2,3,4,6,7,8-Heptachlorodibenzofuran	1	1
1,2,3,4,7,8-Hexachlorodibenzofuran	1	1
1,2,3,7,8,9-Hexachlorodibenzofuran	1	1
Dibenzo(a,h)anthracene G	1	1
Fluoranthene G	1	1
Acenaphthene G	1	1
Acenaphthylene G	1	1
Anthracene G	1	1
Benz(a)anthracene G	1	1
Benzo(a)pyrene G	1	1
Benzo(b)fluoranthene G	1	1
Benzo(g,h,i)perylene G	1	1
Benzo(k)fluoranthene G	1	1
Chrysene G	1	1
Fluorene G	1	1
Indeno(1,2,3,c,d)pyrene G	1	1
Phenanthrene G	1	1
Pyrene G	1	1
Naphthalene G	1	1
CB05 Mech	1	0
CB05_ALD2	1	0
CB05_ALDX	1	0
CB05_BENZENE	1	0
CB05_CH4	1	0
CB05_ETH	1	0
CB05_ETHA	1	0
CB05_ETOH	1	0
CB05_FORM	1	0
CB05_IOLE	1	0
CB05_ISOP	1	0
CB05_MEOH	1	0
CB05_OLE	1	0
CB05_PAR	1	0
CB05_TERP	1	0
CB05_TOL	1	0
CB05_UNR	1	0

CB05_XYL	1	0
CB6CMAQ Mech	1	0
CB6CMAQ_ALD2	1	0
CB6CMAQ_ALDX	1	0
CB6CMAQ_CH4	1	0
CB6CMAQ_ETH	1	0
CB6CMAQ_ETHA	1	0
CB6CMAQ_ETOH	1	0
CB6CMAQ_FORM	1	0
CB6CMAQ_IOLE	1	0
CB6CMAQ_ISOP	1	0
CB6CMAQ_MEOH	1	0
CB6CMAQ_OLE	1	0
CB6CMAQ_PAR	1	0
CB6CMAQ_TERP	1	0
CB6CMAQ_TOL	1	0
CB6CMAQ_UNR	1	0
CB6CMAQ_ACET	1	0
CB6CMAQ_BENZ	1	0
CB6CMAQ_ETHY	1	0
CB6CMAQ_KET	1	0
CB6CMAQ_PRPA	1	0
CB6CMAQ_NAPH	1	0
CB6CMAQ_SOAALK	1	0
CB6CMAQ_XYLMN	1	0
SAPRC07T Mech	1	0
SAPRC07T_CH4	1	0
SAPRC07T_ETOH	1	0
SAPRC07T_ISOP	1	0
SAPRC07T_MEOH	1	0
SAPRC07T_TERP	1	0
SAPRC07T_UNK	1	0
SAPRC07T_ACET	1	0
SAPRC07T_BENZ	1	0
SAPRC07T_ACRO	1	0
SAPRC07T_ACYE	1	0
SAPRC07T_ALK1	1	0
SAPRC07T_ALK2	1	0
SAPRC07T_ALK3	1	0
SAPRC07T_ALK4	1	0
SAPRC07T_ALK5	1	0
SAPRC07T_APIN	1	0
SAPRC07T_ARO1	1	0
SAPRC07T_ARO2MN	1	0
SAPRC07T_B124	1	0
SAPRC07T_BALD	1	0
SAPRC07T_BDE13	1	0

SAPRC07T_CCHO	1	0
SAPRC07T_CRES	1	0
SAPRC07T_ETHE	1	0
SAPRC07T_GLY	1	0
SAPRC07T_HCHO	1	0
SAPRC07T_IPRD	1	0
SAPRC07T_MACR	1	0
SAPRC07T_MEK	1	0
SAPRC07T_MVK	1	0
SAPRC07T_MXYL	1	0
SAPRC07T_NAPHTH	1	0
SAPRC07T_NROG	1	0
SAPRC07T_OLE1	1	0
SAPRC07T_OLE2	1	0
SAPRC07T_OXYL	1	0
SAPRC07T_PACD	1	0
SAPRC07T_PRD2	1	0
SAPRC07T_PRPE	1	0
SAPRC07T_PXYL	1	0
SAPRC07T_RCHO	1	0
SAPRC07T_SOAALK	1	0
SAPRC07T_TOLU	1	0
CB6AE7 Mech	1	0
CB6AE7_ALD2	1	0
CB6AE7_ALDX	1	0
CB6AE7_CH4	1	0
CB6AE7_ETH	1	0
CB6AE7_ETHA	1	0
CB6AE7_ETOH	1	0
CB6AE7_FORM	1	0
CB6AE7_IOLE	1	0
CB6AE7_ISOP	1	0
CB6AE7_MEOH	1	0
CB6AE7_OLE	1	0
CB6AE7_PAR	1	0
CB6AE7_TERP	1	0
CB6AE7_TOL	1	0
CB6AE7_UNR	1	0
CB6AE7_ACET	1	0
CB6AE7_BENZ	1	0
CB6AE7_ETHY	1	0
CB6AE7_KET	1	0
CB6AE7_PRPA	1	0
CB6AE7_APIN	1	0
CB6AE7_NAPH	1	0
CB6AE7_SOAALK	1	0
CB6AE7_XYLMN	1	0

