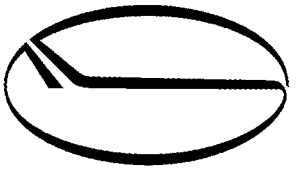

May 24, 2006

By Electronic Submission & Facsimile

Clerk of the Board
California Air Resources Board
1001 I Street, 23rd Floor
Sacramento, California 95814
Electronic submission: **http://www.arb.ca.gov/lispub/comm/bclist.php**
Fax: 916-322-3928

Re: Notice Of Public Hearing To Consider Adoption Of New Emission Standards, Fleet Requirements, And Test Procedures For Forklifts And Other Industrial Equipment

To the Clerk of the Board:

I write on behalf of the Air Transport Association of America, Inc. (ATA)[1] to provide comments on the California Air Resources Board's (ARB's) proposed "New Emission Standards, Fleet Requirements, and Test Procedures for Forklifts and Other Industrial Equipment" (LSI Rule).[2] ATA regularly comments on federal and state regulatory developments that may affect the airlines. In that capacity, we submit these comments on the proposed rule.

ATA and its members continue to believe that ARB is preempted by federal law from regulating airport ground support equipment (GSE) in the manner proposed in the LSI Rule, and expressly reserve the right to challenge the LSI Rule. Nevertheless, with ARB staff's recommendation to remove the GSE electrification mandate from the proposed rule (Section 2775.1(b)), and ARB staff's proposal to codify in the regulation the emission factors to be used to account for on-road equivalent GSE in calculating fleet average emissions, ATA would like to

[1] ATA is the principal trade and service organization of the U.S. scheduled airline industry. The members of the Association are: ABX Air, Alaska Airlines, Aloha Airlines, American Airlines, ASTAR Air Cargo, ATA Airlines, Atlas Air, Continental Airlines, Delta Air Lines, Evergreen International Airlines, FedEx Corporation, Hawaiian Airlines, JetBlue Airways, Midwest Airlines, Northwest Airlines, Southwest Airlines, United Airlines, UPS Airlines, and US Airways; associate members are: Aerovías de México, Air Canada, Air Jamaica, and Mexicana de Aviación.

[2] *See* Notice of Public Hearing to Consider Adoption of New Emission Standards, Fleet Requirements, and Test Procedures for Forklifts and Other Industrial Equipment, April 20, 2006. Available online at: http://www.arb.ca.gov/regact/lore2006/lore2006.htm

Air Transport Association of America, Inc.
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acknowledge the efforts of ARB staff to seek to develop a proposed LSI Rule that reflects the important goal of achieving further emission reductions from GSE, and that better takes into account more accurate data concerning the nature and uses of GSE.

BACKGROUND

ATA has a long history of working cooperatively with ARB to find ways to control emissions from GSE. In ATA's written comments last year on ARB's initial proposal for regulation of off-road large spark-ignition (LSI) engines,[3] in addition to setting forth the bases for federal preemption of the proposed rule, ATA provided detailed information concerning the specialized nature of GSE, its useful life, and other characteristics relevant to ARB's proposal as applied to GSE fleets. ATA also identified specific proposed changes to the rule.[4]

Thereafter, ATA shared technical information with ARB, and worked cooperatively with ARB staff over many months to communicate ATA's concerns and encourage ARB to seek to develop more flexible and more technically feasible fleet average emission targets for GSE. The fleet average emission levels for GSE ultimately proposed by ARB staff, reflected in proposed 13 CCR Sections 2775.1 and 2775.2, represent aggressive further reductions in air emissions from GSE in California.

DISCUSSION

I. The LSI Rule is Preempted by the Federal Aviation Act, Airline Deregulation Act, and Clean Air Act, and ATA Reserves the Right to Challenge the Regulation

In its comments on ARB's previous LSI proposed rule, ATA demonstrated in detail that federal aviation laws and the Clean Air Act preempt ARB's regulation of GSE. Although ARB's current proposed LSI Rule (with the deletion of the electrification mandate) represents an improvement, it does not remedy this defect. The LSI Rule's proposed regulation of GSE is preempted by federal law, including the Federal Aviation Act, Airline Deregulation Act, and Clean Air Act. Among other things, these laws reflect Congress' judgment that GSE – which is critical to the safe and efficient functioning of the National Airspace System – can only be regulated in a consistent and uniform manner at the federal level. The fleet average emission standards and other provisions of the LSI Rule would impose broad and problematic state mandates on GSE, requiring extensive replacement of GSE with untested equipment, resulting in

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[3] *See* California Regulatory Notice Register, Register 2005, No. 18-Z (May 6, 2005).

[4] *See* Letter from B. Hawkins, ATA, to Clerk of the Board, ARB (June 17, 2005), concerning ARB's "Notice of Public Hearing to Consider Adoption of Emission Standards and Test Procedures for New 2007 and Later Off-Road Large Spark-Ignition ("LSI") Engines and Fleet Requirements for Users of Off-Road LSI Engines." (Attached hereto as Exhibit A, and incorporated by reference herein).

prohibited impacts on aircraft operations and airline prices, routes, and services. ATA and its members continue to believe this is contrary to federal law for the reasons set forth in Sections I and IV of ATA's previous comments, addressing federal preemption and issues relating to the integration of emission reduction technologies into GSE,[5] and those prior comments are hereby incorporated by reference.

II. The Executive Officer's Authority to Issue Appropriate Compliance Extensions Should Not Be Limited to 2013 [Proposed Section 2775.2(e)(2)(C)]

Proposed Section 2775.2(e)(2)(B) allows operators to apply to the Executive Officer for a two year compliance extension, with renewals of up to one year, but only if the applicant has made a good faith effort to comply with the fleet average emission level standards and provides documentation of other factors that justify the extension. For example, such an extension is available where, "due to conditions beyond the reasonable control of the applicant," insufficient numbers of lower-emission modified GSE are commercially available, or where such new or modified GSE pose operational or safety issues. *See* Proposed Section 2775.2(e)(2)(B)(i), (ii). A compliance extension under such circumstances is reasonable and necessary, particularly given that the availability of new or retrofitted emission-controlled GSE that can perform safely and efficiently in an airport environment, and that are sufficiently low in emissions to meet the proposed fleet average emission standards, is not generally within the control of the GSE operator -- but instead depends largely on engine manufacturers and the limited number of specialty GSE manufacturers.

Section 2775.2(e)(2)(C) unnecessarily provides that such compliance extensions shall not be issued by the Executive Officer beyond January 1, 2013. ATA understands that the preferred approach of ARB staff is that, if the circumstances set forth under proposed Section 2775.2(e)(2)(B)(i)-(iii) persist and necessitate an extension beyond 2013, staff would recommend that the Board itself take action to amend the rule to provide for the further extension.

However, given the necessity that such extensions be available for GSE, and the nature of the showing required under Section 2775.2(e)(2)(B), it is not necessary to place an arbitrary date limit on the Executive Officer's ability to grant compliance extensions. ATA believes that the better and more efficient approach would be to empower the Executive Officer at the outset to grant such extensions beyond 2013 if the circumstances warrant, rather than requiring Board action to amend the regulation. Given that the proposed LSI Rule already recognizes the potential need for compliance extensions as a "safety valve," particularly for GSE, the Executive Officer will be in the best position to determine the need for such extensions both before and after 2013. At a minimum, for determinations involving any extension beyond 2013, the Executive Officer should be empowered to make the initial determination, subject to Board review, with the Executive Officer's determination to stand absent Board action to the contrary.

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[5] *See* Exhibit A, at pages 5-11, 15-23.

Accordingly, ATA suggests that ARB delete proposed Section 2775.2(e)(2)(C), and allow the Executive Officer to make appropriate determinations concerning compliance extensions based on the circumstances identified in the regulation, without an arbitrary date limit, and subject to Board review for determinations extending beyond 2013.

III. ATA Supports ARB Staff's Proposal for a 15-Day Amendment to Make Explicit the Emission Factors to be Applied to Account for On-Road Equivalent (ORE) GSE

ATA understands that ARB staff intends to propose that the LSI Rule be modified to make clear that OREs (i.e., vehicles that are designed for on-road use, and are used without a license plate in an off-road environment such as an airport) can be included for purposes of calculating fleet average emission levels for non-forklift fleets, and to codify the emission factors that should apply to such units. In general, on-road vehicles are required to meet more stringent emission standards, and the use of typically cleaner OREs wherever possible for off-road applications should be recognized and encouraged. Inclusion of OREs is a key component of the overall fleet average emissions approach of the LSI Rule.

Emission factors are needed to allow calculation of ORE emissions for purposes of the fleet average emission standards of the LSI Rule because on-road engines are typically certified using a different metric than off-road engines. The emission factors that ARB staff has concluded should be applied for OREs under the LSI Rule vary over time, to reflect natural fleet turnover and steady incorporation of newer, cleaner vehicles. According to discussions with ARB staff, the ORE emission factors to be used in calculating compliance with the three fleet average emissions targets of the proposed LSI Rule are as follows:

2009: 1.1 g/bhp-hr
2011: 0.8 g/bhp-hr
2013: 0.7 g/bhp-hr

Although the definitions set forth in the current LSI Rule proposal would allow for inclusion of OREs in calculating fleet average emissions, and ARB staff already communicated to ATA the above composite emission factors to be utilized in making the calculation, ATA strongly supports a more explicit provision codifying these matters. ATA agrees with ARB staff that issuing a 15-day notice amending the proposed rule to expressly recognize inclusion of OREs and to incorporate the emission factors into Section 2775.1(a) of the regulation will add clarity for regulators and the regulated community, and will further help encourage the use of on-road vehicles where possible for off-road applications.

IV. ATA Supports ARB Staff's Recommendation that the Proposed Electrification Mandate be Withdrawn

ATA understands that ARB staff will recommend that the Board delete from the LSI Rule the proposed electrification mandate, Section 2775.1(b). That provision would impose a mandatory 30 percent electrification requirement for GSE operated at five South Coast airports (Burbank, John Wayne, Los Angeles International, Long Beach Municipal and Ontario International), and would apply only to those airlines that had voluntarily agreed to achieve early GSE emission reductions under the South Coast Ground Support Equipment Memorandum of Understanding (MOU), dated November 27, 2002.

At the request of ARB staff, ATA provided information and data demonstrating that the MOU signatories already have achieved the contemplated electrification levels, on a voluntary and aggregated basis. In addition, ATA provided information establishing that there is little to no risk electrification levels would decline. Based on this information, and the recordkeeping and monitoring provisions already incorporated in the rule, ARB staff concluded that the electrification mandate should be withdrawn.

ARB staff is correct to withdraw the proposed electrification mandate for the reasons described above, and the Board should accept staff's recommendation that the mandate not be adopted. ATA also believes that the mandate should be withdrawn because, as set forth below, in light of the fleet average emission standards to be adopted under the LSI Rule, the addition of an electrification mandate would achieve no emission reductions, and the provision suffers from a variety of serious legal flaws.

A. The Electrification Mandate is Unnecessary and Would be Arbitrary and Capricious

1. The Electrification Mandate Would Do Nothing to Reduce Air Emissions

All GSE subject to the proposed LSI Rule, including GSE in the South Coast, would be subject to the same state-wide fleet average emission targets -- *regardless* of the electrification mandate. *See* Proposed Section 2775.1(a). As such, the electrification mandate provision would not change the fleet emission requirements under the rule, and would yield no net reduction in emissions and no environmental benefit. The proposed fleet average emission standards are the end result of a substantial effort by ARB to develop fleet average emission standards designed to achieve ARB's emission reduction goals, while preserving some level of flexibility for GSE operators. The addition of the electrification mandate would needlessly impair that flexibility, and would simply invite litigation challenging the LSI Rule, with no additional emissions reductions.

2. The Electrification Mandate Unfairly Would Apply Only to Those Airlines That Stepped Forward to Undertake Early, Voluntary Reductions in GSE Emissions Under the MOU

From a policy perspective, the electrification mandate would have the perverse effect of punishing those airlines that voluntarily came forward to sign the MOU at a time when ARB needed to achieve early reductions in GSE emissions. Despite the termination of the MOU for other reasons, those early emission reductions have been provided by the carriers. Thus, not only would the provision provide no environmental benefit, it would impose facially discriminatory and unnecessary obligations only on the very airlines who were willing to come forward to work with ARB to achieve voluntary reductions. At the same time, other California GSE operators would be free to ignore the mandate. By imposing unnecessary regulatory burdens on only some airlines, the mandate would give a competitive advantage to non-U.S. carriers and other operators who refused to join the MOU. From a policy perspective, this would be inequitable and unwise, and from a legal perspective, this discriminatory treatment is arbitrary and capricious.

B. The Electrification Mandate Would be Contrary to Federal and State Law

1. Federal Aviation Laws Preempt any State GSE Electrification Mandate

As discussed above, the Federal Aviation Act and the Airline Deregulation Act preempt ARB from issuing any GSE regulation that affects the movement and operation of aircraft, or airline rates, routes, or services. While ATA continues to believe that ARB's effort to impose fleet average emission standards and other state requirements on GSE under the LSI Rule is preempted under this standard (particularly when viewed in the proper context of ARB's ongoing overall effort to regulate the GSE fleet, including the PE ATCM[6] and anticipated ORD ATCM[7]), the impermissible effects of an electrification mandate are particularly stark and problematic, especially given the inflexibility of such a mandate with respect to airline operations.[8]

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[6] "Airborne Toxic Control Measure (ATCM) For Diesel Particulate Matter From Portable Engines Rated At 50 Horsepower and Greater," effective March 11, 2005.

[7] Off Road Diesel Airborne Toxic Control Measure, expected to be proposed this year. *See* http://www.arb.ca.gov/msprog/ordiesel/ordiesel.htm.

[8] *See*, *e.g.*, Letter from Paul Dykeman, FAA, to Donald Zinger, EPA, (Aug. 24, 2000), enclosure at 5-6 (in reviewing proposed Texas electrification mandate, FAA concluded that, even assuming that the state had authority to regulate GSE in some manner, "[t]he central issue here is whether the [proposed Texas] regulation has left owners and operators of GSE equipment the discretion to choose among suggested procedures and the freedom to choose measures that do no necessarily regulate aircraft operations.") (included as attachment A to Exhibit A hereto); *see also* the discussion, infra at note 10, as to the ineffectiveness of the proposed LSI Rule regulatory language in providing such flexibility.

