State of California

AIR RESOURCES BOARD

Final Statement of Reasons for Rulemaking, Including Summary of Comments and Agency Responses

PUBLIC HEARING TO CONSIDER THE ADOPTION OF PROPOSED DIESEL PARTICULATE MATTER CONTROL MEASURE FOR ON-ROAD HEAVY-DUTY DIESEL-FUELED RESIDENTIAL AND COMMERCIAL SOLID WASTE COLLECTION VEHICLES

May 7, 2004

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Public Hearing Date: September 25, 2003
Agenda Item No.: 03-7-2

I. INTRODUCTION

This rulemaking was initiated by the publication on June 6, 2003, of a notice of public hearing to consider the adoption of the proposed regulation. The Staff Report: Initial Statement of Reasons for Rulemaking ("Staff Report"), entitled “Proposed Diesel Particulate Matter Control Measure for On-road Heavy-duty Residential and Commercial Solid Waste Collection Vehicles,” and a Technical Support Document were also released on June 6, 2003, and made available to the public upon request as required by Government Code § 11346.2. On August 8, 2003, staff issued a Supplemental Report with corrected and additional information to be included in the Staff Report. These documents, including the June 6, 2003 Notice of Public Hearing, are all incorporated herein by reference.

At the public hearing held on September 25, 2003, the Board considered the proposed regulation and received written and oral comments on the regulatory proposal. Staff also proposed several modifications at the hearing. Staff proposed changes including the removal of joint responsibility for compliance by municipalities, leaving vehicle owners as solely responsible for compliance, a corresponding reduction in reporting requirements by municipalities, a split of one compliance phase-in group, tighter requirements for owners to ensure all applicable vehicles are implemented before an owner can apply for a compliance extension and that 100 percent of vehicles are in compliance by the end of the phase-in period.

At the conclusion of the hearing, the Board approved the regulatory language with the modifications described. Further, in accordance with section 11346.8 of the Government Code, the Board in Resolution 03-21 directed the Executive Officer to make the text of the modified amendments available to the public for a supplemental written comment period of 15 days. The Executive Officer was then directed to adopt the Procedure with additional modifications and clarifications as may be appropriate in light of the comments received.

BACKGROUND. In 1998, the Air Resources Board (ARB or the "Board") identified diesel particulate matter (PM) as a toxic air contaminant following a ten-year review process. A toxic air contaminant is an air pollutant which may cause or contribute to an increase in mortality or serious illness, or which may pose a present or potential hazard to human health. Many toxic air contaminants are volatile and are found primarily in the atmosphere as gases, but some are atmospheric particles or liquid droplets. Diesel PM is of special concern, because it is prevalent and can be distributed over large regions, thus leading to widespread public exposure.

The amount of diesel PM emitted into California's air and its significant potential cancer risk makes it a high priority toxic air contaminant. To address this significant health concern, the ARB adopted the Risk Reduction Plan to Reduce Particulate Matter from Diesel-fueled Engines and Vehicles in 2000. This plan outlines control measures to reduce diesel PM from new and in-use diesel-fueled engines. A major strategy in the plan involves the use of diesel emission control strategies with existing diesel vehicles and equipment in on-road, off-road, and stationary applications.

The proposed regulation mandates the use of these diesel emission control strategies along with other best available control technologies (BACT) in on-road heavy-duty diesel residential and commercial solid waste collection vehicles (collection vehicles). The measure requires reduction of diesel PM emissions from these vehicles through the application of BACT, by specified implementation dates, phased-in by engine model year groups over seven years. The proposed regulation supports the previously adopted Diesel Risk Reduction Plan, which established a goal of reducing diesel PM by 75 percent by the year 2010.

The text of the proposed modifications to the originally proposed amendments to the regulations was made available for a supplemental 15-day comment period ending March 12, 2004, by issuance of a Notice of Public Availability of Modified Text (15-day notice or Notice). This Notice and its two attachments were mailed on February 26, 2004, to all parties identified in section 44(a), title 1, California Code of Regulations (CCR), along with other interested parties. The 15-day notice and attachments were also posted February 26, 2004, on the ARB's Internet site for rulemaking. Resolution 03-21 was appended to the 15-day notice as Attachment 1. Attachment 2 contained the

proposed title 13, CCR regulatory text showing the modifications proposed with the Notice.

A complete description of the proposed regulatory action and its rationale are contained in the Staff Report and the information made available in the supplemental Notice of Modified Text. These documents and the June 6, 2003, Notice are incorporated herein by reference. This Final Statement of Reasons updates the Staff Report by identifying and explaining the modifications made to the text of the originally proposed regulatory language. This Final Statement of Reasons also contains a summary of the comments the Board received on the proposed regulatory action during the formal rulemaking process and ARB's responses to those comments.

The proposed regulations will appear in Title 13, CCR, sections 2020 to 2021.2.

Economic and Fiscal Impacts. In developing the proposed regulation, ARB staff evaluated the potential economic impacts on private persons and businesses. The Board has determined that the proposed regulatory action will create costs, as defined in Government Code section 11346.5(a)(5) and (6), to state and local agencies whether or not reimbursable by the state pursuant to part 7 (commencing with section 17500), division 4, title 2 of the Government Code.

The Board's Executive Officer has also determined that pursuant to Government Code section 11346.5 (a)(3)(B) the regulations will affect small business. Therefore, in accord with Government Code section 11346.9 (a)(5), alternatives that would lessen the adverse economic impact on small businesses were considered. These alternatives included not including them in the scope of the regulation or delaying implementation for these businesses. To not include these businesses in the scope of the regulation would have meant over 60 percent of the businesses would not have been covered by this regulation. This reduction in scope was unacceptable as the vehicles owned by these companies are many of the oldest (1960 to 1988 model years) and highest diesel PM emitting vehicles. Staff instead provided a delay in implementation by two years for companies with 4 to 14 trucks, and longer delays for companies with fewer than four trucks.

The Board has also determined that the proposed regulatory action will not have a significant adverse economic impact on businesses, including the ability of California businesses to compete with businesses in other states, except as noted for the following reason. While there are significant costs for implementation, companies will eventually be able to recover those costs by increasing the fees charged for service where appropriate, therefore, the regulation is not expected to have a significant adverse impact on businesses. Because of the scope of the regulation, we did not expect to impact interstate recycling vehicles, and other companies are not expected to enter the California waste collection market due to the distance factor. Therefore,

California's ability to compete with businesses in other states is not expected to be adversely impacted.

Finally, the Board determined that this regulatory action will create costs, as defined in Government Code section 11346.5 (a)(6), to state and local agencies whether or not reimbursable by the State pursuant to Part 7 (commencing with section 17500, Division 4, Title 2 of the Government Code). These costs were associated with bringing the collection vehicles owned by these agencies into compliance. No costs were associated with renegotiating contracts, because this responsibility was assumed to be part of the agency representative's normal job duties.

Consideration of Alternatives. For reasons set forth in the Initial Statement of Reasons, in staff's comments and responses at the hearing, and in this Final Statement of Reasons, the Board determined no alternative considered by the agency, or that has otherwise been identified and brought to the attention of the agency, would be more effective in carrying out the purpose for which the regulatory action was proposed or would be as effective or less burdensome to affected private persons than the action taken by the Board.

The Board has determined that this regulatory action will result in a mandate to local agencies that own collection vehicles. However, the Board finds these costs are not reimbursable pursuant to Part 7 (commencing with section 17500), Division 4, Title 2 of the Government Code, because they can be recuperated through passing on the cost to waste collection customers.

The Board has further determined that no alternative considered by the agency would be more effective in carrying out the purpose for which the regulatory action was proposed or would be as effective and less burdensome to affected private persons than the action taken by the Board.

II. SUMMARY OF COMMENTS AND AGENCY RESPONSES

At the September 25, 2003, hearing, oral testimony was received from:

Mark Leary, California Integrated Waste Management Board (CIWMB)
Yvonne Hunter, League of California Cities (LCC) and California State Association of Counties (CSAC)*
Daniel Meyers, City of Los Angeles (LA City)*
Mary M. Pitto, Regional Council of Rural Counties (RCRC)
Harry Schrauth, City of Oakland (Oakland)
Michael Mohajer, Los Angeles County Solid Waste Management Committee (LACSWMC)

Yvette Agredano, Solid Waste Association of North America (SWANA)*
Sam Mendoza, City of San Diego (San Diego)*
Frank Caponi, Los Angeles County Sanitation Districts (LACoSD)
Jed Mandel, Engine Manufacturers Association (EMA)*
Emily Brown, INFORM*
David Huerta, City of Fremont (Fremont)
Graham Noyes, World Energy*
Stephanie Williams, California Trucking Association (CTA)*
Tim Ward, California Independent Oil Marketing Association (CIOMA)
John Kelly Astor, California Refuse Removal Council (CRRC)*
Bill Dobert, Specialty Solid Waste Recovery Systems (SSW)
Greg Sanders, Varner Brothers, Inc. (Varner)
Jack Fiori, California Waste Recovery Systems (CWRC)
Andy Rose, citizen (ASRose)*
Mark Figone, East Bay Sanitary Company (EBSC)*
Dennis Shuler, Gilton Solid Waste Management (GSWM)*
Shelia Edwards, Marin Sanitary Service (MSS)
Kevin Mullins, Mill Valley Refuse Service (MVRS)
Louie Pellegrini, Peninsula Sanitary Service (PSS)
Sheryl Granzella, Richmond Sanitary Service (RSS)
Ronald Proto, R.J. Proto Consulting Group, Inc. (RJPCG)*
Doug Button, South San Francisco Scavenger Co., Inc. (SSFS)
David Achiro, Tahoe Truckee Sierra Disposal Co., Inc. (TTSD)
Harry Miller, Tracy Delta Solid Waste Management Co. (TDSWM)
Alan Marchant, Turlock Scavenger Company (TSC)*
John McNamara, CRRC
Richard Caglia, Industrial Waste Salvage (IWS)
Sean Edgar, CRRC*
Paul Wuebben, South Coast Air Quality Management District (SCAQMD)
Ruben Martinez, Diesel Air Fleet Service (DAFS)
Dr. Joseph Kubsh, Manufacturers of Emission Controls Association (MECA)*
Scott Smithline, Californians Against Waste (CAW)
Karen Wilson, Sacramento Metropolitan AQMD (SMAQMD)
Todd Campbell, City of Burbank and Coalition for Clean Air (Burbank, CCA)*
Bonnie Holmes-Gen, American Lung Association of California (ALA)*
Chuck Helget, Allied Waste Industries (Allied)*
Tom Addison, Bay Area Air Quality Management District (BAAQMD)
Patricia Monahan, Union of Concerned Scientists (UCS)*
Diane Bailey, Natural Resources Defense Council (NRDC)
S. Kent Stoddard, Waste Management (WM)*
Wendel Smith, Global Fuel (Global)

Those names listed above with asterisks also submitted written comments. These written submissions were received during the 45-day comment period. About half of the

oral testimony was neutral or supported the proposal. In general, the representatives of environmental groups and government agencies supported the regulation while the California Refuse Removal Council and its members opposed the regulation. Waste Management and Allied Waste Industries both supported the regulation. Comments to the proposal are addressed below.

Additional written comments were received by the hearing date from the following:

Richard L. Hays, San Diego
Michael Repetto, TDSWM
Gordon W. Beers, Palo Verde Valley Disposal Service (PVVDS)
Shawn Guttersen, Sacramento Recycling & Transfer Station (SRTS)
Richard Gilton, GSWM
Patricia Garbarino, MSS
Thomas J. Vogt, Taormina Industries (Taormina)
James E. Harrison, E.J. Harrison & Sons, Inc. (EJH&S)
Heather Lea Merenda, City of Santa Clarita (Santa Clarita)
Norm Covell, SMAQMD
Dana Wilson, Marin Hazardous and Solid Waste Joint Powers Authority (Marin JPA)
Karen Keene, CSAC
Jim Hemminger, RCRC
Paul Yoder, SWANA
Patricia Mahan & Jennifer Sparacino, City of Santa Clara (Santa Clara)
Scott Hughes, National Biodiesel Board (NBB)
Tom Russ, City of Corning (Corning)
Brooke A. Levin, Oakland
Morris B. Vance, City of Vista (Vista)
Kevin Barnes, Bakersfield Public Works Department (Bakersfield)
Shari Afshari, County of Los Angeles Department of Public Works (LA Co)
Valerie Matzger, City of Piedmont (Piedmont)
Fred W. Mackenbach, City of Palos Verdes Estates (PV Estates)
Douglas Stern, City of Rancho Palos Verdes (Rancho PV)
David Vaccarezza, CWRS
Ricky R. Ross, InterMountain Disposal, Inc. (IMD)
Rand Romig, Advance Disposal Co. & Recycling Center (ADCRC)
Margaret J. Rands, County of Santa Clara (Santa Clara Co)
Mike Sedell, City of Simi Valley (Simi Valley)
George Gitschel, Rose Waste Systems, Inc. (RWS)
Al Spector, Shafer Systems International, Inc. (SSI)
Michael Villegas, Ventura County Air Pollution Control District (VCAPCD)
Thomas W. Wilson, Orange County Board of Supervisors (OC)
Robb Daer, George Peterson Insurance Agency (GPIA)
Tim Robinson, Bay-Con
John W. Sanbuett, Western Trailers (WT)

Margaret Clark, LACSWMC
Del McClain, Snider Leasing Corp. (SLC)
Mark Thornton, County of Tuolomne, Board of Supervisors (Tuolomne Co)
William Norton, BAAQMD
David L. Jones, San Joaquin Valley Air Pollution Control District (SJVAPCD)
Jose Esteves, City of Milpitas (Milpitas)
Charles Bacchi, California Chamber of Commerce (CCC)
Steve T. Wallauch, Lynn M. Suter & Associates, representing City of Berkeley (Berkeley)
Mark K. Lindley, City of Moorpark (Moorpark)
Mark Murray, CAW
Gail Ruderman Feuer, NRDC
Kathryn Phillips, Center for Energy Efficiency and Renewable Technologies (CEERT)
V. John White, Sierra Club California (Sierra Club)
Tim McRae, Planning and Conservation League (PCL)
Kate M. Larsen, Environmental Defense (ED)
Robert W. Lucas, Lucas Advocates for California Council for Environmental and Economic Balance (CCEEB)
Timothy French, Neal, Gerber & Eisenberg, LLP, for EMA
Dale McKinnon, MECA
Maureen Kirk, City of Chico (Chico)
Bradley Edgar, Cleaire Advance Emission Controls (Cleaire)
Donald Nelson, City of Thousand Oaks (Thousand Oaks)
Blanca Alvarado, County of Santa Clara Board of Supervisors (Santa Clara BoS)
Mary K. Lindley, City of Moorpark (Moorpark)
Barry Wallerstein, SCAQMD
Rick Bishop, Western Riverside Council of Governments (WRCOG)

Set forth below is a summary of each comment, objection or recommendation made regarding the specific regulatory action proposed, together with an explanation of how the proposed action was changed to accommodate each objection or recommendation, or of the reasons for making no change. The comments have been grouped by topic wherever possible. Comments not involving objections or recommendations specifically directed towards the rulemaking or to the procedures followed by ARB in this rulemaking are not summarized below. Additionally, any other referenced documents are not summarized below.

