

**2002 Base Year Ozone State Implementation Plan
Emissions Inventory for VOC, NO_x, and CO
for the State of Delaware**

FINAL REPORT

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Prepared by:

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Air Quality Management Section

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LIST OF SUPPORTING DOCUMENTATION ON CD

EMISSION DATA FILES

DE 2002 Point 12122006.mdb
DE 2002 Nonpoint 12072006.mdb
DE 2002 Nonroad 12062006.mdb
DE 2002 Onroad 07202006.mdb
DE 2002 Natural 07202006.mdb

SECTION 2 - POINT SOURCES

2002 Point IPP.pdf
2002 PEI Inv TAP CAP i-STEPS Emission Factors.pdf
Activity Form Ammonia Refrigeration.pdf
Activity Form Black Top Facilities.pdf
Activity Form Diesel Generator.pdf
Activity Form EO Sterilization.pdf
Activity Form Example of Facility General.pdf
Activity Form Facility Cover Letter.pdf
Activity Form Small Combustion Sources.pdf
Administrative Completeness Determination Form.pdf
Comparison of EPA's Emissions Tracking System Emissions.pdf
Emission Comparisons and Operational Changes Tracking.pdf
Example of ACD.pdf
Example of Detailed Report.pdf
Example of Emission Summary and Certification Page.pdf
Example of the Ozone SIP QA Report.pdf
How Art We Doing Terminal Server.pdf
IPP_Point_121903.pdf
On-line Reporting Cover Letter.pdf
On-line Reporting Detailed Instructions.pdf
On-line Reporting Getting Started Instructions.pdf
On-line Reporting Issues Updates and FAQs.pdf
Workshop Presentation.pdf
AEI and TRI Comparison 051904.xls
Calendar Year 2001 2002 Compliance Record.xls
DE Area_Point SCC XWalk 3-18-04 JO.xls
Initial List of Facilities and Tracking Information.xls
Pechan Phase III Tracking.xls
Rule Effectiveness Evaluations.xls

SECTION 3 – STATIONARY NON-POINT SOURCES

Ag Pesticides 6-30-04.xls
AIM Coatings 6-30-04.xls

LIST OF SUPPORTING DOCUMENTATION ON CD continued

Asphalt Paving 9-1-06.xls
Auto Refinishing 7-1-04.xls
Bakeries 5-11-04.xls
Catastrophic Accidental Release 7-8-04.xls
Commercial Cooking 7-6-04.xls
Commercial Fuel Combustion 8-24-06.xls
Consumer Products 12-17-04.xls
Dry Cleaners 7-6-04.xls
Gasoline Marketing 11-22-06.xls
Graphic Arts 9-12-06.xls
Inactive Landfills 7-7-04.xls
Industrial Adhesives 2-17-06.xls
Industrial Fuel Combustion 8-31-06.xls
Industrial Surface Coatings 7-8-04.xls
Land Clearing Debris Open Burning 7-29-04.xls
Leaking Underground Storage Tanks.xls
Prescribed Burning 9-7-06.xls
Publicly Owned Treatment Works 9-12-06.xls
Residential Fuel Combustion 8-25-06.xls
Residential Open Burning 7-7-04.xls
Residential Wood Combustion 8-25-06.xls
Solvent Cleaning 7-7-04.xls
Structure Fires 9-11-06.xls
Traffic Markings 7-7-04.xls
Vehicle Fires 7-7-04.xls
Wild Fires 9-7-06.xls
DE Area_IPP_0220.pdf
OMNI Technical Memorandum 1.pdf
OMNI Technical Memorandum 2.pdf
Phase III Area FR 5-23-2005.pdf
Residential Wood Combustion – OMNI report.pdf

SECTION 4 – NON-ROAD SOURCES

MANEVU_NRD2002_NIF_030306_DE_only.mdb
OGV DE v7.mdb
OGV NJ&PA v4.mdb
Aircraft 10-19-06.xls
Dredging 10-17-06.xls
Ferries 10-20-06.xls
Locomotives 10-23-06.xls
Towboats 10-19-06.xls
TugAssist 10-17-06.xls
Agricultural SSWD Calc.xls

LIST OF SUPPORTING DOCUMENTATION ON CD continued

Airport Services SSWD Calc.xls
CNG SSWD Calc.xls
Construction SSWD Calc.xls
Industrial SSWD Calc.xls
Lawn&Garden SSWD Calc.xls
Light Commercial SSWD Calc.xls
Logging SSWD Calc.xls
LPG SSWD Calc.xls
Railroad Support Equipment SSWD Calc.xls
Recreation Marine Equipment SSWD Calc.xls
Recreational Vehicles SSWD Calc.xls
DE_Nrd_IPP_fnl.pdf
DE_2002_Nrd_Rpt_Dec04.pdf

