Table F2.1: Reasons for Measure Elimination (127 Measures)

New Jersey Identifier	Measure Name	Description	Reason
Area			
2	Consumer Products	Adopt the CARB 7/20/05 Amendments which sets new or revises existing limits on 13 consumer product categories (do not include Tier 2 reductions for shaving gels and antistatic aerosols since they have a later compliance date). Implement by model rule.	Does not advance the attainment date
3	Portable Fuel Containers	Adopt the CARB 2005 Amendments broadening the definition of PFCs to include kerosene containers and utility jugs, and other changes to make OTC Model Rule consistent with CARB requirements. Implement by model rule.	Does not advance the attainment date
4	Adhesives and Sealants (Industrial)	Enact VOC content limits similar to those contained in the CARB RACT/BARCT document for adhesives and sealants (Dec. 1998). Implement by model rule. *Note: Aspects of this measure are also covered by the NJ RACT Analysis.*	Does not advance the attainment date
5	Smoke Management Plan	Limit when currently approved open burning can occur, such as banning open burning on ozone red alert days	Does not advance the attainment date
6	Vapor Recovery Systems at Gasoline Service Stations	Add-on vapor control to the vent pipes at gasoline dispensing stations to further reduce emissions at high volume and/or vacuum assist stations.	Not economically feasible
7	Architectural and Industrial Maintenance Coatings	Amend existing New Jersey Subchapter 23 architectural coatings regulations based on California Air Resources Board (CARB) changes to their Suggested Control Measure (SCM) and also to be consistent with other Ozone Transport Region (OTR) states.	Measure cannot be implemented by 6/08
8	Natural Gas Combustion for Commercial and Industrial Sectors/Residential Sectors	Adopt lower emission standards for NOx for heaters<2MMBtu/hr (Follow the lead of California and Texas)	Measure cannot be implemented by 6/08

Table F2.1: Reasons for Measure Elimination (127 Measures)

New Jersey Identifier	Measure Name	Description	Reason
9	Bakery Controls: SCAQMD Rule 1153, BAAQMD Regulation 8, Rule 42	SCAQMD Rule 1153, BAAQMD Regulation 8, Rule 42. Adoption of these standards (32): require bakeries to install control system. Reduce exemption level and set standards for unregulated bakeries.	Not economically feasible
10	Pesticide Application	Reformulation of pesticides, reducing fumigant usage; using alternative application methods; applying microencapsulation techniques; using integrated pest management	Measure cannot be implemented by 6/08
11	Pesticide Application Restrictions: Mandatory Episodic	Ban pesticide application on Code Red Ozone Action Days	Not socially feasible
12	Reid Vapor Pressure Reduction Program	Consider lowering the RVP limit	Not legally feasible
13	Restrictions for Consumer Products and Paints during Ozone Season	Consumer-oriented programs to reduce the use of high emitting paints or other consumer products during the ozone season	Not socially feasible; Measure will not achieve benefits by 6/08
14	CONS-2 Set New Consumer Products Limits for 2008 – 2010	Several possible approaches: to adopt mass-based limits based on reformulation; mass or reactivity-based limits may be set for new categories and for small categories that have grown significantly (in terms of product sales) over the last five to ten years	Measure cannot be implemented by 6/08
15A	Limits on Sale of Auto and Truck Body Refinishing Products	State-wide limits on the sale of paint containing VOC to auto and truck body repair shops to only those that have hazardous waste generation ID numbers, equipment to control VOC emissions and industry-funded training for employees handling and using the products.	Not socially feasible
15B	Limit the VOC Content of Auto Body Refinishing Products	Limit the VOC Content of Auto Body Refinishing Products to the South Coast Air Quality Management District (SCAQMD) Standard	Measure cannot be implemented by 6/08
16	Episodic Limits on Asphalt Paving and Traffic Marking Activities	Prohibit road paving and traffic marking on ozone action days	Not socially feasible

Table F2.1: Reasons for Measure Elimination (127 Measures)

New Jersey Identifier	Measure Name	Description	Reason
18	Degreasing Controls	Adopt more stringent degreasing regulations. Require lower-VOC solvents at a level of 25 grams of VOC per liter. (SCAQMD Rule 1171, BAAQMD, VCAPCD)	Does not advance the attainment date
19	Alternative Degreasers	Require the use of citric-based, water-based and low VOC degreasers for commercial and industrial sources	Not technologically feasible
20	Tehama County: TCAPCD Rule 4.22: Industrial Use of Organic Solvents	Limits on industrial use of organic solvents, including the following: **A.** A person shall not discharge more than 15 pounds of organic solvents into the atmosphere in any one day from any article, machine, equipment, or other contrivance in which any organic solvent or any material containing organic solvent comes into contact with a flame or is baked, heat cured, or heat polymerized, in the presence of oxygen at temperatures above 400° F, unless all organic solvents discharged from these things have been reduced by at least 85% overall or to not more than 15 pounds in any one day. **B.** A person shall not discharge more than 40 pounds of photochemically reactive solvents into the atmosphere in any one day from any article, machine, equipment, or other contrivance used under conditions other than those described in part A.	Does not advance the attainment date
22	Reduce Fuel Permeation Through Gasoline Dispenser Hoses at Marinas	Determine the applicability of applying the stricter permeability standard for marine gasoline hoses to dispenser hoses at service stations	Not technologically feasible; Measure will not achieve benefits by 6/08
23	Voluntary Gas Can Replacement Program	Region-wide measure encouraging early replacement of gas cans used by public citizens, private industry, and local governments	Not economically feasible; Measure will not achieve benefits by 6/08
24	Capture and Control Vapors from Gasoline Cargo Tankers	This measure would include developing performance specifications and standards for individual components and methodology for testing and certifying these components	Measure will not achieve benefits by 6/08

Table F2.1: Reasons for Measure Elimination (127 Measures)

New Jersey Identifier	Measure Name	Description	Reason
25	Emission Reductions from Composting	SCAQMD Control Measure #2003WST-02: Includes alternative composting methods and emissions control equipment. Several composting control methods available to industry include: windrow, enclosures, forced aeration systems, and in-vessel composting. SCAQMD Rules 1133, 1133.1 and 1133.2, adopted in January 2003, implemented the first phase of this control measure. The second phase includes the identification of control options to reduce VOCs and ammonia emissions from greenwaste composting and food waste composting operations. The second phase will be implemented beginning in 2007 with full implementation by the end of 2009.	Does not advance the attainment date. Phase 2 of this measure will not achieve benefits by 6/08
26	Reformulation of Aerosol Coatings to CARB Tier 2 standards	Reformulation of Aerosol Coatings to CARB Tier 2 standards	Does not advance the attainment date
27	Low NOx residential water heaters (TNRCC); Low-emission water heaters F1	Adopt SCAQMD Rule 1121: Control of NOx from Residential Type Natural Gas Fired Water Heaters	Measure cannot be implemented by 6/08
28	Low-Emission Furnaces	Adopt SCAQMD Rule 1111: NOx Emissions from Natural Gas Fired, Fan-Type Central Furnaces (no more than 40 nanograms of NOx per joule of useful heat)	Measure cannot be implemented by 6/08
29	Low NO_x Fuel for Stationary Sources	Require oil-burning stationary sources to burn ThermaNOx, a low-NOx No. 2 fuel oil emulsion, during ozone season	Measure cannot be implemented by 6/08
Onroad			
DOT6	Fuel tax increase	A tax of $0.50 is assumed to have result in a 4% reduction in travel	Not socially feasible
DOT7	Implement Pay-as-you-drive vehicle insurance	The insurance is optional and will have a 5% participation rate in 2009	Not socially feasible

Table F2.1: Reasons for Measure Elimination (127 Measures)

New Jersey Identifier	Measure Name	Description	Reason
DOT8	Truck idling restrictions	Truck idling restrictions will be implemented statewide. It is assumed, in an effort to avoid fines and other negative repercussions resulting from continued idling, both fleet and individual truck owners will invest in idling reduction technology (auxiliary power units, diesel driven heating systems and automatic shut-down/start-up systems).	Does not advance the attainment date
DOT9	Impact of Various Transit Projects	Encourage the use of transit through the completion of significant fixed guideway/rail projects	Does not advance the attainment date
DOT10	Effect of No Fare Increase	Encourage the use of transit by not increasing fares despite inflationary pressures	Not economically feasible
DOT11	Adoption of Smart Growth Land Use Policies	Analysis of compact development in the NY-NJ-CT Region	Does not advance the attainment date
DOT12	Transportation Demand Management (TDM)	Programs and ordinances to facilitate non-automobile travel provision and utilization of mass transit, and to generally reduce the need for single-occupant vehicle travel, as part of transportation planning and development efforts of a locality.	Not socially feasible
DOT13	Clean Fleets Replacements	100 9 year old vehicles replaced with 100 hybrid vehicles in each county	Does not advance the attainment date
DOT15	Electric Vehicles at Transit Stations	Estimated benefit of 10 vehicles, each replacing one auto commuter trip and one midday trip per day	Not economically feasible
DOT16	School Bus Replacements	Twenty percent (4,246) of all Model Year 2002 and older school buses are replaced by Model year 2007 diesel buses	Does not advance the attainment date
DOT17	IdleAire Installations	A total of 210 parking spaces at truck stops would be equipped with IdleAire technology statewide.	Does not advance the attainment date
DOT18	Transit Bus Replacements	All Model Year 2002 and older transit buses are replaced by Model Year 2007 diesel buses	Does not advance the attainment date
DOT19	Heavy Duty Diesel Engine Replacements	Assumes 30% of all HDV8B vehicles (Class 8b Heavy Duty Vehicles: >60,000 lbs. GVWR) are replaced	Not economically feasible
DOT20	School Bus Retrofit	All Model Year 1992-2002 school buses will utilize retrofit technology	Does not advance the attainment date

Table F2.1: Reasons for Measure Elimination (127 Measures)

New Jersey Identifier	Measure Name	Description	Reason
DOT21	Improved Signal Coordination	Analysis was done using the NJDOT CMS incident Model	Other local considerations (difficult to engage local agencies responsible for the signals)
DOT22	Commercial Vehicle Information Systems and Networks (CVISN).	Analyzed as the adoption of high-speed weigh in motion devices to replace off-line weigh stations	Does not advance the attainment date
DOT23	Implementation of Express E-Z Pass Toll Collection	Analysis includes the impacts of adding high speed, no toll booth EZ-Pass lanes to the Union, Essex and Barnaget toll plazas	Does not advance the attainment date
DOT24	Incident Management/Service Patrols	Analysis was done using the NJDOT CMS incident Model	Not economically feasible
DOT25	Speed Limit Adherence	Lower the average travel speed on all freeways in the state through an expanded enforcement presence in the form of increased police patrols	Other local considerations (difficult to enforce)
DOT26	Statewide Expansion of Bicycle Facilities	Analysis is based on the facilities inventoried in the NJDOT Bicycle/Pedestrian Master plan	Not economically feasible
30	Diesel Engine Chip Reflash	Mandatory program to upgrade the version of software in engine electronic control module (ECM), also known as “chip reflash) to reduce off-cycle NOx emissions. Implement by model rule.	Measure cannot be implemented by 6/08
31	Efficient Vehicle Purchase Incentives/Disincentives	Influence the decision of NJ motorists considering the purchase of a new vehicle by providing incentives towards high efficiency vehicles and away from low efficiency vehicles	Measure cannot be implemented by 6/08
32	Onroad Vehicle Idling	Phase out the sleeper berth exemption of the diesel idling regulation; promote the installation and use of auxiliary power units (APU’s) and truck stop electrification (TSE); and expand the anti-idling program enforcement to the local police.	Does not advance the attainment date
33	Early Retirement Program for Heavy Duty Diesel Vehicles	Incentive program where owners of old, high emitting vehicles turn in or upgrade these vehicles earlier than normal focused on commercial, medium to heavy-duty diesel vehicles, including vehicles at ports	Not economically feasible; Measure will not achieve benefits by 6/08

Table F2.1: Reasons for Measure Elimination (127 Measures)