As detailed in Sections I and IV of ATA's June 15, 2005, comments on ARB's initial LSI proposal (incorporated herein by reference), GSE constitute highly diverse and specialized equipment. Given the technical feasibility, operational, and potential safety issues raised by any attempt to electrify existing GSE, any state mandate to electrify a percentage of GSE necessarily would impinge upon aircraft operations and airline rates, routes, and services. In this regard, the Federal Aviation Administration (FAA), the agency vested by Congress with primary and exclusive jurisdiction to interpret and carry out the nation's aviation laws, in evaluating a proposed Texas electrification mandate (later withdrawn by regulators), highlighted a number of ways in which an electrification requirement can impermissibly affect current or future aircraft operations.[9] While airlines are free to agree to undertake voluntary electrification measures (which can be crafted by the airlines in a manner that minimizes disruptions to operations), states lack the authority to impose such measures.[10]

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[9] *See*, *e.g.*, Letter from Paul Dykeman, FAA, to Donald Zinger, EPA, (Aug. 24, 2000), enclosure at 6 ("Electrification will be difficult to implement without affecting operations given the recharging time, battery life, and the need for space for recharging equipment at the airport. Both the phased-in percentage emission reduction alternative and the electrification alternative potentially reduce the availability of GSE during peak periods of airport operation. Limitations on total numbers of GSE available at any given time would create difficulties in scheduling flights and increase congestion and delays.").

[10] Here, the ATA member airlines voluntarily achieved significant electrification on an aggregate basis under the MOU. The fact that ATA member airlines have already achieved, and are very likely to maintain, over 30% LSI electrification in the aggregate (i.e., based on the composite performance of all airlines) does not mean that each of the airlines could readily comply with an electrification mandate such as that initially proposed as part of the LSI Rule, and does not mean that ARB has the authority to mandate such measures. Among other reasons, as a practical matter, due to differing operational requirements some airlines require a greater proportion of GSE unsuitable for electrification (*e.g.*, cargo loaders).

In addition, unlike the MOU, which was negotiated by the airlines and ARB as part of an overall voluntary, aggregate requirement (with exceptions based on infrastructure unavailability, safe operation, and other issues, and separate provision among the carriers to address aggregate compliance worked out in advance as part of the overall negotiation), the electrification mandate as a regulatory requirement would be based on individual airline compliance. Although the LSI Rule electrification mandate would have included a provision that would nominally allow airlines to "voluntarily agree" to average or trade emissions, that provision is essentially meaningless in the absence of a voluntary agreement and could not save an otherwise preempted regulation. The airlines are competitors, and there is no reasonable basis for assuming that carriers who may be able to comply by virtue of their unique operational circumstances could or should voluntarily agree to assist under-compliant competitors to meet the requirements of a state regulation.

2. A Discriminatory Electrification Mandate That Would Apply Only to a Select Group of Domestic Carriers Would Provide an Impermissible Competitive Advantage to Foreign Carriers and Other Operators, and Would be Contrary to Federal Aviation Law

It is a fundamental principle of federal aviation law that regulation of air carriers must be uniform, and any regulation or electrification requirement that would apply only against certain airlines is contrary to federal law. This core policy is reflected throughout the statutory framework and legislative history of the federal aviation statutes, as well as FAA regulations. For example, the Airline Deregulation Act embodies national policies of "strengthening the competitive position of air carriers to at least ensure equality with foreign air carriers," ensuring "the availability of a variety of adequate, economic, efficient, and low-priced services without unreasonable discrimination," and "placing maximum reliance on competitive market forces and on actual and potential competition . . . to provide the needed air transportation system." 49 U.S.C. § 40101(a)(4), (6), (15). A state regulatory mandate that singles out a select number of domestic carriers would fly in the face of these fundamental purposes and objectives of federal law, and would burden commerce in a manner contrary to federal aviation law.

This core non-discrimination principle also finds direct expression in numerous other specific provisions of federal aviation law -- particularly those that govern airports, airport projects, and aviation grants. *See*, *e.g.*, 49 U.S.C. § 47101(d) ("Each airport and airway program should be carried out . . . to . . . prevent unjust and discriminatory practices, including as the practices may be applied between categories and classes of aircraft"); 49 U.S.C. § 47107(a) (project grants may not be approved absent written assurances that "the airport will be available for public use on reasonable conditions and without unjust discrimination; (2) air carriers making similar use of the airport will be subject to substantially comparable charges -- (A) for facilities directly and substantially related to providing air transportation; and (B) regulations and conditions, except for differences based on reasonable classifications"); *see also New York Airlines, Inc. v. Dukes County, Martha's Vineyard Airport Comm'n, ,* 623 F. Supp. 1435, 1447 (D. Mass. 1985) (holding that the Airport and Airway Development Act of 1976 indicates a clear intent on the part of Congress that all air carriers be subject to "nondiscriminatory and substantially comparable" treatment by airport operators).

In addition to reflecting the core federal policy against discriminatory regulation and treatment of airlines, these provisions make clear that any discriminatory ARB regulation, such as the LSI electrification mandate, could endanger airport projects and grants for the five South Coast airports that would be subject to the mandate. For example, if ARB had not determined to withdraw the electrification mandate from the LSI Rule, those California airports may not have been able to provide adequate written assurances that the airports would be available to all carriers "on reasonable conditions and without unjust discrimination" and without discriminatory "regulations and conditions." *See*, *e.g.*, 49 U.S.C. § 47107(a).

3. The Electrification Mandate Would be Constitutionally Infirm

By singling out those airlines that negotiated and signed the MOU, the electrification mandate would not only perversely punish those airlines that came forward to voluntarily reduce GSE emissions, and violate federal aviation laws, but would also present serious issues under the federal and California constitutions.

For example, the mandate would constitute an illegal bill of attainder under Article I, Section 10, Paragraph 1 of the U.S. Constitution, and Article I, Section 9 of the California Constitution. According to the U.S. Supreme Court, a bill of attainder is "a law that legislatively determines guilt and inflicts punishment upon an identifiable individual without provision of the protections of a judicial trial." *Nixon v. Administrator of General Services*, 433 U.S. 425, 468 (1977). Courts and commentators have confirmed that the bill of attainder doctrine applies to corporations, and applies to legislative rulemakings as well as actions by the legislative branch. *See*, *e.g.*, *Consolidated Edison Co. v. Pataki*, 292 F.3d 338, 347 (2d Cir. 2002) (bill of attainder clause applies to corporations); *Joint Anti-Fascist Refugee Comm. v. McGrath*, 341 U.S. 123 (1951) (actions by executive branch, not only legislative, may constitute unconstitutional bill of attainder) (Justice Black, concurring); *see also* L. Tribe, *American Constitutional Law* 661 (2d ed. 1988). By explicitly specifying and singling out the MOU signatory airlines for punitive regulation intended to re-impose elements of the terminated MOU, the electrification mandate would violate the bill of attainder clauses of the U.S. and California constitutions. *See*, *e.g.*, *Seariver Maritime Financial Holdings Inc. v. Mineta,* 309 F.3d 662 (9th Cir. 2002).

In addition, the provision would violate the Equal Protection clauses of the Fourteenth Amendment to the U.S. Constitution, and Article 1, Section 7 of the California Constitution. There is no legitimate rational basis, and none is identified in the rulemaking record, for ARB to single out for additional regulation the 16 unrelated domestic airlines that signed the MOU, while leaving unregulated foreign and other carriers and other GSE operators who refused to sign the MOU.

The electrification mandate would also be illegal as an impairment of contracts under the Contracts Clause of the U.S. Constitution, Article I, Section 10, Clause 1 ("No State shall . . . pass any . . . Law impairing the Obligation of Contracts"), and of the California Constitution, Article I, Section 9. The electrification mandate is not a "generally applicable rule of conduct," *cf. Exxon Corp. v. Eagerton*, 462 U.S. 176, 192 (1983), but a regulatory enactment by ARB, the governmental party to the MOU, which would apply only to those airlines who were the private parties to the MOU, and who were in compliance with the MOU and had tendered partial performance in reliance on its terms. *See University of Hawaii Prof'l Assembly v. Cayetano*, 183 F.3d 1096, 1107 (9th Cir. 1999) ("A higher level of scrutiny is required to assess abrogations of government obligations than in the case of legislative interference with the contract of private parties.") (citation omitted). Any attempt by ARB to seek to re-impose through regulation provisions of the MOU, which was justifiably terminated according to its terms, would be

contrary to the agreement embodied by the MOU and effectively nullify its termination provision, in violation of the Contracts Clause.[11] *See*, *e.g.*, *Allied Structural Steel Co. v. Spannaus*, 438 U.S. 234, 250 (1978) (striking down a pension statute, reasoning that the statute was not enacted to deal with a general societal problem, but instead "its narrow aim was leveled, not at every Minnesota employer, not even at every Minnesota employer who left the State, but only at those who had in the past been sufficiently enlightened as voluntarily to agree to establish pension plans for their employees").

CONCLUSION

While ATA and its members continue to believe that the regulation of GSE under the LSI Rule is preempted by federal law, with the removal of the illegal electrification mandate (proposed Section 2775.1(b)), and the codification of the emission factors to be used for on-road equivalent units, ATA would like to acknowledge the efforts of ARB staff to seek to develop a proposal that aims to achieve additional aggressive reductions in GSE emissions while taking into account more accurate information and data concerning the nature of uses of GSE. Please contact me at 202-626-4216 if you have any questions or would like additional information in connection with any of the points raised in these comments.

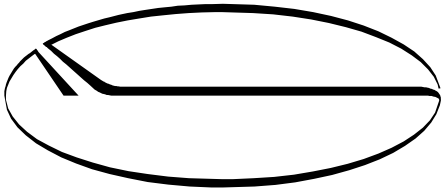
Sincerely,

Tim A. Pohle
Assistant General Counsel – Environmental Affairs
Air Transport Association of America, Inc.

Attachment

[11] Adoption of the electrification mandate would also likely constitute a breach of contract, particularly since the mandate is directed only at the MOU signatory airlines as a means of re-imposing elements of the terminated MOU through regulation.

EXHIBIT A



June 17, 2005

By Electronic Mail & Facsimile

Clerk of the Board
California Air Resources Board
1001 I Street, 23rd Floor
Sacramento, California 95814
Fax: 916-322-3928
Email: lore2005@listserv.arb.ca.gov

Re: Notice of Public Hearing to Consider Adoption of Emission Standards and Test Procedures for New 2007 and Later Off-Road Large Spark-Ignition ("LSI") Engines and Fleet Requirements for Users of Off-Road LSI Engines

To the Clerk of the Board:

I am writing on behalf of the Air Transport Association of America, Inc. ("ATA")[1] to provide comments on the California Air Resources Board's ("ARB's") proposed "Emission Standards and Test Procedures for New 2007 and Later Off-Road Large Spark-Ignition (LSI) Engines and Fleet Requirements for Users of Off-Road LSI Engines" ("LSI Rule").[2] ATA regularly comments on federal and state regulatory developments that may affect the airlines. In that capacity, we submit these comments on the proposed rule.

SUMMARY OF COMMENTS

The LSI Rule's proposed regulation of airport ground support equipment ("GSE") is preempted by federal law, including the Federal Aviation Act, Airline Deregulation Act, and Clean Air Act. Among other things, these laws reflect Congress' judgment that GSE – which is critical to the safe and efficient functioning of the National Airspace System – can only be regulated in a consistent and uniform manner at the federal level. The LSI Rule, in the form

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[1] ATA is the principal trade and service organization of the U.S. scheduled airline industry. The members of the Association are: ABX Air, Inc, Alaska Airlines, Aloha Airlines, America West Airlines, American Airlines, Astar Air Cargo , ATA Airlines , Atlas Air, Continental Airlines, Delta Air Lines, Evergreen International Airlines, Federal Express Corp., Hawaiian Airlines, JetBlue Airways, Midwest Airlines, Northwest Airlines, Polar Air Cargo, Southwest Airlines, United Airlines, UPS, and US Airways; associate members are: Aerovías de México, Air Canada, Air Jamaica, and Mexicana de Aviación.

[2] *See* Notice of Public Hearing, Initial Statement of Reasons for Proposed Rulemaking ("Initial Statement of Reasons" or "ISOR"), and related materials at www.arb.ca.gov/regact/lore2005/lore2005.htm (posted May 6, 2005).

proposed on May 6, 2005 (the "May 6 proposal"), would impose profound and ill-considered mandates on GSE, requiring replacement of virtually all LSI GSE with unproven equipment within an unreasonably short time, resulting in prohibited impacts on aircraft operations and airline prices, routes, and services.

In recent discussions with ATA, ARB staff has acknowledged that the 7 to 8 year fleet turnover assumption on which the proposal is based is inaccurate as applied to GSE, and has agreed to revise the assumption and propose revised terms for GSE at the June 23, 2005 hearing. ATA is working with ARB staff to analyze potential approaches. It is unclear as of this filing whether the parties can identify a mutually acceptable approach, or whether any revisions that ARB may propose will fully address the infirmities of the rule as applied to GSE. Absent exclusion of all GSE from the scope of this and other off-road rules,[3] ATA and its members reserve the right to take appropriate action to have the rules declared invalid as preempted by federal law notwithstanding any changes in the rule ARB may propose.

Separate and apart from its invalidity under federal law, the proposed LSI Rule suffers from a number of fundamental flaws as applied to GSE, including:

- Incompatibility with ARB's Voluntary Agreement with the Carriers

The rule is wholly inconsistent with the letter and spirit of the South Coast Ground Service Equipment Memorandum of Understanding, dated November 27, 2002 ("MOU" or "South Coast MOU"). The MOU was negotiated and executed by ARB and ATA member airlines ("Participating Airlines") that operate at the five major commercial airports in the South Coast Air Quality Management District ("South Coast"). The MOU provides that, by December 31, 2010, the Participating Airlines will reduce NOx and hydrocarbons (HC) to 2.65 g/bhp-hr, and electrify specific percentages of GSE, among their aggregate fleet in the South Coast, including both LSI and diesel. The MOU is the most stringent off-road fleet conversion undertaking in the nation, and would require conversion of virtually all of the carriers' LSI-powered GSE. In reliance on the understandings reached with ARB under that agreement, the carriers have already made significant investments toward compliance, including purchases of electric equipment and supporting infrastructure, and purchases of currently best-available LSI engines with emission rates of 3.0 g/bhp-hr.

The LSI Rule would impose a different and inconsistent set of fleet average emission requirements, focused only on the LSI portion of the GSE fleet in isolation. The May 6 proposal would require the carriers almost immediately to re-convert their LSI GSE fleets to meet the 2013 target of 1.7 g/bhp-hr. The proposed exemption for GSE subject to an MOU does nothing to address this issue, because the exemption would expire in 2012. In addition, fleet average emissions under the LSI Rule are calculated without regard to actual equipment

[3] The "Airborne Toxic Control Measure (ATCM) For Diesel Particulate Matter From Portable Engines Rated At 50 Horsepower and Greater," eff. March 11, 2005 ("PE ATCM"), and the off-road diesel ATCM, expected to be proposed later this year (http://www.arb.ca.gov/msprog/ordiesel/ordiesel.htm).

usage, whereas fleet average emissions under the MOU take usage into account -- subjecting the carriers to fundamentally different fleet management requirements. These inconsistencies are exacerbated by ARB's adopted and planned off-road diesel ATCMs, which would impose yet another set of requirements on diesel GSE, on different schedules, with no consideration of a complementary and cohesive fleet management strategy necessary to ensure the efficient operation of GSE.