SECTION 5 – ON-ROAD MOBILE SOURCES

2002 vehicle reg and input files.zip
DDOT2002_KS_SHP.zip
DDOT2002_NC_SHP.zip
DE_ExternalFiles2002.zip
DE_InputFiles_51904.zip
DE_OutputFiles_51904.zip
2002 Permanent Count Station Data.xls
2002_de_mnthlyvmtfac.xls
2002 Kent County Mobile Tables.xls
2002 New Castle County Mobile Tables.xls
2002 Sussex County Mobile Tables.xls
2002onroadrequest.pdf
2002onroadtable.pdf
DE onrd2002_fnlrpt.pdf
DE onrd_IPP_fnlv1.pdf

SECTION 6 – NATURAL SOURCES

Biogenics.xls
Lightning 6-3-05.xls

SECTION 7 – QUALITY CONTROL/QUALITY ASSURANCE

Nonpoint Critical Check and Comments.mdb
Nonpoint Invalid Code Check.mdb
Nonpoint Noncritical Check.mdb
Nonroad Critical Check.mdb
Nonroad Invalid Code Check.mdb

LIST OF SUPPORTING DOCUMENTATION ON CD continued

Nonroad Noncritical Check.mdb
Onroad Critical Check and Comments.mdb
Onroad Invalid Code Check.mdb
Onroad Noncritical Check.mdb
Point Critical Checks Summary Report.pdf
Point Emission Critical Checks Report.pdf
Point Emission Process Critical Checks Report.pdf
Point Emission Release Point Critical Checks Report.pdf
Point Emission Release Point Noncritical Checks Report.pdf
Point Invalid Code Quick Report.pdf
Point Noncritical Checks Summary Report.pdf
Point Release Point Statistics Report.pdf
State Comments on NEI Checker Reports for Point.pdf

ACRONYMS & ABBREVIATIONS

ACD	administrative completeness determination
AFS	Air Facility System
AIM	architectural and industrial maintenance
AP-42	EPA Compilation of Air Pollution Emission Factors
AQMS	Delaware Air Quality Management Section (DNREC)
ARP	Delaware Accidental Release Prevention Program (DNREC)
ASTM	American Society for Testing and Materials
ATP	Anti-tampering Program
ATV	all-terrain vehicle
BEA	Bureau of Economic Analysis
BEIS	Biogenic Emission Inventory System
BELD	Biogenic Emissions Landcover Database
BOC	Bureau of Census
C&D	Chesapeake and Delaware
CAF	county allocation factor
CARB	California Air Resources Board
CD	compact disc
CE	control efficiency
CEM	continuous emission monitor
CERR	Consolidated Emissions Reporting Rule
CFR	Code of Federal Register
CG	cloud-to-ground
CGA	cylinder gas audit
CH ₄	methane
CMLF	Cape May-Lewes Ferry
CMV	commercial marine vessel
CNG	compressed natural gas
CO	carbon monoxide
CO ₂	carbon dioxide
CTG	Control Techniques Guideline
cu yd	cubic yard
D&B	Dun & Bradstreet
DAA	Delaware Aeronautics Administration
DAFB	Dover Air Force Base
DARS	Data Attribute Rating System
DATAS	Delaware Air Toxics Assessment Study
DDA	Delaware Department of Agriculture
DDPR	Division of Parks and Recreation (DNREC)
DE	Delaware
DE ANG	Delaware Air National Guard
DE ARNG	Delaware Army National Guard
DE DOL	Delaware Department of Labor
DE F&W	Division of Fish & Wildlife (DNREC)
DelDOT	Delaware Department of Transportation

ACRONYMS & ABBREVIATIONS continued

DENS	Delaware Environmental Navigator System
DMV	Delaware Division of Motor Vehicles (DelDOT)
DNREC	Department of Natural Resources and Environmental Control
DOC	U.S. Department of Commerce
DOE	U.S. Department of Energy
DOF	Delaware Division of Forestry (DDA)
DPC	Delaware Population Consortium
DRBA	Delaware River and Bay Authority
DSC	Delaware State Climatologist
DSFM	Delaware State Fire Marshal
DSWC	Division of Soil and Water Conservation (DNREC)
DWT	dead weight tonnage
E&C	Engineering and Compliance Branch (DNREC-AQMS)
EDMS	Emissions and Dispersion Modeling System
EF	emission factor
EGAS	Economic Growth Analysis System
EGR	exhaust gas recirculation
EGU	electric generating unit
EIA	Energy Information Administration
EID	Delaware Emission Inventory Development Program (DNREC-AQMS)
EIIP	Emission Inventory Improvement Program
EO	ethylene oxide
EPA	U.S. Environmental Protection Agency
EPCRA	Emergency Planning and Community Right-to-Know Act
ERG	Eastern Research Group
ETS	Emissions Tracking System
FAA	Federal Aviation Administration
FCI	fuel consumption index
FHWA	Federal Highway Administration
FIFRA	Federal Insecticide, Fungicide, and Rodenticide Act
FIPS	Federal Information Processing Standards
FIRE	Factor Information Retrieval System
FLF	fuel-loading factor
FP & GC	fuel pressure and gas cap test
g	gram
GAF	geographic allocation factor
GIS	geographical information system
GSE	ground support equipment
GTM	gross ton-miles
GVWR	gross vehicle weight rating
HAP	hazardous air pollutant
HC	hydrocarbon
HDD	heating degree-day
HDDV	heavy-duty diesel vehicle