New Jersey Identifier	Measure Name	Description	Reason
34	Opacity Cutpoint Revision	The age ranges and the assigned smoke opacity limits would be changed to be more restrictive on all vehicles.	Does not advance the attainment date
35	Light Duty Diesel Vehicle Inspection	Require that light duty diesel vehicles manufactured since 1997 be subjected to the same emissions inspection process as their gasoline powered counterparts.	Measure cannot be implemented by 6/08
36	Medium Duty Vehicle Inspection	Add previously unregulated medium duty diesel vehicles (MDDV) between 8,501 and 17,999 lbs GVWR to the current inspection program using existing smoke opacity testing procedures (snap, rolling, or stationary load test) as appropriate for the MDDVs governed	Does not advance the attainment date
37	California Reformulated Gasoline and California Diesel (Combined Factor)	Implement CARB diesel fuel standards; an EPA fuel waiver would be required for this measure	Not legally feasible
38	Adopt CARB Diesel Fuel Properties	Implement prior to federal rule. The Federal rule will require reformulated diesel fuel in 2007	Not legally feasible
39	Encourage the use of Alternative Fuels	Expanded funding of the alternative fuel incentives program at the current match level to encourage the purchase and conversion of public and commercial fleets	Not economically feasible; Measure will not achieve benefits by 6/08
40	Low NOx Onroad Diesel Fuel in Ozone Season	For all diesel vehicles	Not technologically or legally feasible
41	Diesel Fuel Reformulation - Higher Cetane Highway Vehicles	Require onroad diesel vehicles to use high cetane fuel	Not technologically or legally feasible
42	Permit Requirement for Fleets	Require permits and air quality plans for large fleets that use city streets (delivery trucks, bus and van service, collection vehicles, etc.)	Not socially or legally feasible
43	Develop a Station Car/Low Emission Vehicle Share Program	Develop a station vehicle program using low emission vehicles that are leased by residents	Not economically feasible
44	Demolish Impounded Vehicles that are High Emitters	Demolish Impounded Vehicles that are High Emitters	Not socially feasible

Table F2.1: Reasons for Measure Elimination (127 Measures)

New Jersey Identifier	Measure Name	Description	Reason
46	Low Income Vehicle Repair Assistance Program (LIRAP)	Provide financial assistance on a need basis to owners of vehicles that have failed the emissions portion of the State's inspection and maintenance (I/M) program to get the vehicles repaired to meet emission standards	Measure cannot be implemented by 6/08
47	Require Transit Use for Government Employees	Require that government employees use transit for home to work trips, expand transit, and encourage large businesses to promote transit use	Not socially or legally feasible
50	CNG (Compressed Natural Gas) Fueling Stations	Build new modular CNG fueling stations	Not economically feasible
51	CNG Buses Instead of New Diesel	Purchase additional CNG buses for local transit authorities instead of normally scheduled replacement diesel bus purchases	Not economically feasible
53	CNG Rental Cars	Purchase CNG rental cars for use in the region	Not technologically, economically, or socially feasible; Measure will not achieve benefits by 6/08
54	Clean Fuel Vehicles	Require state & local governments to make 5% of fleet clean fuel vehicles. Implement voluntary program to replace old, conventionally-fueled taxis and transit buses with clean-fueled vehicles	Not economically feasible
56	Voluntary: Alternative Fueled Vehicle (AFV) Purchase Program	Local governments and transit agencies purchase alternative fueled vehicles instead of conventional gasoline powered vehicles	Not economically feasible; Measure will not achieve benefits by 6/08
57	CNG Refuse Haulers	Purchase new CNG powered trash trucks instead of conventional diesel vehicles	Not technologically or economically feasible
58	Set Tighter Emission Standards for New Passenger Vehicles [Low Emission Vehicle III]	LEV III would incorporate two changes to the emission standards in the LEV II program	Not legally feasible
59	Neighborhood Electric Vehicle (NEV) Program	Develop and fund a program for neighborhood electric vehicles (voluntary)	Not socially feasible

Table F2.1: Reasons for Measure Elimination (127 Measures)

New Jersey Identifier	Measure Name	Description	Reason
60	Extended Vehicle Idling	Various measures to control extended vehicle idling. Examples: Controls on construction and operation of drive-thru facilities such as banks and fast food restaurants; controls on extended idling during layover time, particularly of diesel engines used by transit vehicles and delivery trucks.	Not socially feasible
61	Mandatory Emissions Control Equipment Replacement	Mandatory replacement of emissions control equipment for passenger vehicles at periodic intervals	Not economically, socially, or legally feasible; Measure will not achieve benefits by 6/08
63	Technology to Identify Smoking Vehicles	Use remote sensors and license plate photos to identify smoking vehicles.	Does not advance the attainment date
64	Vehicle Retirement Incentives	Provide incentives for voluntary vehicle retirement	Not economically feasible; Measure will not achieve benefits by 6/08
65	HDDV Retrofit	Retrofit heavy-duty diesel vehicles with dual fuel (LNG and diesel) engines	Not economically feasible
66	Automated Speed Enforcement	Automate speed enforcement and lower the speed limit to 55 mph for heavy duty vehicles	Not socially feasible
67	Fleet Modernization	Accelerate the turnover of older higher emitting engines to cleaner late model vehicles and engines	Not economically feasible; Measure will not achieve benefits by 6/08
68	Reduce Emissions From Heavy-Duty Vehicles Serving Transportation Facilities	Includes ports, airports, and railyards	Not economically or socially feasible; Measure will not achieve benefits by 6/08
69	HDD Truck and Bus Retrofits	Retrofit heavy-duty trucks and buses with catalysts to reduce smog-forming oxides of nitrogen	Not economically feasible; Measure will not achieve benefits by 6/08
70	Retrofit Heavy Duty Gasoline Trucks	Retrofit with 3-way catalysts on gasoline-burning heavy duty trucks that currently have 2-way catalysts or no catalysts	Not technologically feasible; Measure will not achieve benefits by 6/08
71	Install New Engines in Heavy Duty Gasoline Trucks	Install new engines with 3-way catalysts on gasoline-burning heavy duty trucks that currently have 2-way catalysts or no catalysts	Not economically or socially feasible; Measure will not achieve benefits by 6/08
73	Diesel Additive Standards	Set Additives Standards for Diesel Fuel to Control Engine Deposits	Measure cannot be implemented by 6/08

Table F2.1: Reasons for Measure Elimination (127 Measures)

New Jersey Identifier	Measure Name	Description	Reason
NonRoad			
DOT1	Limit use of Recreational Watercraft	Based on registration data	Not socially feasible
DOT3	Retrofit Construction Equipment	Assume 10% of total inventory of equipment will be used on state contracted projects and that 20% of those vehicles must use a combination of ULSD and retrofit technology	Does not advance the attainment date
DOT4	Retrofit Switch Yard Locomotives	Assume 5 locomotives/switch yard will use a combination of idling reduction technologies preventing 10 hours of idling per day. Assume 3 of the 5 engines are 4-stroke and 2 of the 5 are 2-stroke engines	Measure cannot be implemented by 6/08
DOT5	Construction Equipment Idling Restrictions	Assume 10% of the population would be subject to the idling restrictions through state contracts and that 80% comply	Measure cannot be implemented by 6/08
74	Nonroad Idling	Extend idling requirements to nonroad vehicles, and include outreach and education for construction operators; promote nonroad idle reduction technologies; and institute idling restrictions for Ground Support Equipment (GSE) at airports.	Does not advance the attainment date
75	Idling Reduction for Train Engines	Adopt a regulation to encourage the use of idle reduction technologies and/or limit idling of locomotives.	Does not advance the attainment date
76	Leveraging Airport Leases to Achieve Reductions from Ground Support Equipment	Place emission reduction conditions on airline leases at the airport or adopt rules requiring a uniform phase-in of electrifying GSE.	Measure cannot be implemented by 6/08
77A	Increasing the Rate of Small Engine Turnovers through the Use of Incentive-Based Initiatives	Implementation of incentive-based programs to increase small engine turnover	Measure cannot be implemented by 6/08
78	Insure Proper Disposal of Fuel Samples After Daily Aircraft Pre-Flight Checks	Require aircraft pilots to properly dispose of fuel samples accumulated during daily pre-flight checks required by the Federal Aviation Administration (FAA).	Does not advance the attainment date

Table F2.1: Reasons for Measure Elimination (127 Measures)

New Jersey Identifier	Measure Name	Description	Reason
79	Stage II Vapor Recovery Compatibility for Boat Fueling and Marina Gasoline Fueling Facilities	Prohibit gasoline-powered watercraft refueling at a gas station equipped with a vapor-balance type stage II vapor recovery system unless the boat fuel filler neck is compatible with the fuel pump interface. Remove the marina exemption from stage II requirements at N.J.A.C. 7:27-16.3 (f) 1(I) and require use of “active” fan assisted stage II vapor recovery systems.	Not technologically feasible; Measure will not achieve benefits by 6/08
80	Use Restrictions for 2-Stroke Engines	Prohibit 2-stroke engines on high ozone days before Noon	Not socially feasible
81	Capture of Stationary Locomotive Exhaust	Capturing stationary locomotive exhaust with a hood or bonnet over the exhaust stack and treating these gases using stationary source control technology	Not technologically feasible
82	Use Restrictions for Non-Commercial Lawn Equipment	Ban the use of non-commercial gasoline-powered lawn mowers and other gasoline-powered lawn equipment on Ozone Action Days	Not socially feasible
83	Preference for Low-Emissions Lawn & Garden Equipment	In bids for government contracts, award extra points to bidders using low emission lawn & garden equipment	Measure cannot be implemented by 6/08
84	Strengthen Lawn Equipment Regulations	Strengthening existing regulations so that up to 60% of residential lawn and garden equipment would be zero-polluting electric models	Not legally feasible; Measure will not achieve benefits by 6/08
85	Providing Electric Power to Ships (Cold Ironing) at the Ports (Shoreside Power)	Installation of shoreside power at new cruise ship terminals/Voluntary program for shoreside electrical power	Measure cannot be implemented by 6/08
86	Accelerated Retirement Program for Pleasurecraft	Recreational marine vessels: promote use of new engine technologies through engine buyback programs, differential registration fees, or voluntary State programs	Measure cannot be implemented by 6/08
87	Marine Vessel Buy Back Program	Buy back program for marine vessels with 2-stroke engine	Not economically feasible; Measure will not achieve benefits by 6/08
88	Stringent Recreational Marine Engine Standards	More stringent and timely than USEPA standards	Measure cannot be implemented by 6/08

Table F2.1: Reasons for Measure Elimination (127 Measures)

New Jersey Identifier	Measure Name	Description	Reason
89	Graduated Registration Fees for Recreational Boats	Require boat owners to register the boat engine(s) at the time of boat registration and pay registration fees according to length of the boat, as well as the age and the horsepower of the engine. Levee additional registration fee for registration of boats	Does not advance the attainment date
90	Emission Fee Program for Port-Related Mobile Sources	The purpose of this control measure is to establish an emission fee program to mitigate impacts associated with increasing port-related mobile source emissions	Not economically or socially feasible; Measure will not achieve benefits by 6/08
91	Incentives for Cleaner Off-Road Vehicles and Equipment	To replace or upgrade engines in the existing fleet with lower-emitting engines	Not economically feasible; Measure will not achieve benefits by 6/08
92	Portable Engine and Generator Emissions Reduction Program	Offer incentives to support the incremental cost of a retrofit/replacement of existing electrical generation units, modeled after (or as part of) the Moyer Program.	Not economically feasible
93	Off-Road Gas/LPG Engines	Require Evaporative Controls	Not legally feasible
94	Off-Road Gas/LPG Engines	Require on-board diagnostics	Not legally feasible
95	Off-Road Gas/LPG Engines	Implement optional standards/green labeling	Not legally feasible
96	Off-Road Gas Engines	Set Lower Emission Standards for New Off-Road Gas Engines	Not technologically feasible; Not legally feasible; Measure will not achieve benefits by 6/08
97	Auxiliary Power Units (APUs) for Locomotives	Install auxiliary power units on railroad switching locomotives that operate in rail yards	Does not advance the attainment date
99	Locomotive Emission Reduction	Pursue approaches to reduce emissions from in-use locomotives	Measure cannot be implemented by 6/08
100	Lawnmower Exchange Program	Gasoline lawnmowers are exchanged for new electric lawnmowers which have zero emissions	Measure cannot be implemented by 6/08
101	Lawn and Garden Equipment Buyback and Scrappage Programs	Voluntary program to replace gasoline powered lawn and garden equipment with electric powered equipment	Measure cannot be implemented by 6/08
103	Engine Standards for Diesel Powered Engines	A three-tiered process that will increase emissions standards for nonroad diesel powered engines used for a variety of purposes	Measure will not achieve benefits by 6/08; Not legally feasible