A. Authority

1. **Comment** (CTA, EMA): The proposed rule does not comply with federal law in that the mandatory retrofit or repower provisions will still apply to engines that are "new" as the term is applied pursuant to the federal CAA, therefore ARB must provide sufficient lead time and stability for new engine standards and it must

obtain a waiver of federal preemption. ARB cannot regulate non-new engines until their first rebuild.

Agency Response: Staff disagrees with this comment. Under federal law, states are generally preempted from adopting standards for new motor vehicles and new motor vehicle engines. California enjoys the ability, if needed, to get a waiver from that preemption. However, in this case, the regulations affect in-use, non-new vehicles. There is no federal preemption that would affect ARB's ability to regulate in this area.

2. **Comment** (CTA, EMA): The proposed rule is contrary to state law in direct contravention of Health & Safety Code (HS&C) section 43600 and is not a valid exercise of ARB's statutory authority to adopt air toxic control measures (ATCMs), because HS&C 43600 does not provide authority to adopt an ATCM mandating the retrofit of used motor vehicles.

   Agency Response: Staff disagrees with this comment. State law gives ARB ample authority to address the problem of diesel particulate matter. In the statutory provisions for addressing toxic air contaminants such as diesel particulate matter, there is specific authority to apply best available control technology to motor vehicles and motor vehicle engines.

   Health & Safety Code sections 39666 and 39667, respectively, direct the Board to adopt ATCMs for non-vehicular and vehicular sources. For both vehicular and non-vehicular in-use sources, sections 39666 and 39667 specifically direct the ARB to reduce emissions to the lowest level achievable through application of the best available control technology or a more effective control method, unless the Board determines that an alternative level of emission reduction is adequate or necessary to prevent an endangerment of public health. Best available control technology for non-vehicular sources has typically included retrofit technology. In accord, section 39667 suggests that control measures for vehicular sources may include, but are not limited to, the modification, removal, or substitution of vehicle fuel, vehicle fuel components, fuel additives, or the required installation of vehicular control measures (retrofits).

3. **Comment** (CTA, EMA): The Board should replace the rule with a voluntary incentive program, which the commenters would support.

   Agency Response: Staff disagrees with this comment. While appealing for many reasons, voluntary incentive programs have significant problems related to issues of equity and funding. California would have to significantly raise fees or taxes to fund such an incentive program. While California voters are generally supportive of incentive programs, it is unlikely they would support one of this size, which favors only one industry sector. In addition, voluntary programs do

not provide statewide benefits, and some communities would see no air quality improvement while others would. A mandated program ensures that all Californians benefit. Finally, California is a large state, with a large and growing population. Our air quality is the worst in the nation, and we are required by law to reduce emissions to achieve clean air goals by 2010. Under the Clean Air Act, states are required to adopt Implementation Plans to achieve documented reductions by certain dates. Most California air districts are out of compliance with clean air goals for ozone and particulate matter. This rule, and others like it, are included in California's Implementation Plan for ozone and will be included in the particulate matter Implementation Plan. Thus, a mandatory program is both essential and justified by the magnitude of the benefits that will accrue to all Californians.

B. Scope

4. **Comment** (LA City): The regulation language is unclear with respect to a municipality that franchises, contracts, or permits but does not regulate rates.

   Agency Response: The revised regulation clarifies the definition of "contract" to specify that it is an agreement between a municipality and owner in which the contractor's compensation, or a formula for determining compensation, is specified. Section 2021.1 then applies only to municipalities that have contracts for solid waste collection. Thus, section 2021.1 does not apply to a municipality that does not regulate rates.

5. **Comment** (LA City): Municipalities should not be responsible for fleets operating outside their jurisdiction because waste haulers operate over municipality boundaries.

   Agency Response: Staff did not intend to make municipalities responsible for fleets that operate outside their jurisdiction. In the revision of the rule, staff has added a phrase "in the jurisdiction that houses collection vehicles" (section 2021.1 (b)(1)(B)) that clarifies ARB's intent.

C. Applicability to Municipalities that Contract for Services

6. **Comment** (Bakersfield, Chico, CSAC, LA City, LA Co, LACSWMC, LCC, Marin JPA, Milpitas, Moorpark, Oakland, Piedmont, OC, PVEstates, RanchoPV, RCRC, Santa Clara BOS, Santa Clara, Santa Clarita, SWANA, Thousand Oaks, Tuolomne Co, VCAPCD, Vista): Local agencies should not be responsible for enforcement of this rule. This places an unreasonable burden on local governments, which are not equipped for enforcement; ARB should be responsible for enforcement.

(Corning, Oakland, OC, Simi Valley): Municipalities should not have joint responsibility with private companies for implementation of this rule.

(CSAC, Fremont, LA City, LACoSD, LACSWMC, LCC, Oakland, RCRC): Commenters support the proposal that removes municipalities from joint responsibility with private haulers for implementation.

(WM): The current version of the rule and the revisions that staff is recommending to address the opposition of local government will severely undermine the air quality benefits of the rule and may create an extraordinary economic burden on private haulers.

Agency Response: After receiving much public comment on the concept in the rule to place joint responsibility for compliance on the contractor, the Board determined that joint responsibility was not appropriate and directed the staff to remove municipalities that contract for collection services from joint responsibility. Staff determined, however, that municipalities should provide ARB with annual reports to assist in ensuring compliance by their contractors.

Staff recommended making this change to the rule after consultation with municipality stakeholders regarding their ability to monitor compliance by contracted waste haulers. Municipalities traditionally do not conduct inspections of vehicles owned by their contract haulers, nor do they hire engineers or enforcement staff to monitor their waste hauling contracts. ARB's hypothesis that placing joint responsibility for the rule on municipalities would increase the effectiveness of the rule was probably incorrect because such joint responsibility would likely not result in greater compliance on account of city or county inspections of collection vehicles. Staff therefore disagrees with the commenter (WM) that states that this change will "severely undermine" air quality benefits. ARB has always assumed that its inspectors will conduct compliance inspections. Removing municipalities from joint compliance responsibility should not undermine the benefits of this rule.

7. **Comment** (CSAC, LA City, LCC, Milpitas, PV Estates, RCRC, Rancho PV, Santa Clara BOS, Santa Clara, Santa Clarita, SWANA, Tuolomne Co, VCAPCD): Instead of municipalities bearing responsibility for enforcement, waste haulers should develop compliance plans and submit them to ARB for approval, after which ARB could provide the approved plans to the municipalities.

   Agency Response: Staff disagrees with this comment. In developing this rule, staff considered asking companies and municipalities that operate collection services to develop compliance plans and submit annual reports for their fleets. Staff rejected this concept because we determined that the costs to develop and submit a plan and annual reports, along with the cost to ARB to review and

evaluate these plans and annual reports, is unnecessary and would not enhance compliance or enforcement. The waste collection industry also was very critical of the initial draft rule, which proposed annual reports. The rule staff has instead developed relies on vehicle-by-vehicle compliance and record keeping, and allows ARB to use its existing enforcement procedures to monitor and enforce compliance.

8. **Comment** (Chico, CSAC, LA City, LA Co, LACoSD, LACSWMC, LCC, Milpitas, Oakland, PV Estates, Rancho PV, RCRC, Santa Clara BOS, Santa Clara, Santa Clarita, SWANA, SWMC LA, Thousand Oaks, Tuolomne Co, VCAPCD, Vista): Local agencies should not be subject to substantial civil penalties for non-compliance. Local agencies would be relying on information provided to them, which might not be correct.

   Agency Response: Staff agrees in part with this comment and has modified the regulation to only require municipalities to provide information to ARB that they have already, including the name and contact information of any contracted haulers. Under these modifications, municipalities would not be required to obtain information from their contractors to provide to ARB, which might be incorrect. In addition, municipalities are not required to provide information on haulers operating by permits or other agreements that do not meet the definition of a "contract." More broadly, however, if a local agency refused to comply with the regulation, ARB is correct in providing for civil penalties for non-compliance and will proceed to enforcement.

9. **Comment** (LACoSC, LACSWMC, SWANA): ARB should not require municipalities to provide reports regarding contractors; reports should come from local enforcement agencies under the authority of the Public Resources Code section 40130 and California Code of Regulations section 71332.

   Agency Response: Staff disagrees with this comment. ARB looked at the possibility of making local enforcement agencies the responsible party for these reports, but was concerned that, as a group, they had not been informed of the rule nor were they able to participate in the rulemaking process. In addition, the specified section of the Public Resources Code section applies only to the California Integrated Waste Management and not to the Air Resources Board. With the modifications made to the rule, staff believes that the required reporting is manageable and will not add significantly to the workload or costs of local agencies that contract for solid waste collection service.

10. **Comment** (Thousand Oaks): Reports should come from the waste hauler and not the municipalities. ARB should work with other reporting agencies, such as the California Integrated Waste Management Board, to ensure all reporting standards are consistent statewide.

Agency Response: Staff disagrees with this comment. The purpose of requiring municipalities to provide reports is to obtain information about contracted haulers from another source than the haulers themselves. ARB has specific needs for data under this rule, thus while staff will strive to coordinate reporting with the CIWMB, it simply may not be feasible to have consistent statewide reporting.

11. **Comment** (RCRC): Commenter supports language that would only require local governments to provide ARB with information about solid waste contractors or franchises over which they have rate-setting authority.

    Agency Response: Staff agrees and has made changes to the rule consistent with this comment, in particular by changing the definitions of “contract” and “contractor.”

12. **Comment** (Oakland, Santa Clarita): ARB should not require cities to approve fee increases for the industry to comply with this rule; it is inappropriate for ARB to assume compliance costs should be passed on to consumer through contracts. Contract negotiations are between cities and waste haulers.

    Agency Response: Staff agrees that ARB should not require cities to approve fee increases and has not adopted a rule that requires this. The Board, in Resolution 03-21, encourages municipalities and service providers to work together to amend or renegotiate contracts as needed so that service fees reflect the waste hauler's costs for compliance with these regulations.

13. **Comment** (ASRose, CTA, MVRS): Municipalities should be responsible for compliance with this rule, not the vehicle owner.

    Agency Response: Staff disagrees with this comment. Staff believes that the most appropriate entity for regulation is the vehicle owner, who has control over purchasing and maintenance decisions regarding vehicles and engines. The Board directed staff to change the proposed rule from one that placed joint responsibility for compliance on both the municipality and vehicle owner to one that only places responsibility for compliance on the vehicle owner, after considering testimony from witnesses at the September 25, 2003, Board hearing.

D. Best Available Control Technology Options

14. **Comment** (NBB, World Energy): ARB should allow another compliance option - A company should be allowed to reduce the same amount of particulate matter (PM) as they would under the current control measure through the use of alternative diesel fuel strategies that have successfully completed ARB's "Interim

Procedure for Certification of Emission Reductions for Alternative Diesel Fuels." This will allow biodiesel to be used now.

(Allied, Berkeley): ARB should allow companies to use biodiesel as a compliance option.

Agency Response: Staff disagrees with the concept of a separate compliance option for companies using biodiesel; on the other hand, biodiesel is not prohibited by this regulation, but it is also not a DECS until it receives verification under the verification procedure [title 13, California Code of Regulations (CCR), section 2700 et seq.]. A company can use biodiesel in its fleets, so long as applicable local, state, and federal agencies approve it as a fuel. Biodiesel reduces engine exhaust PM emissions from seven percent (20% biodiesel:80% diesel) to 30 percent (100% biodiesel), and the verification procedure requires a minimum of 25 percent reduction for a technology to be verified for use by this rule. Use of 100 percent biodiesel, however, increases NOx emissions by 20 percent, according to the U.S. Environmental Protection Agency (**http://www.epa.gov/otaq/retrofit/techlist-biodiesel.htm)**, which is contrary to California's need to reduce NOx emissions. The ARB's goal is to reduce diesel particulate matter emissions by 75 percent by 2010, thus even if all vehicles in California used biodiesel its use would not achieve the goal. Finally, the NBB and World Energy are proposing a fleet rule concept, which staff considered and rejected as a more costly and less efficient rule structure than the vehicle-by-vehicle approach in this rule.