ACRONYMS & ABBREVIATIONS continued

HDGV	heavy-duty gas vehicle
HDV	heavy-duty vehicle
hp	horsepower
HPMS	Highway Performance Monitoring System
HPV	high-profile violator
IC	intra-cloud
ICAO	International Civil Aviation Organization
IFO	Intermediate Fuel Oil
I/M	Inspection and Maintenance
IPP	Inventory Preparation Plan
KC	Kent County (Delaware)
LandGEM	Landfill Gas Emissions Model
lb	pound
LDGT	light-duty gas truck
LDGV	light-duty gas vehicle
LDT	light-duty truck
LDV	light-duty vehicle
LEV	low-emission vehicle
LFG	landfill gas
LPG	liquefied petroleum gas
LTO	landing/takeoff
LUST	leaking underground storage tank
MACT	maximum achievable control technology
MANE-VU	Mid-Atlantic – Northeast Visibility Union
MARAMA	Mid-Atlantic Regional Air Management Association
MC	method code (<i>i</i> -STEPS)
Mg	megagram
MMBtu	million British thermal units
mph	miles per hour
MRI	Midwest Research Institute
MSW	municipal solid waste
N	nitrogen
NAAQS	National Ambient Air Quality Standard
NAICS	North American Industry Classification System
NCC	New Castle County (Delaware)
NCDC	National Climatic Data Center
n.e.c.	not elsewhere classified
NEI	National Emissions Inventory
NESHAP	National Emission Standards for Hazardous Air Pollutants
NFDC	National Fire Data Center
NH ₃	ammonia
NIF	NEI Input Format
NMOC	non-methane organic compound
NO	nitric oxide

ACRONYMS & ABBREVIATIONS continued

NO _x	oxides of nitrogen
NPCA	National Paint and Coatings Association
NPDES	National Pollutant Discharge Elimination System
NRC	National Response Center
OBD	on-board diagnostics
OEM	original equipment manufacturer
OGV	ocean-going vessel
OHV	off-highway vehicle
OIT	Office of Information Technology (DNREC)
OMNI	OMNI Environmental Services, Inc.
ORIS ID	Office of Regulatory Information System Identification
ORVR	on-board refueling vapor recovery
OTAQ	Office of Transportation Air Quality (USEPA)
OTC	Ozone Transport Commission
OTR	Ozone Transport Region
OWB	outdoor wood boiler
PCV	positive crankcase ventilation
pdf	portable document format
Pechan	E.H. Pechan & Associates, Inc.
PEI	Periodic Emissions Inventory
PFC	portable fuel container
PIA	Printing Industries of America, Inc.
PM _{2.5} -PRI	particles with an aerodynamic diameter less than or equal to a nominal 2.5 micrometers
PM ₁₀ -PRI	particles with an aerodynamic diameter less than or equal to a nominal 10 micrometers
ppm	parts per million
ppmw	parts per million by weight
POTW	publicly-owned treatment works
POW	Port of Wilmington
PRI	Public Research Institute
P/V	pressure/vacuum
QA	quality assurance
QAPP	Quality Assurance Project Plan
QC	quality control
R&D	research and development
RATA	relative accuracy test audit
RE	rule effectiveness
RP	rule penetration
rpm	revolutions per minute
RSD	Regulatory Support Document
RSZ	reduced speed zone
RTO	regenerative thermal oxidizer
RVP	Reid vapor pressure

ACRONYMS & ABBREVIATIONS continued

RWC	residential wood combustion
SARA	Superfund Amendments and Reauthorization Act
SC	Sussex County (Delaware)
SCC	source classification code
SCR	selective catalytic reduction
SEPTA	Southeast Pennsylvania Transportation Authority
SI	spark ignition
SIC	Standard Industrial Classification code
SIP	State Implementation Plan
SM	Synthetic Minor permit classification
SNCR	selective non-catalytic reduction
SO ₂	sulfur dioxide
SSWD	summer season weekday
TAF	temporal allocation factor
TCEQ	Texas Commission on Environmental Quality
TDM	travel demand model
Tg	teragram
TG	touch-and-go
THC	total hydrocarbons
TIM	time-in-mode
TMB	Delaware Tanks Management Branch (DNREC)
T/O	test only
TOC	total organic carbon
TPD	tons per day
TPH	total petroleum hydrocarbons
TPY	tons per year
TRI	Toxics Release Inventory
TSDf	treatment, storage, and disposal facility (hazardous waste)
TV	Title V permit classification
U.S.	United States
USACE	U.S. Army Corps of Engineers
USCG	U.S. Coast Guard
USDA	U.S. Department of Agriculture
USGS	U.S. Geological Survey
VMT	vehicle miles traveled
VOC	volatile organic compound
WWTP	wastewater treatment plant