Table F2.1: Reasons for Measure Elimination (127 Measures)

New Jersey Identifier	Measure Name	Description	Reason
104	Engine Modernization Incentives	Accelerate the Modernization of Older Engines through incentives	Not economically feasible; Measure will not achieve benefits by 6/08
105	Engine Standards for Large Gasoline Powered Engines	A two-tiered standard that will regulate nonroad gasoline powered engines rated over 19kW	Measure will not achieve benefits by 6/08; Not legally feasible
106	Engine Standards for Locomotive Engines	A three-tiered emission standard for new or remanufactured locomotive engines	Measure will not achieve benefits by 6/08; Not legally feasible
107	Marine Biodiesel Fueling Station	Converting from petro-diesel to biodiesel in ferries	Not economically feasible; Measure will not achieve benefits by 6/08
108	Low Emissions Agricultural Equipment	Require sale of low-emissions agricultural equipment in region	Measure will not achieve benefits by 6/08
109	Convert Diesel powered Irrigation pumps	Program proposes to offer an "incentive" rate for farmers who voluntarily convert diesel-engine-powered agricultural pumps to electric	Not economically feasible; Measure will not achieve benefits by 6/08
110	Low Emission Diesel Fuel for Nonroad Equipment	Require the year-round use of low emission diesel fuels for diesel off-road vehicles and equipment	Not legally feasible; Measure will not achieve benefits by 6/08
111	Low-Emissions Light Commercial Equipment	Require sale of low-emissions light commercial equipment in region	Measure cannot be implemented by 6/08
112	Preference for Low-Emission Light Commercial Equipment in Government Contracts	In bids for government contracts, award extra points to bidders using low emission light commercial equipment	Measure cannot be implemented by 6/08
113	Fleet Rules for Construction Equipment	Limits the length of existence of the off-road equipment used in construction projects in the region	Not technologically feasible; Measure will not achieve benefits by 6/08
114	Preference for Low-Emission Industrial Equipment in Government Contracts	In bids for government contracts, award extra points to bidders using low emission industrial equipment	Measure cannot be implemented by 6/08

Table F2.2: Workgroup Measures Recommended for Further Consideration by NJDEP (250 Measures)

Workgroup	Control Measure Title	Description
C&T	Increase publicity & enforcement of anti-idling law.	Increase publicity of the current anti-idling laws as well as the enforcement.
C&T	Increase publicity & enforcement of anti-idling law.	Increase publicity of the current anti-idling laws as well as the enforcement.
C&T	Implement a system of remote sensing devices (RSD) targeting gross emitters.	Implement a system of remote sensing devices (RSD) targeting gross emitters similar to those systems used by Colorado, Missouri, and Virginia. Combining this measure with a Low Income Repair Assistance Program (LIRAP) should be considered both for the emi
C&T	Implement a system of remote sensing devices (RSD) targeting gross emitters.	Implement a system of remote sensing devices (RSD) targeting gross emitters similar to those systems used by Colorado, Missouri, and Virginia. Combining this measure with a Low Income Repair Assistance Program (LIRAP) should be considered both for the emi
C&T	Low Income Repair Assistance (LIRAP) for older cars.	Repair assistance for older cars that have failed multiple inspections. Also know as Low Income Repair Assistance (LIRAP).
C&T	Employee Trip Reduction Programs (ETRP).	Employee Trip Reduction Programs (ETRP). Includes telecommuting, carpool matching, vanpool subsidies, and parking cash out. Goal is to reduce the number of single occupant autos used by employees to commute to work thereby reducing vehicle miles travelled
C&T	Travel demand management (TDM) strategies.	Travel demand management strategies (TDM) designed to modify individual behavior and reduce or eliminate the number of single-occupant auto trips. Include: encouraging substitution of transit, bicycles, and walking for auto trips, carpooling and ride shar
C&T	State gas-guzzler tax.	State gas-guzzler tax (including credit for high efficiency cars). Will be charged at the time of new car purchase or lease. Consider implementing for sale of used cars in the future when market demand shifts.
C&T	Annual inspections for vehicles over ten years.	Increase inspection interval on vehicles over 10 years old to annual. Consider combining with a Low Income Repair Assistance Program (LIRAP).

Table F2.2: Workgroup Measures Recommended for Further Consideration by NJDEP (250 Measures)

Workgroup	Control Measure Title	Description
C&T	Free replacement gas caps.	Provide free replacement gas caps for vehicles failing the gas cap test at centralized inspection stations (CIFs).
C&T	Free replacement gas caps.	Provide free replacement gas caps for vehicles failing the gas cap test at centralized inspection stations (CIFs).
C&T	Conversion of state and large fleets to alternate fueled vehicles.	Conversion of State and large corporation fleets to hybrid or clean burning alternate fueled vehicles such as CNG. Fleet owners could modify the specifications used for new purchase to reflect this requirement as they are constantly upgrading their fleet.
C&T	Public education on behavior modifications that will save fuel and reduce emissions.	Public education on behavior modifications that will save fuel as well as reduce emissions, for example, avoiding drive-thrus, reducing long term idling, and maintaining proper tire inflation. Could partner with AAA. Also could include a tire pressure che
C&T	Fuel economy standards for fleets.	NJDEP or MVC to establish fuel- economy standards for fleets of various sizes.
C&T	Employer shuttles to train and bus terminals.	Employer shuttles to rail and bus terminals. Shuttle service is typically scheduled to correspond with train and bus arrivals and departures. Employers, local governments, or transit operators may sponsor such services.
C&T	Registration fee based on vehicle miles travelled (VMT).	Registration fee based on vehicle miles travelled (VMT). This strategy proposes a sliding scale registration fee based on odometer readings reported by owner each year. There may be need for stiff fines for intentional mis-reporting discovered through spo
C&T	A tax credit program to reduce the tax burden for those that use CNG, LNG or propane as motor fuel.	A tax credit program aimed at reducing the tax burden for those that use CNG, LNG or propane as a motor fuel.
C&T	Park-n-ride programs.	Park-n-ride programs to provide remote parking lots linked with major destinations by scheduled transit services or shared ride facilities.

Table F2.2: Workgroup Measures Recommended for Further Consideration by NJDEP (250 Measures)

Workgroup	Control Measure Title	Description
C&T	Electric shuttles for local travel in structured residential communities.	Electric shuttles for local travel in structured residential communities. Government may purchase and provide these vehicles and/or government incentives provided to communities to create their own small transit operation using such vehicles.
C&T	Install electric vehicle charging stations in town centers at malls.	Install electric vehicle charging stations in town centers and at malls to improve conditions for use of electric vehicles which may encourage more people to purchase and begin to use them. This strategy will be funded by the State.
C&T	NJ Transit to provide additional night/weekend services.	New Jersey Transit to provide additional night/weekend services on existing train and bus lines. This will encourage more people to leave their cars at home if their hours fit the conventional commuting schedule.
C&T	NJ Transit to add new and extend existing routes.	NJ Transit to add new and extend existing routes, combined with advertising campaigns and, if necessary, fare discounts, to increase ridership
C&T	Gasoline manufacturers to be required to produce custom blends that will reduce PM2.5 & O3 precursors.	New Jersey to require gasoline manufacturers to create custom blends aimed at reducing PM2.5 and O3 precursors.
C&T	Encourage use of hydrogen vehicles.	Encourage use of hydrogen vehicles.
C&T	Increase fuel tax.	Increase fuel tax.
C&T	Early vehicle retirement programs.	Early vehicle retirement programs. Should have absolute deadlines for age of vehicle or mileage.
C&T	Pollution Credit Trading Program (PCTP).	Pollution Credit Trading Program (PCTP). This strategy envisions a basic pollution allowance for each adult citizen, which could then be traded between those needing less credit and those whose lifestyles require more credit. Credits could be traded throu
C&T	Statewide expansion of safe pedestrian and bike routes in unsafe areas.	Expansion of bike paths, sidewalks, and trails to provide safe pedestrian and bike routes in many areas of the State where walking and biking are difficult and unsafe.
C&T	Registration fee based on vehicle weight.	Registration fee based on vehicle weight.

Table F2.2: Workgroup Measures Recommended for Further Consideration by NJDEP (250 Measures)

Workgroup	Control Measure Title	Description
C&T	Incentives for owners of older vehicles to replace their catalytic converters.	Provide incentives for the owners of older vehicles to replace their catalytic converters with a more modern and more effective unit than originally supplied with the vehicle. This retrofit will be done regardless of whether a vehicle passed the emissions
C&T	Phase out all drive-through facilities to reduce idling.	Phase out all drive-through facilities to reduce idling.
C&T	Phase out all drive-through facilities to reduce idling.	Phase out all drive-through facilities to reduce idling.
DI	Diesel Particulate Filters (DPFs).	V1: Diesel Particulate Filters. Ultra Low Sulfur Diesel must be used in conjunction with the DPFs in order for them to work effectively. DPFs could be deployed on a more limited basis, for example, either a demonstration project or deployed on a limited n
DI	Diesel Oxidation Catalysts (DOCs).	V2: Diesel Oxidation Catalysts (DOCs): A DOC is a device that is attached to the exhaust system of a diesel engine that is designed to break down pollutants in the exhaust stream into less harmful components. It is preferred that the DOC be used in conjun
DI	Closed crankcase filtration system.	V3: Closed crankcase filtration system: allows crankcase blow-by emissions to be recirculated into the combustion chamber after being filtered by a device installed between the engine breather port and air intake system, rather than being exhausted to the
DI	DOC or DPF with Fuel Catalysts.	V4: DOC or DPF with Fuel Catalysts. A fuel catalyst is a substance added in the fuel system that reacts with the substrate within the DOC or DPF to enhance PM or NOx removal. This catalyst could be a chemical compound based on organic chemicals, such as b
DI	Expand the Liqufied Natural Gas (LNG) refueling program to all landfills in urban areas.	V5. Liquefied Natural Gas (LNG) refueling program in Burlington County. The LNG pilot program could potentially be expanded to other landfills or “digesters" in urban areas. See White Paper, Attachment 6.

Table F2.2: Workgroup Measures Recommended for Further Consideration by NJDEP (250 Measures)

Workgroup	Control Measure Title	Description
DI	Hybrid Power Train Technology.	V6. Hybrid Power Train Technology: This technology works best in “stop and go” applications, such as short haul delivery trucks and refuse trucks. Two more widely used versions of hybrid power come in the form of hydraulic or electric (parallel or series)
DI	Purinox emulsified fuel.	V7. Purinox emulsified fuel
DI	Biodiesel.	V8. Biodiesel: the state should take steps to make biodiesel commercially available statewide (or at a minimum create a biodiesel corridor along a major thoroughfare such as the NJ Turnpike). Biodiesel is a fuel that is derived from common crops, such as
DI	Ediesel.	V9. Ediesel. Ediesel is a blend of ethanol and diesel fuel. Ethanol’s primary feedstock is corn.
DI	Scrappage program to replace older vehicles with new (or newer) lower emitting ones.	V10. Scrappage program. A scrappage or fleet modernization program is a method to replace older, higher emitting diesel vehicles with new (or newer) lower emitting vehicles. The replacement vehicle could be retrofitted to ensure additional reductions. The
DI	Mandate emission reductions for stationary or mobile sources located in areas designated as non-attainment for Ozone or PM.	R1. Mandate emission reductions for stationary or mobile sources located in areas designated as non-attainment for ozone or PM. No permit approvals should be issued by NJDEP unless the new emissions are offset by more than 100%. If the offsets cannot be p
DI	Reschedule refuse collection at night.	R2. Reschedule refuse collection at night
DI	Halt construction on Ozone Action Days.	R3. Halt construction on Ozone Action Days
DI	Double the price of tolls on Ozone Action Days.	R4. Changing tolls on Ozone Action days; double the price of tolls on Ozone Action Days
DI	Implement a dual speed limit on interstates and enhance police enforcement of the existing limit.	R5. Implement a dual speed limit on Interstates, such as 65 mph for cars and 55 for trucks; enhanced police enforcement of the existing speed limit
DI	Implement rules that govern the PM emissions of Transportation Refrigeration Units (TRUs).	R6. Implement rules that govern the PM emissions of Transportation Refrigeration Units (TRUs) (NJDEP should adopt California's standards or work on similar measures)