The only way to structure the LSI Rule (and ARB's other off-road rules) that could be at least somewhat equitable to the carriers and consistent with the MOU would be to exempt all GSE subject to the MOU for its useful life, with provision for carriers to elect to include their South Coast fleets in their statewide averages. Even if ARB were to take these measures, the carriers would still be faced with the significant costs and inefficiencies of administering inconsistent compliance schemes -- *i.e.*, an aggregate MOU target for all GSE in the South Coast, and LSI- and diesel-specific regulatory targets in the rest of the state, all with different effective dates.

The carriers entered into the MOU based upon ARB's assurances that the Board would not also seek to regulate GSE, and the MOU provides that the airlines may terminate the agreement should ARB do so. The carriers' current predicament illustrates why that protection was vital. Both the PE ATCM and the LSI Rule have triggered the termination provision, and the airlines are now free to terminate the MOU. As ATA has advised ARB staff, the carriers are likely to find it necessary to exercise their right to terminate the MOU.

- Inaccurate Turnover Assumption

ARB's Initial Statement of Reasons and economic impact assessments rely on the inaccurate assumption that all *non-forklift* LSI equipment has a 7-8 year turnover cycle. However, as the parties discussed in the South Coast MOU negotiations, and as discussed in further detail below, the actual median useful life of LSI-powered GSE is significantly longer. ATA has recently provided ARB staff with updated calculations, based on a methodology agreed to with ARB in the MOU negotiations, showing that the carriers' current statewide LSI GSE fleet has a median useful life of approximately 19 years.

This inaccurate turnover assumption exacerbates the impact that the May 6 proposal would have on the carriers, and would render that proposed rule arbitrary and capricious as applied to GSE. The assumption leads to proposed fleet averages that would require the carriers to completely turn over their LSI fleets within only a few years, at a fraction (about 1/5) of their useful life. The May 6 proposal would impose three increasingly stringent fleet average emission standards over only a four-year period (3.0 g/bhp-hr by 2009, 2.3 by 2011 and 1.7 by 2013). To meet these requirements, the carriers would have to implement fleet conversions to meet the 2009 interim target, just one or two years before newer and much cleaner LSI engines are expected to reach the market. The May 6 proposal would then almost immediately require a second conversion using the newer equipment in order to achieve the 2011 and 2013 targets.

In recent discussions with ATA, ARB staff agreed to revise the May 6 proposal to reflect the longer median useful life of GSE, with provision for ATA to comment on the revisions. It is ATA's understanding that, at or after the June 23, 2005 Board hearing, ARB staff will propose less stringent fleet average emission targets for 2011 and 2013, but may maintain the 3.0 g/bhp-hr target for 2009.

However, as discussed below, given the actual useful life of GSE, the LSI Rule must not be structured in a way that will force rapid fleet turnovers using unproven equipment, and force the airlines to scrap good and serviceable GSE at a time when quarterly operating losses for the industry exceed one billion dollars. Merely adjusting the emission targets without adjusting the 2009, 2011, and 2013 compliance dates would not adequately take account of the actual useful life of GSE. Accordingly, if ARB does not exempt GSE from the rule, it should take account of GSE's actual useful life through an appropriate combination of adjustments to both the compliance deadlines and the fleet average emission targets for GSE.

In the ISOR, ARB used a turnover assumption of 7 to 8 years to establish the final effective date of 2013 in the May 6 proposal. As discussed below, applying the same methodology using GSE's 19-year median useful life produces a final effective date of 2024. If ARB is unwilling to accept this result of its methodology, ARB should work with ATA and the carriers to arrive at appropriate adjustments to both the compliance deadlines and emission level targets that accommodate the carriers' need to manage their GSE fleets in a way that ensures the reliability of their time-critical operations.

● Failure to Recognize the Time, Cost, Uncertainty, and Operational Disruptions Associated with GSE Fleet Conversions

The LSI Rule's assumption that virtually the entire LSI GSE fleet can be converted and reconverted within the rapid timeframes contemplated by the rule, even with less stringent fleet average emission targets, is inconsistent with the efficient operation of the National Airspace System, and unsupported by practical experience. In particular, the LSI Rule incorrectly assumes that new lower-emission LSI engines can be purchased from engine manufacturers and made functional in useable GSE within 2-3 years (or less) of the date that the engine ostensibly is expected to become available. *See*, *e.g.*, ISOR at 23 (assuming that 1.0 g/bhp-hr equipment could be purchased and placed in use by 2009, and 0.4 g/bhp-hr equipment by 2012).

In fact, as discussed in further detail below, GSE represents a small market of highly diverse and specialized types of equipment that must be integrated into a complementary scheme of interdependent aircraft support functions. Each piece of GSE is a necessary component of an overall operational strategy for efficiently supporting aircraft moving through the National Airspace System. The development of new, re-powered, or retrofitted GSE that can safely and effectively service aircraft within that unique scheme and maintain the unimpeded flow of air commerce requires significant additional design and development by airlines and GSE manufacturers, real-world testing, and personnel training. These additional

steps are necessary to integrate new engine or electric technology into GSE that meets operational requirements (or to demonstrate that the technology is not feasible for a particular type of GSE), and to integrate the GSE into the fleet. This effort requires a much longer period of time than provided by the LSI Rule's fleet average emission requirements, with greater cost, uncertainty, and operational disruptions.

These considerations were not taken into account by ARB staff in developing the LSI Rule, and further demonstrate the incompatibility of state-mandated regulations that force restructuring of existing functioning ground support fleets in contravention of the federal aviation laws. ARB should reevaluate its approach of seeking to impose rapid, profound, and ill-considered GSE mandates on the aviation industry using a rule designed primarily to address non-GSE forklifts. If ARB does not remove GSE from the scope of the rule, it should work with ATA to arrive at appropriate adjustments to the compliance deadlines and fleet average emission targets to allow adequate time for the required GSE fleet conversions, and to prevent the need for "double conversions." The rule should also include "safety valve" provisions that delay the deadlines in the event that viable, proven equipment or verified retrofits cannot be developed and are not available to meet the requirements.

Should ARB choose to proceed with applying the rule to GSE in spite of federal preemption, inconsistency with the MOU, and the other fundamental flaws set forth above, at a minimum ARB should change the content of the proposed rule in a number of additional respects. As discussed more fully below, it is quite possible that, because of the limited market for GSE, compliant retrofits and/or GSE with compliant engines, field-tested to the degree that carriers can rely upon it for their time-sensitive operations, will not be available at whatever effective dates may be established. ARB should therefore revise and broaden the "Limited Hours of Use" and "Specialty Equipment" exemptions to recognize the needs of GSE fleet management.

DISCUSSION

I. The LSI Rule is Preempted by Federal Law

Federal aviation law provides for uniform and exclusive federal authority over the National Airspace System, and preempts any state rule that affects either: (a) the movement and operation of aircraft; or (b) airline prices, routes, or services. This preemption extends to state regulation of airport infrastructure, facilities, and ground operations that support aircraft. As a consequence, as discussed further below, federal aviation law preempts the LSI Rule to the extent it applies to GSE. In addition, the federal Clean Air Act ("CAA") independently preempts enforcement of the LSI Rule unless and until ARB requests and receives authorization from the United States Environmental Protection Agency ("EPA") under Section 209(e) of the CAA.

A. The Federal Aviation Act and Associated Regulations Establish an Exclusive Federal System of Aviation Regulation, and Preempt ARB's Regulation of GSE

The Federal Aviation Act of 1958 ("Aviation Act") establishes "a *uniform and exclusive* system of federal regulation" of aircraft operations that preempts state and local regulation.[4] This pervasive federal regulatory scheme extends not only to aircraft in flight, but also to aircraft-related operations on the ground.[5] Through its extensive regulation of GSE, and requirement that airlines restructure and replace virtually their entire existing LSI GSE fleets with unproven equipment within an unreasonable and unworkable timeframe, the May 6 proposal would significantly affect the movement and operation of aircraft on the ground and in the air, and is therefore preempted by the Federal Aviation Act.

As the FAA has recognized, "[t]he availability of reliable GSE equipment is . . . essential to safe and efficient use of navigable airspace."[6] LSI GSE performs a myriad of complex and time-sensitive functions essential to the unimpeded flow of aircraft and to the safe and efficient use of the National Airspace System. These functions include aircraft maintenance, fueling, deicing, starting aircraft engines, moving aircraft to and from the gate, and loading, unloading, and sorting cargo and baggage. All of these activities affect the airlines' ability to move aircraft efficiently from the gate, proceed through the runway queue on time, and move into the National Airspace System on schedule. Like aircraft, GSE "do not wander about . . . like vagrant clouds. They move only by federal permission, subject to federal inspection, in the hands of federally certified personnel and under an intricate system of federal commands." *See City of Burbank v. Lockheed Air Terminal, Inc.*, 411 U.S. 624, 633-34 (1973) (quoting *Northwest Airlines, Inc. v. Minnesota,* 322 U.S. 292, 303 (1944) (Jackson, J., concurring)). Because GSE comprise such an important part of the airline industry's ground operations and flight preparation processes, their ability to function quickly, reliably, and with minimal interruption is necessary to maintaining a consistent national air travel network.

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[4] *Burbank v. Lockheed Air Terminal, Inc*., 411 U.S. 624, 639 (1973) (emphasis added); *see also American Airlines v. Department of Transp*., 202 F.3d 788, 801 (5th Cir. 2000) ("[f]ederal control [over aviation] is intensive and exclusive.") (quoting *Northwest Airlines, Inc. v. Minnesota*, 322 U.S. 292, 303 (1944)); 49 U.S.C. §§ 40101, 40103, 44701.

[5] *See, e.g.*, 49 U.S.C. § 40103(b)(2)(B)-(C); *City of Houston v. FAA*, 679 F.2d 1184, 1195 (5th Cir. 1982).

[6] Letter from Paul Dykeman, Deputy Director, Office of Environment and Energy, FAA, to Donald Zinger, Assistant Director for Transportation and Air Quality, U.S. EPA, Attachment at 6 (August 24, 2000) (Attachment A hereto); *see also id.* ("GSE equipment is necessary to landings and takeoff of aircraft. Aircraft are dependent upon GSE for maintenance, fueling, housing, and in some cases, for movement on the ground as well as a myriad of other activities that are critical to the safety of aircraft and flight preparation.")

Compliance with the LSI Rule (and ARB's off-road diesel ATCMs)[7] will adversely affect these ground operations, and the rule impermissibly encroaches on the primary jurisdiction that FAA maintains over aircraft operations. The LSI Rule would require carriers to develop new or repowered GSE, replace existing GSE or retrofit them with control devices, switch to alternative fuels, and/or implement electrification. To comply with the rule, each carrier would be required to turn over virtually its entire existing fleet of LSI GSE with unproven or experimental new or retrofitted equipment, under an initial 2009 compliance deadline less than four years away.

As discussed in further detail in Section IV, below, the industry's experience demonstrates that any effort to replace GSE with new technology is a difficult proposition, that often brings unanticipated reliability, performance, and fleet compatibility problems. For example, although the industry has already made substantial voluntary electrification efforts in the South Coast, including development and significant purchases of certain types of electric replacement units, in many applications no electric battery has yet been developed that can perform an entire duty cycle as required for operations. Thus, many of those electric units are still considered experimental, and must be supplemented on a regular basis with existing LSI equipment to avoid operational disruptions.

Even if ARB is correct in assuming that lower-emission off-road LSI GSE engines will be developed in the timeframes contemplated, ARB has ignored the difficult question of whether the market will support development and manufacture of GSE that integrate such engines and that meet the exacting specifications and performance requirements needed for airport operations. There is no basis in the rulemaking record to conclude that this can occur on the schedule assumed by ARB, or without substantial under-performance and reliability problems. Moreover, the Federal Aviation Act preempts the LSI Rule's attempt to pre-condition the purchase and use of GSE upon compliance with state certification requirements and other mandates that relate to the types of large spark-ignition GSE engines and other technologies used in aircraft-related ground operations.[8] Indeed, EPA has rejected SIP measures on similar grounds.[9]

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[7] To a certain extent, it is impossible to sever the impacts of the LSI Rule from the overall effects of the LSI Rule, the PE ATCM, and ARB's planned off-road diesel ATCM expected later this year. Compliance with the three rules would require GSE fleet operators to adopt comprehensive new fleet management strategies affecting both LSI and diesel GSE. If all three rules are adopted, the impacts on aviation described above will be even more problematic and have an adverse material impact on the free flow of air commerce.

[8] *See, e.g.*, *Burbank-Glendale-Pasadena Airport Authority v. City of Los Angeles*, 979 F.2d 1338, 1341 (9th Cir. 1992) (zoning ordinance that required consideration of environmental impacts before runway construction amounted to an "interference with the movements and operations of aircraft" preempted by the Federal Aviation Act).

[9] *See, e.g.*, 66 Fed. Reg. at 57,189 (rejecting suggested SIP measure because states and localities have "no authority to control airline operations").

In addition to equipment changes, compliance with the LSI Rule would also require changes in the supporting airport and maintenance infrastructure and aircraft ground support operations to accommodate modified GSE. It would likely impose changes in the locations and usage patterns of GSE at California airports, in part to reduce the number of pieces of higher-emitting GSE equipment, limiting the numbers of GSE used at a given airport and their operations. These changes in equipment, airport infrastructure, GSE fleet management, and GSE usage will in turn affect the movement and operation of aircraft.

The exclusive federal nature of aviation regulation does not allow individual states to interfere with airline operations by mandating that airlines restructure their operational model and replace virtually all of their LSI GSE fleet with unproven equipment at that state's airports. Rather, it is incumbent upon states, when adopting regulatory requirements, to ensure that existing, highly specialized and integrated operations essential to the efficient movement of aircraft are not disrupted or forced into wholesale changes that have yet to be validated by significant field experience.

The LSI Rule's impermissible intrusion into operations will be further exacerbated by the fact that, having invested substantial resources and capital in a GSE fleet management strategy agreed to by ARB in the MOU, the LSI Rule (and ARB's other off-road rules) will force the airlines to abandon that strategy in mid-course and start anew with a second burdensome and problematic retooling of its GSE fleet that will have to be accomplished within time frames that are not practically feasible.