15. **Comment** (INFORM): To support natural gas, ARB should eliminate the best available control technology (BACT) option of use of the highest level diesel emission control strategy (DECS) verified because it does not have a clear performance standard and requires subjective judgments. CARB should direct staff to analyze the current and potential state economic incentive programs that could boost interest in natural gas vehicles.

Agency Response: Staff disagrees with the intent of the comment. The commenter would have staff eliminate the DECS option and provide vehicle owners with only two options – a new diesel engine or a new alternative-fuel engine. Owners would be unable to keep their existing diesel engines but would have to replace them on the implementation schedule. As there will be no diesel engines meeting 0.01 g/bhp-hr until 2007, this rule would essentially be an alternative-fuel regulation for the next three years. As INFORM's other comments make clear, the commenter would prefer that ARB prohibit the use of diesel engines entirely and adopt a rule that requires only alternative-fuel engines to be used. That is not staff's charge. At the July 30, 1998, hearing, Chairman John Dunlap stated the ARB's policy as follows:

> "If the Board finds that diesel exhaust meets the State law definition of a toxic air contaminant and adopts the listing as such, that will complete the identification process. Diesel exhaust will then enter what we call the Risk Management Phase. I would like the audience to know that in the Risk Management Phase we will not consider banning diesel fuel or engines (July 30, 1998, transcript, p. 21)."

Thus, staff has complied with the ARB policy in providing owners of in-use diesel engines with the ability to continue to use those engines, so long as they can be retrofitted with applicable DECS to reduce PM emissions. Some owners of the oldest diesel engines will need to replace them, but the rule provides the option to replace a very old engine with one that is certified to 0.1 g/bhp-hr plus a DECS.

Finally, staff works closely with local air districts to publicize incentive programs, such as the Carl Moyer Program, which do serve to increase the interest of companies in converting to alternative-fuel engines.

16. **Comment** (EMA): The rule is not technology neutral because BACT requirements for diesel engines are more stringent than for alternative-fuel engines; they should be equal (0.01 g PM).

    Agency Response: Staff has identified alternative-fuel engines as compliant, without requiring owners to reduce PM emissions from those engines. Staff took this position because alternative-fuel engines do not emit diesel PM, as they do not use diesel fuel. Currently certified alternative-fuel engines, however, already meet the 0.01g/bhp-hr PM standard under the optional standard provision, thus staff does not believe it is favoring alternative-fuel engines, but rather is providing additional time for owners to reduce the PM emissions from their diesel engines.

17. **Comment** (CTA): ARB unfairly favors natural gas without regard for criteria pollutants. Recent studies show that natural gas particulate is significantly more toxic than diesel with a particulate trap. ARB should retreat from this path of favoring a technology.

    Agency Response: Staff disagrees with this comment. As discussed in response to comments 15 and 16, staff does not believe it favors either natural gas (alternative-fuel) or diesel engines in this rule. Proof of this is that both sides have accused ARB of favoring the other technology. Regarding the statement by the commenter that studies show that natural gas particulate is significantly more toxic than diesel with a particulate trap, ARB is unaware of these studies. ARB's own studies, rather, have shown that particulate from a natural gas engine is approximately equivalent to a diesel engine fitted with a particulate trap in terms of toxicity (**http://www.arb.ca.gov/research/cng-diesel/cng-diesel.htm**.

Finally, staff points out that California has identified diesel PM as a toxic air contaminant, while natural gas emissions have not been so identified.

18. **Comment** (Thousand Oaks): Any ARB requirement to convert vehicles to natural gas by a certain date with no cost recovery from ARB is unreasonable.

    Agency Response: Staff agrees and has not proposed a rule requiring that vehicle owners convert their vehicles to natural gas by a certain date. The regulation provides owners with several options that meet the definition of best available control technology. Conversion to natural gas-powered engines is only one of those options.

19. **Comment** (EMA, CCEEB): ARB should require the use of low sulfur (<15 ppm) diesel fuel by 2004.

    Agency Response: Staff considered and rejected the proposal to require early implementation of low sulfur diesel fuel by all collection vehicles prior to 2006 because it was an additional cost with little benefit. The proposed rule instead allows vehicle owners to choose their compliance method for each vehicle, which may include the use of low sulfur diesel fuel as a requirement for use with a verified DECS.

20. **Comment** (ALA, Burbank, CCA, CEERT, ED, Sierra Club, NRDC, PCL, UCS): ARB should not allow the use of Level 1 & Level 2 DECS on pre-1988 engines.

    Agency Response: In its discussion following staff's presentation and the witness testimony, the Board expressed agreement with restricting the use of Level 1 technology on pre-1988 engines, particularly for larger companies, but not restricting Level 2 technology because of concern about the high cost of repowering, especially for the smaller companies. Therefore, staff has kept the original concept in the regulation of prohibiting the use of Level 1 technology, but only for companies with 15 or more vehicles total. In addition, the amount of time one can use a Level 1 product is restricted by engine model year to either five or ten years maximum [see section 2021.2(e)(3)].

E. Technology Availability and Feasibility

21. **Comment** (ASRose, CCC, CRRC, CTA, EBSB, GSWM, IWS, MSS, MVRS, Moorpark, PSS, PVDDS, SSFS, SRTS, TDSWM, TSC, Varner): The technology is too uncertain and may not work in all instances; ARB should delay implementation of the rule until the technology is mature and works in every application.

Agency Response: Staff disagrees with this comment. Over the three years of rule development, staff evaluated the feasibility of technologies to reduce diesel PM on in-use vehicles. The results of that evaluation were published in the "Staff Report: Technical Support Document; Proposed Control Measure for Diesel Particulate Matter from On-road Heavy-duty Diesel-fueled Residential and Commercial Solid Waste Collection Vehicle Diesel Engines; June 6, 2003." Staff concluded that, based on field experience, diesel particulate filters, diesel oxidation catalysts, new diesel engines certified to 0.01 g/bhp-hr PM, and alternative-fuel engines are all feasible and cost-effective methods of reducing diesel PM. With these four technologies alone, something is available for every application. Staff continues to verify technologies, and expects there to be more companies with more products available as time goes on.

Stakeholders expressed serious reservations about one specific technology, the diesel particulate filter. Staff acknowledges that diesel particulate filters do not work in all applications. To provide waste hauler companies with more information regarding their feasibility, however, staff facilitated a meeting on June 5, 2003, between waste haulers and the City of Los Angeles, Bureau of Sanitation. At that time the City had retrofitted about 360 collection vehicles. Los Angeles officials reported they had had no out-of-service experiences because of the filters and the dealer had resolved the few problems quickly. The ensuing discussion and inspection of retrofitted vehicles seemed to convince those who attended that diesel particulate filters were a feasible and reliable device for certain types of collection vehicles, particularly automated side loaders.

22. **Comment** (SMAQMD): Low sulfur (<15 ppm) diesel fuel may not be available in time for implementation; ARB should increase its support of verified diesel retrofit systems that operate on standard CARB diesel and can be implemented immediately with little impact on targeted fleets.

Agency Response: Low sulfur (<15 ppm) diesel fuel is currently available at all ARCO stations that have diesel fuel, according to BP officials. In addition, about 65 transit agencies and several cities statewide are using low sulfur diesel fuel, and have been since July 2001, either through contracts with fuel haulers or by filling up vehicles at public stations. For companies that are unable to obtain low sulfur diesel fuel, there is currently one product verified that can be used with CARB diesel fuel.

As for supporting verified systems that operation on standard CARB diesel, ARB does not provide support for any particular verified system, outside of research and development funds that are awarded competitively independent of the verification process. Once a system is verified, ARB posts that news on its website and companies are free to market their product to the various industries as ARB-verified.

23. **Comment** (CCEEB): ARB should address safety concerns in the rule, such as specialty vehicles in which PM filters may not remain hot enough for adequate regeneration.

    Agency Response: This comment is not germane to this rule but is more appropriately addressed to the verification rule. Nevertheless, ARB does address safety concerns through its verification program. In addition, a manufacturer bears liability for the warranty, and thus is unlikely to sell a diesel particulate filter for use in an application where the filter would not achieve the necessary exhaust temperature for regeneration.

24. **Comment** (Allied, CRRC, SMAQMD, SD, Taormina): ARB should provide some consideration for dual-fuel trucks and the impact of the rule on dual-fuel vehicle owners. They need additional time for implementation. They purchased dual-fuel trucks because of NOx reductions.

    Agency Response: In response to witness testimony, Board member DeSaulnier directed staff to work with the companies and municipalities that own dual-fuel collection vehicles to accommodate their request (transcript, p 216). Owners of these vehicles had argued that they had invested considerably more in each of these vehicles than a comparable conventional vehicle to reduce exhaust emissions of NOx. Thus, they argued, they should have additional time to add aftertreatment technology or to replace the engines to reduce PM emissions. After consulting with stakeholders, staff agreed and modified the rule to allow dual-fuel and bi-fuel certified trucks to implement with the 2003 through 2006 model year engines, thus providing an acceptable delay, which still achieves the goals of the regulation.

F. Implementation Schedule

25. **Comment** (SD, CIOMA): ARB should delay implementation of the pre-1988 engines because of the higher cost of compliance of these engines.

    (ALA, BAAQMD, Burbank, CAW, CCA, CEERT, ED, NRDC, PCL, Sierra Club, SCAQMD, UCS): ARB should accelerate implementation of 1987 and older vehicles by two years, to begin in 2005 instead of 2007.

    (INFORM): ARB should phase out the oldest, dirtiest engines by the end of 2005, with no extensions allowed. Overall, the program implementation period should be phased in from 2003 through 2008.

(CTA): ARB should compress the implementation period to begin in 2006 and finish in 2010, delaying implementation until low sulfur diesel fuel is required nationwide in mid-2006.

(CCEEB): ARB should require that new vehicles (2003 model year and newer) meet BACT upon delivery unless they are exempted for technical or economic reasons.

(RCRC): Keep the original phase-in schedule for the older vehicles and owner with three or less vehicles.

(SSFS): ARB should not make them implement the rule "alone," "before the rest of the state."

Agency Response: ARB received numerous comments regarding the implementation schedule both during the informal rulemaking period and during the 45-day comment period. Staff based its recommended implementation schedule on considerations of technology availability, cost, the ages of vehicles owned by different types of haulers (public agency, large private, and small private companies), and the need to significantly reduce diesel PM by 2010. The Board requested staff move up the date on implementation of pre-1988 trucks by two years, along with asking staff to provide some kind of relief for small companies. Staff, therefore, moved up the implementation schedule as requested, but left it the same for companies with 15 or fewer trucks.

Staff had also recommended to the Board that Group 1, comprising 1988 through 2002 engines, be split into two groups. In consultations with environmental organizations and waste haulers following the Board meeting, all parties agreed to leave Group 1 as is and not split it. Part of that agreement included adding a requirement that early compliance of those vehicles include the provision that half of the early complied trucks be the oldest in the group. These decisions were reflected in the proposed modifications made available for public comment for 15 days.

26. **Comment** (CCEEB): ARB should require each fleet to meet the same timelines whether a contractor or municipality operates it.

Agency Response: Staff agrees and the proposal makes no distinction in the rule's implementation schedule between vehicles operated by a contractor or a municipality and has never proposed a schedule with different timelines based on vehicle operation.

27. **Comment** (CCEEB): ARB's rules should anticipate and work in tandem with other mobile source pollutant programs to phase-in requirements so as not to waste the value of investments required for the current rulemaking.

    Agency Response: Staff agrees and works within ARB to coordinate adoption of rules to maximize the effectiveness of the various programs.

28. **Comment** (CCEEB): ARB should allow each fleet to choose the BACT it believes appropriate for each vehicle and not force it to pick a compliance path for the entire fleet.

    Agency Response: Staff agrees and the rule does not force an owner to pick a compliance path. Rather, owners are given a menu of choices for best available control technology, which they can apply on a vehicle-by-vehicle basis.

29. **Comment** (Allied): The Board should adopt additional standards that will ensure required technologies are commercially available a reasonable time before compliance deadlines are triggered.

    Agency Response: Staff disagrees with this comment because at the time of rule adoption ARB had already verified three DECSs at Level 3 and three DECSs at Level 1 that are applicable to collection vehicles. Additional DECS products have been verified since rule adoption. Staff has received over 100 applications for verification, thus technology is already commercially available and staff believes that additional products will be verified each year.

G. Role of Local Air Districts

30. **Comment** (SCAQMD): Any modified schedule for implementation approved through Executive Order should be subject to comments by air districts and the general public to provide timely consideration of stakeholder concerns.

    Agency Response: Staff disagrees with this comment. Any modification to the implementation schedule will be subject to public notice and hearing. The adopted rule allows the ARB's Executive Officer to grant compliance extensions under specified conditions, which have been approved by action of the Board after public notice and hearing. Additional notices and hearings each time an owner applies for a compliance extension are not required, the Board having already delegated this authority to the Executive Officer.