Table F2.2: Workgroup Measures Recommended for Further Consideration by NJDEP (250 Measures)

Workgroup	Control Measure Title	Description
DI	Phase out the sleeper berth exemption.	I1. Phase out the sleeper berth exemption: in order for these various idling and fuel savings technologies to be more widely used, the NJDEP must tighten (by removing the sleeper berth exemption) and more aggressively enforce the idling regulations.
DI	Target idling trucks in non-attainment areas.	I2. Target idling trucks in non-attainment areas. This strategy would go in conjunction with phasing out the sleeper berth exemption and increasing local police enforcement of idling laws.
DI	Implement a driver training program to reduce idling.	I3. Implement a driver training program to reduce idling: As part of Commercial Driver's License training, make anti-idling practices part of the training program. Combine with a public outreach program. This public outreach should include posting signs i
DI	On board battery technology.	I4. On board battery technology. This involves a large battery pack mounted on the truck to run the truck's electrical systems so that the truck can be shut off.
DI	Auxilliary Power Units (APUs).	I5. Auxiliary Power Units (APUs): An APU is a small engine that is mounted on the truck chassis and can power the HVAC along with any smaller electrical appliances while the truck engine is off. Increased enforcement in combination with a tightening of th
DI	Truck Stop Electrification (TSE).	I6. Truck Stop Electrification (TSE): This is a system employed at truckstops where electrical and/or HVAC is provided to the truck from an outside, stationary source.
DI	Expand the anti-idling program enforcement to the local police.	I7. Expand the anti-idling program enforcement to the local police (the enforcement of the idling laws by the local police is crucial for many of these PM reduction strategies to be effective)
DI	Wide based tires.	O1. Wide based tires. These tires are extra wide and could be substituted for the two-tire configuration typically seen on most trucks.
DI	Lubricant technology in the form of low viscosity (synthetic) lubricants	O2. Lubricant technology in the form of low viscosity (synthetic) lubricants

Table F2.2: Workgroup Measures Recommended for Further Consideration by NJDEP (250 Measures)

Workgroup	Control Measure Title	Description
DI	Automatic tire inflation systems.	O3. Automatic tire inflation systems. This is a system mounted on the truck that maintains the optimal tire pressure.
DI	Truck aerodynamic improvements.	O4. Truck aerodynamic improvements
DI	Publicize the process for reporting excessively smoking vehicles.	O5. Publicize the process for reporting excessively smoking vehicles
DI	Bring roadside opacity checks into the cities.	O6. Bring roadside opacity checks into the cities
DI	Partnership with other government agencies. Leverage relationships with outside groups such as school PTAs.	O7. Partnerships with other government agencies such as Dept of Transportation, Dept of Education, Dept of Health. Leverage relationships with outside groups such as school PTAs.
DI	Use DPFs with ULSD. (See DI001)	C1. Diesel Particulate Filters (See DI001) Use with USLD.
DI	Use DOCs with ULSD. (See DI002)	C2. Diesel Oxidation Catalysts (See DI002) Use with USLD.
DI	Combine DOC or DPF with fuel catalyst.	C3. Combined DOC or DPF with fuel catalyst. A similar technology that involves either a DOC or DPF used in combination with a fuel catalyst.
DI	Outreach and education for construction operators.	C4. Outreach and education for construction operators (extremely high idle rates for offroad equipment)
DI	Idle reduction technologies.	C5. Idle reduction technologies
DI	Use of biodiesel or ediesel.	C7. Use of biodiesel or Ediesel
DI	Mandatory contract provision requiring retrofits on construction equipment.	C8. Mandatory contract provision requiring retrofits on construction equipment (award additional points during the contract review process to companies that use retrofitted equipment)
DI	Replacing older construction vehicles/equipment with new (newer) lower emitting ones.	C9. Scrappage program. A scrappage or fleet modernization program is a method to replace older, higher emitting diesel vehicles with new (or newer) lower emitting vehicles. The replacement vehicle could be retrofitted to ensure additional reductions. Thi
DI	Halting construction on Ozone Action Days.	C10. Halting construction on Ozone Action Days
DI	Scrappage program for old yard equipment.	GP1. Scrappage program for old yard equipment. See White Paper, Attachment 7.

Table F2.2: Workgroup Measures Recommended for Further Consideration by NJDEP (250 Measures)

Workgroup	Control Measure Title	Description
DI	Incentives/regulations to use low sulfur or ultra low sulfur fuel for yard equipment.	GP2. Incentives/regulations to use low sulfur or ultra low sulfur fuel for yard equipment (provide incentives to switch from offroad diesel fuel (3000 ppm sulfur) to low or ultralow sulfur fuel.) See White Paper, Attachment 7.
DI	New emission/permit fees for Diesel Risk Mitigation Fund.	GP3. New emission/permit fees for “Diesel Risk Mitigation Fund.” A new fee placed on diesel offroad mobile sources should be considered that would provide two functions. See White Paper, Attachment 7.
DI	Timeshifting/expanded hours at ports.	GP4. Timeshifting/expanded hours at ports. See White Paper, Attachment 7.
DI	Electronic gate/computer scheduling at port.	GP5. Electronic gate/computer scheduling at port (voluntary effort by terminal operators). See White Paper, Attachment 7.
DI	Crane electrification.	GP6. Crane electrification (voluntary effort by terminal operators and the PANY/NJ). See White Paper, Attachment 7.
DI	Short haul barging to satellite locations.	GP7. Short haul barging to satellite locations. See White Paper, Attachment 7.
DI	Shared chassis pools.	GP8. Shared chassis pools. Under the "pool" concept, a truck driver would only have to go to one location to retrieve a chassis for their load. Although Governor Codey recently signed A1478 which will result in improved chassis safety and maintenance, th
DI	Voluntary Speed Reduction	S1. Voluntary speed reduction. See White Paper, Attachment 7.
DI	Cold Ironing	S2. Cold ironing: Cold ironing is a strategy for ships to “plug in” to onshore electrical power while they are dwelling at berth to provide energy for the ship’s needs. (long-term solution). See White Paper, Attachment 7.
DI	Incentives to Use Low Sulfur or Ultra-Low Sulfur Fuel for Ocean Vessels	S3. Incentives to use low sulfur or ultra low sulfur fuel. Ocean vessels typically use “bunker” fuel, which is the cheapest and has the highest sulfur content of any fuel (ranging from to 10,000-30,000 ppm sulfur). Use of a tax on fuel emissions could spu
DI	Incentives to Repower Tugboats	S4. Provide incentives to repower tugboats. See White Paper, Attachment 7.

Table F2.2: Workgroup Measures Recommended for Further Consideration by NJDEP (250 Measures)

Workgroup	Control Measure Title	Description
DI	Incentives to Retrofit Ferry Engines	S6. Provide incentives to retrofit ferry engines with DPFs, DOCs or SCR. See White Paper, Attachment 7.
DI	Strong Arm Dockers for Ferries	S7. Strong arm dockers for ferries. Technology is available that holds ferries up against docks while loading and unloading, which normally requires engine use. See White Paper, Attachment 7.
DI	Incentives for Trains to Use Low or Ultra-Low Sulfur Fuel	R1. Provide incentives for trains to use low or ultra low sulfur fuel. ULSD is required by federal law beginning in 2012, but incentives could spur the use of it much sooner. See White Paper, Attachment 7.
DI	Idling Reduction for Train Engines	R2. Idling reduction for train engines. NJDEP should investigate its legal authority to implement and enforce an idling limit for trains, which would serve as an incentive to use these technologies. See White Paper, Attachment 7.
DI	Expanded Electrification of Passenger Rail Lines	R3. Expanded electrification of passenger rail lines by NJTransit. See White Paper, Attachment 7.
DI	Expanded Use of Dual Mode Diesel/Electric Engines	R4. Expanded use of dual mode diesel/electric engines. See White Paper, Attachment 7.
DI	Periodic Emissions/Opacity Testing of Locomotives	R5. Periodic emissions/opacity testing of locomotives. This would be a mandatory strategy by the state which would be similar to onroad inspections. Either an opacity test or continuous opacity monitor might complement current inspections already performe
DI	Congestion Management/Double Track/Grade Separation	R6. Congestion management/double track/grade separation: this includes adding another track, separating the grade of rail (lowering the tracks below street level), upgrading track to raise freight speed limit, etc. See White Paper, Attachment 7.
DI	Scrappage Program for Locomotives	R7. Scrappage program. See nonroad strategy C9. See White Paper, Attachment 7.
DI	Incentives for Purchase of Hybrid Locomotives	R8. Incentives for purchase of hybrid locomotives (such as the Green Goat). See White Paper, Attachment 7.
DI	Electrify Airport Ground Support Equipment	A1. Electrify airport ground support equipment.
DI	Incentives for Alternative Fuels for Ground Support Equipment	A2. Provide incentives for alternative fuels for ground support equipment.

Table F2.2: Workgroup Measures Recommended for Further Consideration by NJDEP (250 Measures)

Workgroup	Control Measure Title	Description
DI	Idling Restrictions for Ground Support Equipment	A3. Apply idling restrictions to ground support equipment. It may be possible to apply the current 3 minute idling law to offroad equipment including ground support equipment.
DI	Cap and Trade Limits on Airport Emissions (Bubble Concept)	A4. Cap and trade limits on airport emissions (bubble concept). See White Paper, Attachment 8.
DI	Differential Landing Fees	A5. Differential landing fees: The state or PANYNJ could charge fees to airlines based on their emissions, with more efficient planes paying less. See White Paper, Attachment 8.
DI	Require Efficiency Improvements in Airport Lease Agreements	A6. Require efficiency improvements in airport lease agreements: While airline leases with the PANYNJ are negotiated infrequently (every 20 years or so), the Port could negotiate other parts of the lease agreement to secure efficiency improvements.
DI	Require Stronger Environmental Review of Airport Emissions	A7. Require stronger environmental review of airport emissions: The National Environmental Policy Act (NEPA) requires federal agencies to integrate environmental values into their decision making processes by considering the environmental impacts of their
DI	Diesel/Electric Shuttle Buses at Airport	A8. Diesel/electric shuttle buses at airport (The transit style diesel buses used at Newark airport (and owned by the airlines) are all 12-24 years old and nearing the end of their service life.)
DI	Finalization of the Proposed (July 11, 2005) New Source Performance Standards (40 CFR 60, 85, 89, 94, 1039, 1065 and 1068)	R1. Finalization of the proposed (July 11, 2005) New Source Performance Standards (40 CFR 60, 85, 89, 94, 1039, 1065 and 1068). These federal standards are being revised to align stationary source engines with nonroad diesel engine standards.
DI	Require All Permitted Generators to Use Ultra-Low Sulfur Diesel Fuel by 2007	R2. Amend NOx rules (N.J.A.C. 7:27-19) to require that all permitted generators use ULSD fuel by 2007. ULSD may be required, not specifically by the rule, but by permits issued with NOx control technologies which warrant its use.
DI	Require Ultra-Low Sulfur Diesel Fuel for Emergency Generators for New Sources	R3. Modify the General Permit requirements for Emergency Generators to require the use of ULSD for new sources.