B. The Airline Deregulation Act Preempts ARB's Regulation of GSE

The Airline Deregulation Act ("ADA") provides that a state "may not enact or enforce a law, regulation, or other provision having the force and effect of law related to a price, route, or service of [an] air carrier . . . ."[10] As the Supreme Court has explained, this language "express[es] a broad preemptive purpose," and ADA preemption applies even if a state law is not expressly designed to affect airline prices, routes, and services, and even if the impact is only indirect.[11] Federal courts have held that ADA preemption extends to regulation of GSE and airport support vehicles because such equipment is "integral" to carriers' services.[12]

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[10] 49 U.S.C. § 41713(b)(1). This statutory provision was previously codified at 49 U.S.C. § 1305(a)(1). *See* 49 U.S.C. App. § 1305(a)(1). In 1994, Congress reenacted this provision at 49 U.S.C. § 41713(b)(1) as part of its reenactment of Title 49, and changed the operative language from "rates, routes or services" to "price, route, or service," but no substantive change was intended. *See American Airlines v. Wolens*, 513 U.S. 219, 223 n.1 (1995).

[11] *Morales v. Transworld Airlines*, 504 U.S. 374, 386 (1992) (holding that ADA preempted state law requirements that expressly referred to airlines and established "binding requirements" upon them).

[12] *See, e.g.*, *Federal Express Corp. v. California Pub. Util. Comm'n*, 936 F.2d 1075, 1078 (9th Cir. 1991) (holding that California's generally applicable trucking regulation of air carrier's trucking operations was

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The LSI Rule (in conjunction with ARB's off-road diesel rules) would impermissibly restrict and limit the critical carrier services and operations performed by GSE, and compliance with the proposed rule would require changes in the airlines' decisions concerning their prices, routes, or services. As noted above, the LSI Rule would require changes in the types of GSE equipment used, electrification, use of alternative fuels, and/or retrofits, many of which will directly alter or limit the functionality and reliability of the equipment. The LSI Rule will also affect airport infrastructure planning, the composition of the GSE fleet, and allocation of GSE among California airports, all of which affect the ability to service aircraft at various California airports and to provide scheduled passenger and cargo service to meet the demands of the market without regulatory limitation or interference from the State.

Because GSE is an integral part of air transportation, ARB's regulation of GSE and the forced restructuring of the carriers' existing fleets through the LSI Rule and ARB's other off-road rules will affect airline decisions regarding prices, routes, and services. Among other things, this includes airline decisions concerning: the volume, frequency, and scheduling of transportation service that would otherwise be offered in order to meet the demands of the market; prices and the selection of markets where air transportation is offered; and the types of service offered (*e.g.*, passenger, cargo, mixed). Indeed, given the significant estimated costs to the airlines of compliance with the LSI Rule (approximately $85-115 million), the rule may ultimately have a direct and substantial effect on prices for air transportation service to and from California destinations. The added GSE costs at California airports due to ARB's regulations will also affect decisions concerning routes and service, for example, providing incentives for flights to be routed through non-California airports where servicing aircraft with unregulated GSE is less costly or more effective, or through certain California airports at the expense of others where the additional cost of GSE conversion renders the efforts to provide service operationally problematic or financially prohibitive. For these reasons, ARB's regulation of GSE would disrupt or displace the primary role of market demand in determining the transportation services that airlines offer, and subject transportation decisions to state regulation. As the federal judiciary has repeatedly recognized, this is precisely what Congress intended to prevent with the ADA.

For the reasons previously explained, ARB's regulation of GSE would also subject airlines who executed the MOU to unequal, arbitrary and undue burdens by requiring them to convert their fleets a second time within an unworkable time frame, notwithstanding the prior agreement by ARB that they would not be so burdened. This concern places particularly problematic burdens on air commerce in light of the difficult conditions currently faced by the industry. Regulatory mandates to restructure ground support fleets within unworkable timeframes become all the more problematic in an economic environment in which significant

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preempted because such trucking operations "are integral to . . . operations as an air carrier"); *Marlow v. AMR Serv.*, 870 F. Supp. 295, 298-99 (D. Haw. 1994) (finding ADA preemption because GSE (jet bridge) forms an "integral part" of air carrier services).

costs of compliance are imposed arbitrarily on carriers operating at a loss or on historically narrow profit margins. To the extent that the additional costs of operation imposed by the LSI Rule force another air carrier into bankruptcy, there can be no doubt that would affect airline prices, routes, and services.

C. The Clean Air Act Independently Preempts the LSI Rule

Absent EPA authorization, Section 209(e) of the Clean Air Act ("CAA") preempts states from establishing or enforcing "standards and other requirements relating to the control of emissions from" off-road engines, which includes LSI engines in GSE.[13] CAA preemption extends to emission standards for both new and existing ("in use") off-road engines, including the types of fleet requirements, emission restrictions, and retrofit and engine conversion requirements proposed in the LSI Rule.[14] Accordingly, as ARB must recognize, the LSI Rule establishes emission standards within the meaning of CAA Section 209(e), and is preempted and unenforceable unless and until ARB requests and EPA grants authorization for the rule.[15]

However, the LSI Rule does not qualify for EPA authorization. Among other things, EPA is prohibited from granting authorization unless a California rule is "consistent with" Section 209, which in turn requires that the rule be consistent with the requirements of Section

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[13] 42 U.S.C. § 7543(e).

[14] *See, e.g.*, *Engine Mfrs. Ass'n v. South Coast Air Quality Management District*, 541 U.S. 246 (2004) (holding that California fleet rules requiring purchase of certain levels of low and zero-emission on-road vehicles constituted "standards" under Section 209(a)); *Engine Mfrs. Ass'n v. United States Envtl. Protection Agency*, 88 F.3d 1075, 1087-93 (D.C. Cir. 1996) (preemption not limited to new vehicle standards); *American Auto. Mfrs. Ass'n v. Cahill*, 152 F.3d 196, 200 (2nd Cir. 1998) (state on-road rules constitute emission standards if they are "regulatory measures intended to lower the level of [vehicle] emissions); *see also* 40 C.F.R. § 85.1603(c)(2); 40 C.F.R. Part 89, App. A ("EPA believes that states are precluded from requiring retrofitting of used nonroad engines" absent EPA authorization); EPA, "Summary and Analysis of Comments: Control of Emissions from Unregulated Nonroad Engines," at III-61 (Sept. 2002) ("EPA agrees [with ATA] that certain regulations of vehicles in use, for example, retrofit requirements, would generally be considered emission standards . . . and thus covered by the preemption of Section 209(e)") (excerpts provided as Attachment B hereto).

[15] As both the Federal Aviation Administration ("FAA") and EPA have concluded, federal aviation law preempts emissions regulations independent of CAA preemption. FAA, which has exclusive jurisdiction in this area, has explained that "[t]he Federal regulatory regime for aviation is grounded in a number of statutory and regulatory provisions that generally preempt states from regulating the area of commercial aviation," and has concluded that a state measure is subject to federal aviation preemption, regardless of whether it may be otherwise permissible under the CAA. *See* Letter from Carl Burleson, FAA to Gerald Fontenot, EPA, Region IV, at 2 (Apr. 24, 2001) (Attachment C hereto). EPA has rejected commercial aviation-related measures from State Implementation Plans ("SIPs") based solely on preemption under federal aviation laws, and has concluded that states have "no authority to control airline operations." *See* 66 Fed. Reg. 57,160, 57,189 (2001). EPA has expressly admonished states and localities that they "should keep the [federal aviation law preemption] arguments of ATA in mind if they attempt" to enact aviation-related emissions measures. *See* EPA, "Summary and Analysis of Comments: Control of Emissions from Unregulated Nonroad Engines, at III-60 through III-62 (Sept. 2002) (excerpts provided as Attachment B hereto).

202(a). 42 U.S.C. § 7543(e)(2)(A)(iii).[16] Section 202(a) requires that an emission standard must: be technically feasible; provide adequate lead time to permit the development of necessary technology; and give appropriate consideration to the cost of compliance within that time period. 42 U.S.C. § 7521(a); *see also*, *e.g.*, 68 Fed. Reg. 65702, 65703 (Nov. 21, 2003).

Among other authorization criteria not satisfied by the LSI Rule, as discussed throughout these comments the LSI Rule does not satisfy the Section 202(a) requirements as applied to GSE. For example, compliance with the rapid, multiple GSE fleet conversions required by the LSI Rule is not technically feasible, and the rule fails to provide adequate lead time to permit the development and incorporation into GSE fleets of the lower-emission engines and other technology required to meet the emission targets. (*See* Section IV, below). The rule also fails to give appropriate consideration to the cost of compliance, particularly in light of the actual useful life of GSE, its highly specialized nature and limited market, and the unique requirements of the aviation industry. (*See* Sections III and IV, below).

Accordingly, the LSI Rule does not qualify for authorization, and its adoption and enforcement is, and will continue to be, preempted by the federal Clean Air Act. In addition, ARB failed to take into account the CAA Section 202(a) and 209(e) requirements in formulating the LSI Rule, and failed to address these requirements in the ISOR. Thus, the rulemaking is also arbitrary and capricious, and contrary to California law.[17]

II. The LSI Rule Is Incompatible with ARB's Voluntary Agreement with the Carriers

As noted above, the South Coast MOU is the most stringent and aggressive off-road fleet conversion obligation in the nation. Under this voluntary agreement, by the end of 2010 the Participating Airlines must achieve fleet average emissions of 2.65 g/bhp-hr of HC + NO_X for South Coast GSE, including both LSI and diesel equipment. In addition to extensive electrification, achievement of this emission target will require carriers to convert virtually all of their LSI fleets by 2010. In total, if the MOU remains in effect, it will require conversion of approximately 85-90% of the Participating Airlines' South Coast GSE fleets (both gas and diesel) by 2010, and cost the airlines over $100 million. The Participating Airlines have already expended a substantial portion of this amount to implement the emission reductions under the MOU, including purchase of new 3.0 g/bhp-hr LSI engines.

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[16] *See also*, *e.g.*, 68 Fed. Reg. 65702, 65703 (Nov. 21, 2003) ("because California's nonroad standards and enforcement procedures must be consistent with section 209(b)(1)(C), EPA will review nonroad authorization requests under the same 'consistency' criteria that are applied to motor vehicle waiver requests," including consistency with Section 202(a)).

[17] Moreover, due to the existing federal regulation addressing LSI engine emissions, ARB is required by California law to make additional findings in the ISOR, including that the LSI Rule is "authorized by law" and/or the cost of differing state regulations is justified. *See* Cal. Gov't Code § 11346.2(B)(5). No such findings are included in the ISOR.

When the Participating Airlines agreed to make these substantial early investments in lower-emitting GSE in the South Coast, they acted with the understanding that these investments would not be made irrelevant or duplicative by subsequent ARB regulation of GSE, particularly action that would require re-conversion of the same equipment. This understanding was reflected in the MOU's termination provision, which allows the Participating Airlines to terminate the MOU if ARB adopts any regulation that affects GSE. *See* South Coast MOU, Section V.H.3. ARB triggered this termination provision by adopting the PE ATCM earlier this year, and the LSI Rule would provide an additional and separate basis for termination of the MOU. Even if GSE subject to the MOU were fully exempted from the LSI Rule and ARB's off-road diesel ATCMs, ATA expects that its members will find it necessary to terminate the MOU based on ARB's regulation of non-MOU GSE, because of the cost and inefficiency of maintaining separate and inconsistent compliance schemes.

The requirements of the LSI Rule in particular are incompatible with the emission reduction scheme agreed to under the MOU, and it would not make sense for the airlines to seek to satisfy both. The May 6 proposal would impose three increasingly stringent fleet average emission standards over only a four-year period, with the final 2013 target of 1.7 g/bhp-hr becoming effective just two years after the MOU targets are reached. In addition, the LSI Rule would impose a GSE fleet management scheme fundamentally different from that agreed to by ARB under the MOU. For example, under the LSI Rule fleet average emissions are generally calculated without regard to actual equipment usage -- weighting each piece of equipment equally regardless of whether it is operated for thousands of hours per year, or just a few hundred (or under some circumstances even less). In addition to providing an inaccurate estimate of actual emissions, this methodology would require a fundamentally different fleet management strategy from the MOU, under which usage is taken into account in calculating fleet average emissions.

Under the proposed LSI Rule, GSE subject to the South Coast MOU would lose its exemption from the LSI Rule on January 1, 2012 -- only one year after the MOU's final compliance date of December 31, 2010. To then meet the May 6 proposal's 2013 fleet average emission requirement of 1.7 g/bhp-hr, the LSI Rule would require the airlines to implement significant additional conversions to their South Coast MOU GSE fleets by, first, purchasing 0.6 g/bhp-hr engines, which are not expected to become available for any application until the 2010 model year, and second, seeking to design and develop new or repowered GSE using those new engines. In other words, carriers who only recently achieved early reductions by converting virtually all of their South Coast LSI fleets, including substantial investments in development of GSE powered by the lowest emitting LSI engines available (primarily 3.0 g/bhp-hr), to meet the 2010 target of the MOU, would almost immediately be required to "double convert" a significant amount of LSI equipment with 0.6 g/bhp-hr engines to meet the 2013 target of the LSI Rule. The revised fleet averages for GSE that ARB is currently evaluating must eliminate the necessity for carriers to implement such double controls.

The proposed MOU exemption, extending one year past the expiration date of the MOU, does not alleviate any of the inequities that the Participating Airlines now face. Due to the

emission reductions achieved under the MOU, the South Coast GSE fleets of some or all of the Participating Airlines are likely to have lower average emissions than GSE in other parts of California through at least 2010. Accordingly, the exemption of GSE subject to an MOU could be read as requiring the exclusion of lower-emitting South Coast equipment from fleet operators' average emission calculations -- driving up the average emissions levels and requiring operators to make deeper reductions outside the South Coast than would otherwise be required.

For these reasons, and consistent with the understanding underlying the MOU, the LSI Rule should be structured to exempt all GSE subject to the MOU as of its expiration on December 31, 2010 for the useful life of that equipment. Moreover, carriers must have the option to include their South Coast fleets in their statewide fleet average calculations. The carriers should not be punished under later-adopted statewide rules for voluntarily entering into an agreement that achieved lower average emissions in the South Coast. Accordingly, in addition to extending the term of the exemption, as discussed herein, the MOU GSE exemption provision should be revised to provide that GSE subject to an MOU "shall be exempt from the requirements of this article except that each individual participating airline may elect in any given year to include such ground support equipment in its Fleet for purposes of determining compliance with the Fleet Average Emission Level requirements of this Article . . ." *See* Proposed 13 CCR Section 2775(b)(2). To provide otherwise would risk further punishing Participating Airlines for achieving substantial early voluntary emission reductions in the South Coast.