CB6AE7_IVOC	1	0
NonHAPTOG	1	0

Series Name	County	Year	I/M Input	RunNo	MOVES Run Spec	Input Database	Output Database	Comment
PSM_20230327	10003	2023	Basic Perf Std	01	PSM_20230327_y2023_c10003_01.mrs	PSM_20230327_y2023_c10003_01_in	PSM_20230327_y2023_c10003_01_out	
PSM_20230327	10003	2023	Delaware's Plan of Record (Statewide Plan - 7 MY exemption)	02	PSM_20230327_y2023_c10003_02.mrs	PSM_20230327_y2023_c10003_02_in	PSM_20230327_y2023_c10003_02_out	Input Copied - Needed CO in the test to avoid errors when I loaded the POR which has PolProcessID 101, and 102

polProcessID	stateID	countyID	yearID	sourceTypeID	fuelTypeID	IMProgramID	inspectFreq	testStandardsID	begModelYearID	endModelYearID	useIMyn	complianceFactor
101	10	10003	2023	21	1	111	1	11	1968	2000	y	100.00
102	10	10003	2023	21	1	111	1	11	1968	2000	y	100.00
301	10	10003	2023	21	1	111	1	11	1968	2000	y	100.00
302	10	10003	2023	21	1	111	1	11	1968	2000	y	100.00
101	10	10003	2023	21	1	151	1	51	2001	2022	y	100.00
102	10	10003	2023	21	1	151	1	51	2001	2022	y	100.00
301	10	10003	2023	21	1	151	1	51	2001	2022	y	100.00
302	10	10003	2023	21	1	151	1	51	2001	2022	y	100.00
112	10	10003	2023	21	1	143	1	43	2001	2022	y	100.00
101	10	10003	2023	21	5	111	1	11	1968	2000	y	100.00
102	10	10003	2023	21	5	111	1	11	1968	2000	y	100.00
301	10	10003	2023	21	5	111	1	11	1968	2000	y	100.00
302	10	10003	2023	21	5	111	1	11	1968	2000	y	100.00
101	10	10003	2023	21	5	151	1	51	2001	2022	y	100.00
102	10	10003	2023	21	5	151	1	51	2001	2022	y	100.00
301	10	10003	2023	21	5	151	1	51	2001	2022	y	100.00
302	10	10003	2023	21	5	151	1	51	2001	2022	y	100.00
112	10	10003	2023	21	5	143	1	43	2001	2022	y	100.00