Table F2.2: Workgroup Measures Recommended for Further Consideration by NJDEP (250 Measures)

Workgroup	Control Measure Title	Description
DI	Lower Sulfur Content of Fuel	R4. Revise N.J.A.C. 7:27-9 requirements to lower the sulfur content of fuel. This requirement could be associated with a decrease in monitoring and recordkeeping requirements in permits.
DI	Timers as a Permit Condition for Generators/Compressors	R5. Require generators/compressors to operate on timers as a permit condition.
DI	Intra-Facility Emissions Trading Program	R6. Develop an intra-facility emissions trading program for NOx and PM2.5 to allow facilities to offset stationary source emission increases by decreasing mobile source emissions through retrofits.
DI	Scrappage/Incentive Program for Engines Controlled by Selective Catalytic Reduction (SCR)/Urea Control Systems	V1. Develop a scrappage/incentive program to replace higher emitting engines controlled by Selective Catalytic Reduction (SCR)/Urea control systems with newer, more efficient, and less polluting engines.
DI	Temporary Amnesty Program for Grandfathered Minor Sources	V2. Implement a temporary program to provide amnesty from SOTA requirements for grandfathered minor sources to allow them to upgrade to more efficient units.
DI	Convert Diesel Generators to Burn Natural Gas	V3. Convert diesel generators to burn natural gas.
DI	Requirements or Incentives for Non-emergency Generator Retrofits	V4. Require or provide incentives for non-emergency generators to retrofit with control devices or replace them with cleaner burning units.
DI	Biodiesel for Stationary Diesel Sources	V5. Biodiesel (mixtures with 20% or less)- See V8 under onroad strategy section. The position of the Engine Manufacturers Association (EMA) is to support the use of biodiesel up to 5% blends, with no affect on the engine warranty if the biodiesel blend m
DI	Contract Requirements to Use Ultra-Low Sulfur Diesel Fuel	O1. Develop contract requirements that ULSD be used in all state contracts including sources with a heat input of less than 1,000,000 BTU per hour.
DI	Incentives for Low or Ultra-Low Sulfur Fuel Use in Stationary Diesel Sources	C6. Provide incentives for low or ultra low sulfur fuel use

Table F2.2: Workgroup Measures Recommended for Further Consideration by NJDEP (250 Measures)

Workgroup	Control Measure Title	Description
DI	Community Based $PM_{2.5}$ And Diesel PM Monitoring System	Community Based PM2.5 And Diesel PM Monitoring System, especially in urban areas: the development and installation of a comprehensive community based PM2.5 and diesel particulate matter monitoring system as part of New Jersey's SIP.
DI	"Moratorium" On The Issuance Of New Air Pollution Discharge Permits	"Moratorium" On The Issuance Of New Air Pollution Discharge Permits. The State should adopt a rule that allows the NJDEP to refuse to issue a new air pollution discharge permit in an area that exceeds federal PM2.5 standards. Developed by NJDEP, DHSS and
DI	Alternative Energy Sources	Developing A Plan To Utilize Alternative Energy Sources: It is recommended that the State be proactive in developing and utilizing as soon as possible a wide range of environmentally friendly alternative energy sources such as hydrogen, solar power, compr
DI	California's Lower Mean Annual Standard for $PM_{2.5}$	New Jersey should Institute California's Lower Mean Annual Standard for PM2.5. In the near future, the State should lower the federal mean annual PM2.5 standard of 15.0 g/m3 that it now uses to the more protective 12.0 g/m3 standard that California emplo
DI	Cleaire Longview	Implement a similar project like the one done in California: involved retrofitting 1600 transit buses from a variety of transit providers using the the Cleaire Longview.
HR	Ban All Wood Burning	N1: a) Ban all wood burning in new and existing sources
HR	Natural Gas/Propane Fireplaces in New Construction	N1: b) Ban all wood burning and require only natural gas/propane fireplaces can be built in new construction (i.e., put a restriction on developments with a certain amount of houses, e.g., 5-10, that would be required to install only natural gas or propan
HR	Required Percentage of a Certain Type of Fuel in New Developments	N2: Instead of restricting the developers to all or nothing in new developments, require that only a certain percentage be natural gas, propane, or of a certain type of fuel.

Table F2.2: Workgroup Measures Recommended for Further Consideration by NJDEP (250 Measures)

Workgroup	Control Measure Title	Description
HR	Restrictions on Wood Burning Sources	N3: Restriction on wood burning sources: Ban and/or require inserts/fireplaces with specific efficiency lower than the current USEPA standards for wood stoves and fireplace inserts who would be affected dependent on #/type of new homes built and #/type o
HR	Voluntary Wood Stove Change-out Program	N4: Voluntary wood stove change-out program: Tax rebate and/or industry discount and/or USEPA-sponsored exchange program and/or utility company rebate for replacing an older, more polluting wood stove or fireplace insert with a new, higher efficiency, les
HR	Retrofits for Wood Burning Units	N5: Retrofit all types of existing wood burning units with a catalytic control
HR	Point-of-Sale Wood Stove and Fireplace Replacements	N6: Require replacement or alternative heating system of older wood stoves and fireplaces upon sale of residential (commercial) property (i.e., like done with lead paint removal), in addition to requiring an inspection of existing wood stoves or fireplace
HR	Change the New Jersey Department of Community Affairs (NJDCA) Uniform Construction Code (Statewide)	N7: Change NJDCA code (statewide) to require all new and replacement wood stoves comply with USEPA standards and have the code official ensure that only an USEPA-certified unit was installed. This would be done through the "local permit" process.
HR	Update/Revise USEPA Rules/Standards	N8: Update/revise USEPA rules/standards, then adopt by the NJDEP, and cross-referenced into the NJDCA construction codes.
HR	Training Requirements to Install Units	N9: All licensed contractors and manufacturers should be trained to comply with the current standards. NJDCA does not currently require a license for installing a woodstove or fireplace insert.
HR	More Stringent State Standards	N10: NJDEP should adopt standards that are more stringent than the federal standards under 40 CFR 60 (Subpart AAA) and then adopt into NJDCA code

Table F2.2: Workgroup Measures Recommended for Further Consideration by NJDEP (250 Measures)

Workgroup	Control Measure Title	Description
HR	Oxygen to Fuel Fatio	N11: All manufactured fireplaces must achieve an oxygen to fuel ratio better than the current exemption. (USEPA exemption due to > 35:1 oxygen:fuel combustion ratio). This would capture units that are exempt under the federal standards.
HR	Expand Existing Restrictions For Burning Permits	O1: Expand existing restrictions on prescribed burning/open burning permits to include additional emission reduction measures (e.g., Limit size of burn, local municipal code): See detailed suggestions under this grouping (O).
HR	Prohibit Burning on High Ozone Days	O2: N.J.A.C. 7:27 Subchapter 2: Expand permit conditions to prohibit burning on high ozone days.
HR	Address Commercially Sold and/or Recycled Items	O3: N.J.A.C. 7:27 Subchapter 2: Remove items that can be commercially sold and/or recycled prior to the open burning. Require through rule and permit conditions.
HR	New Restrictions on Issuance of Open Burning Permits	O4: NJAC 7:27 Subchapter 2, Infested plant life (N.J.A.C. 7:27-2.5), Herbaceous plant life and hedgerows (N.J.A.C. 7:27-2.9), Orchard prunings and cullings (N.J.A.C. 7:27-2.10), and Land clearing (N.J.A.C. 7:27-2.11): Impose new restrictions on issuance o
HR	Limit Open Burning to Maximize Agriculture Production	O5: N.J.A.C. 7:27-2.9 Herbaceous plant life and hedgerows and 7:27-2.11 Land clearing: Limit to maximize agriculture production (for defined period of time/prohibition of alternate use for specific period of time) (1) Open burning should not be okay for
HR	Support Alternate Methods to Open Burning	O6: N.J.A.C. 7:27-2.10 Orchard prunings and cullings: (1) Promote recycling, financial incentives for alternate methods. (2) Department of Agriculture should duplicate agricultural Best Manufacturing Practices (BMP) for reuse of material that would otherw
HR	More Restrictions on Issuance of Special Permits	O7: N.J.A.C. 7:27-2.12 Special permit: Restrict by size, when, (e.g., high ozone days, etc.), fuel source: (1) Limit # of special permits or for amount of burning: issued by household, county, region/# of acres in a given time period (Permits already have

Table F2.2: Workgroup Measures Recommended for Further Consideration by NJDEP (250 Measures)

Workgroup	Control Measure Title	Description
HR	Increase Fees for Permits and Enforcement Fines	O8: N.J.A.C. 7:27-2.13 Fees (and fines): (1) Increase fees for permits and enforcement fines as a disincentive for open burning. (2) Correlate the fee to the cost of analysis and processing.
HR	Expand Subchapter 5	O9: Expand Subchapter 5 to address residential emissions of PM2.5 and include retrofit requirements for outdoor wood burning equipment in Subchapter 4(?).
HR	Local Education Campaigns	O10: Education to towns about outdoor wood burning appliances and cover existing zoning regulations (extension/addition to ID# B3)
HR	Regulate Fuel Source for Outdoor Wood Burning Equipment	O11: Regulate fuel source to ensure that only clean, untreated wood is burned in outdoor appliances.
HR	Equipment Standards for Outdoor Wood Burning Equipment	O12: Require equipment standards, such as New Source Performance Standards, for outdoor equipment.
HR	Regional or Federal Standards for Outdoor Wood Boilers	O13: Potential standards for outdoor wood boilers should be developed by a regional agency or by the USEPA.
HR	Allow Local Zoning Ordinances	O14: Allow local zoning ordinance that bans or requires permits for outdoor wood burning in certain densities/types of development or within certain feet from the property line, including educational material that can and cannot be burned and regulatory r
HR	Permit Provisions on Minimum Chimney Height and Distance to Houses/Property Lines	O15: Permits: Include provisions on minimum chimney height and distance to houses/property lines where a new outdoor wood boiler could be sited on a residential property; grandfather units until the sale of the property and regulate the fuel source. Upon
HR	Statewide Ban or Local Control of Outdoor Wood Boilers	O16 a) Ban outdoor wood boilers within New Jersey (new installations) and ban future sales of current units O16 b) Counties to restrict/ban units based on health concerns
HR	Sources not Covered by N.J.A.C. 7:27 Subchapter 2	O17: Regulate sources that are not regulated by Subchapter 2 like residential fire pits
HR	Definition of Open Burning	O18: Expand the scope of subchapter 2 to delete the exemption for a stack or chimney by changing the definition of open burning

Table F2.2: Workgroup Measures Recommended for Further Consideration by NJDEP (250 Measures)

Workgroup	Control Measure Title	Description
HR	Seasonal Restrictions for Wood Burning	B1: Seasonal restrictions for wood burning - Weather / air quality-related restrictions (e.g., high fire-risk restrictions on campfires; drought restrictions on water use)
HR	Statewide Education and Outreach Campaign	B2: Statewide Education and Outreach campaign: Regarding the health and environmental benefits of compliance and/or participation, operation and maintenance to reduce emissions from residential wood burning, including promotion of improved air quality; al
HR	Traditional and Non-traditional Avenues for an Education and Outreach Program	B3: Investigate an Education and Outreach program using traditional (e.g., newspapers - local and major, radio, TV, websites, letters to the editor, fact sheets, Public Service Announcements (PSAs)) and non-traditional avenues and partners: (1) Daycare ce
HR	No Burn Days; Overall Standard for Outdoor Wood Burning Units	B4: Require an overall standard (see ID# O12 and O13) and promote a daily advisory for "no burn days"
HR	Clarify Regulations for Burning	B5: Better define and distinguish in the regulations burning for home heating (e.g., wood stove/fireplace) vs. ornamental burning (e.g., chimeneas) vs. Subchapter 2 burning (e.g., burning by permit)
HR	Recommended Wood Types and Home Heating Fuel Sources	B6: NJDEP to recommend wood types and home heating fuel sources that burn “clean” (e.g., public education).
HR	State Government Enforcement of Residential Wood Smoke Complaints	B7: Enforcement of residential wood smoke nuisance complaints - State Health Department to determine if appropriate materials are being burned (e.g. untreated firewood rather than household or commercial waste material) - no local enforcement
HR	County or Local Government Enforcement of Residential Wood Smoke Complaints	B8: Enforcement of residential wood smoke nuisance complaints by Local or County Health Departments (not the State)
HR	Local Police Enforcement of Residential Wood Smoke Complaints	B9: Enforcement of residential wood smoke nuisance complaints by Local Police Department
HR	Municipal Ordinances for Residential Wood Smoke Complaints	B10: Enforcement of residential wood smoke nuisance complaints - Municipal ordinance (individual)
HR	Statewide Municipal Ordinances for Residential Wood Smoke Complaints	B11: Enforcement of residential wood smoke nuisance complaints - Municipal ordinance (uniform statewide)

Table F2.2: Workgroup Measures Recommended for Further Consideration by NJDEP (250 Measures)

Workgroup	Control Measure Title	Description
HR	Amend the New Jersey Air Pollution Control Act	B12: Amend the New Jersey Air Pollution Control Act to allow for local bans on outdoor wood burning at the municipal level and to provide the authority to require homeowners to upgrade their wood stove or fireplace or outdoor wood burning equipment to res
HR	An All Health Department/All NJDEP Hotline	B13: An all health department/all NJDEP hotline
HR	Interagency Notification and Tracking System	B14: Health departments notify NJDEP regarding complaints and NJDEP will track and evaluate data. The data will be used to support local action under nuisance codes.
HR	Restaurant Retrofits	R1: Retrofit any equipment that currently does not have retrofit technology; custom-make technologies for any equipment is currently available.
HR	Adopt California Standards for Restaurant Emissions	R2: Adopt California standards further investigating regulations and controls applied in California for applicability in New Jersey taking into consideration the regional differences (e.g., # of charbroilers = same impact?) between New Jersey and Southern
HR	Adopt More Encompassing Standards for Restaurant Emissions Compared to California	R3: Go beyond California standards (i.e., include other sources such as fat fryers): Adding controls for existing restaurant equipment should be investigated further taking into account the regional differences between New Jersey and Southern California w
HR	Further investigate New Jersey restaurant emissions	R4: Further investigate New Jersey restaurant emissions to try to improve quantification methods for more accurate air emissions from restaurants based on other types of cooking methods (i.e., taxation data, restaurant data sent to the Department of Healt
HR	Further investigate N.J.A.C. 7:27 - Subchapter 11	R5: Further investigate N.J.A.C. 7:27 - Subchapter 11 – Incinerators: stack heights or other technology contained within the regulation for applicability to restaurant controls.
HR	Further investigate controls for small bread baking restaurants	R6: Further investigate controls for small bread baking restaurants.