III. The LSI Rule is Premised on a Dramatic Underestimate of the Useful Life of GSE, Rendering the Rule Arbitrary and Capricious as Applied to GSE

As noted above, and as ARB staff acknowledged in recent discussions with ATA, the LSI Rule is premised on the critical incorrect assumption that all non-forklift LSI equipment has a 7-8 year turnover cycle. *See* ISOR at 22-24 (Fleet Average Compliance Scenarios). Based on data provided to ARB staff, the parties agreed in the South Coast MOU negotiations that the median useful life of GSE is considerably longer. The parties arrived at a methodology for calculating median useful life, taking the average age of the GSE fleet and applying the ratio of average age to median useful life derived from ARB's OFFROAD model, which we have calculated to be 1:1.75, to arrive at median useful life. ATA has updated these calculations using 2003 and 2004 inventories of the average age of GSE, and using the agreed methodology the median useful life of California LSI GSE is determined to be approximately 19 years.[18]

[18] As discussed in further detail in the attached Memorandum from Ashworth Leininger Group ("ALG") dated June 3, 2005 (Attachment D hereto), ATA has data concerning the average age of GSE in California based on 2003 and 2004 GSE inventories, but does not have direct data concerning median useful life. The calculation of median useful life was performed by examining the relationship between age and median life for a static equipment population as set forth ARB's OFFROAD Model. These calculations show that the ratio of median useful life to average age in the OFFROAD Model is approximately 1.75 to 1. Thus, to calculate the estimated median useful life for GSE in California, ALG multiplied the average age of GSE (11.3 years) times the ratio 1.75 from ARB's OFFROAD Model. The resulting estimated median useful life for California GSE is calculated to be

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The May 6 proposal's reliance on an incorrect turnover assumption results in an unrealistically short compliance schedule, which would impose three increasingly stringent fleet average emission standards over four years. As ARB staff implicitly recognized by acknowledging to ATA that the turnover assumption in the ISOR is inaccurate for GSE, the proposed compliance schedule is inconsistent with the actual rate of GSE turnover. As explained above, the proposed compliance schedule would require "double conversions" of GSE, since compliance with the interim 2009 and 2011 standards[19] would require substantial investments in existing technology (primarily 3.0 g/bhp-hr LSI engines), while compliance with the 2013 standard would require re-conversion using 0.6 g/bhp-hr engines that ARB assumes will become available by Model Year 2010.

In addition, the flawed turnover assumptions led ARB to dramatically underestimate the cost of the May 6 proposal with respect to GSE. Based on ARB's 7-8 year turnover assumption, the fleet average compliance scenarios set forth in the Initial Statement of Reasons incorrectly conclude that ordinary GSE turnover would allow low cost compliance by operators through scheduled replacement of obsolete GSE with newer, lower-emitting equipment. *See* Initial Statement of Reasons at 22-24. Instead, given GSE's actual useful life of about 19 years, the May 6 proposal would require much more aggressive and expensive early replacement of serviceable GSE equipment. Moreover, the assumptions and scenarios ignore the carriers' operational need to retain older equipment, rather than simply replace it, as backup for the unproven new technology that they would be forced to develop to meet the proposed fleet averages. In addition, ARB has failed to account for the substantial costs associated with developing and using new GSE technology, as discussed below in Section IV.

For these reasons, ARB's cost effectiveness calculations fall far short of the actual costs of the LSI Rule with respect to GSE. The actual costs per ton of reduced emissions are vastly greater than stated in the Initial Statement of Reasons, and ARB's erroneous calculations render the proposed rule arbitrary and capricious as applied to GSE.[20]

These considerations further illustrate that the LSI Rule is fundamentally flawed with respect to regulation of GSE, and demonstrate that ARB should remove GSE from the scope of

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(Continued …)
19.7 years, which has been rounded down to 19 years as a conservative estimate for discussion purposes in these comments. ATA and ARB staff discussed and mutually accepted this methodology in correspondence and supporting materials exchanged during the negotiations for the South Coast MOU. *See* Letter from M. Carlock and G. Honcoop, ARB to S. Belcher, ATA and E. Ashworth, ALG, dated August 13, 1999 (accepting methodology for estimating useful life); *see also* Memorandum from T. Paxman to S. Belcher dated July 14, 1999 (explaining methodology).

[19] Or compliance with the 2010 MOU standard for South Coast GSE, if the MOU remains in effect.

[20] ARB should reevaluate its assessments of the costs and compliance burdens associated with the May 6 proposal, and any revised proposal, in light of the actual median useful life of GSE.

the LSI Rule, as well as other rules, for separate consideration in light of the unique and highly specialized nature of GSE. If ARB is unwilling to remove GSE, in the alternative, it should at a minimum work with ATA to formulate extended deadlines and fleet average emission limits for GSE that recognize GSE's actual useful life and minimize "double conversions." Applying the same methodology that ARB used in the ISOR, and using the correct median useful life for GSE of 19 years, the final effective date would be 2024. Delayed compliance deadlines would allow meaningful strides toward compliance to be achieved through fleet turnover, and minimize the need for "double conversions" of GSE fleets (as well as allow the time necessary for development and integration of new technology into GSE fleets, as discussed below in Section IV).[21]

During recent discussions with ATA, ARB staff has indicated that it intends to propose revised fleet average emission targets for GSE as a means of accounting for GSE's actual useful life. However, in addition to revised fleet average emission targets, deferral of effective dates is necessary and appropriate to account for the 19-year useful life of GSE, and to allow adequate time for the fleet conversions required under the proposed rule while accommodating GSE fleet management needs. As noted in the ISOR, as of 2004, GSE accounted for only about 7% of the baseline HC+NOx emissions addressed in the May 6 proposal, and that figure includes significant GSE emission reductions in the South Coast already achieved by the Participating Airlines under the MOU. *See* ISOR at 8. Seeking extremely marginal additional emission reductions from GSE by imposing unrealistically short compliance deadlines based on inaccurate useful life assumptions is an unnecessary and ill-advised approach, especially given the unique importance of GSE to the National Airspace System. Accordingly, ARB should reconsider not only the fleet average emission targets, but also the compliance deadlines for GSE.

IV. The LSI Rule Fails to Recognize the Substantial Effort and Uncertainties Associated With Integration of New Technologies Into GSE Fleets, Rendering the Fleet Compliance Schedule, Cost Estimates, and Other Aspects of the Rulemaking Arbitrary and Capricious

ATA members have substantial real-world experience in GSE fleet conversion to achieve air emission reductions and other objectives, having undertaken certain voluntary GSE and on-road equipment conversions at many major airports and cities in the United States. Industry experience demonstrates that the LSI Rule's assumptions concerning the costs, delays, and operational difficulties associated with conversion or replacement of LSI GSE equipment are wholly unrealistic. The rapid integration of new technologies and accelerated multiple fleet

[21] If ARB intends to propose retaining the final 2013 effective date and adjusting stringency levels to address the median useful life of GSE, another means of partially addressing the "double conversion" issue would be to provide additional flexibility for compliance with the proposed interim 2009 and 2011 fleet average emission targets. For example, the rule could exempt GSE from the interim requirements, or allow GSE operators to satisfy the interim 2009 and 2011 targets by submitting a satisfactory fleet management plan demonstrating how the 2013 fleet average emission target will be satisfied (such as through commitments to purchase and integrate cleaner LSI engines after they become available).

turnovers contemplated by the May 6 proposal are not feasible for GSE, and the rulemaking record provides no evidence to the contrary. The proposed rule fails to take account of the costs and operational problems that would result from the attempt, and would risk compromising the safety and efficiency of airline operations in California. As illustrated by the real-world examples provided on pages 20-23 below, integration of new technology into the GSE fleet requires successful completion of a series of challenging and time-consuming steps, with no up-front guarantee that the new technology will be feasible when applied to GSE in "real world" operational scenarios.[22] Any revised proposal must take account of these considerations regarding GSE fleet management.

First, the new or re-powered GSE or retrofit must be designed, developed, and manufactured, including the integration of any new technology or engine into the GSE equipment. Because the GSE market is small and highly specialized, contrary to the assumptions underlying the LSI Rule, the airlines cannot simply purchase a new LSI engine "off-the-shelf" from the original engine manufacturer ("OEM"), install it into a piece of GSE, and expect the equipment to perform the specialized functions required of it in the context of an airport operating environment. In addition, there are currently no available verified retrofits for GSE to meet the emission targets, and as ARB recognized in the context of agricultural equipment, it is significantly less feasible to retrofit older equipment such as GSE. ISOR at 24 ("as the equipment gets older, several factors conspire to decrease the feasibility of retrofits"). There are over 20 different categories of GSE, each of which must meet different performance requirements through various duty cycles.[23] Any new engine block, electric power system, or other technology must be carefully integrated into the equipment to operate properly relative to the GSE's unique vehicle and operational functions, controls (electronic, hydraulic and mechanical), braking systems, and other aspects of real world performance at the airport. This represents a substantial design task in which in-house airline engineering staff must be proactive partners with both OEMs and GSE manufacturing companies. ATA members have invested significantly in such programs in the past, and have engaged outside design and engineering expertise to work with manufacturers. In the industry's experience, it typically takes several years to design, develop, and manufacture prototype re-powered, electric, or new GSE equipment. Even with such an effort, there is no guarantee of success, and several years of development may result in a determination that the proposed new technology is not feasible for use with a particular piece of GSE.

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[22] In addition to rendering the May 6 proposal arbitrary and capricious, these considerations further demonstrate that the LSI Rule is preempted by the federal aviation laws, as discussed above in Section I. While airlines may voluntarily conclude that it is appropriate to undertake certain GSE fleet conversions even if the changes may affect aircraft operations, prices, routes, or services, the federal aviation laws prohibit states from imposing mandatory GSE requirements that have such effects.

[23] Even within a single category, some GSE may be designed and modified over the years to have unique vehicle and operational characteristics needed to service a particular type of aircraft within the conditions and infrastructure of a particular airport, or to perform in other respects unique to a particular air carrier's operations.

Second, even if a prototype can be produced that meets the required specifications, it typically takes one to five additional years of actual operating data in the field to determine whether a new technology will meet long term GSE requirements for aircraft support. Simply securing a prototype for use is insufficient to conclude that the new vehicle can be effectively integrated into the existing GSE fleet. Each piece of GSE must operate as one component in a carefully integrated and complementary ground support system, and must work together seamlessly to support the efficient movement of aircraft through the National Airspace System and maintain the unimpeded flow of air commerce. Actual in-service data are also necessary to confirm that the unit itself is safe and reliable, can perform the necessary tasks in the field safely and efficiently, can operate continuously throughout the required duty cycle, and that its components will adequately hold up throughout its useful life. Such experience is necessary to identify and correct the inevitable "bugs" in any new equipment technology. This is particularly important if a substantial portion of an existing fleet is to be converted within a compressed schedule as contemplated under the May 6 proposal (and, according to ARB staff, the impending revised proposal). When a performance, safety, reliability, or fleet compatibility problem is found, equipment may need to be modified or even substantially redesigned. The airlines must meet strict passenger and employee safety requirements,[24] tight schedules, and on-time reliability performance requirements that cannot be compromised, and which are not typically faced by operators of the non-GSE forklifts that the LSI Rule was primarily designed to regulate.

Finally, before new GSE technology can be fully integrated into the existing fleet, operations and maintenance staff must complete mandatory airport safety and operations training requirements. Such safety and training for new equipment typically requires 8-12 months to design, review, coordinate and complete. Until training is completed and the equipment's functionality and reliability is established, the carrier must retain and continue to use the old equipment to supplement and backup the newer equipment. In some instances the old equipment may continue to be in use for one or more hours daily.[25] In addition, contrary to the assumptions underlying the LSI Rule (*see*, *e.g.*, Initial Statement of Reasons at 36-37), new GSE technology typically will result in <u>increased</u> operating costs due to additional maintenance and unanticipated compatibility and functionality problems associated with the adoption of the new technology.

Overall, industry experience demonstrates that it takes more than the two or three years contemplated by the May 6 proposal, and often substantially longer, to bring a new technology

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[24] If airline safety officials determine that a new or redesigned piece of GSE fails to satisfy vigorous safety requirements, the GSE must be removed from airport operation. *See*, *e.g.*, 14 C.F.R. § 139.329 (requiring airport operators to establish and implement procedures for safe and orderly operation of GSE). ARB lacks the authority to require operation of a piece of GSE that is determined not to be safe for airport operations.

[25] Equipment operated one hour per day would not qualify for the low-use exemption under the proposed rule, which is limited to equipment used less than 251 hours per year. *See* proposed 13 CCR Section 2775.1(e).

into GSE use, at a substantial cost to the airline (or other GSE fleet operator) for the necessary development, testing, and training. As with any new technology, unanticipated performance and reliability issues often arise, and there is no guarantee that the technology will be feasible over the useful life of the unit. The compressed and inflexible fleet average emissions compliance schedule of the May 6 proposal fails to take these issues into account. ARB's assumption that the necessary LSI GSE equipment and fleet conversions can be accomplished within the timeframes provided is unsupported by the rulemaking record and is contrary to industry experience, which demonstrates that compliance with the deadlines as contemplated in the proposed rule is not feasible.

In contrast to the proposed LSI Rule, current federal and California regulations concerning LSI engines[26] accomplish emission reductions only by setting engine emission requirements for *new* engines. This distinguishes those rules as they allow airlines flexibility in assessing the feasibility of incorporating such new equipment and deciding when a particular new engine has proven sufficiently reliable to be integrated without disruption. Such prospective regulation of new engines also provides adequate time to pursue the development of GSE that incorporate such new engines in ways that are less disruptive to airport operations. The May 6 proposal, on the other hand, provides very little integration flexibility, and would require airlines to purchase and seek to implement new engines and other technology into their GSE fleets almost immediately as it becomes available.

A technology-forcing regulation such as the LSI Rule is not a workable option for GSE, in the same way that technology forcing is not appropriate generally in aviation contexts.[27] The consequences of a tractor towing an aircraft with hundreds of passengers on board failing to perform reliably as specified in the context of a busy, tightly-orchestrated and highly congested airport are significantly more severe than the consequences of an unreliable or underperforming forklift motor in a warehouse setting. Indeed, ARB implicitly recognized this fact in negotiating and committing to the South Coast MOU -- an effort that allowed ARB and the airlines to work together to develop a workable emission-reduction strategy appropriate for GSE. Whatever the reasons behind ARB staff's decision to abandon that approach and to seek to impose mandates on GSE, that decision should be reconsidered. Simply put, to require airlines to restructure virtually their entire existing LSI GSE fleets to unproven equipment within the timeframes of the LSI Rule is to ask the airlines to take unacceptable reliability and, potentially, safety risks.

None of these GSE conversion issues were adequately considered in the development of the May 6 proposal. As ARB assesses a revised proposal that addresses the median useful life of GSE, it should also reevaluate the rule in light of a more realistic assessment of the difficulties

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[26] *See* 67 F.R. 68241 (November 8, 2002); 13 C.C.R. §§ 2430-39.