polProcessID	stateID	countyID	yearID	sourceTypeID	fuelTypeID	IMProgramID	inspectFreq	testStandardsID	begModelYearID	endModelYearID	useIMyn	complianceFactor
101	10	10003	2023	21	1	21101	2	11	1968	1995	Y	95.9375
101	10	10003	2023	31	1	21101	2	11	1968	1995	Y	95.9375
101	10	10003	2023	32	1	21101	2	11	1968	1995	Y	95.9375
101	10	10003	2023	21	1	25105	2	51	1996	2016	Y	95.9886
101	10	10003	2023	31	1	25105	2	51	1996	2016	Y	95.9886
101	10	10003	2023	32	1	25105	2	51	1996	2016	Y	95.9886
101	10	10003	2023	43	1	25106	2	51	2008	2016	Y	0.2496
101	10	10003	2023	51	1	25106	2	51	2008	2016	Y	6.9880
101	10	10003	2023	52	1	25106	2	51	2008	2016	Y	54.4831
101	10	10003	2023	53	1	25106	2	51	2008	2016	Y	55.7502
102	10	10003	2023	21	1	21101	2	11	1968	1995	Y	95.9375
102	10	10003	2023	31	1	21101	2	11	1968	1995	Y	95.9375
102	10	10003	2023	32	1	21101	2	11	1968	1995	Y	95.9375
102	10	10003	2023	21	1	25105	2	51	1996	2016	Y	95.9886
102	10	10003	2023	31	1	25105	2	51	1996	2016	Y	95.9886
102	10	10003	2023	32	1	25105	2	51	1996	2016	Y	95.9886
102	10	10003	2023	43	1	25106	2	51	2008	2016	Y	0.2496
102	10	10003	2023	51	1	25106	2	51	2008	2016	Y	6.9880
102	10	10003	2023	52	1	25106	2	51	2008	2016	Y	54.4831
102	10	10003	2023	53	1	25106	2	51	2008	2016	Y	55.7502
112	10	10003	2023	21	1	24305	2	43	1996	2016	Y	95.9886
112	10	10003	2023	31	1	24305	2	43	1996	2016	Y	95.9886
112	10	10003	2023	32	1	24305	2	43	1996	2016	Y	95.9886
112	10	10003	2023	43	1	24306	2	43	2008	2016	Y	0.2496
112	10	10003	2023	51	1	24306	2	43	2008	2016	Y	6.9880
112	10	10003	2023	52	1	24306	2	43	2008	2016	Y	54.4831
112	10	10003	2023	53	1	24306	2	43	2008	2016	Y	55.7502
112	10	10003	2023	21	1	24103	2	41	1975	1995	Y	95.9375
112	10	10003	2023	31	1	24103	2	41	1975	1995	Y	95.9375
112	10	10003	2023	32	1	24103	2	41	1975	1995	Y	95.9375
113	10	10003	2023	21	1	24305	2	43	1996	2016	Y	95.9886
113	10	10003	2023	31	1	24305	2	43	1996	2016	Y	95.9886
113	10	10003	2023	32	1	24305	2	43	1996	2016	Y	95.9886
113	10	10003	2023	43	1	24306	2	43	2008	2016	Y	0.2496
113	10	10003	2023	51	1	24306	2	43	2008	2016	Y	6.9880
113	10	10003	2023	52	1	24306	2	43	2008	2016	Y	54.4831
113	10	10003	2023	53	1	24306	2	43	2008	2016	Y	55.7502
201	10	10003	2023	21	1	21101	2	11	1968	1995	Y	95.9375
201	10	10003	2023	31	1	21101	2	11	1968	1995	Y	95.9375
201	10	10003	2023	32	1	21101	2	11	1968	1995	Y	95.9375
201	10	10003	2023	21	1	25105	2	51	1996	2016	Y	95.9886
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201	10	10003	2023	43	1	25106	2	51	2008	2016	Y	0.2496
201	10	10003	2023	51	1	25106	2	51	2008	2016	Y	6.9880
201	10	10003	2023	52	1	25106	2	51	2008	2016	Y	54.4831
201	10	10003	2023	53	1	25106	2	51	2008	2016	Y	55.7502
202	10	10003	2023	21	1	21101	2	11	1968	1995	Y	95.9375
202	10	10003	2023	31	1	21101	2	11	1968	1995	Y	95.9375
202	10	10003	2023	32	1	21101	2	11	1968	1995	Y	95.9375
202	10	10003	2023	21	1	25105	2	51	1996	2016	Y	95.9886
202	10	10003	2023	31	1	25105	2	51	1996	2016	Y	95.9886
202	10	10003	2023	32	1	25105	2	51	1996	2016	Y	95.9886
202	10	10003	2023	43	1	25106	2	51	2008	2016	Y	0.2496
202	10	10003	2023	51	1	25106	2	51	2008	2016	Y	6.9880
202	10	10003	2023	52	1	25106	2	51	2008	2016	Y	54.4831
202	10	10003	2023	53	1	25106	2	51	2008	2016	Y	55.7502
301	10	10003	2023	21	1	25105	2	51	1996	2016	Y	95.9886
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301	10	10003	2023	32	1	25105	2	51	1996	2016	Y	95.9886
301	10	10003	2023	43	1	25106	2	51	2008	2016	Y	0.2496
301	10	10003	2023	51	1	25106	2	51	2008	2016	Y	6.9880
301	10	10003	2023	52	1	25106	2	51	2008	2016	Y	54.4831
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302	10	10003	2023	31	1	25105	2	51	1996	2016	Y	95.9886
302	10	10003	2023	32	1	25105	2	51	1996	2016	Y	95.9886
302	10	10003	2023	43	1	25106	2	51	2008	2016	Y	0.2496
302	10	10003	2023	51	1	25106	2	51	2008	2016	Y	6.9880
302	10	10003	2023	52	1	25106	2	51	2008	2016	Y	54.4831
302	10	10003	2023	53	1	25106	2	51	2008	2016	Y	55.7502