31. **Comment** (SCAQMD): ARB should consider giving local air districts the option to implement the rule faster than the adopted rule by action of their Governing Boards.

Agency Response: Staff disagrees and has chosen not to give each air district the option of choosing its own implementation schedule. A statewide rule is justified for motor vehicles because, unlike stationary sources, motor vehicles can move throughout the state and are not restricted to one air district. Collection vehicles can operate in more than one air district, and thus different implementation schedules would be confusing. A vehicle could be moved from one area of the state, and may also cross air district boundaries in the conduct of business.

H. Small Businesses

32. **Comment** (CCC): ARB has used an arbitrary definition of small business for this rule.

(CRRC): ARB should replace its definition of small business as being less than 15 vehicles with the federal definition of small business.

Agency Response: Staff disagrees with these comments. ARB did not adopt a definition of small business in this rule. Rather, it chose to provide two different sizes at which a company could have some additional time to implement the rule: a company with 15 or fewer vehicles has two additional years to bring the oldest vehicles (1960 to 1987 engines) into compliance and a company with three or fewer vehicles can delay meeting the intermediate compliance deadlines and comply with all of its vehicles by the final compliance deadlines.

Staff arrived at these numbers after consulting with various stakeholders, each of whom had different ideas regarding the best numbers to use. Most stakeholders did not support any consideration of special needs for smaller companies, but the Board expressed strong concerns about smaller companies and discussed this issue in the Board hearing. While the Board allowed staff leeway in making the final decision, Board member Riordan did state that she thought 15 was the most reasonable number (transcript, p. 233) for allowing two additional years for bringing the oldest vehicles into compliance. Staff has determined about 74 percent of companies own or operate fewer than 15 collection vehicles with pre-1988 model year engines, which is about three percent of the vehicles in the fleet. The Board also concurred with staff's decision to allow the intermediate compliance deadline delays for companies with three or fewer vehicles.

Staff also believes that adopting the federal definition of small business would be counterproductive to achieving our air quality goals. The federal Small Business Act defines a "small business" as one that is independently owned and operated and which is not dominant in its field of operation." By this definition, it is entirely possible that only two or three waste hauling companies could be considered "dominant" in California and all other about 400 companies would be considered

small businesses. The Act has also adopted size standards, which vary by industry. For solid waste collection (NAICS 562111), maximum annual receipts of $10.5 million define a business as small. Very few waste haulers are publicly traded companies, thus staff has been unable to determine how many companies would meet this size standard, but again we believe that most of the 700 or more waste hauling companies would be defined as a "small business" under the federal definition, thus it is not a useful way to differentiate which companies might need additional time to comply. Staff therefore concludes that its criteria for which companies should have additional time to bring their oldest vehicles into compliance is appropriate.

I. Compliance Extensions

33. **Comment** (CCEEB): Retrofit rules should provide credit for early compliance and efforts that exceed compliance.

    Agency Response: The rule does provide credit for early compliance that exceeds the required implementation schedule [section 2021.1 (d)(1)].

34. **Comment** (CCEEB, CWRS): ARB should provide flexibility for a compliance extension if technology is not available.

    Agency Response: The rule does provide for such flexibility [section 2021.1 (d)(2)].

35. **Comment** (ALA, Burbank, CCA, CCERT, ED, NRDC, PCL, Sierra Club, USC): The compliance extension for unavailability of a diesel emission control system should be limited to just one year for pre-1988 collection vehicles.

    Agency Response: Staff agreed and added the following sentence to section 2021.1 (d)(2)(B)(vi): "The Executive Officer will grant a compliance extension for only one year for an engine in Groups 2a or 2b."

36. **Comment** (Milpitas): ARB should expand exceptions or provide an implementation waiver when franchise agreements terminate and complete fleet replacement occurs before 2010.

    Agency Response: Staff is unsure what the commenter meant by this request but thinks the concept is that if a company is going to completely replace its vehicles by 2010, ARB should allow that company to avoid any intermediate compliance deadlines. Such a scheme would reduce the effectiveness of the rule in the near term. As staff demonstrated in the staff report and during the hearing, most of the benefits of this rule accrue beginning in 2005. Allowing

companies to avoid compliance until after 2010 would subject people to five additional years of too high PM in the air, increasing the number of premature deaths relative to the expected benefits of this rule, and could also compromise the ability of the South Coast Air Basin to meet 2010 ozone attainment requirements.

37. **Comment** (CCEEB): ARB should exempt vehicles that are to be retired within one year.

    Agency Response: The rule does exempt vehicles that are to be retired within one year of a compliance deadline, provided the owner has applied best available control technology to all applicable engines [section 2021.1 (d)(5)].

38. **Comment** (Allied): If a control strategy has been proven in the field, it should be allowed to be used as a compliance strategy while lab testing is going on.

    Agency Response: The rule does allow the use of experimental strategies for a limited time [section 2021.1 (d)(6)].

39. **Comment** (Bakersfield): ARB should favor additional air pollution reduction through a provision that gives credit for a change in the refuse collection system, such as converting a fleet to single-pass trucks.

    Agency Response: As with comment 14, this commenter envisions a fleet-type rule by which a company could get credit for overall fleet reductions, as opposed to the vehicle-by-vehicle approach of the rule. Staff carefully considered a fleet-type rule, but in the end determined that it would be a more costly regulation with no additional emissions benefits. Any company that reduces the number of diesel trucks can, however, claim them as retired and get credit for compliance for those vehicles. The remaining vehicles will also have to apply best available control technology, but at a later date if the retired vehicles are eliminated first from the fleet.

40. **Comment** (Allied, CRRC): The compliance extension in section 2021.2 (d)(2) (compliance extension based on no verified diesel emission control strategy) should not be at the discretion of the Executive Officer but should be automatically granted.

    Agency Response: There are two types of compliance extensions in section 2021.2 (d)(2). The first is an automatic blanket extension that will be granted by the Executive Officer for groups of engines for which there is no verified diesel emission control strategy. The second type requires that the owner of the vehicle or engine apply for an extension for engines not covered by the blanket

extension. This extension is the one to which the commenter is referring and staff disagrees with the comment. Owners must apply for the extension and the Executive Officer will review, and if legitimate, will approve the application. Staff believes that such an automatic extension would provide a loophole that could be abused by unscrupulous companies. Companies that abide by the regulation would then be at a disadvantage with those that would take advantage of such a loophole. If a company has to apply for an extension, and knows that someone will be scrutinizing the application for its veracity, then the opportunity for abuse is lessened.

41. **Comment** (INFORM): Strong penalties should apply when control systems or fuels fail to work properly, and therefore ARB should eliminate program exemptions for diesel emission control strategy failure or damage and discontinuation of a fuel verified as a DECS.

    Agency Response: Staff disagrees with this comment and does not believe it is appropriate to penalize the end user if a mandated product fails to perform as warranted. The verification program rule provides for in-use compliance monitoring and penalties for diesel emission control strategies that fail in-use. This rule, however, does not apply to the manufacturer of the device, but the end user. Thus, this comment is not germane to this rule but is more appropriately directed towards the verification program rule.

42. **Comment** (Tuolomne Co): ARB should provide a contract hauler with temporary relief if the city denies a rate increase for cost recovery.

    Agency Response: Staff considered and rejected allowing a waste hauler relief from compliance if the city denies a rate increase. First, staff is not a party to a contract between a city and waste hauler and would not have the facts regarding the basis for denying a rate increase. For example, a city could determine, through an audit of records, that the waste hauler will continue to have sufficient profit even after complying without a rate increase.

    Second, ARB could not adopt a rule with such uncertain compliance deadlines and emission benefits. Staff has no way of determining how many waste haulers would be granted a rate increase, or when such rate increases would happen. Thus staff could not determine when emission benefits would happen.

    Third, such a provision would provide an uneven playing field for haulers that do not have contracts and would have to implement under a certain schedule, compared to contracted haulers that could delay implementation indefinitely. Finally, a city would have no incentive to approve a rate increase if it knew that their contracted hauler could delay implementation with no penalty. Under ARB's rule, a city knows the compliance schedule and thus can calculate with some

certainty when its contracted hauler will experience costs, thus providing it with information needed to raise rates.

J. Monitoring Compliance with the Rule

43. **Comment** (INFORM): ARB should direct staff to monitor implementation to ensure maximum emission reductions and regularly review the rule to ensure that it keeps pace with the evolving technology offerings for this sector.

    (CRRC, CTA, WM): ARB should require staff to report to the Board on or before April 1, 2005, and each year thereafter on the effectiveness of the previous year's phase-in of implementation. The report must include a survey of the type of BACT devices utilized in the previous calendar year, an estimate of emission reductions attributable to the new control measure; and a survey of rate-regulated haulers to determine the extent to which they were compensated for the cost of compliance.

    Agency Response: The Board agreed and directed the Executive Officer, in Resolution 03-21, to report back annually in 2005, 2006, and 2007, and biennially thereafter as needed on the effectiveness of implementation, the status of best available control technology, to estimate the effectiveness of control technology used, and to provide the status of rate negotiations on cost recovery by contracted haulers.

K. Cost Analysis

44. **Comment** (CTA, CCEEB, TDSWM): The cost analysis is flawed and does not accurately reflect the expected cost of compliance, including initial capital cost of any new vehicles, increase in operating costs, refueling infrastructure costs, installation and maintenance costs, plus loss in value associated with reduction in vehicle life due to control equipment installation and operation.

    Agency Response: Staff disagrees with this comment. The cost analysis is a prediction of all expected costs associated with implementation (See Supplemental ISOR – dated August 8, 2003) of best available control technology. Staff conducted extensive analysis into the expected costs of compliance and included all relevant costs. Staff did not include some specified costs because they were not included in the predicted implementation scenarios, as detailed below.

    Staff did not include capital costs of new vehicles because our analysis determined that new vehicles were not required for implementation of this regulation. In the analysis, we assumed collection vehicle owners would choose

the least-cost option applicable to their specific situation. Therefore, while an owner may prefer to purchase a new vehicle, it was never considered to be a cost of compliance. In the event that a less expensive diesel emission control strategy could not be used, for example, replacing the engine would be the next least-cost option. Staff determined than an engine replacement should be available in most situations by contacting engine manufacturers and dealers. According to a representative of Cummins Corp., for example, even engines in pre-1988 vehicles could be replaced with new mechanical engines. These costs are included in the analysis (see Supplemental ISOR – dated August 8, 2003).

Refueling infrastructure costs were not included in the cost, because the infrastructure would not be needed. One of two scenarios could occur during the implementation.

1) The same CARB #2 diesel fuel used currently would be used with the BACT being implemented. In this case, no refueling infrastructure changes would be required.

2) The BACT would be required to use low sulfur diesel fuel. Only one BACT requires low sulfur diesel fuel, diesel particulate filters. A very small percentage of vehicles (4%) would be required to use this low sulfur fuel before 2006 when the federal fuel standard is lowered to 15 parts per million by weight sulfur content. For these vehicles, we assumed that the company would choose to use low sulfur diesel fuel on their whole fleet, that it would fuel vehicles at a portable or outside source, or that it would request a compliance delay due to lack of infrastructure (see Compliance Extensions in the regulation order). Thus no new infrastructure would be required, and, therefore, no additional cost was included in the analysis.

Loss in vehicle value was not included because staff found no reduction in vehicle life due to control equipment installation and operation. Diesel emission control strategies have not been found to reduce vehicle life. For example, the expected lifetime of two diesel emission control strategies, diesel particulate filters and oxidation catalysts, can be over ten years. At that point the diesel emission control strategy could be replaced, not decreasing the vehicle's value. It is possible the vehicle value could be enhanced, because those in the secondary market may prefer to purchase a vehicle with reduced diesel emissions that already complies with this regulation.

45. **Comment** (MECA, Moorpark): While ARB's capital & operating cost estimates for DPFs in general are within a reasonable range, ARB should note that costs will vary among different engines, applications, and operating conditions. Therefore, in some geographic areas, costs could be more than projected by staff.

Agency Response: Staff agrees with this assertion. Staff calculated a range of capital and operating costs, but determined and reported the average statewide costs. Companies that have predominately older vehicles, for example, will have higher implementation costs if they comply mainly through the use of new engines. Geographic regions further from urban areas may experience higher costs because of higher shipping.

46. **Comment** (CRRC): ARB asserts that there will be "no, or an insignificant potential cost impact" on waste haulers based on determination that costs will be passed on to customers. ARB should supply evidence in support of its expectations that costs will be passed on to customers.

Agency Response: In the Notice Of Public Hearing To Consider The Adoption Of A Control Measure For Diesel Particulate Matter From On-Road Heavy-Duty Residential And Commercial Solid Waste Collection Vehicles (Notice), the section “Fiscal Impact on Businesses” states, in part:

> “The Executive Officer has made an initial determination that adoption of the proposed regulatory action may have a significant adverse economic impact on some solid waste collection businesses, if those businesses are unable to increase their rate for collection solid waste. Other solid waste collection vehicle businesses may experience no adverse economic impacts because they have the ability to recover costs through rate increases. Adoption of the proposed rule will not affect the ability of California businesses to compete with businesses in other states.”

The language quoted by the commenter follows this discussion of cost impacts and is clearly a non sequitur; ARB’s language quoted by the commenter was in error. With regards to the comment that ARB should supply evidence that costs will be passed on to customers, see the Agency Response to Comment #54.

47. **Comment** (LA City): ARB has not accurately reflected the costs incurred by municipalities in determining the cost of implementation in the staff report.