[27] *See*, *e.g.*, 42 U.S.C. § 7571 (requiring that federal aircraft emission standards must be technically feasible, take effect only after such time as is necessary to develop and apply the requisite technology, and do not adversely affect safety).

posed by GSE conversion (including a reassessment of the costs and benefits of the regulation of GSE). These considerations further demonstrate the unsuitability of seeking to impose inflexible GSE mandates using a rule primarily developed to regulate non-GSE forklifts. Furthermore, they confirm that the LSI Rule is preempted by federal aviation laws intended to ensure the free flow of air commerce and the safe and efficient operation of the National Airspace System. As such, the LSI Rule can and should exempt GSE.

In the alternative, as discussed above, at a minimum ARB should not only adjust fleet average emission targets for GSE (as suggested by ARB staff during recent discussions with ATA) but also work with ATA to develop adjusted compliance deadlines for GSE that allow adequate time for development and integration of new technology into GSE fleets. As ARB recognized with respect to agricultural fleets that are likely to encounter feasibility problems in seeking to retrofit older equipment, it is appropriate to adjust both the emission targets and compliance deadlines to account for such issues. *See* ISOR at 24-25 ("staff believes it is appropriate to give the agriculture-related industries a relaxed standard and additional time").

In addition, the rule should include "safety valve" provisions that delay the compliance deadlines if proven lower-emission GSE incorporating new LSI engines, verified retrofits, or other technologies does not become commercially available within the timeframes contemplated by the LSI Rule. During the development process for the LSI Rule, ARB staff made clear that ARB would revisit the fleet average emission requirements if new technology does not result in lower-emitting LSI engines as expected.[28] Because the fleet average emission requirements of proposed Section 2775.1 are premised on the availability of verified retrofits, and the development and integration of new engines and other technologies into GSE, this concept should be made an express part of the LSI Rule through a safety-valve provision. As recognized by ARB, forklifts comprise a much greater share of the off-road LSI engine market than GSE. *See*, *e.g.*, Initial Statement of Reasons at 18. For this reason, and due to the greater specialization required of GSE equipment, engine manufacturers will likely develop lower-emission LSI engines for the forklift market well before they seek to develop such engines for GSE, and the limited GSE market may not be sufficient to support the incorporation of such engines and other technologies by GSE manufacturers.[29]

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[28] The anticipated engine technology is set forth in Part 1 of the Proposed Regulation Order, which would require that new LSI Engines over 1 liter meet a 3.0 g/bhp-hr standard by Model Year 2004, 2.0 g/bhp-hr by Model Year 2007, and 0.6 g/bhp-hr by Model Year 2010. See proposed 13 CCR Section 2433(b)(1).

[29] The proposed LSI Rule provides for a blanket one-year compliance extension of all of the fleet average emission requirements if there are no verified retrofit systems available by 2007, with an additional one-year extension if no verified retrofits are available by 2008. *See* proposed 13 CCR Section 2775.2(g)(1). However, as discussed above, vendors may decide to obtain verification first for the much larger forklift market, and only later seek to obtain verification for non-forklift LSI equipment such as GSE. Accordingly, the situation could easily arise that there are verified retrofits available for forklifts, but not non-forklift LSI engines. Thus, in the alternative to the general "safety valve" provision described above, at a minimum Section 2775.2(g)(1) should be clarified to provide that if there are no verifiable retrofits available for non-forklifts, the compliance extensions will still be triggered for Non-Forklift Fleets, even if verified forklift retrofits are available.

Industry Examples

Set forth below are a few examples of past industry efforts to incorporate new technology and develop lower-emission GSE to replace existing LSI and diesel equipment. As demonstrated by these examples, and by other voluntary GSE initiatives undertaken by the airlines (such as efforts undertaken pursuant to the South Coast MOU), ATA and its members actively support the continuing development of new lower-emission GSE technology. However, these examples serve to illustrate how the development of a piece of lower-emission GSE is a considerable undertaking with no guarantee of success, which requires substantially more time and effort than contemplated by the LSI Rule, and (if pursued as contemplated under the LSI Rule) carries real potential for operational disruptions.

- *Electrification of Cargo Loaders and Other GSE*

ATA members have been actively involved in developing electric powered cargo loaders. Cargo loaders are used to load and unload containerized cargo into and out of aircraft, to transport cargo through the airport, and in some instances to help sort incoming cargo for re-loading during the same duty cycle. The most common type of cargo loader has a lift capacity of about 15,000 pounds and is used to load containers into the lower lobe (deck) of both passenger and cargo aircraft. A second type of cargo loader is the main deck loader, with a 30,000-pound lift capacity, which is used to load 8 to 30 containers on the top side of cargo aircraft (where passengers would be seated on a passenger aircraft). Many loaders used by cargo carriers must be capable of continuous heavy operation for an extended duty cycle, in order to rapidly unload, transport, sort, and re-load cargo, and may travel a total of four to five miles per day. Cargo loaders are most often powered by diesel engines (although many others use LSI engines), but this example is provided to illustrate the technology implementation process, which is the same regardless of whether the original engine is diesel or LSI.

Over the past ten years, at least two of our members independently attempted to develop electric lower lobe and main deck loaders. Collectively the two programs cost these airlines over $10,000,000, and were undertaken in conjunction with two separate GSE manufacturers. In one example, the GSE manufacturer took one year to develop an initial prototype. The prototype unit was evaluated by the airline, and the airline provided the GSE manufacturer with design and engineering feedback to address operational and equipment issues. Over the next two years, the GSE manufacturer redesigned the prototype and provided the airline with 25 modified units. However, the design modifications were still not sufficient to satisfy the reliability and serviceability requirements for the equipment. Despite spending over $5,000,000, and devoting full-time operations and engineering staff (including personnel hired from the GSE manufacturer to work full-time for the airline), the program was terminated because the electric cargo loader still failed to meet minimum performance requirements. All 25 units were scrapped. The second effort, initiated by a different airline with a different GSE manufacturer, had a similar experience. The second GSE manufacturer produced 32 electric cargo loaders, of which 26 were ultimately converted to diesel fuel, and six are in limited use.

During these efforts a number of insurmountable technical problems arose. For example, meeting the high power demand for cargo loaders required installation of large battery packs that weighed over 2½ tons. Even with these large battery packs, the maximum useful life of the battery at full load was less than three hours. However, the cargo loaders were required for use over an entire eight-hour shift, without any opportunity to recharge within a shift. In addition, the speed of the rear loading platform was inadequate to meet performance requirements. The electric units also experienced a high rate of component and electric motor failure, as well as recurrent failures of the lifting mechanism.

Individual airlines have achieved some limited success in converting or designing certain other types of new electric GSE with less-demanding functions, such as certain types of baggage loaders and tractors, push-back aircraft tractors, and other specific types of GSE. These programs required the airlines to work with multiple GSE equipment suppliers (one carrier has evaluated eight separate electric-powered baggage tractors), individual component manufacturers (e.g., transmission, hydraulic, electrical), and in-house design teams to properly define operating specifications unique to the airline's fleet and operations, to design or re-design existing internal GSE systems, to build and test prototypes, and to perform in-field testing to identify and correct deficiencies. Such projects have typically required at least three to five years to complete for a given type of equipment (e.g., belt loaders, baggage and cargo tractors, etc.), with no up-front guarantee of success. Additionally, airlines have had to develop opportunity and equalization charging systems and refine existing battery technology to support electrification and to allow these electric GSE to operate safety over the course of a day.

Should a piece of GSE fail or underperform within the airport, aircraft may be damaged, schedules delayed, or airline workers or passengers injured. As illustrated by the airlines' attempt to electrify large cargo loaders, it is incorrect to assume that electrification is a viable option for all types of LSI GSE as a means of complying with the fleet average targets. Based on the airlines' extensive experience in the development of electric GSE, it is clear that there is no guarantee that electrification of a category of equipment will work in all applications. Even where electrification has worked, it has required a substantial design effort of three to five years or more for each type of equipment, the development of supporting technology, and the development and installation of supporting airport infrastructure. Each step of the process may reveal technical or airport operations problems, any of which could prove insurmountable. Even if the project can be completed, it may result in equipment that underperforms in actual use, or require airport infrastructure changes that cause unacceptable interference with operations.

- *Re-powering GSE with Off-The-Shelf LSI Engines*

At least three airlines attempted to re-power uncontrolled LSI GSE with electronically fuel injected Ford 2.5 or 4.2 liter off-road spark ignition engines. Both engines are able to provide over 90% reduction in NOx+HC emissions; the 4.2 liter V-6 has been certified by Ford Power Products to meet current LSI emission limits. Airlines worked cooperatively with both the engine manufacturer and GSE equipment manufacturers to re-power existing LSI GSE with

both of these engines. During a three- to four-year development process, a number of design issues were encountered and addressed to ensure reliable and safe operation of the re-powered equipment. For example:

- the standard electronic four-speed transmission that was offered with the engine was not suitable for GSE operations, where maximum speeds are limited to 15 miles per hour. Additionally, the reliability of the standard transmission had not been demonstrated in GSE service, which requires higher torque to move heavier loads. The new LSI engine had to be redesigned so that it could be matched with the standard C6 two-speed transmission used in GSE applications;

- the 4.2 liter engine was too large to fit within the engine bay of existing LSI-powered cargo tractors;

- both engines required extensive redesign and testing of the electronic control modules (ECMs) to ensure safe operation over the duty cycle of the engine. To optimize emission reductions, the new LSI engines rely heavily on the computer-controlled fuel management system, as well as on multiple sensors within the vehicle chassis, transfer case, and engine. The ECMs supplied with the engines did not work in the GSE duty cycle. It took several years for the OEM engineers and the airlines to diagnose and begin to redesign the control module, wiring harness, and associated equipment. For example, three separate oxygen sensor configurations were tested on the 4.2 liter engine before the proper design was determined;

- the electronic throttle assembly and pedal had to be redesigned to repair short circuiting and metal failure;

- problems with poor idling required the manufacturer to modify the induction system of the 4.2 liter engine; and

- problems with the electronic coil and wiring harness required redesign to ensure reliability in severe cold and hot/humid operating climates.

Based on these intensive design and testing programs, and the problems outlined above, at least one carrier determined that repowering their GSE with the 2.5 liter LSI engine was not workable. Even after the redesign process, the re-powered equipment could not operate seamlessly at low speed or idle, which posed significant safety problem for cargo handlers. Airline cargo handlers must manually connect the tractors to carts, which requires personnel to step between the tractor and the cart itself to attach the tow bar or connect carts to each other. This is perhaps the most dangerous task in managing cargo, and an unacceptable safety risk is posed should the engine jerk, hesitate or rapidly accelerate. Such unpredictable engine performance may result in a broken arm or leg, loss of a limb, or other serious injury. Despite the time, money, and effort exerted to optimize this re-power option, at least one carrier

determined that the continued safety risks posed by the re-powered units required the carrier to cancel the project.

This practical experience has led several airlines to conclude that re-powering LSI GSE is not technically practicable. This is especially true given the short time frames under which such re-powering would be required to satisfy the LSI Rule. A number of airlines have concluded that they would not attempt to re-power existing equipment to comply with fleet average emission requirements, but would seek to develop and purchase new equipment. It should be noted, however, that similar systems integration problems can be expected with the design and development of any new GSE using new engine technology. As with electrification, there have also been some successful re-powering efforts, but, again, such programs typically require a number of years, often cause unanticipated performance problems and other issues in the field, and carry no up-front guarantee of success. To say the least, commercial availability of a low emission engine provides no guarantee that it can be successfully integrated into GSE of a given category.

- *Application of On-Road Hybrid Technology*

Even for simpler on-road equipment (which does not share many of the particular challenges of GSE, such as highly specialized performance requirements), industry experience demonstrates that implementation of new lower-emission technologies takes longer than the 2-3 years assumed in the LSI Rule. For example, one of our members has invested heavily to develop a hybrid cargo delivery vehicle -- an on-road medium duty delivery truck that can run on both electric and an LSI or diesel engine, with 90% reductions in NOx+HC and PM emissions. Through a competitive design and construction process, the airline solicited 20 proposals, and selected two vendors to provide prototypes. After five years of continuous development work, there are now 18 pre-production hybrid trucks in revenue service, which are still going through demonstration and real-world testing.

V. Regardless of Whether the MOU Remains in Effect, The LSI Rule Is Flawed in Other Respects and Should be Modified

A. The LSI Rule's Definitions of GSE Should Be Clarified to Give Credit For Existing Electrification and Establish Incentives for Additional Electrification

In recent discussions, ARB has clarified that it intended to allow electric equipment used in lieu of LSI equipment to be included in calculating fleet average emission levels. The definitions of "airport ground service equipment" and "sweeper/scrubber" in the May 6 proposal do not expressly provide for inclusion of electric units that perform work that would otherwise be performed by LSI equipment. ATA supports ARB's intention to clarify the proposal to make clear that GSE will be treated the same as other LSI equipment for this purpose. To this end, ATA proposes modifying the definitions under proposed Section 2775 to read as follows:

> "Airport Ground Support Equipment" means any large spark-ignition engine-powered, or functionally equivalent electric or other zero-emission powered, equipment contained in the 24 categories of equipment included in section B.3 of Appendix 2 of the South Coast Ground Support Equipment Memorandum of Understanding, dated November 27, 2002.
>
> "Sweeper/scrubber" means a large spark-ignition engine-powered, or functionally equivalent electric or other zero-emission powered, piece of industrial floor cleaning equipment designed to brush and vacuum up small debris and litter and then scrub and squeegee the floor.

Moreover, since ARB favors electrification as a control strategy, it should establish regulatory incentives for operators to make early electrification conversions. ARB took this approach under the Portable Engine Airborne Toxic Control Measure adopted earlier this year, providing double credit toward fleet averages for Tier IV diesel equipment purchased in early years of the rule. In similar fashion, if effective dates earlier than 2024 are proposed, electric equipment replacing LSI equipment more than two years before the first interim effective date should be counted twice when counting fleet average emission levels for purposes of determining compliance with the LSI Rule's interim fleet average emission requirements. The real benefit to ARB and the airlines is that such credit will allow maximum penetration of both electric and 0.6 g/bhp-hr technology in the GSE fleet in California and reduce total compliance costs.

B. The LSI Rule's Definition of "Off-Road" Should be Modified to Give Credit for Off-Road Use of Equipment Designed for On-Road Use

ARB has also clarified in recent discussions that it intends to count low-emitting on-road equivalent ("ORE") LSI equipment used in airport operations toward fleet averages. ATA supports this revision to the proposal, and would be pleased to work with ARB staff to arrive at emission factors implementing this clarification.[30] Specifically, ATA proposes adding the following definition under proposed Section 2775:

> "Off road" equipment includes any equipment that lacks a license plate issued by the California Department of Motor Vehicles, specifically including unlicensed equipment designed or manufactured for on-road use.