Table F2.2: Workgroup Measures Recommended for Further Consideration by NJDEP (250 Measures)

Workgroup	Control Measure Title	Description
HR	Work with NESCAUM to develop a MOU for a regional sulfur in fuel oil standard	Z1: Work with NESCAUM to develop a Memorandum of Understanding (MOU) for a regional sulfur in fuel oil standard that addresses capacity, supply, distribution, and timing concerns of the refineries.
HR	Expand existing rebate programs to additional appliances	Z2: Expand existing rebate programs to additional appliances to get more of the public involved with renewable energy and energy efficiency combined with a general public education and outreach effort
HR	Mandate geothermal or solar energy for new homes and businesses	Z3: Mandate geothermal or solar energy for new homes and businesses and require equipment upgrades for existing homes and businesses.
HR	Require clean energy systems for homes over a certain size	Z4: Require clean energy systems for homes over a certain size
HR	Mandate that builders provide homeowners with clean energy options at the time of construction	Z5: Mandate that builders provide homeowners with clean energy options at the time of construction. Increase marketing, public relations, education, and outreach (e.g., homebuying websites).
HR	Require that a certain percentage of homes are predesigned with geothermal/clean energy options	Z6: Require that a certain percentage of homes are predesigned with geothermal/clean energy options ready for purchase and are available to low-income families. Require that future system changes must be equal to or better than the energy efficient/clean
HR	Extend existing NJBPU programs to incorporate more benefits for builders	Z7: Instead of mandates, extend existing NJBPU programs to incorporate more benefits for builders. Include outreach to builders about the availability of rebates for energy efficiency/clean energy options.
HR	Mandate that clean energy systems be required for new commercial and industrial buildings	Z8: Mandate that clean energy systems be required for new commercial and industrial buildings and include maintenance and upgrade specifications for existing buildings. Require that future system changes must be equal to or better than the energy efficien

Table F2.2: Workgroup Measures Recommended for Further Consideration by NJDEP (250 Measures)

Workgroup	Control Measure Title	Description
HR	Create minimum standards for all appliances	Z9: Mandate a program that meets certain standards that are widely accepted by creating minimum standards for all appliances - extend to appliances not covered under existing codes (i.e., see if other types of appliances could also be given an Energy Star
HR	Restaurant Grease Used as an Alternative Fuel	Restaurant Grease Used as an Alternative Fuel: using restaurant grease, known as “yellow grease,” to make B20 and B100 blends for an alternative diesel fuel.
HR	Lowering the Sulfur Content of Number 4 and 6 Fuel Oil or Requiring Number 6 Fuel	Lowering the Sulfur Content of Number 4 and 6 Fuel Oil or Requiring Number 6 Fuel Oil Users to Change to Number 4 Fuel Oil if Number 2 Fuel Oil Sulfur Content is Lowered
NA	Replacing older outboard boat engines and personal watercraft	Replacing older outboard boat engines and personal watercraft with units that meet the 2006 model year USEPA or CARB emission standards.
NA	Using incentive-based initiatives to accelerate retirement and replacement of high-use older commercial landscape equipment	Using incentive-based initiatives to accelerate retirement and replacement of high-use older commercial landscape equipment with equipment meeting the most stringent emission standards.
NA	Replacing gas-powered residential chainsaws with either newer technology gas-powered or electri-powered ones	Replacing gas-powered residential chainsaws with either newer technology gas-powered or electri-powered ones.
NA	Modify existing state purchasing contract language	Modify existing state purchasing contract language to ensure that equipment purchased using a State contract meet the lowest emissions standards available in the State.
NA	Develop a system that will give special recognition to commercial landscaping companies that engage in practices that align with NJDEP's goals	Develop a system that will give special recognition to commercial landscaping companies that voluntarily use low emitting equipment, minimize engine use and engage in practices that align with NJDEP's goals.
NA	Prohibiting use of landscaping equipment used by the public sector on ozone and/or PM action days	Prohibiting use of landscaping equipment used by the public sector on ozone and/or PM action days. Measure should also apply to contractors on state contracts.

Table F2.2: Workgroup Measures Recommended for Further Consideration by NJDEP (250 Measures)

Workgroup	Control Measure Title	Description
NA	Restrict use of certain landscaping equipment on ozone and/or PM action days.	Restrict use of certain landscaping equipment (leaf blowers, trimmers, etc) on ozone and/or PM action days.
NA	Public education on Best Management Practices to reduce emissions	Public education on Best Management Practices to reduce emissions. Would include developing flyers, posters, and pamphlets for distribution to the public, updating or developing new websites to include Best Management Practices, updating current programs
NA	Public education on alternative, low maintenance landscapes	Public education on alternative, low maintenance landscapes. Purpose is to reduce the amount of lawn mowing by replacing grass with alternative landscapes.
NA	Public education on reducing large lawn areas	Public education on reducing large lawn areas.
NA	Prohibit refueling of a boat at a gas station equipped with stage II vapor recovery vapor-balance type system unless the boat fuel filler neck is compatible with the fuel pump interface.	Prohibit refueling of a boat at a gas station equipped with stage II vapor recovery vapor-balance type system unless the boat fuel filler neck is compatible with the fuel pump interface.
NA	Stage II vapor recovery requirements for aircraft refueling operation	Stage II vapor recovery requirements for aircraft refueling operation.
NA	Require that aircraft pilots properly dispose of fuel samples accumulated during daily pre-flight checks required by the FAA	Require that aircraft pilots properly dispose of fuel samples accumulated during daily pre-flight checks required by the Federal Aviation Administartion (FAA).
NA	Evaluate feasibility of low-emitting forklift program when finalized in California	Evaluate feasibility of low-emitting forklift program when finalized in California.
NA	Residential replacement program for mowers.	Residential replacement program for mowers.
NA	Reduce hours of operating lawn & garden equipment	Reduce hours of operating lawn & garden equipment for commercial businesses on ozone and/or PM action days.
NA	Regulate portable fuel tanks (< 7 gallons) for boats by extending current Portable Fuel Container (PFC) regulation	Regulate portable fuel tanks (< 7 gallons) for boats by extending current Portable Fuel Container (PFC) regulation to cover boat tanks under 7 gallons and replacing old tanks with new low emission ones.

Table F2.2: Workgroup Measures Recommended for Further Consideration by NJDEP (250 Measures)

Workgroup	Control Measure Title	Description
NA	Encourage use of low-emitting portable fuel containers	Encourage use of low-emitting portable fuel containers by prohibiting gas stations from dispensing fuel into old portable fuel containers
NA	Golf courses golf cart electrification	Golf courses golf cart electrification. Equipment turnover to be funded through greens fees, etc.
NA	Retirement program for non-compliant boat engines	Retirement program for non-compliant boat engines.
NA	Restricting sale of used non-compliant equipment	Restricting sale of used non-compliant equipment (This measure will apply to pre emission control equipment only).
SCS	Water injection for simple cycle aeroderivative gas turbines	Water injection for simple cycle aeroderivative gas turbines
SCS	Low Sufur Fuel	Low Sufur Fuel
SCS	Biodiesel - Use of biodiesel blended with fuel oil	Biodiesel - Use of biodiesel blended with fuel oil. Most common and useful is the B20 (20% biodiesel).
SCS	Fuel Switching - Switch from #6 fuel oil to #2 fuel oil	Fuel Switching - Switch from #6 fuel oil to #2 fuel oil
SCS	Operational Flexibility	Operational Flexibility to newer, more efficient, and lower emitting combustion units over older, less efficient, higher emitting units.
SCS	Selective Catalytic Reduction	Selective Catalytic Reduction. For simple cycle turbine, combined cycle turbine, non-coal large boilers, and non-coal small boilers.
SCS	Low NOx burner (LNB)	Low NOx burner (LNB) - For simple cycle turbine, combined cycle turbine, boilers, and others.
SCS	Repowering/replacement for simple cycle turbine	Repowering/replacement for simple cycle turbines
SCS	Wet electric static precipitator for non-coal large boilers	Wet electric static precipitator for non-coal large boilers
SCS	Municipal Waste Combustion	Municipal Waste Combustion
SCS	Eliminate "peak shaving" from emergency generator definition	Eliminate "peak shaving" from emergency generator definition - This applies to new generators
SCS	Flame temperature	Flame temperature - Control flame temperature within a certain range to maximize flame temperature and minimize NOx emissions. This may be tied to other control measures instead of a stand-alone.

Table F2.2: Workgroup Measures Recommended for Further Consideration by NJDEP (250 Measures)

Workgroup	Control Measure Title	Description
SCS	Schedule stack testing outside of ozone season	Stack testing - Schedule stack testing outside of ozone season. Also, don't require stack testing unless the particular operating scenario occurs. For example, if a boiler is permitted to burn natural gas and #2 fuel oil but primarily burns natural gas 95
SCS	Co-fire landfill gas (LFG)	Co-fire landfill gas (LFG) - Give credits for burning landfill gas because this is reducing the amount of methane being emitted.
SCS	Distributed Generators (DG)	Distributed Generators (DG) - Use of cleaner small units to replace the larger, older, dirtier units.
SCS	SCR for emergency generators (DG)	SCR for emergency generators (DG) - Idea was that this could be a method of reducing demand during the hot summer days (high ozone days) from the peaking units. In a way, this is a form of distributed generation.
SCS	Refinery gas (RFG)	Refinery gas (RFG) - Emissions control on combustion of refinery gas. Most refinery gas used as fuel or flaring is currently controlled.
SCS	Light oil emulsification	Light oil emulsification - Water emulsified fuel lowers peak flame temperatures to reduce "thermal NOx".
SCS	SCONOx	SCONOx - A single catalyst oxidizes nitric oxide (NO) to nitrogen dioxide (NO2), & then absorbs NO2 onto its surface, which is coated with potassium carbonate (K2CO3).
SCS	XONON	XONON - A catalyst integrated into turbine combustors limits combustion temperatures & thermal NOx formation.
SCS	Restrict oil usage during ozone action days	Restrict oil usage during ozone action days - This may be combined with other DEP initiatives to increase awareness, education, and communication.
SCS	Selective Non-Catalytic Reduction (SNCR)	Selective Non-Catalytic Reduction (SNCR)
SCS	Additional Retirement of NOx Allowances	Additional Retirement of NOx Allowances - Require the additional retirement of NOx allowances when dirty units are operated during the ozone action days. This is to discourage the use of dirtier units during the ozone action days.
SCS	Synergies between NJBPU Energy Efficiency/Renewable Energy Initiatives and NOx Reductions	Synergies between NJBPU Energy Efficiency/Renewable Energy Initiatives and NOx Reductions

Table F2.2: Workgroup Measures Recommended for Further Consideration by NJDEP (250 Measures)