Agency Response: Staff disagrees with this comment. In a detailed cost analysis, staff included average capital, operation, and maintenance costs of collection vehicles for municipalities and private companies alike (see ISOR – dated June 6, 2003 and Supplemental ISOR – dated August 8, 2003). These costs were based on estimates from a wide range of sources.

For those municipalities that contract out for waste collection, we did not include the cost of renegotiating contracts in our analysis, because staff determined that this responsibility would be incorporated into regular job duties. Staff made this determination after consultation with municipality representatives.

L. Health Benefits Analysis

48. **Comment** (EMA): ARB's modeled diesel emission concentrations are incorrect because ARB has failed to consider natural turnover of vehicles. ARB's baseline scenario needs to consider and reflect the on-road PM standards of 0.01 g/bhp-hr in 2007. Therefore, natural turnover will reduce the benefits of this rule.

    Agency's Response: Staff disagrees with this comment. ARB's emission model includes both natural turnover of vehicles and the 2007 new engine emission standards. The modeled benefits are a valid representation of the effects of this rule.

49. **Comment** (EMA): The quantitative risk assessment is invalid. The discussion of potential cancer risks contains significant errors and overstates purported health impacts and benefits. Specifically, the risk assessment uses an invalid and scientifically unjustified unit risk factor. The risk assessment methodology overestimates the potential exposure to diesel exhaust. ARB needs to include a better discussion of inherent uncertainties regarding reported risk estimates. Given the uncertainties, any actual risk reduction from the implementation of this rule will be insignificant.

    Agency Response: Staff disagrees with this comment. The risk assessment conducted by staff is a valid characterization of the potential risks associated with exposures to diesel PM from solid waste collection vehicles and is a useful tool for comparing the benefits of proposed regulations. The methodology used is consistent with the Office of Environmental Health Hazard Assessment (OEHHA) Air Toxic Hot Spots Program Risk Assessment Guidelines (August 2003). ARB staff uses these guidelines when conducting risk assessments as they provide a standard approach for determining potential risk from exposures to toxic pollutants. These guidelines recommend an exposure duration of 70 years for residential exposures and an inhalation unit risk factor of 3.0×10^{-4} $(\mu g/m^3)^{-1}$ for diesel PM.

    The commenter incorrectly concludes that in the exposure assessment staff assumed that receptors are exposed to increased concentrations of refuse vehicle exhaust continuously for 70 years. In the scenario evaluated by ARB staff, receptors were only assumed to be exposed to the diesel exhaust for the few minutes that the solid waste collection vehicle was traveling near the receptor location during each week. However, consistent with the OEHHA Risk Assessment Guidelines, staff did assume that these few minutes of exposure per week would occur over a 70-year period.

    With respect to uncertainties associated with the risk assessment, ARB staff addressed the uncertainties associated with the analysis in the Staff Report:

Initial Statement of Reasons, Appendix D and in the body of the report Page 13, "Risk Assessment." It was clearly stated that the assumptions used to determine the risks were not based on a specific solid waste collection vehicle daily activity pattern. Rather source parameters that bracketed a broad range of possible operating scenarios were used to provide an approximate range of potential risk levels in hypothetical neighborhoods. Additional discussion was also provided on the numerous variables that can influence the risk values.

50. **Comment** (EMA): ARB has overstated both the estimated health effects impacts and benefits. ARB's discussion of PM health effects mixes health effects of diesel PM with health effects of ambient PM as a whole.

    Agency Response: Staff disagrees with the comment that ARB has overstated estimated health effects impacts and benefits. It is true, however, that staff's estimate was derived from general PM data. Staff assumes that diesel PM is just as toxic as general PM (neither more so or less so) since we have no evidence to the contrary. While the exact mechanism of toxicity is unknown, OEHHA epidemiologists believe that the evidence is overwhelming that diesel PM is causally associated with adverse health effects. Studies from hundreds of cities from around the world, in which the exact composition of PM is unknown and presence of other pollutants may vary, still show an association between PM and health.

51. **Comment** (EMA): ARB estimates that the annual average concentration of diesel PM is 1.8 $\mu g/m^3$, and then proceeds to erroneously estimate premature deaths. The Reference Concentration for diesel PM, however, is 5 $\mu g/m^3$, therefore no premature deaths or any other adverse health impacts will occur.

    Agency Response: Staff disagrees with this comment. US EPA inhalation Reference Concentration of 5 $\mu g/m^3$ was derived in 1993 and was based on two animal studies in which histological and inflammatory changes in the lung were the critical effects; not mortality (see Proposed Identification of Diesel Exhaust as a TAC part B, Appendix A, page A-1). OEHHA did not develop a separate Reference Concentration value; rather it adopted US EPA's value. The weight of scientific evidence leads to the conclusion that death rates rise and fall in close correlation to local concentrations in ambient PM, even when the PM concentrations are far below the inhalation Reference Concentration.

52. **Comment** (EMA): ARB's reference to the work of Diaz-Sanchez regarding the potential effects of diesel PM exposure incorrectly characterize the results of that study.

    Agency Response: Staff qualified the statement regarding the work of Diaz-Sanchez in the Staff Report: Initial Statement of Reasons, Supplemental Report

(Page 6, Paragraph 3) as follows: "…to act as an adjuvant in allergic responses and possibly asthma (Diaz-Sanchez et al. 1996, Takano et al. 1998, Diaz-Sanchez et al. 1999). However, additional research is needed at diesel exhaust concentrations that more closely approximate current ambient levels before the role of diesel exhaust exposure in the increasing allergy and asthma rates is established."

53. **Comment** (EMA): Recent research on the observed elevation of weekend ozone is due to decreased NOx from diesel vehicles, thus the rule will have no health benefits related to ozone reductions.

Agency Response: Staff disagrees with this comment. The ozone weekend effect is a tendency for ozone concentrations in some areas to be higher on weekends than on weekdays. These results seem counterintuitive in that emissions of ozone precursors from primary sources are presumably lower on weekends than on weekdays. Air quality data for the morning commute period indicate that emissions of pollutants that are precursors to ozone decline on weekends in almost all locations. Based on these weekend effect phenomena, some observers conclude that attainment of ambient air quality standards for ozone would occur more efficiently without additional regulatory reduction of NO_x. However, the NO_x–reduction hypothesis is only one possible explanation of the ozone weekend effect.

In addition to the NO_x–reduction hypothesis, there are several plausible alternative hypotheses that do not imply NO_x reductions would be counter-productive for reducing ozone concentrations in the long term. These hypotheses, which are documented in the ARB's May 2003 Draft Report entitled "The Ozone Weekend Effect in California," are: 1) the NO_x-timing hypothesis, which assumes that the timing of NO_x emissions on weekends is different from weekdays; 2) the carryover-near-the-ground hypothesis, which assumes that the volume of traffic is greater on Friday and Saturday nights compared to other nights of the week; 3) the carryover-aloft hypothesis, which assumes that large amounts of ozone and ozone-forming pollutants commonly persist overnight above the cool layer of air near the surface; 4) the increased weekend emissions hypothesis, which assumes that the total emissions of VOCs and the total emissions of NO_x from all sources (human activities and natural) are actually greater on weekends compared to weekdays; 5) the aerosol and ultraviolet radiation hypothesis, which assumes that there are more aerosols and soot particles in the atmosphere on weekends than on weekdays; and 6) the ozone quenching hypothesis, which assumes NO emissions during the morning are greater on weekdays than on weekends and that they destroy more of the available ozone in the layer of air near the ground where air monitoring instruments are located.

In short, there are several plausible hypotheses regarding the ozone weekend effect. Further, real-world observations underscore the considerable effectiveness of ongoing emission reduction strategies aimed at ozone precursors. These observations include:

- Ozone concentrations and exceedances of health-based standards and indicators in the South Coast Air Basin declined dramatically during the 1990s when major reductions in NO_x and VOC were occurring;

- ozone concentrations continue to decline on weekends, although at a slower rate than on weekends;

- significant uncertainties remain as to the causes of the ozone weekend effect and to the relevance of those causes to a long-term control strategy;

- NO_x reductions are needed because ozone non-attainment regions are not always VOC-limited; and

- NO_x emissions have a variety of negative environmental impacts including the formation of secondary particulate matter.

ARB staff has recommended further research to elucidate the relative influence of all factors to contribute to the varied observations of the ozone weekend effect. Full evaluation of these potential factors will involve a variety of disciplines including field measurements, laboratory studies, and modeling exercises.

M. Recovery of the Costs of Compliance

54. **Comment** (CRRC, CTA, EBSC, EJH&S, GWSM, MSS, MVRS, PVDDS, RSS, RWS, SSFS, SSW, SRTS, TDSWM, TSC, TTSD): ARB must provide a mechanism for contracted haulers to recover their full costs of compliance; just because contracts allow for cost recovery does not mean it will happen.

(Allied, ASRose, Bay-Con, BLT Ent, CCC, CRRC, CCEEB, CWRS, EBSC, EMA, FCWRS, GPIA, GSWM, IMD, MSS, MVRS, RJPCG, SLC, SSI, WM, TSC, WT): To ensure cost recovery, the Board should adopt a statement of intent that acknowledges that municipalities and fleet owners share the responsibility for compliance and that the rate setting structure shall insure the cost recovery of actual and necessary costs for control technologies.

(CRRC): To assure cost recovery, ARB should change the rule to define "owner" to exclude municipalities and rate-regulated haulers and reformat the regulation into 3 parts: compliance by municipalities that operate and own vehicles;

compliance by municipalities with rate-regulated operators; and compliance by all other owners; rate-regulated vehicles would be labeled as such including the name of the municipality responsible for compliance.

Agency Response: ARB acknowledges that this rule is costly, but maintains that the rule is a cost-effective means to reduce diesel PM pollution and associated short- and long-term health impacts. Information regarding costs and benefits is contained in the "Staff Report: Initial Statement of Reasons, Supplemental Report," dated August 8, 2003. ARB does not have legal authority to adopt a rule that interferes with contracts negotiated between two parties unrelated to it. The question, therefore, is whether or not collection vehicle owners will be able to recoup their costs of compliance.

Within the solid waste collection industry, staff estimates that one-third to one-half of all vehicles are under contract to provide services through a city or county and most of those have contracts that regulate the fees the companies can charge. The rest of the industry provides solid waste collection services on a competitive basis and fees are unregulated. Those companies will be able to raise rates without any oversight. In addition, companies that operate vehicles both in rate-regulated and non-rate-regulated spheres own another subset of vehicles and those companies have additional options regarding balancing fee increases between rate-regulated and non-rate-regulated situations.

To address the companies that are under contract for service to a municipality and are rate-regulated, staff carried out a survey of municipalities to determine contract conditions related to fees. Because that survey was conducted after the release of the Staff Report, it is described in Appendix A of this Final Statement of Reasons. Through that survey, staff determined that approximately 87 percent of the contracts allow for a rate increase when costs increase. Staff acknowledges that in many contracts an allowance for a rate increase does not guarantee a rate increase (some of the contracts are "cost plus" and do guarantee a rate increase), but the provision is there to allow municipalities and their contractors to meet and discuss the increase in costs that will accrue as a result of this regulation.

Staff also recognizes that many factors govern the costs of solid waste collection, beyond a simple calculation of the cost of service. As an example, staff observed negotiations in the City of Santa Clarita for a new collection contract in 2003. The winning bid for service was a reduction of $3.59 per month from the then-current contracted fee, with another reduction of $2.39 per month to take effect in 2006. When this negotiation took place, the company that was the winning bidder had full knowledge of this regulation, and that increased costs could be accrued because of it. Staff thus concludes that within the waste

collection industry, companies have many factors to consider when setting rates, one of which is now the cost of compliance with this regulation.

Finally, staff notes that the Board did adopt a statement of intent, in Resolution 03-21, regarding the need for municipalities and collection vehicle owners to work together to amend or renegotiate contacts as needed so that fees reflect the cost of compliance. Since the Board hearing, staff has formed an advisory group and met twice to discuss outreach materials and plans. At the request of the group, ARB has developed a letter that stresses the importance of this rule and its cost; the letter is being mailed to all mayors, city managers, and chairs of Boards of Supervisors.

55. **Comment** (Allied): ARB should establish a dispute resolution process to resolve claims between fleet owners and local governments if costs for compliance exceed staff's estimates and local governments refuse to increase fees.

Agency Response: Staff disagrees with this suggestion. As stated above, ARB does not have the legal authority to interfere with these contract negotiations and has no power to compel municipalities or fleet owners to participate in a dispute resolution process. Staff will provide information regarding its estimates of the costs of compliance to cities and counties and will be available to answer questions if requested.

56. **Comment** (ADCRC, Allied, Bay-Con, CRRC): The definition of "commercially available" should be amended to define "reasonable cost" as that which is equal or less than the maximum cost estimated in the Staff Report for a given technology or repower cost.

(ADCRC, Allied, Bay-Con, CRRC): Technology may not be available and if it is it may be prohibitively expensive - "commercially available" should include a cap on what is a "reasonable cost."

Agency Response: Staff considered and rejected the concept of providing a maximum cost that would define or limit what manufacturers could charge for technology and staff has declined to define "reasonable cost." First, price caps rarely work as intended to reduce costs. Rather, a mandated maximum cost more likely results in manufacturers pricing their products at or just below that maximum cost, thus artificially inflating prices of at least some products. Second, a price cap would effectively bar any new technologies from the market that cost more than the price cap, even if those technologies were superior in other ways.