C. The "Limited Hours of Use" Exemption Should be Modified to Apply to Equipment Operated Less Than 500 Hours Per Year, and to Clarify That Equipment Already Certified to a 3.0 g/bhp-hr Standard Need Not be Arbitrarily Retired or Replaced

As currently proposed, the "limited hours of use" exemption would exempt LSI equipment used less than 251 hours per year, subject to certain additional requirements. However, as explained above, carriers often have to retain older equipment to supplement electric GSE developed under the MOU, which cannot complete certain duty cycles. This retained equipment is often operated more than one hour per day, and would exceed the 251 hour limit. Given the specialized nature of GSE, and the relatively low number of units involved, the "limited hours of use" exemption should be modified to apply to equipment operated less than 500 hours per year. This would allow the airlines to continue to operate existing electric equipment, and consider expanding electrification, with limited use backup equipment that is used more than one hour per day.

In addition, as currently drafted the exemption also requires the operator to either: (i) retrofit or repower the equipment to a Level 2 or Level 3 verification level; or (ii) "retire the equipment or replace the equipment with a new or used piece of equipment" certified to a 3.0 g/bhp-hr standard. *See* Proposed 13 CCR Section 2775.1(e)(1)(D)(ii). However, prong (ii) of this test does not recognize the possibility that the existing equipment might already be capable of being certified to a 3.0 g/bhp-hr standard. For such equipment, there is no reason to require

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[30] There are special considerations in devising emission factors for ORE used in airport operations. On-road equipment emissions are generally determined based upon the estimated average speed at which the equipment is operated. For GSE, the maximum speed within an airport is limited to 15 miles per hour. As part of the GSE MOU negotiations, the ARB allowed the airlines to use an average speed of 13 miles per hour, which was then applied to the appropriate g/mile certified emission rate for the class of on-road equipment. These data, combined with the horsepower and odometer readings for the on-road equivalent, allowed the airlines to express emissions of on-road vehicles in g/bhp-hr.

that the operator "retire the equipment or replace the equipment," since the existing equipment already meets the 3.0 g/bhp-hr standard. Accordingly, proposed Section 2775.1(e)(1)(D)(ii) should be amended to read as follows:

> (ii) ~~retire the equipment or replace the equipment with a new or used piece of~~ the equipment is certified to a 3.0 g/bhp-hr hydrocarbon plus oxides of nitrogen emission standard.

D. The Proposed "Specialty Equipment Exemption" is Unworkable

The LSI Rule would exempt certain "Specialty Equipment" from fleet average emission requirements, provided the equipment is metered and recorded as being used less than 251 hours per year, with the approval of the Executive Officer. *See* proposed 13 CCR 2775.1(f). The proposed rule would apply this exemption only if the replacement cost of the equipment is 50% higher than a "typical" piece of equipment from that "category," or the retrofit cost is 100% higher than the "typical" retrofit cost. *See* proposed 13 CCR 2775.1(f)(1)(A). However, the proposed rule does not define what constitutes a typical piece of equipment from the same category.

While potentially useful in concept, we believe that any average cost scheme likely will be unworkable -- neither ARB nor the fleet operators will have sufficient data to determine or agree upon typical replacement costs for a given category, or support a finding that a given replacement or retrofit exceeds the 50% or 100% thresholds. However, we agree with ARB's recognition during rulemaking workshops that GSE is inherently specialty equipment, and that there is a real need to provide an exemption for such equipment. The specialty equipment provision should expressly recognize this fact and exempt all specialty GSE (*i.e.*, all GSE equipment that is not also available "off the shelf" for non-GSE applications) from the rule. In the alternative, working with ATA and its members, ARB should develop a practical, workable test or expressly list those categories of GSE deemed to constitute specialty equipment.

CONCLUSION

As with the Portable Engine Diesel ATCM, and the off-road diesel engine ATCM that ARB expects to propose later this year, the LSI Rule impermissibly regulates GSE and is preempted under federal law. Unless all GSE is exempted from the LSI Rule and the ATCMs, ATA and its members may be compelled to pursue legal recourse to have the rules declared invalid as preempted by federal law.

The LSI Rule (and the diesel ATCMs) are also inconsistent with the letter and spirit of the agreement between the Participating Airlines and ARB, embodied in the South Coast MOU. ARB, EPA, and the carriers spent several years and substantial resources negotiating the MOU, the implementation of which will require the Participating Airlines to spend over $100 million in a very difficult economic environment for the industry. ATA expects that the Participating Carriers will find it necessary to terminate the MOU to avoid the cost and inefficiency stemming from inconsistent compliance obligations.

Regardless of whether the MOU is terminated, the proposed LSI Rule is fundamentally flawed and based on incorrect assumptions concerning the useful life of GSE and the time, effort, and operational difficulties associated with the integration of lower-emission technology into GSE. These considerations further demonstrate why ARB should not seek to regulate GSE -- particularly not through the LSI Rule, which was primarily designed to regulate non-GSE forklifts and fails to recognize or afford weight to the unique nature of GSE and its vital role in the National Airspace System. In the alternative, in recognition of these considerations the fleet average emission targets should be revised, compliance deadlines should be substantially delayed as applied to GSE, and numerous other terms of the LSI Rule should be amended, as discussed herein.

Please call me at (202) 626-4151 if you have questions about these comments.

Sincerely,

Betty L. Hawkins
Assistant General Counsel

Attachments

ATTACHMENT A

U.S. Department of Transportation
Federal Aviation Administration

800 Independence Ave., S.W.
Washington, D.C. 20591

Donald Zinger
Assistant Director for
Transportation and Air Quality
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, N.W.
Washington, DC 20460

AUG 24 2000

Dear Mr. Zinger:

This letter clarifies the Federal Aviation Administration's (FAA) views concerning the rule adopted by the Texas Natural Resources Conservation Commission (TNRCC) on April 19, 2000, on emissions from airport ground service equipment. Enclosed please find an analysis of preemption issues related to that rule. The analysis concludes that any authority the State of Texas has to regulate airport ground service equipment is exceeded when that authority is exercised in a manner that would necessarily regulate aircraft operations. The Clean Air Act and Federal Aviation Act preempt state regulations that impinge upon aircraft operations and management of the navigable airspace. Based upon the data available, the FAA is unable to conclude that the regulation has left fleet operators a choice between suggested, reasonably available alternative means to comply with the TNRCC regulation and the freedom to select measures that do not restrict aircraft operations in the future.

The FAA has confidence that the ongoing discussions with the U.S. EPA with stakeholder groups to develop voluntary measures to reduce emissions from the aviation sector will be successful in providing reductions at airports throughout the country. In the meantime, FAA encourages U.S. EPA and TNRCC to continue to work cooperatively with appropriate airport officials and other affected parties to explore ways to reduce oxides of nitrogen and

other pollutants at airports that do not impinge upon aircraft operations. If you would like to discuss this matter further, please feel free to contact me at (202) 267-3577 or Daphne A. Fuller in the FAA Office of the Chief Counsel at (202) 267-3199.

Sincerely yours,

Paul Dykeman
Deputy Director
Office of Environment and Energy

Enclosure

cc: Ben Harrison, Office of U.S. EPA Regional Counsel

I. Factual Background

The TNRCC has adopted a rule that would require persons who own or operate ground service equipment (GSE) in the Dallas Ft. Worth (D/FW) ozone nonattainment area at airports having 100 or more air carrier operations per year, averaged over a three year period to "demonstrate a reduction of oxides of nitrogen (Nox) emissions" equal to or greater than the amount specified in the regulation. This includes the four largest commercial airports in the D/FW ozone nonattainment area, Dallas Ft. Worth, Meachem, Alliance, and Love Field airports. GSE is defined to include equipment that is used to service aircraft during passenger and/or cargo loading and unloading, maintenance, and other ground-based operations (excluding equipment used to service general aviation aircraft and military aircraft and equipment that is used during freezing weather such as ground heaters and deicing vehicles). Owners and operators of ground service equipment are required to:

(1) have a 100% electrified fleet by May 1, 2005 or three years after the airport becomes subject to the rule, whichever is later. If a GSE unit is not available for purchase or conversion to electric power then the lowest emitting equipment available may be used instead, subject to the approval of the executor director of TNRCC and U.S. EPA; or
(2) have a plan that provides for emission reduction measures to achieve the phased compliance required by (a), (b), or (d)(generally 20% by 2003, 50% by 2004, and 90% by 2005). The plan may include measures, which are applied to the GSE fleet itself, and measures which have been achieved elsewhere within the nonattaiment area as long as those measures would be creditable in accordance with the Commission's emission banking program.

By letter dated June 23, 2000, to the Chairman of the Texas Natural Resource Commission, the U.S. EPA Regional Administrator for Region 6 clarified earlier U.S. EPA comments concerning the proposed rule. The letter stated that, based upon U.S. EPA's analysis "the Texas regulation is not preempted by the Clean Air Act."

II. Discussion

A. Federal Preemption

Article VI of the United States Constitution provides that the laws of the United States "shall be the supreme law of the Land; . . . any Thing in the Constitution or Laws of any state to the Contrary notwithstanding." Cipollone v. Liggett Group, Inc., 505 U.S. 504, 516 (1992), quoting Art. VI, cl. 2. Since M'Culloch v. Maryland, 17 U.S. (4 Wheat.) 316, 427 (1819), it has been settled that state law that conflicts with Federal law is "without effect." Maryland v. Louisiana, 451 U.S. 725, 746 (1981). Consideration of issues arising under the Supremacy Clause start with the assumption that the historic police powers of the States are not to be superceded by Federal law unless that is the "clear and manifest purpose of Congress." Cipollone, 505 U.S. at 516, quoting Rice v. Santa Fe Elevator Corporation, 331 U.S. 218, 230, (1947). Accordingly, the purpose of Congress is the ultimate touchstone of preemption analysis. Cipollone, 505 U.S. at 516. Preemption is predicated on Congressional intent.

Federal law may supercede state law in several different ways. California Federal Saving and Loan Association v. Guerra, 479 U.S. 272, 280-281(1987). First, when acting within constitutional limits, Congress is empowered to preempt state law by so stating in express terms. Jones v. Rath Packing Company, 430 U.S. 519, 525 (1977). Second, Congressional intent to preempt state law in a particular area may be inferred from a " 'scheme of federal regulation . . . so pervasive as to make reasonable the inference that Congress left no room for the States to supplement it,' because the 'Act of Congress may touch a field in which the federal interest is so dominant that the federal system will be assumed to preclude enforcement of state laws on the same subject,' or because 'the object sought to be obtained by the federal law and the character of obligations imposed by it may reveal the same purpose.' " Pacific Gas and Electric v. State Energy Resources Conservation & Development Commission, 461 U.S. 190, 203-204 (1983), quoting Fidelity Federal Savings & Loan Association v. De la Cuesta, 458 U.S. 141, 153 (1982), Rice v. Santa Fe Elevator Corporation, 331 U.S. 218, 230 (1947). Third, in those areas where Congress has not completely displaced state regulation, Federal law may nonetheless preempt state law to the extent that it actually conflicts with Federal law. Such conflict occurs either because "compliance with both

federal law and state regulations is a physical impossibility," Florida Lime & Avocado Growers, Inc. v. Paul, 373 U.S. 132, 142-143 (1963), or because the state law stands "as an obstacle to the accomplishment and execution of the full purposes and objectives of Congress." Hines v. Davidowitz, 312 U.S. 52, 67 (1941).

B. State Regulation Of Aircraft Operations and Use of the Navigable Airspace Is Preempted Under the Clean Air Act, the Federal Aviation Act and Airport Noise and Capacity Act

The authority of the State to regulate aircraft to reduce air pollution is sharply circumscribed under the Clean Air Act, as amended, 42 U.S.C. § 7401, et seq. Section 233 of the Clean Air Act expressly preempts state regulation of aircraft engine emissions. Section 233 provides that "no state or political subdivision thereof may adopt or attempt to enforce any standard respecting emission of any air pollution from any aircraft or engine thereof unless such standard is identical to a standard applicable to such aircraft under this part." 42 U.S.C. § 7573.[1]

Section 233 preempts any action by the State to enforce any standard for aircraft emissions unless the standard is identical to a standard applicable under the Clean Air Act. In other words, the State may only adopt a regulation addressing a particular aircraft emission if it is identical to a Federal standard. If there is no Federal standard, then State action is preempted and the State has no authority to apply a standard. In addition to the explicit prohibition under Section 233, the comprehensive scheme established by Sections 231 and 232 of the Clean Air Act for regulation of aircraft engine emissions by the U.S. Environmental Protection Agency ("EPA") and the U.S. Department of Transportation ("DOT") demonstrates Federal preemption of the field.[2] Under Section 231, the EPA, in consultation with the Secretary of Transportation (to assure safety), establishes national standards for aircraft engine pollutants. EPA must consult with DOT to assure that the standard takes effect after time allowing for the development and application of requisite technology. If DOT finds

[1] This section has been interpreted in California v. Dept of the Navy, 624 F. 2d 885 (9th Cir. 1980). In that case, the court ruled that the State could regulate U.S. Navy jet engine test cells. These test cells were not considered to fall within the preemption of Section 233 because the test cells were separate and apart from the aircraft engines themselves and could be regulated without necessarily affecting the operation of the aircraft.

[2] See, Washington v. General Motors Corp., 406 U.S. 109, 114 (1972)(Congress has "preempted the field so far as emissions from airplanes are concerned.")

that a proposed standard would create a hazard to aircraft safety, then the DOT may request review by the President who determines whether to disapprove the standard. The EPA has established standards for fuel venting and exhaust emissions for in-use gas turbine airplane engines manufactured after 1984. See 40 CFR Part 87. Under Section 232, the FAA is then responsible for enforcing those standards through the certification process. See 14 CFR Part 34. Based upon this comprehensive scheme there is clearly no room for States to establish or impose any aircraft emission standard not identical to those established by the EPA. When the scheme of regulation of aircraft engine emissions under the Clean Air Act is read together and harmonized with the other aviation statutes discussed below, it is clear that standards under Section 233 refer broadly not just to quantitative emission levels, but to emission reduction targets that necessarily have the direct or indirect effect of restricting aircraft operations.

The Federal Aviation Act, as recodified at 49 U.S.C. § 40103, the regulations implementing it in 14 C.F.R., the Airport Noise and Capacity Act (ANCA), as recodified at 49 U.S.C. § 47521, and the regulations implementing it in 14 C.F.R., preempt the States from regulating in the area of aircraft operations and airspace management. In a long series of cases,[3] the courts have ruled that neither the States nor their political subdivisions can regulate the manner in which aircraft are operated or the airspace in which the aircraft are operated. This Federal scheme of regulation is deemed to be pervasive, intensive, and exclusive and is vested solely in the FAA. The court in City of Burbank v. Lockheed Air Terminal[4], expressed concern about the need for uniformity of safe, efficient use of the navigable airspace. It reasoned that to permit curfews and other local regulation of flight operations would increase difficulties of scheduling flights to avoid congestion and concomitant decrease in safety would be compounded.