Workgroup	Control Measure Title	Description
SCS	More stringent compliance criteria with NOx allowances for "excess" NOx emissions	More stringent compliance criteria with NOx allowances for "excess" NOx emissions
SCS	No stack testing when units are not ordinarily running	No stack testing when units are not ordinarily running
SCS	Schedule stack testing outside the ozone season	Schedule stack testing outside the ozone season
SCS	Provide more education and assistance to smaller institutional facilities regarding control measures, retrofits, and upgrades	Provide more education and assistance to smaller institutional facilities, such as hospitals and apartment complexes regarding control measures, retrofits, and upgrades
SCS	Integrated Gasification Combined Cycle (IGCC)	Integrated Gasification Combined Cycle (IGCC) - Process that converts coal into a "syngas" that is used to fuel a combustion turbine to generate electricity. The exhaust heat from the combustion turbine is used to produce steam for a second generation cy
SCS	New Jersey Hydrogen Learning Center (NJH2LC)	New Jersey Hydrogen Learning Center (NJH2LC) - BPU's Office of Clean Energy (OCE) is funding Rutgers to explore next steps in developing a Hydrogen economy in NJ. Rutgers will explore what College and University programs need to be developed to deliver E/
SCS	Lower afterburner exhaust temperature	Lower afterburner exhaust temperature - Reduce the afterburner temperature requirement for sewage sludge incinerators. Demonstrations have shown that both the CO and Non-Methane Hydrocarbon emissions limits can be continuously met with an afterburner tem
VOC	Further regulation of degreasers, primarily through educational and enforcement outreach	Further regulation of degreasers, primarily through educational and enforcement outreach . The workgroup suggests that outreach and enforcement alerts be increased to smaller facilities regarding the MACT standards, conducting efficient degreasing operati

Table F2.2: Workgroup Measures Recommended for Further Consideration by NJDEP (250 Measures)

Workgroup	Control Measure Title	Description
VOC	Control of Consumer Products and AIM aerosol products through the use of reactivity based regulations	Control of Consumer Products and AIM aerosol products through the use of reactivity based regulations *Also see related white paper The Workgroup recommends that NJDEP 1) Consider adoption of California's aerosol coating reactivity based emission standa
VOC	Additional control of Consumer Products	Additional control of Consumer Products The Workgroup also recommends that the State continue to work with the USEPA on programs that would grant SIP credits without the State being required to adopt their own command and control regulations. *Also see
VOC	Accelerate conversion to new Portable Fuel Containers	Accelerate conversion to new Portable Fuel Containers through educational outreach to the public and by considering a phase in mandatory change-out
VOC	Requiring new technology at gasoline stations	Requiring new technology at gasoline stations which reduces vapors, especially at larger vacuum assist stations *Also see related white paper
VOC	Improve gasoline dispensing through a variety of public outreach and education efforts	Improve gasoline dispensing through a variety of public outreach and education efforts The Workgroup felt the need to address gasoline-dispensing issues. The issues discussed included: * "No topping off" by attendants * Improved operations and maintena
VOC	Investigate Marine Ballasting Operations	Investigate Marine Ballasting Operations
VOC	Further capture and control of emissions from bulk tank terminals	Further capture and control of emissions from bulk tank terminals
VOC	Increase capture and destruction efficiency requirement at graphic arts sources	Increase capture and destruction efficiency requirement at graphic arts sources *Also see related white paper
VOC	Change NJAC 7:27-16.7(e) to apply to all facilities that utilize surface coatings in excess of one gallon per day.	Change NJAC 7:27-16.7(e) to apply to all facilities that utilize surface coatings in excess of one gallon per day. [Current regulation applies to facilities that use 2.5 gallons per day] *Also see related white paper

Table F2.2: Workgroup Measures Recommended for Further Consideration by NJDEP (250 Measures)

Workgroup	Control Measure Title	Description
VOC	Control of refinery flares	Control of refinery flares by enhanced control of (currently uncontrolled) predictable gas streams. The Workgroup recommends monitoring and recording of flare events and installation of a gas recovery system.
VOC	Improve controls and capture efficiency of emissions from active and closed landfills	Improve controls and capture efficiency of emissions from active and closed landfills
VOC	Improve NJDEP Emission Inventory	Improve NJDEP Emission Inventory *Also see related white paper
VOC	Change purchasing specifications to require the use of green products for State contracts	Change purchasing specifications to require the use of green products for State contracts (schools, universities, etc.).
VOC	Investigate and control tank cleaning operations at large bulk tank terminals	Investigate and control tank cleaning operations at large bulk tank terminals
VOC	Further reduce emissions from public owned treatment works (POTW)	Further reduce emissions from public owned treatment works (POTW) *Also see related white paper
VOC	Improvements in leak detection and repair	Improvements in leak detection and repair by including previously unregulated sources, and using imaging technology to identify fugitive leaks and sources
VOC	Update Emissions Factor for Graphic Arts Sources	Update Emissions Factor for Graphic Arts Sources *Also see related white paper

Table F2.3: Potential New Jersey RACMs Ranked by Estimated Potential VOC Reduction

Rank	New Jersey Identifier	Measure Name	2009 Emission Benefit (tpd)		
			NJ Statewide Potential VOC Reduction	NJ Statewide Potential NO_x Reduction	NJ Statewide Total VOC + NO_x Benefit
1	4	Adhesives and Sealants (Industrial)	9.2	0	9.2
2	26	Reformulation of Aerosol Coatings to CARB Tier 2 Standards	5.9	0	5.9
3	2	Consumer Products	1.4	0	1.4
4	18	Degreasing Controls	1.1	0	1.1
5	3	Portable Fuel Containers	0.9	0	0.9
6	DOT11	Adoption of Smart Growth Land Use Policies	0.6	1.0	1.6
7	DOT3	Retrofit Construction Equipment	0.4	0	0.4
8	25	Emission Reductions from Composting	0.3	0	0.3
9	89	Graduated Registration Fees for Recreational Boats	0.3	0	0.3
10	DOT9	Impact of Various Transit Projects	0.2	0.1	0.3
11	34	Opacity Cutpoint Revision	0.59	0.17	0.8
12	DOT22	Commercial Vehicle Information Systems and Networks (CVISN).	0.05	1.0	1.1
13	DOT8	Truck idling restrictions	0.04	1.6	1.6
14	DOT17	IdleAire Installations	0.04	1.5	1.5
15	DOT13	Clean Fleets Replacements	0.03	0.06	0.1
16	DOT20	School Bus Retrofit	0.03	0	0.03
17	DOT18	Transit Bus Replacements	0.02	0.4	0.4

Table F2.3: Potential New Jersey RACMs Ranked by Estimated Potential VOC Reduction

Rank	New Jersey Identifier	Measure Name	2009 Emission Benefit (tpd)		
			NJ Statewide Potential VOC Reduction	NJ Statewide Potential NO_x Reduction	NJ Statewide Total VOC + NO_x Benefit
18	DOT23	Implementation of Express E-Z Pass Toll Collection	0.02	0.01	0.03
19	DOT16	School Bus Replacements	0.01	0.3	0.3
20	36	Medium Duty Vehicle Inspection	0.003	0.12	0.1
21	63	Technology to Identify Smoking Vehicles	0.002	0	0.0
22	74	Nonroad Idling	0	0.6	0.6
23	5	Smoke Management Plan	NA	NA	NA
24	20	Tehama County: TCAPCD Rule 4.22: Industrial Use of Organic Solvents	NA	NA	NA
25	32	Onroad Vehicle Idling	NA	NA	NA
26	75	Idling Reduction for Train Engines	NA	NA	NA
27	78	Insure Proper Disposal of Fuel Samples After Daily Aircraft Pre-Flight Checks	NA	NA	NA
28	97	Auxiliary Power Units (APUs) for Locomotives	NA	NA	NA

NA = Data not available

Table F2.4: Potential New Jersey RACMs Ranked by Estimated Potential NOx Reduction

Rank	New Jersey Identifier	Measure Name	2009 Emission Benefit (tpd)		
			NJ Statewide Potential NO_x Reduction	NJ Statewide Potential VOC Reduction	NJ Statewide Total VOC + NO_x Benefit
1	DOT8	Truck idling restrictions	1.6	0.04	1.6
2	DOT17	IdleAire Installations	1.5	0.04	1.5
3	DOT11	Adoption of Smart Growth Land Use Policies	1.0	0.63	1.7
4	DOT22	Commercial Vehicle Information Systems and Networks (CVISN).	1.0	0.05	1.1
5	74	Nonroad Idling	0.6	N/A	0.6
6	DOT18	Transit Bus Replacements	0.4	0.02	0.4
7	DOT16	School Bus Replacements	0.3	0.01	0.3
8	34	Opacity Cutpoint Revision	0.17	0.59	0.8
9	DOT9	Impact of Various Transit Projects	0.1	0.2	0.3
10	36	Medium Duty Vehicle Inspection	0.1	0.003	0.1
11	DOT13	Clean Fleets Replacements	0.06	0.03	0.1
12	DOT23	Implementation of Express E-Z Pass Toll Collection	0.005	0.02	0.03
13	4	Adhesives and Sealants (Industrial)	0	9.2	9.20
14	26	Reformulation of Aerosol Coatings to CARB Tier 2 Standards	0	5.9	5.9
15	2	Consumer Products	0	1.4	1.4
16	18	Degreasing Controls	0	1.1	1.1
17	3	Portable Fuel Containers	0	0.9	0.9

Table F2.4: Potential New Jersey RACMs Ranked by Estimated Potential NOx Reduction

Rank	New Jersey Identifier	Measure Name	2009 Emission Benefit (tpd)		
			NJ Statewide Potential NO_x Reduction	NJ Statewide Potential VOC Reduction	NJ Statewide Total VOC + NO_x Benefit
18	DOT3	Retrofit Construction Equipment	0	0.4	0.4
19	25	Emission Reductions from Composting	0	0.3	0.3
20	89	Graduated Registration Fees for Recreational Boats	0	0.3	0.3
21	DOT20	School Bus Retrofit	0	0.03	0.03
22	63	Technology to Identify Smoking Vehicles	0	0.002	0.002
23	5	Smoke Management Plan	NA	NA	NA
24	20	Tehama County: TCAPCD Rule 4.22: Industrial Use of Organic Solvents	NA	NA	NA
25	32	Onroad Vehicle Idling	NA	NA	NA
26	75	Idling Reduction for Train Engines	NA	N/A	NA
27	78	Insure Proper Disposal of Fuel Samples After Daily Aircraft Pre-Flight Checks	NA	NA	NA
28	97	Auxiliary Power Units (APUs) for Locomotives	NA	NA	NA

NA = Data not available

Table F2.5: Results of RACM Criteria Evaluation

New Jersey Identifier	Measure Name	Emissions Reduced? (Y/N)		Technologically Feasible?	Economically Feasible?	Able to implement by 6/08?	Other Local Considerations?	Advances the Attainment Date?
		NO_x	VOC					
Area								
2	Consumer Products	N	Y	√	√	√	√	X
3	Portable Fuel Containers	N	Y	√	√	√	√	X
4	Adhesives and Sealants (Industrial)	N	Y	√	√	√	√	X
5	Smoke Management Plan	N	Y	√	√	√	√	X
6	Vapor Recovery Systems at Gasoline Service Stations	N	Y	√	X	N/A	N/A	X
7	Architectural and Industrial Maintenance Coatings	N	Y	√	√	X	√	X
8	Natural Gas Combustion for Commercial and Industrial Sectors/Residential Sectors	Y	N	√	√	X	√	X
9	Bakery Controls: SCAQMD Rule 1153, BAAQMD Regulation 8, Rule 42	N	Y	√	X	N/A	N/A	X
10	Pesticide Application	N	Y	√	√	X	N/A	X
11	Pesticide Application Restrictions: Mandatory Episodic	N	Y	√	√	√	X	X
12	Reid Vapor Pressure Reduction Program	Y	Y	X	N/A	√	X	X
13	Restrictions for Consumer Products and Paints during Ozone Season	N	Y	√	√	X	X	X
14	CONS-2 Set New Consumer Products Limits for 2008 – 2010	N	Y	√	N/A	X	N/A	X
15A	Limits on Sale of Auto and Truck Body Refinishing Products	N	Y	√	√	√	X	X
15B	Limit the VOC Content of Auto Body Refinishing Products			√	√	X	√	X
16	Episodic Limits on Asphalt Paving and Traffic Marking Activities	N	Y	√	√	√	X	X
18	Degreasing Controls	N	Y	√	√	√	√	X
19	Alternative Degreasers	N	Y	X	N/A	N/A	N/A	X
20	Tehama County: TCAPCD Rule 4.22: Industrial Use of Organic Solvents	N	Y	√	√	√	√	X
22	Reduce Fuel Permeation Through Gasoline Dispenser Hoses at Marinas	N	Y	X	N/A	X	N/A	X
23	Voluntary Gas Can Replacement Program	N	Y	√	X	X	N/A	X
24	Capture and Control Vapors from Gasoline Cargo Tankers	N	Y	√	N/A	X	N/A	X
25	Emission Reductions from Composting	N	Y	√	√	√	√	X