Staff believes that the market is the most effective entity to regulate prices. If customers will not pay for a product because of its price, if additional products

are verified to compete in the market, if the cost of production is reduced because of increased production or advances in materials science – all these are market mechanisms that affect prices much more effectively than an artificially imposed price cap. If a company believes that no DECS is available at a reasonable cost, it can request a compliance delay from the Executive Officer.

57. **Comment** (CTA): The questionnaire that ARB sent to municipalities (regarding cost recovery) was very biased.

Agency Response: Staff disagrees with this comment. Staff developed the survey (see Appendix A) because we had many questions regarding information we had been told regarding contracts. For example, we had been told by industry representatives that most contracts were "evergreen" and had no fixed ending dates, and that most contracts had no provisions for a rate increase beyond cost-of-living increases. The industry representatives were also asking for ARB to move the responsibility for compliance from collection vehicle owners to the municipalities that contract for service, under the theory that only this would ensure that vehicle owners could recover the full costs of compliance from their customers.

Given the time constraints, staff felt that the most efficient way to get its questions answered was to develop and issue a survey. Working with the California Integrated Waste Board, the survey was sent to over 400 contacts in local governments and ARB received over 70 surveys back. Staff included the last question (see Appendix A) regarding the industry's push to move the responsibility onto municipalities not to bias the answers to the previous questions but to provide municipalities that perhaps had not previously participated in the public process the ability to provide their comments and concerns. Staff obtained valuable information from the survey, which also served to draw more municipalities into the public participation process.

58. **Comment** (Chico, LACSWMC, OC, Santa Clara, Simi Valley): The rule is an unfunded mandate on local government.

Agency Response: Staff disagrees with this comment. The rule as revised by the Board removes local governments from joint compliance, thus this rule should not result in any increase in costs to local governments. Furthermore, local governments that own and operate waste collection services may charge fees for those services and recover their costs. Nevertheless, the rule was not an unfunded mandate in its prior form. An unfunded mandate occurs when the state requires the municipalities to provide a new program or service or a higher level of service. This generally is a function that only government can perform and thus the cost for the new function must be borne by the municipalities. The municipalities that would be subject to this rule were not being required by the

state to operate fleets if they don't already do so, nor was the state proposing to require existing municipal fleets to provide a higher level of service (e.g., more frequent runs, or a greater area of coverage). Municipalities that own and operate waste collection services are subject to the same requirements as private waste haulers.

59. **Comment** (EBSC, Fremont): The city's recently completed rate review or contract negotiation might not include the costs anticipated by this rule; this is a problem.

    Agency Response: ARB began working with the waste hauling industry almost three years before rule adoption. Staff met numerous times with both small and large sized waste haulers, the California Refuse Removal Council, and cities and counties. Staff also attended local and regional association meetings of the industry. Staff believes solid waste collection companies and municipalities were adequately informed of the rule but regrets if any particular negotiations were carried on with one or both parties in ignorance of the rule.

60. **Comment** (LACSWMC): A contract is between the city and the hauler and ARB does not have a place in the negotiations.

    Agency Response: Staff agrees with this comment. Indeed, there is no legal role for the ARB in contract negotiations between two entities unrelated to it. In adopting this rule, ARB has been careful not to suggest that it is dictating rates or fees for solid waste collection. Municipalities, however, do need to recognize that the health benefits of this rule are substantial and at the same time the costs of compliance are also high. It is to the State's benefit, therefore, that collection vehicle owners with contracts to collect solid waste are dealt with fairly when they present the higher costs of compliance and request a rate increase.

N. Reducing Other Air Pollutants

61. **Comment** (ALA, Burbank, CAW, CCA, CEERT, Cleaire, DAFS, ED, NRDC, PCL, Sierra Club, SMAQMD, UCS): ARB should commit to reducing exhaust emissions of oxides of nitrogen (NOx) from these vehicles and in future rules of this type.

    Agency Response: Supervisor DeSaulnier reiterated the ARB's long-term commitment for further NOx reductions in his motion to adopt Resolution 03-21 (transcript, p 231).

62. **Comment** (CIOMA, MECA): The ARB retrofit requirement for PM reduction creates an opportunity for fleets to incorporate NOx reductions at the same time.

Agency Response: This rule should provide significant reductions in NOx emissions, primarily from turnover of older diesel vehicles to new diesel or alternative-fuel engines. Not included in the calculation of benefits is the possibility that some companies will qualify for incentives by purchasing one of the products that reduces both NOx and PM emissions. Staff expects that the rule may result in additional benefits of NOx reduction, in addition to those predicted in the model.

O. Outreach and Public Participation

63. **Comment** (CRRC): ARB should provide a complete list of currently verified DECS at the time of rule adoption that includes cost, manufacturer contact information, engine model years, verified engine family names, acceptable range of exhaust temperatures, fuel requirement, limitations, and any additional information it deems necessary to evaluate a technology's use. In addition, ARB should include any conditions that may reduce technology availability in the future.

    Agency Response: A complete list of verified DECS was available at the time of rule adoption at: **http://www.arb.ca.gov/diesel/verdev/verdev.htm**. ARB's website does not include the cost of the product, however, but does include limitations and special requirements of specific DECSs and links to the manufacturers. The costs are available from the manufacturer or authorized dealer and, in ARB's experience, vary based on several factors beyond ARB's control. ARB cannot predict the future regarding technology availability with any certainty, but does expect more technologies to be verified as time goes on.

64. **Comment** (CRRC): Within 6 months of adoption, ARB shall provide a guidance document to vehicle owners which includes the above (comment above) plus standard reporting forms per section 2021.1(b), a summary of DECS verified in the previous six months, and provide end users with a list of manufacturers seeking DECS verification.

    Agency Response: ARB will strive to work with the waste hauler industry to provide companies with information that will enable them to better choose verified products for their vehicles and will keep its website updated with verified DECS. Staff has already drafted a guidance document and fact sheets, and held outreach and implementation advisory committee meetings on March 4 and 25, 2004.

    ARB cannot, however, provide companies with a list of manufacturers that are seeking verification because of confidentiality agreements and also because ARB is not in the business of promoting companies seeking to do business. As for providing reporting forms, the rule does not require reporting by waste

haulers, although it does require specified records to be kept both in the vehicle and on site [section 2021.1 (f)].

65. **Comment** (CRRC): Within 6 months ARB shall establish a Technical Advisory Group of industry representatives, equipment manufacturers, fuel providers, and ARB staff.

    Agency Response: Staff disagrees with this suggestion. ARB does not believe a new Technical Advisory Group for this rule is needed. In 2000 Chairman Lloyd formed the International Diesel Retrofit Advisory Committee, the members of which advise ARB on technical matters. This Committee has met six times since its first meeting in November 2000. In addition, staff communicates frequently with industry representatives, equipment manufacturers, and fuel providers.

66. **Comment** (CRRC): Within nine months of adoption, ARB shall establish and maintain a Technology Resources webpage with the most current verification information and the guidance document.

    Agency Response: This comment seems to be duplicative of other comments made by the same commenter above (#63, 64, 65), except that this comment specifies a web page. As stated above, ARB maintains a website with current verification information and has begun work on a guidance document. Staff does believe its website needs revisions to make it more "user-friendly" and is beginning work on revisions.

67. **Comment** (CRRC): Within three months of adopting the rule ARB must establish a periodic reporting mechanism to provide Board members with information regarding status of rule implementation, technology concerns, and data summaries.

    Agency Response: Board resolution 03-21 establishes the timing for reports to the Board and specifies information that staff will provide, at a minimum, to the Board. The Executive Officer shall report annually in 2005, 2006, 2007, and biennially thereafter as needed on the effectiveness of the previous year's phase-in of implementation, plus the status of technology utilized, an estimate of the effectiveness of the technology used, and the status of rate negotiations for the costs of implementing the control measure.

68. **Comment** (LA Co, LACSWMC, Oakland, Simi Valley, Thousand Oaks): Municipalities were not sufficiently informed or consulted with regards to rule development and should have additional opportunities for participation.

Agency Response: Staff disagrees with this comment. Prior to publicly noticing the proposed rule, staff conducted extensive outreach in an effort to reach affected stakeholders. We held five workshops in four locations around the state that were publicly noticed and well attended. Municipalities that attended one or more of those workshops included: the City of Fresno, Santa Clara County, Sacramento County, the City of Sacramento, the City of Merced, San Joaquin County, the City of Riverside, the City of Whittier, Los Angeles County Sanitation Districts, the City of San Diego, the City of Los Angeles, the City of Pomona, Riverside County, the City of Glendale, the City of Santa Clarita, the City of Big Bear, the City of San Bernardino, Santa Barbara County, the City of Redondo Beach, and the City of Long Beach.

In addition to these public workshops, staff convened three teleconferences specifically with municipalities. Participating in those teleconferences were the County of Los Angeles, City of Anaheim, City of Santa Ana, County of Orange, County of Riverside, County of San Bernardino, County of Santa Barbara, County of Ventura, City of Long Beach, City & County of San Francisco, City of San Jose, City of San Bernardino, City of Oakland, City of Los Angeles, City of Sacramento, and City of Pasadena. Many more city and county officials than these were invited to the meetings but chose not to attend. Staff also contacted municipalities through individual phone calls and e-mails.

Following the June 6, 2003, public notice, the California Integrated Waste Management Board assisted ARB by sending e-mail notices to over 450 contacts in its database, including the survey discussed above and found in Appendix A.

While staff regrets that some municipalities feel they did not receive adequate notice during the informal rulemaking process, staff notes that they did receive the formal public notice of rulemaking and participated in the process from June 6, 2003, when the rule was formally noticed, through the September 25, 2003, Board hearing, well over the legally mandated 45 days.

69. **Comment** (CTA): The regulation is subject to due process concerns.

Agency Response: Staff disagrees with this comment. The commenter participated in all public workshops and sent comment letters during the informal period prior to the opening of the formal public comment period. Staff responded to some, but not all, of those comment letters in writing prior to September 25, 2003. ARB is not, however, obligated to respond in writing to comments received during the informal workshop period, and indeed usually does not respond to those comments formally. Instead, we work informally with stakeholders to understand their concerns and incorporate those comments into future rule drafts where appropriate. Staff did discuss the rule development with this commenter through phone calls, in-person meetings, and e-mails.

Comments made by this commenter during the official public comment period are addressed, as required by law, in this Final Statement of Reasons. ARB, therefore, provided the commenter, and all stakeholders, with due process and followed all legal mandates for rulemaking.

P. Warranty for Diesel Emission Control Strategies

70. **Comment** (Allied, CRRC, CTA): ARB should establish a dispute resolution process to resolve claims by vehicle owners against retrofit device and/or engine manufacturers for equipment damage resulting from the use of DECSs.

    (Allied, CRRC): The warranty period for hardware control technologies should be ten years, at a minimum.

    (CTA): ARB should require, by regulation, the emission control device manufacturing industry to work with the smallest and least capitalized economic unit in the business relationship on harmonizing warranty periods. Engine manufacturers should verify that each device works and will not cause engine failure before CARB verifies the technology and requires the end user to purchase it.

    Agency Response: These comments are not germane to this rulemaking but are more appropriately addressed to the verification procedure, which mandates warranties of the verified diesel emission control strategies.

71. **Comment** (CTA): ARB was supposed to bring up warranties in this rule making. ARB should require emission control device manufacturers to cover the costs of any engine failures caused by their devices in the case that the engine warranty is nullified.

    Agency Response: Staff removed the issue of warranty and warranty nullification from this rulemaking through the addition of language in section 2021.1 (b)(4) defining one option for meeting best available control technology this way: “The highest level diesel emission control strategy... that is verified for a specific engine... and which the diesel emission control strategy manufacturer or authorized dealer agrees can be used on a specific engine and collection vehicle combination, without jeopardizing the original engine warranty in effect at the time of application.” This statement eliminates the likelihood that the application of any DECS will nullify an engine warranty. The rule also includes a specific provision allowing companies to request a compliance extension if application of a DECS would jeopardize the engine warranty. Therefore, there was no cost of warranty to be considered in this rulemaking.

Q. Support

72. **Comment** (BAAQMD, CIWMB, CSAC, LCC, MECA, RCRC, SCAQMD, SJVAPCD, SMAQMD, VCAPCD, WM): Commenters expressed support for the rule.

    Agency Response: ARB appreciates all support.

III. MODIFICATIONS TO THE ORIGINAL PROPOSAL – NOTICE OF MODIFIED TEXT

At the hearing, the Board approved the regulations and proposed modifications and clarifications to the sections 2020, 2021, 2021.1, and 2021.2, title 13, CCR. Further, the Board directed staff to work with stakeholders regarding modifications or clarifications to the approved regulations. The following is a description of the modifications and clarifications, by section number.

Section 2020. Purposes and Definitions for Diesel Particulate Matter Control Measures

(b) Definitions: Staff moved definitions in section 2020, for “active fleet”, “backup vehicle”, “contract”, “contractor”, “residential and commercial solid waste”, “roll off vehicle”, and “solid waste collection vehicle” to section 2021. These definitions are specific to the Solid Waste Collection Vehicle regulation, whereas the section 2020 definitions apply generally to regulations that control diesel PM emissions. In addition, some definitions have been modified for clarity.

Alternative Fuel: Staff repeated the definition from section 1956.2(b)(1) here in section 2020 because staff intends to make structural changes to section 1956.2, which will include moving some of the section 1956.2(b) definitions to section 2020. Because the definition of “alternative fuel” is pertinent to the Solid Waste Collection Vehicle rule, staff made this duplication in advance of the structural change, which is planned for later in 2004.