Table F2.5: Results of RACM Criteria Evaluation

New Jersey Identifier	Measure Name	Emissions Reduced? (Y/N)		Technologically Feasible?	Economically Feasible?	Able to implement by 6/08?	Other Local Considerations?	Advances the Attainment Date?
		NO_x	VOC					
26	Reformulation of Aerosol Coatings to CARB Tier 2 standards	N	Y	√	√	√	√	X
27	Low NOx residential water heaters (TNRCC); Low-emission water heaters F1	Y	N	√	N/A	X	N/A	X
28	Low-Emission Furnaces	Y	N	√	N/A	X	N/A	X
29	Low NO_x Fuel for Stationary Sources			√	N/A	X	N/A	X
Onroad								
DOT6	Fuel tax increase	Y	Y	√	√	√	X	X
DOT7	Implement Pay-as-you-drive vehicle insurance	Y	Y	√	√	√	X	X
DOT8	Truck idling restrictions	Y	Y	√	√	√	√	X
DOT9	Impact of Various Transit Projects	Y	Y	√	√	√	√	X
DOT10	Effect of No Fare Increase	Y	Y	√	X	√	√	X
DOT11	Adoption of Smart Growth Land Use Policies	Y	Y	√	√	√	√	X
DOT12	Transportation Demand Management (TDM)	Y	Y	√	√	√	X	X
DOT13	Clean Fleets Replacements	Y	Y	√	√	√	√	X
DOT15	Electric Vehicles at Transit Stations	Y	Y	√	X	√	√	X
DOT16	School Bus Replacements	Y	Y	√	√	√	√	X
DOT17	IdleAire Installations	Y	Y	√	√	√	√	X
DOT18	Transit Bus Replacements	Y	Y	√	√	√	√	X
DOT19	Heavy Duty Diesel Engine Replacements	Y	Y	√	X	√	√	X
DOT20	School Bus Retrofit	N	Y	√	√	√	√	X
DOT21	Improved Signal Coordination	Y	Y	√	√	√	X	X
DOT22	Commercial Vehicle Information Systems and Networks (CVISN).	Y	Y	√	√	√	√	X
DOT23	Implementation of Express E-Z Pass Toll Collection	Y	Y	√	√	√	√	X
DOT24	Incident Management/Service Patrols	Y	Y	√	X	√	√	X
DOT25	Speed Limit Adherence	Y	Y	√	√	√	X	X
DOT26	Statewide Expansion of Bicycle Facilities	Y	Y	√	X	√	√	X
30	Diesel Engine Chip Reflash	Y	N	√	√	X	√	X
31	Efficient Vehicle Purchase Incentives/Disincentives	Y	Y	√	√	X	N/A	X
32	Onroad Vehicle Idling	Y	N	√	√	√	√	X
33	Early Retirement Program for Heavy Duty Diesel Vehicles	Y	N	√	X	X	N/A	X
34	Opacity Cutpoint Revision	Y	Y	√	√	√	√	X
35	Light Duty Diesel Vehicle Inspection	Y	Y	√	√	X	N/A	X
36	Medium Duty Vehicle Inspection	Y	Y	√	√	√	√	X

Table F2.5: Results of RACM Criteria Evaluation

New Jersey Identifier	Measure Name	Emissions Reduced? (Y/N)		Technologically Feasible?	Economically Feasible?	Able to implement by 6/08?	Other Local Considerations?	Advances the Attainment Date?
		NO_x	VOC					
37	California Reformulated Gasoline and California Diesel (Combined Factor)	Y	Y	√	N/A	N/A	X	X
38	Adopt CARB Diesel Fuel Properties	Y	Y	√	N/A	N/A	X	X
39	Encourage the use of Alternative Fuels	Y	Y	√	X	X	N/A	X
40	Low NOx Onroad Diesel Fuel in Ozone Season	X	X	X	N/A	N/A	X	X
41	Diesel Fuel Reformulation - Higher Cetane Highway Vehicles	Y	Y	X	N/A	N/A	X	X
42	Permit Requirement for Fleets	Y	N	√	N/A	N/A	X	X
43	Develop a Station Car/Low Emission Vehicle Share Program	Y	Y	√	X	N/A	N/A	X
44	Demolish Impounded Vehicles that are High Emitters	Y	Y	√	N/A	N/A	X	X
46	Low Income Vehicle Repair Assistance Program (LIRAP)	Y	Y	√	√	X	N/A	X
47	Require Transit Use for Government Employees	Y	Y	√	√	√	X	X
50	CNG (Compressed Natural Gas) Fueling Stations	Y	Y	√	X	N/A	N/A	X
51	CNG Buses Instead of New Diesel	Y	N	√	X	√	√	X
53	CNG Rental Cars	Y	Y	X	X	X	X	X
54	Clean Fuel Vehicles	Y	Y	√	X	N/A	N/A	X
56	Voluntary: Alternative Fueled Vehicle (AFV) Purchase Program	Y	Y	√	X	X	N/A	X
57	CNG Refuse Haulers	Y	Y	X	X	N/A	N/A	X
58	Set Tighter Emission Standards for New Passenger Vehicles [Low Emission Vehicle III]	Y	Y	√	N/A	N/A	X	X
59	Neighborhood Electric Vehicle (NEV) Program	Y	Y	√	√	N/A	X	X
60	Extended Vehicle Idling	N	Y	√	N/A	N/A	X	X
61	Mandatory Emissions Control Equipment Replacement	Y	Y	√	X	X	X	X
63	Technology to Identify Smoking Vehicles	N	Y	√	√	√	√	X
64	Vehicle Retirement Incentives	Y	Y	√	X	X	N/A	X
65	HDDV Retrofit	Y	N	√	X	N/A	N/A	X
66	Automated Speed Enforcement	Y	Y	√	√	√	X	X
67	Fleet Modernization	Y	Y	√	X	X	√	X
68	Reduce Emissions From Heavy-Duty Vehicles Serving Transportation Facilities	Y	Y	√	X	X	X	X
69	HDD Truck and Bus Retrofits	Y	Y	√	X	X	N/A	X

Table F2.5: Results of RACM Criteria Evaluation

New Jersey Identifier	Measure Name	Emissions Reduced? (Y/N)		Technologically Feasible?	Economically Feasible?	Able to implement by 6/08?	Other Local Considerations?	Advances the Attainment Date?
		NO_x	VOC					
70	Retrofit Heavy Duty Gasoline Trucks	Y	Y	X	N/A	X	N/A	X
71	Install New Engines in Heavy Duty Gasoline Trucks	Y	Y	√	X	X	X	X
73	Diesel Additive Standards	Y	N	√	N/A	X	N/A	X
NonRoad								
DOT1	Limit use of Recreational Watercraft	Y	Y	√	√	√	X	X
DOT3	Retrofit Construction Equipment	N	Y	√	√	√	√	X
DOT4	Retrofit Switch Yard Locomotives	Y	N	√	√	X	√	X
DOT5	Construction Equipment Idling Restrictions	Y	Y	√	√	X	√	X
74	Nonroad Idling	Y	N	√	√	√	√	X
75	Idling Reduction for Train Engines	Y	N	√	√	√	√	X
76	Leveraging Airport Leases to Achieve Reductions from Ground Support Equipment	Y	Y	√	N/A	X	N/A	X
77A	Increasing the Rate of Small Engine Turnovers through the Use of Incentive-Based Initiatives	N	Y	√	√	X	√	X
78	Insure Proper Disposal of Fuel Samples After Daily Aircraft Pre-Flight Checks	N	Y	√	√	√	√	X
79	Stage II Vapor Recovery Compatibility for Boat Fueling and Marina Gasoline Fueling Facilities	N	Y	X	N/A	X	N/A	X
80	Use Restrictions for 2-Stroke Engines	N	Y	√	N/A	N/A	X	X
81	Capture of Stationary Locomotive Exhaust	Y	Y	X	N/A	N/A	N/A	X
82	Use Restrictions for Non-Commercial Lawn Equipment	Y	Y	√	√	√	X	X
83	Preference for Low-Emissions Lawn & Garden Equipment	Y	Y	√	√	X	N/A	X
84	Strengthen Lawn Equipment Regulations	Y	Y	√	N/A	X	X	X
85	Providing Electric Power to Ships (Cold Ironing) at the Ports (Shoreside Power)	Y	Y	√	N/A	X	N/A	X
86	Accelerated Retirement Program for Pleasurecraft	Y	Y	√	√	X	N/A	X
87	Marine Vessel Buy Back Program	Y	Y	√	X	X	N/A	X
88	Stringent Recreational Marine Engine Standards	Y	Y	√	N/A	X	N/A	X
89	Graduated Registration Fees for Recreational Boats	N	Y	√	√	√	√	X

Table F2.5: Results of RACM Criteria Evaluation

New Jersey Identifier	Measure Name	Emissions Reduced? (Y/N)		Technologically Feasible?	Economically Feasible?	Able to implement by 6/08?	Other Local Considerations?	Advances the Attainment Date?
		NO_x	VOC					
90	Emission Fee Program for Port-Related Mobile Sources	Y	Y	√	X	X	X	X
91	Incentives for Cleaner Off-Road Vehicles and Equipment	Y	Y	√	X	X	N/A	X
92	Portable Engine and Generator Emissions Reduction Program	Y	Y	√	X	√	N/A	X
93	Off-Road Gas/LPG Engines	N	Y	N/A	N/A	N/A	X	X
94	Off-Road Gas/LPG Engines	Y	Y	N/A	N/A	N/A	X	X
95	Off-Road Gas/LPG Engines	Y	Y	N/A	N/A	N/A	X	X
96	Off-Road Gas Engines	Y	Y	X	N/A	X	X	X
97	Auxiliary Power Units (APUs) for Locomotives	Y	N	√	√	√	√	X
99	Locomotive Emission Reduction	Y	Y	√	√	X	√	X
100	Lawnmower Exchange Program	Y	Y	√	√	X	√	X
101	Lawn and Garden Equipment Buyback and Scrappage Programs	Y	Y	√	√	X	√	X
103	Engine Standards for Diesel Powered Engines	Y	N	N/A	N/A	X	X	X
104	Engine Modernization Incentives	Y	Y	√	X	X	N/A	X
105	Engine Standards for Large Gasoline Powered Engines	Y	Y	N/A	N/A	X	X	X
106	Engine Standards for Locomotive Engines	Y	Y	N/A	N/A	X	X	X
107	Marine Biodiesel Fueling Station	N	Y	√	X	X	N/A	X
108	Low Emissions Agricultural Equipment	Y	Y	√	N/A	X	N/A	X
109	Convert Diesel powered Irrigation pumps	Y	Y	√	X	X	N/A	X
110	Low Emission Diesel Fuel for Nonroad Equipment	Y	Y	√	N/A	X	X	X
111	Low-Emissions Light Commercial Equipment	Y	Y	√	N/A	X	N/A	X
112	Preference for Low-Emission Light Commercial Equipment	Y	Y	√	√	X	N/A	X
113	Fleet Rules for Construction Equipment	Y	Y	X	N/A	X	N/A	X
114	Preference for Low-Emission Industrial Equipment	Y	Y	√	√	X	N/A	X

KEY:

√ Measure Passes This Criterion
X Measure Fails This Criterion

Table F2.5: Results of RACM Criteria Evaluation

New Jersey Identifier	Measure Name	Emissions Reduced? (Y/N)		Technologically Feasible?	Economically Feasible?	Able to implement by 6/08?	Other Local Considerations?	Advances the Attainment Date?
		NO_x	VOC					
N/A	This Criterion is not Applicable Because the Measure Fails Another Criterion							