Level: Staff added language to the description of Level 3 to expand and clarify how the definition applies to engines that emit 0.01 grams per brake horsepower-hour or less of diesel PM.

Retirement: Staff added language the term applies to the word “engine” as well as “vehicle” and to clarify that a retired engine may be used in a backup vehicle.

Section 2021. Solid Waste Collection Vehicles
Staff simplified the title of this section.

(a) Scope and Applicability: Staff revised language in this section in line with the new definition of “contract.”

(b) Definitions: Staff added a new sentence to clarify that the definitions in this section apply only to the Solid Waste Collection Vehicles rule and picks up the definitions that were deleted from Section 2020. Those definitions moved to section 2021 that contain modified language, or new definitions added to the regulation, are:

Active Fleet: Staff added the word “collection” before "vehicle” to clarify that vehicles that are not solid waste collection vehicles are excluded from the “active fleet” regulated by this rule.

Backup Vehicle: As with the “active fleet” definition, staff added the word "collection" in front of "vehicle" to clarify that vehicles other than collection vehicles are not included in the definition.

Contract: Staff changed this definition from a verb to a noun and simplified the language to more closely match the generally accepted definition of a contract, while specifying that in the case of the contracts referred to in the proposed rule the level of compensation, or a means of setting compensation, must be identified. Thus contracts that do not specify the compensation, or a formula for determining compensation, would not be included in this definition.

Contractor: Staff simplified the definition in line with the new definition of "contract."

Solid Waste Collection Vehicle: Staff has equated the definition of “solid waste collection vehicle” with “collection vehicle” to allow the reduction of words used later in the rule.

Total Fleet: Staff added this new definition to clarify cases in which the rule applies to all of an owner's collection vehicles versus his "active fleet."

Section 2021.1. Methods for Determining Compliance for a Municipality that Contracts with Owners for Solid Waste Collection.

(a) Compliance Requirement: Staff removed the requirement that municipalities ensure waste hauler compliance and added the requirement that each municipality include language in its contracts requiring that the contractor be in compliance with all California state laws in any new contract that has an effective date of December 31, 2004 or later.

(b) Reporting Requirement: Staff changed the date of the initial report from August 1, 2004, to January 1, 2005, and reduced the information required to be reported to ARB each year by municipalities.

(b)(1): Staff removed much of the previously requested information while retaining other reporting requirements.

(b)(1)(B): Staff eliminated some of the reporting requirements here and added "contact electronic mail address" and "the address of each terminal in the jurisdiction that houses collection vehicles."

(b)(1)(C): Staff deleted this paragraph based on public comments and Board direction.

(b)(2): Staff deleted this paragraph based on public comments and Board direction.

(c) Non-Compliance by a Contractor: Staff deleted this subsection based on public comments and Board direction that this section should only apply to municipalities.

(c) Non-Compliance: Formerly subsection (d); staff removed the phrase "by a municipality" because the entire preceding section now applies only to municipalities, making the language removed redundant.

Section 2021.2. Methods for Determining Compliance for an Owner of Solid Waste Collection Vehicles

Based on public comments and Board direction, staff removed the language that included municipalities in responsibility for compliance, thus section 2021.2 only applies to owners.

(a) Compliance Requirements: Staff removed language applying to municipalities and made other modifications for simplicity and clarity.

(a)(1) through (a)(6): Staff made minor wording changes for simplicity and clarity in these six sections.

(b) Best Available Control Technology: Staff added "or collection vehicle" to clarify that BACT applies to the engine or collection vehicle.

(b)(1): Staff removed the language referring to an engine in combination with a verified diesel engine control system to a new section (following) for clarity.

(b)(2): Staff added this new section to clarify under what conditions an owner could comply with BACT. This option was originally included in paragraph (1) but commenters said it was confusing as originally written.

(b)(3): Renumbered from (b)(2), staff added some words for clarity.

(b)(4): Renumbered from (b)(3); staff added one word for clarity.

(c) Implementation Schedule:

Table 1: Staff made changes to Table 1 based on public comment and direction from the Board, including direction to work with witnesses on details of the changes. After working with the interested parties, staff made the following changes to the implementation schedule: staff split Group 2 (model year 1960 to 1987) vehicles into two subgroups, 2a and 2b. The implementation schedule for the new Group 2a is advanced by two years for owners with 15 or more collection vehicles. The implementation schedule for the new Group 2b remains the same as the original Group 2, which provides companies with fewer than 15 collection vehicles more time for compliance. Staff placed dual-fuel and bi-fuel engines into Group 3 to give owners of these vehicles additional compliance time, in recognition of their early efforts to reduce oxides of nitrogen emissions voluntarily.

The new proposed Table 1 is shown below with changes from the originally proposed schedule underlined:

Group	Engine Model Years	% Group to Use BACT	Compliance Deadline
1	1988 – 2002	10 25 50 100	December 31, 2004 December 31, 2005 December 31, 2006 December 31, 2007
2a[a]	1960 – 1987 (Total fleet ≥ 15 collection vehicles)	15 40 60 80 100	December 31, 2005 December 31, 2006 December 31, 2007 December 31, 2008 December 31, 2009
2b	1960 – 1987 (Total fleet < 15 collection vehicles)	25 50 75 100	December 31, 2007 December 31, 2008 December 31, 2009 December 31, 2010
3	2003 – 2006 (Includes dual-fuel and bi-fuel engines)	50 100	December 31, 2009 December 31, 2010

[a]Group 2a: Staff changed the wording of this footnote to specify that Level 1 technology may not be used as BACT for any vehicles in Group 2a fleets.

(c)(1)(A), (B) and (C): Staff made numerous revisions to these paragraphs to ensure that all collection vehicles are implemented in conformity with the compliance schedule in Table 1 and to clarify the methods for determining the number of vehicles to be implemented each year. Public comments convinced staff that the original directions for calculating implementation may have inadvertently allowed some owners to double-count vehicles or otherwise intentionally delayed compliance beyond the final compliance deadlines. Staff also noted the number of vehicles required to be in compliance at any point in the schedule would have been different depending on whether the owner was retiring an engine or vehicle or retrofitting an engine. The revised sections correct these problems.

(c)(1)(D): Staff replaced "is expected to" with "shall" to require rounding up for compliance purposes when the fraction of a vehicle is equal to or greater than one-half. The words "solid waste" were removed as unnecessary.

(d) Compliance Extensions: Staff made changes to this section to conform to the changes brought about in Table 1 as the result of Board direction and public comments, and also changed the language to clarify that compliance extensions are granted to the owner. The changes intend to assure compliance extensions where they are

legitimately earned or needed while also preventing extensions that could unnecessarily delay implementation.

(d)(1): New language has been added to require an owner, when he intends to comply with an early compliance deadline, to submit a notification of intent to comply to the Executive Officer. The notification letter ensures that ARB will have a record of the delay in intermediate and final compliance deadlines afforded by early compliance. Staff does not intend to send letters granting the compliance extension for early implementation but does intend to keep a record of owners who have registered their intent to implement early.

(d)(1)(A): Staff has extended the amount of time for early compliance with Group 1 engines (model years 1988 to 2002) from December 31, 2004, to July 1, 2005, which will give owners close to one year from the operative date of the rule to implement early. In addition, language is added to clarify that the total fleet must comply early, rather than the active fleet, and to specify that at least half of the vehicles must be the oldest in the owner's fleet.

(d)(1)(B): Staff changed the wording to conform with the splitting of Group 2 vehicles into two groups and moved up compliance deadlines for Group 2a fleets to match the new implementation schedule. Staff also made changes to clarify that the total fleet must comply early, rather than the active fleet, and that the intermediate and final compliance deadlines receive the delay, not just the final compliance deadline.

(d)(1)(C): Staff added this new section to add compliance deadlines for vehicles in the new Group 2b fleet.

(d)(2)(A)(ii): Staff added this new section to add compliance extensions for the new Group 2a vehicles.

(d)(2)(A)(iii): Staff made language changes for clarity and to include vehicles in the new Group 2b.

(d)(2)(B): Staff removed redundant language that duplicated requirements stated in paragraph (b)(4) and added language to require an owner to apply verified control technology to all collection vehicles in his fleet for which verified technology exists before asking the Executive Officer for a compliance extension for which there is no verified control technology.

(d)(2)(B)(i), (ii), & (iii): Staff added language to these sections requiring more forms of vehicle identification to facilitate tracking of vehicles that may be granted compliance extensions.

(d)(2)(B)(iv): Staff added this section to require that an owner applying for an extension describe the reason he is requesting the compliance extension, which will better allow the Executive Officer to rule on an application.

(d)(2)(B)(v): Renumbered from (iv); staff shortened and clarified this paragraph so that it refers to documentation required elsewhere in the rule.

(d)(2)(B)(vi): Renumbered from (v); staff tightened requirements to enable effective enforcement and made changes clarifying language relating to compliance extension application dates for Group 2a and 2b vehicles and to state that compliance extensions for engines in these groups will be granted for no more than one year, as requested by the Board at the September 24, 2003 meeting.

(d)(3): Staff clarified the language regarding compliance extensions for very small fleets.

(d)(4): Staff added this new section to specify that owners of dual-fuel or bi-fuel engines comply with the Group 3 implementation schedule.

(d)(5): Staff moved this paragraph from (e)(4) "Special Circumstances" to (d)(5) "Compliance Extensions" because it fits more logically in "Compliance Extensions." Staff modified the language to require that an owner must apply BACT to all applicable engines in his fleet before he can be granted an extension of no more than one year for an engine to be retired within 12 months.

(d)(6): Staff moved this section from (e)(5) "Special Circumstances" to (d)(6) "Compliance Extensions" because it fits more logically in "Compliance Extensions." The language has been tightened to ensure that experimental tests or demonstrations under this paragraph operate for no longer than two years and that vehicles are brought into compliance within six months of the experimental test or demonstration ending. Additional requirements for documentation are detailed and a limit to testing and evaluation of December 31, 2010, is added.

(e): Diesel Emission Control Strategy Special Circumstances: This heading contains minor wording changes for clarity with the word "vehicle" twice being changed to "engine" and "as follows:" added at the end.

(e)(2): Staff reworked this section to improve clarity and tighten requirements. Changes reduce from 60 to 30 days the time allowed to inform the Executive Officer of discontinuing the use of fuel as BACT and require the use of new BACT within 30 days or the submittal of a compliance plan to the Executive Officer. The compliance plan must show how vehicles will be brought into compliance within six months of the date of discontinuance of fuel as BACT. Staff believes that an owner who discontinues use of a fuel as BACT should plan before making the change to install another BACT, thus the

shortened timeframe for compliance. However, staff allows the owner to submit a compliance plan because we recognize that the discontinuance of usage of fuel may, under some circumstances, have been abrupt and unplanned for by the owner.

(e)(3)(B): Staff changed the language to address the split of Group 2 into 2a and 2b and prohibited the use of a Level 1 control strategy on vehicles by owners of 15 or more collection vehicles.

(e)(3)(C): Staff changed the language to address the new Group 2b and specified a limitation on the use of Level 1 control strategy.

(e)(4): This paragraph has been deleted and moved to (d)(5).

(e)(5): This paragraph has been deleted and moved to (d)(6).

(f) Record Keeping Requirement: A number of changes are made throughout this paragraph to tighten and clarify language, the main goal being to ensure proper compliance with record keeping.

(f)(1)(A), (B), & (E): Staff made wording changes in these paragraphs to clarify or expand records requirements to ensure better enforcement.

(f)(1)(F): Staff modified this paragraph to conform with changes in (d)(5).

(f)(1)(G): Staff modified this paragraph to conform with changes in (d)(6).

(f)(1)(H)(i), (ii), & (iii): Staff added these paragraphs to ensure that owners have made a declaration of compliance each year.

(f)(2): Staff made nonsubstantive wording changes in paragraph (f)(2) and deleted the original paragraph (D) to eliminate duplication.

(f)(2)(F): Staff made changes in the former paragraph (G) to conform with (d)(6).

(f)(3): Staff added a sentence clarifying that when ownership of a collection vehicle is transferred, the records required in subsection (f) transfer with the vehicle. In other words, the owner does not have to maintain records for collection vehicles he no longer owns, but he is obligated to transfer the records to the new owner.

IV. SUMMARY OF PUBLIC COMMENTS AND AGENCY RESPONSES – NOTICE OF MODIFIED TEXT

Written comments for the Notice of Modified Text were submitted by the following:

Jerry Mason, Ventura County Air Pollution Control District (VCAPCD)
D. Barton Doyle, San Gabriel Valley Council of Governments (SGVCoG)
John Kelly Astor, California Refuse Removal Council (CRRC)
Michael Miller, Los Angeles County Solid Waste Management Committee (LACSWMC)
Shari Afshari, County of Los Angeles, Department of Public Works (LA Co)
S. Kent Stoddard, Waste Management (WM)
Yvonne Hunter, League of California Cities (LCC)
Mary Pitto, Regional Council of Rural Counties (RCRC)
Karen Keene, California State Association of Counties (CSAC)
Stephanie Williams, California Trucking Association (CTA)
Yvette Gomez Agredano, Solid Waste Association of North America, California (SWANA)
Joe Jobe, National Biodiesel Board (NBB)

Set forth below is a summary of each objection or recommendation made regarding the specific regulatory actions proposed in the Notice of Modified Text, together with an explanation of how the proposed action was changed to accommodate each objection or recommendation, or the reasons for making no change. The comments were grouped by topic whenever possible. Several comments were received that did not involve objections or recommendations specifically directed toward the modifications made or to the procedures followed by the ARB in the Notice of Modified Text. While staff is not required to summarize or respond to those comments, some are summarized below at staff's discretion.

R. Additional Clarification Changes To The Regulation Order

Three additional minor changes were made in response to the comments in this section to improve clarity of the language. These changes are discussed in numbers 73, 76, and 93 of this section.

S. Authority

73. **Comment** (CRRC, WM): ARB does not have the legal authority to require that contracts between municipalities and waste haulers require that the waste hauler be in compliance with all California state laws [section 2021.1(a)].

Agency Response: Staff agrees with this comment. Staff meant to state that the waste haulers be in compliance with "all applicable air pollution control laws", which ARB does have legal authority to require. This change has been made to the final regulation order.

T. Scope and Applicability, Section 2021 (a)

74. **Comment** (CRRC): The section makes a distinction between a municipality that has a contract with an owner for collection service, which is subject to the rule, and a municipality that merely authorizes owners through a permit, license, or similar approval, which is not subject to the rule. Commenter is confused by the change in language and would like an explanation or justification for the distinction.

    Agency Response: This section relates to sections 2021.1 and 2021.2. As originally noticed, section 2021.1 applies to "a municipality that contracts with owners for solid waste collection." Because section 2021.1 does not apply to a municipality that authorizes owners through a permit, license, or similar approval, staff removed that language from section 2021 (a) as erroneous.

75. **Comment** (CRRC): The Scope and Applicability section should include the words "have a contract with owners and operators."

    (SWANA): Section 2021.2 (a) states that it applies to an owner of solid waste collection vehicles. There needs to be a distinction between the owner and the operator as the contract hauler may neither own nor operate the vehicles.

    Agency Response: Neither of these comments is responsive to the Notice of Modified Text as the rule has applied to the owner, as defined, since the original filing. Staff points out that the definition of an owner in this rule is the same as defined in title 13, California Code of Regulations, section 2180.1 (21): "Owner means either (A) the person registered as the owner of a vehicle by the California Department of Motor Vehicles (DMV), or its equivalent in another state, province, or country; or (B) a person shown by the registered owner to be legally responsible for the vehicle's maintenance. The person identified as the owner on the registration document carried on the vehicle at the time a citation is issued shall be deemed the owner unless that person demonstrates that another person is the owner of the vehicle." Staff disagrees that the rule needs to or should be modified to encompass the operator of the vehicles, even if that person is separate from the owner. If the operator is not also the owner or the person legally responsible for maintenance, then staff will have to request the name of the appropriate person to whom a citation should be delivered. Staff does not

expect this to be an obstacle to effective enforcement, but if it becomes an issue staff will propose a change to the rule at a future date.

76. **Comment** (CSAC, LCC, RCRC, WM): The revised language states that municipalities that have a contract with owners for collection service are subject to the provisions of sections 2021, 2021.1, and 2021.2. Since 2021.2 contains the compliance mandate, it appears that staff has left wording in that makes municipalities responsible for compliance by their contractors.

    Agency Response: Staff agrees, this language was left unchanged in error as evidenced by removal of municipality responsibility from section 2021.2. ARB staff meant to state that "Sections 2021 and 2021.1 shall apply to municipalities that have a contract with owners for residential and commercial solid waste collection service. Sections 2021 and 2021.2 shall apply to solid waste collection vehicle owners, both private and government entities." This change has been made to the final regulation order.

U. Definitions

77. **Comment** (CSAC, CRRC, LCC, SWANA, WM): The language in the definition of "solid waste collection vehicle or collection vehicle" specifying that waste is collected "for a fee" excludes cities and other agencies that operate collection vehicles but do not separately charge for collection service.

    Agency Response: The comment is not responsive to the Notice of Modified Text and was not made when the proposal was publicly noticed. If the definition language proves to have the unintended consequence suggested by commenters, staff will propose modifying the rule at a later date.

78. **Comment** (CRRC, WM): The definition of "alternative fuel" includes the phrase "gasoline (when used in hybrid electric buses only)." This should be modified to include any vehicles, not just buses.

    Agency Response: Staff disagrees with this comment. This definition was brought into this rule from the fleet rule for transit agencies (title 13, CCR, sections 1956.2-1956.4) in advance of a pending structural move, which will move the fleet rule for transit agencies into this Article. At its October 24, 2002, hearing, the Board heard testimony from witnesses regarding this definition and at that time instructed staff to include gasoline as an alternative fuel only when used in a hybrid-electric bus. Staff believes it was not the Board's intent to define gasoline as an alternative fuel in all hybrid-electric vehicles – such as passenger cars – but to restrict this as a special definition for buses. Absent further Board direction, staff is unwilling to broaden this definition at this time. Staff is also

does not believe it is necessary to make this change as the only California certified gasoline hybrid-electric bus meets the 0.01 g/bhp-hr PM standard that is identified in section 2021.2 (b)(1) as meeting best available control technology.

79. **Comment** (CRRC): The definition of the word “retirement” should include the word “vehicle.”

    Agency Response: The definition of the word “retirement” does include the word “vehicle” following the phrase “means an engine or vehicle. . .“

80. **Comment** (CRRC): The distinction between the definition of “active fleet” and “total fleet” is unclear.

    Agency Response: Staff defined “total fleet” to mean all of an owner’s collection vehicles no matter where located in California. The “active fleet” concerns the vehicles located at a specific terminal. Some sections of the rule require that the owner count his active fleet (for example, in determining the number of vehicles to be implemented by each compliance deadline) and other sections require than an owner count his total fleet (for example, in determining the number of vehicles to implement for early compliance credit).

81. **Comment** (LA Co, LACSWMC, SWANA): The definition of “owner” should apply only to the registered owner and not also the person responsible for maintenance.

    Agency Response: This comment is outside of the scope of the Notice of Modified Text. Nevertheless, staff disagrees with this comment. See the answer to Comment 75 for an explanation.

V. Compliance for a Municipality that Contracts for Solid Waste Collection Service

82. **Comment** (VCAPCD): Commenter poses the following hypothetical: Assume a collection contractor’s terminal is in the unincorporated area of a county. The contractor serves many cities in the county but not the unincorporated areas. None of the cities would report the address of the terminal. Is this the intent?

    Agency Response: Staff disagrees with the interpretation made by the commenter. In the hypothetical situation above, each city would report the address of the terminal that houses vehicles that specifically serve that jurisdiction. Staff included this language at the request of municipality representatives who stated that the previous language would have them reporting all terminals that house any vehicles owned by the company with which

they have a contract. Staff agreed and modified the language to restrict reporting just to those terminals that house vehicles that serve the municipality making the report.

83. **Comment** (SGVCoG): Commenter believes that the responsibility of the jurisdictions that use the services of independent haulers (not contracted) is unclear. Commenter urges the ARB to consider the impact of the rule on local jurisdictions should those haulers violate the law.

    Agency Response: Staff believes the commenter has incorrectly interpreted the rule. A municipality is not responsible for providing reports to the ARB for any hauler with which it does not have a contract. Further, ARB has removed references in the rule that imposed joint responsibility for compliance on municipalities. Thus, the supposed impact on municipalities implied by the commenter does not exist in the proposed rule.

84. **Comment** (LA Co, LACSWMC, SGVCoG): Commenters remain opposed to any responsibility by municipalities and to any penalty provisions in the law [section 2021.1 (c)]

    Agency Response: Staff disagrees with this comment. Staff believes that ARB needs an independent source of information regarding contracted waste haulers to better allow it to track companies and enforce the rule. With any regulatory requirement comes the need for the ability to enforce that requirement. The Legislature has established statutory penalty provisions that apply to any regulation adopted by the ARB. In this situation, ARB could impose a penalty on any municipality that consistently refused to make the required reports.

85. **Comment** (LA Co, LACSWMC): In section 2021.1 (b)(1)(B) the municipality should not have to report the “owner name” (should be deleted) since the “contractor name” includes the owner, as a contractor is defined as an “owner with a contract.”

    Agency Response: Staff disagrees with this comment. Although we agree that the contractor and owner could be the same person, we have also received comments from some that the owner and contractor could be different. Staff will change this section in the future if experience determines it is redundant. The municipality can simply state the owner and contractor are the “same” in its reports.

86. **Comment** (LACSWMC, SWANA): The term “jurisdiction” in section 2021.1 (b)(1)(B) is confusing and needs to be defined.

Agency Response: Staff disagrees, having consulted several dictionaries, all of which include definitions of the term "jurisdiction." Staff notes the definition of jurisdiction that applies is "the territorial range of authority or control.[1]"

87. **Comment** (LA Co): Health & Safety Code section 44381 does not apply and proposed penalties cannot be imposed on municipalities [section 2021.1 (c)].

Agency Response: Staff disagrees with this comment. Section 2021.1 (c) reads "Any violations of this section may carry civil penalties as specified in state law and regulations, including Health and Safety Code Section 44381." This language does not restrict the ARB to only resorting to the named code section but calls it out as one section that can be used to determine penalties. In addition, staff believes that the specified section does apply to municipalities.

W. Best Available Control Technology

88. **Comment** (WM): Section 2021.2 (b)(3) should be modified to eliminate the requirement that alternative fuel engines must comply with all optional reduced emission standards; they should only have to comply with the optional PM emission standards.

Agency Response: This comment is non-responsive to the Notice of Modified Text; nevertheless, staff disagrees with this comment. The Board has instructed staff to ensure NOx reductions from vehicles when it adopts these diesel emission control rules. Requiring alternative fuel collection vehicles to be certified to all optional emission standards will further that goal.

89. **Comment** (CSAC, LCC, RCRC, WM): The rule imposes a very short timeframe for compliance. Therefore, ARB must modify section 2021.2 (b)(4) with the addition of the following language: "<u>The highest level diesel emission control strategy required by this paragraph shall be the highest level that is verified at the time an owner places an order for the emission control strategy, provided that such strategy must be applied within a period not to exceed 12 months following the date of placing such an order.</u>"

Agency Response: This comment is non-responsive to the Notice of Modified Text; nevertheless, staff disagrees with this comment. Staff believes that a reasonable amount of time between placing an order and installation to be no more than six months, but does not believe this time period should be set in the rule. Vendors should install products as ordered. Staff would consider a contract

[1] The American Heritage College Dictionary, 3rd Edition. 1993. Houghton Mifflin Company, New York.

for installations of products that occur as far out as 12 months from the date of placing the order to be an attempt to circumvent the intent of the rule. Staff will address this issue in any implementation guidance provided to owners.

90. **Comment** (NBB): Requests that the Board modify the rule to include the use of alternative diesel fuels verified through the "Interim Procedure for Certification of Emission Reductions from Alternative Diesel Fuels" as an eligible compliance strategy.

Agency Response: This comment is non-responsive to the Notice of Modified Text; nevertheless staff disagrees with this comment. See the agency response to comment number 14.

X. Implementation Schedule

91. **Comment** (VCAPCD): In section 2021.2 (c)(1), Table 1 shows that Group 1 is unchanged but Group 2 has been split into two groups. Is this correct?

Agency Response: The commenter is correct. See the response to comment 25.

92. **Comment** (CRRC): The new section 2021.2 (c)(1) significantly revises the formula used to determine the number of refuse vehicles to be implemented each year. Commenter feels the new language is confusing and ambiguous with regards to the number of vehicles that must be included in the calculation. The new language actually increases the number of vehicles that require BACT at the start of each group implementation by including retired vehicles from prior years in the calculations. Any solution to this problem short of changing the regulation language "will only contribute to uncertainty and promote future conflict."

Agency Response: The new section does revise the formula used to determine the number of collection vehicles required to comply each year, but staff made these revisions to ensure all collection vehicles are implemented in conformity with the compliance schedule in Table 1 and to clarify the methods for determining the number of vehicles to be implemented each year. Public comments convinced staff that the original directions for calculating implementation may have inadvertently allowed some owners to double-count vehicles or otherwise intentionally delayed compliance beyond the final compliance deadlines. Staff also noted the number of vehicles required to be in compliance at any point in the schedule would have been different depending on whether the owner was retiring an engine or vehicle or retrofitting an engine. The revised sections correct these problems.

Y. Miscellaneous

93. **Comment** (CRRC): In section 2021.2 (e)(1)(B) the reference to “conditions of Paragraph (4) below” should be removed, as there is no such paragraph.

    Agency Response: Staff agrees; this was left in the regulation in error. The phrase “unless the engine meets the conditions of paragraph (4) below” has been removed from section 2021.2(e)(1)(B) of the final regulation order.

94. **Comment** (CRRC): All of the changes that the commenter has requested must be made, even if that results in a delay in the rule. The rule must be written properly to ensure air quality benefits are achieved.

    Agency Response: Staff disagrees with this comment and believes we have made a diligent effort to make the regulation as clear as possible and achieve the goal of reducing in-use emissions of PM and NOx in a cost-effective manner, based on the information available during the rulemaking process. The law is well settled that agencies do not have to wait until a proposed rule is perfect before it can be adopted, therefore to delay further is not warranted. Nevertheless, staff will be providing updates to the Board in 2005, 2006, 2007, and biennially thereafter as needed, and the Board may request staff make changes to the rule if the air quality benefits are not being achieved.