Congress recently reiterated in ANCA the federal policy against "uncoordinated and inconsistent restrictions on aviation that could impede the national air transportation system." 49 USC 47521(2). Where, as here,

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[3] Allegheny Airlines v. Village of Cedarhurst, 238 F.2d 812 (2d Cir. 1956); American Airlines, Inc. v. Town of Hempstead, 398 F.2d 369 (2d Cir. 1968), cert. denied, 393 U.S. 1017, 21 L.Ed.2d 561, 89 S.Ct. 620 (1969); American Airlines v. City of Audubon Park, 297 F.Supp. 207, aff'd, 407 F.2d 1306 (6th Cir. 1969), cert. denied, 396 U.S. 845, 24 L.Ed.2d 95, 90 S.Ct. 78 (1969); City of Burbank v. Lockheed Air Terminal, 411 U.S. 624 (1973).

[4] 411 U.S. 624 (1973).

Congress has articulated a policy, the most relevant preemption standard appears to be that stated in Rice v. Santa Fe Elevator Corp., 331 U.S. 218, 236 (1947): "The test [of applicability of state laws] is whether the matter on which the State asserts the right to act is in any way regulated by the Federal Act. If it is, the federal scheme prevails though it is a more modest, less pervasive regulatory plan than that of the State." See also, American Airlines v. Hempstead, 272 F. Supp 226, 230, aff'd, 398 F.2d 368, cited in City of Burbank v. Lockheed Air Terminal, 411 U.S. at 628 ("The aircraft and its noise are indivisible; the noise of the aircraft extends outward with the same inseparability as its wings and tail assembly; to exclude the aircraft noise from the Town is to exclude the aircraft...")

Finally, the Airline Deregulation Act of 1978 (ADA), 49 U.S.C. § 41713, prohibits state regulation of aircraft operations. Congress enacted the ADA to "... ensure that the States would not undo federal deregulation with regulation of their own." Morales v. Trans World Airlines, Inc., 504 U.S. 374, 378 (1992). (States' enforcement of attorney general guidelines on air travel industry advertising and marketing practices held to be preempted for having a connection with or reference to airline rates, routes, or services). Section 105 prohibits any State or political subdivision from enacting or enforcing "... any law, rule, regulation, standard, or other provision having the force and effect of law relating to price, routes, or services of any air carrier ...." 49 U.S.C. § 41713(b)(1). The Supreme Court has defined the "relating to" language broadly to mean "having a connection with or reference to airline rates, routes, or services." American Airlines v. Wolens, 513 U.S. 219, 223 (1995), citing Morales, 504 U.S. 374.

D. The TNRCC Regulation

Using its delegated authority under the Clean Air Act and its residual authority, the State of Texas may regulate sources of air pollution to achieve and maintain state and national air pollution standards. We do not here reach the issue of whether the Texas regulation is preempted under Section 209 of the Clean Air Act. We assume here, arguendo, without conceding, that the State of Texas may regulate airport ground service equipment in some manner. However, as discussed above, the State may not impose measures that necessarily regulate aircraft or aircraft operations and interfere with safety and efficiency in management of the navigable airspace. The central issue here is whether the TNRCC regulation has left owners and operators of GSE equipment the discretion to choose among suggested

procedures and the freedom to choose measures that do not necessarily regulate aircraft operations. See, Air Transport Association v. Crotti, 389 F. Supp. 58 (ND Cal. 1975)(Court upheld state airport noise statute that imposed noise abatement duties on airport proprietors where airport proprietors were left to choose among suggested procedures and were free to choose noise control measures that did not directly regulate aircraft operations). See also, California v. Navy, 431 F. Supp at 1286.

Based upon review of the preamble to the Texas regulations, FAA lacks sufficient data to make an informed judgment that compliance with the Texas regulation is possible without affecting growth in aircraft operations. GSE equipment is necessary to landings and takeoff of aircraft. Aircraft are dependent upon GSE for maintenance, fueling, housing, and in some cases, for movement on the ground as well as a myriad of other activities that are critical to the safety of aircraft and flight preparation. The availability of reliable GSE equipment is accordingly essential to safe and efficient use of the navigable airspace.

There is no clear evidence that the emission reduction requirements can be met without reducing total GSE equipment and, in turn, aircraft flights. Electrification will be difficult to implement without affecting operations given the recharging time, battery life, and the need for space for recharging equipment at the airport. Both the phased-in percentage emission reduction alternative and the electrification alternative potentially reduce the availability of GSE during peak periods of airport operation. Limitations on total numbers of GSE available at any given time would create difficulties in scheduling flights and increase congestion and delays.

It is equally unresolved whether the requirement for 100% electrification is feasible given the cost and availability of such equipment or reasonably attainable within the next five years given the infrastructure and electric grid requirements considering cost. TNRCC does not appear to have considered whether "opportunity charging" is practicable. There is little or no evidence that a reliable source of power exists that is adequate to provide power for all necessary GSE equipment and sufficient back-up systems in the event of power outages or disruptions. Although the regulation provides for substitution, the regulation does not articulate the standards that TNRCC and U.S. EPA will use to determine when electric GSE is not available such that the lowest emitting available technology may be substituted.

Based upon information available to date, the emission trading program does not obviate any necessity for fleet operators to limit growth to achieve compliance in the future. There has been no analysis to demonstrate that credits are reasonably expected to be available elsewhere in the nonattainment area. Nor is it clear that the Commission trading program leaves GSE owners and operators the freedom to purchase credits from other nonattainment areas in Texas, such as the Houston area, which has more emissions available for credit. Although we agree with the U.S. EPA letter that the TNRCC regulations may allow owners and operators of GSE to include measures in their plans besides the two enumerated, there is no analysis showing that other viable measures are available to fleet operators.

A case that involves similar facts is San Diego Unified Port District v. Gianturco.[5] In Gianturco, the State sought to require the Port District, as owner of Lindbergh Field, to extend the hours of an existing curfew. The State made extension of the curfew a condition of the variance needed for the permit to continue to operate the airport, which was not in compliance with California noise standards. The Ninth Circuit Court of Appeals held that the State's curfew was federally-preempted because it impinged on airspace management by directing when planes may fly in the San Diego area. The court explained that "Local governments may adopt local noise abatement plans that do not impinge upon aircraft operations." 651 F.2d at 1314. The court reasoned that the State could not use variances, licenses and permits to achieve indirectly what the Supreme Court had precluded in Burbank. Similarly, assuming arguendo that the State of Texas may adopt plans to regulate ground service equipment, such plans may not indirectly impinge upon aircraft operations. The State of Texas may not accomplish indirectly that which it is precluded from imposing directly.

The TNRCC regulations may also be determined to be preempted under § 105 of the Airline Deregulation Act of 1978 (ADA), 49 U.S.C. § 41713. To the extent that the TNRCC regulation would effectively require fleet operators to limit operations at airports in Texas, the TNRCC regulations very likely "relate" to air carrier routes in violation of § 41713(b)(1). Whether a fleet operator may take advantage of the flexibility inherent in the Federal deregulatory environment and increase service would appear to depend upon whether the TNRCC regulation indirectly restricts future growth in flights. The statute's proprietary exception, 49 U.S.C. §

[5] 457 F. Supp. 283 (SD Cal. 1978), aff'd. 651 F. 2d 1306, 1313-14 (9th Cir. 1981), cert. den. 455 US 1000 (1982).

41713(b)(3), does not apply here since the State of Texas is not an airport proprietor.

In support of the conclusion that state regulation of GSE equipment is not federally preempted, in its letter dated June 23, 2000, U.S. EPA posits that the prohibition on state emissions standards under section 233 has been interpreted similarly to the prohibition in section 209. As authority for this proposition, EPA cites State of California v. Navy, supra. However, that case is factually distinguishable. It involved state authority to regulate aircraft engine test cells. The court in that case concluded that state regulation of aircraft engine test cells was not preempted, but did not otherwise define the scope of state authority to regulate aircraft operations. Nor did the court uphold state authority to indirectly regulate aircraft operations through operational restrictions on ground service equipment. Indeed, the reasoning in the case, particularly the opinion of the U.S. District Court, which was cited favorably by the Ninth Circuit Court of Appeals, strongly supports the conclusion that state regulations are federally-preempted to the extent that they necessarily impinge upon aircraft operations. A broad reading of state authority to regulate aircraft operations directly, or indirectly through ground service equipment limitations, would be inconsistent with federal preemption of airspace management and aircraft operations. Compare, Motor Equipment Manufacturers Association v. EPA, 627 F.2d 1095 (DC Cir. 1979), cert. den., 446 U.S. 952 (1980); Engine Manufacturers Association v. US EPA, 88 F.3d 1075, 1094 (DC Cir. 1996)(Section 209 of the Clean Air Act only preempts state regulation to establish quantitative limits on emissions. States have authority to impose restrictions on use of motor vehicles and non-road engines and vehicles, such as limitations on downtown usage).

To interpret the term standards in Section 233 of the Clean Air Act so narrowly as to authorize states to regulate aircraft operations would set a precedent that could lead to a proliferation of restrictions at other airports to control local air pollution. Such a result would be contrary to the concepts of Federal preemption and the comprehensive and pervasive scheme of Federal oversight of the nation's air transportation system enacted by Congress.

This analysis is limited to clarifying the scope of state authority based upon Section 233 of the Clean Air Act, when read together with federal aviation laws. FAA otherwise expresses no opinion concerning the remainder of the

analysis in the U.S EPA letter dated June 23, 2000. The FAA reserves the right to revise this analysis should the FAA receive additional, relevant information not heretofore available regarding the TNRCC regulation and alternatives for compliance available under that regulation.

ATTACHMENT B

United States
Environmental Protection
Agency

Air and Radiation

EPA420-R-02-023
September 2002

Summary and Analysis of Comments: Control of Emissions from Unregulated Nonroad Engines

NPGA opposed increased use of electric forklifts for many reasons: -increased electricity consumption. -electricity production also involves emissions. -there are substantial inefficiencies in converting energy for electricity into power for forklifts; 27 percent of the fuel energy is available to the end user. -battery disposal is a significant environmental issue. -this would be in conflict with the energy-conservation goals of the National Energy Policy Act. -battery-powered forklifts do not match the performance of engine-powered models. (NPGA 6)
The market has clear reasons to choose either battery- or engine-powered forklifts (cost, battery issues, performance characteristics, maintenance). Banning engine-powered forklifts would cause significant market dislocation. EPA has the authority to regulate engines, not to ban them. (see ITA 27-28)

Our Response:

We do not believe it is necessary or appropriate to require the use of electric forklifts at this time. Applying emission-control technology to internal-combustion engines, as contemplated in this rulemaking, removes most of the air-quality advantage of operating battery-powered forklifts. As other commenters note, there are significant energy, performance, and other issues implicated by such a mandate. Before we would contemplate any electric forklift requirement, we would need to undertake a rigorous analysis of full life-cycle environmental and economic impacts of the two alternative power sources, considering the source of electricity generation for charging batteries and problems associated with battery disposal. In addition, as Clean Air Act section 213 refers to regulation of nonroad engines, which are defined as internal-combustion engines, we would have to review our authority for regulating based on "propulsion systems" before any such regulation could be contemplated.

5. Federal Preemption

What We Proposed:

Although some aircraft utilize engines similar to those described in this proposal, we did not propose emission standards for aircraft or aircraft engines—aircraft are covered under a separate part of the Clean Air Act (sections 231, 232, and 233). Aircraft ground support equipment (GSE), which are classified as nonroad vehicles, are also covered by section 209(e) of the Clean Air Act which prohibits states and political subdivisions from enforcing standards relating to the control of emissions from nonroad engines and nonroad vehicles, though California may receive a waiver of federal preemption for most types of nonroad engines and other states may adopt California standards.

Current EPA regulations define aircraft as needing airworthiness certification from the Federal Aviation Administration (FAA). Our proposed definition of aircraft in these regulations would exclude all aircraft from emission standards, including those aircraft that do not receive an airworthiness certificate from FAA.

What Commenters Said:

The Air Transport Association (ATA) has concerns with statements in the proposed rule regarding the authority of states with respect to aircraft ground support equipment (GSE). ATA believes that these statements appear inconsistent with the Federal Aviation Law's control of aviation and with section 209 of the Clean Air Act which preempts states from regulating emissions from these vehicles.

ATA requests that the final rule acknowledge that section 209(e) of the Act preempts state regulation of existing nonroad vehicle emissions; further, they request that EPA revisit the preamble language in the final rule to ensure that it is consistent with Federal Aviation Law and section 209. The proposed rule states that section 209 preempts states "from setting emission standards for *new* engines or vehicles"; ATA believes that this is potentially misleading with respect to GSE due to the fact that this preemption is for *new and existing* nonroad vehicles. ATA also requests that the final rule describe and clarify the California "opt-in" process for standards. They believe the discussion of the California "opt-in" process is misleading in the proposal and provide clarification that California may regulate emissions only after applying for a waiver of federal preemption from EPA. ATA states that, for section 209, nonroad sources may be regulated as either a "federal" nonroad vehicle subject to federal standards, or a "California" vehicle for which a preemption waiver has been granted and statutory lead-time provisions have been met.

ATA requests that EPA clarify and explain the limited nature of use restrictions under the Act in the final rule. They have concerns with the statement in the proposal that "there is generally no federal preemption of state initiatives related to the way individuals use individual engines or vehicles." They state that this is inaccurate and incomplete in that section 209(e) was specifically revised to preempt State and local retrofit requirements imposed on vehicle "owners or operators regardless of the impact on engine manufacturers." Further, they state that the Act allows states to impose certain traditional restrictions on how a vehicle is used such as transportation control measures. These controls may reduce emissions, but do not generally impinge upon the standard setting authority for mobile source emissions exclusively given to the federal government and California. States are given the authority to regulate stationary sources, or anything that is "local in nature."

Lastly, ATA requests that the final rule acknowledge the limitation on state regulation of GSE under the Federal Aviation Law. ATA also believes that the aforementioned statement in the proposal ignores the preemptive effect of the Federal Aviation Law on potential state and local efforts relating to GSE. Attachment A, a letter from FAA to EPA, states that for aviation there are a "number of statutory and regulatory provisions that generally preempt states from regulating the area of commercial aviation." Further, the Federal Aviation Act's system extends to aircraft-related ground operations and the Airline Deregulation Act provides that a state "may not enact or enforce a law related to...service of an air carrier...", both of which preempt states from regulating GSE.

Our Response:

While we do not believe our discussion of federal preemption in the preamble to the proposed rule was inaccurate, we agree in general with the ATA's comments. States are initially preempted under section 209(e) from promulgating emission standards for new and existing nonroad engines. However, California may under section 209(e)(2) request authorization to promulgate emission standards for any type of nonroad engine, excluding new locomotive engines and engines in new farm or construction equipment which are smaller than 175 horsepower. California may not enforce such regulations until it has received authorization from EPA. As the commenter notes, EPA must make certain particularized determinations regarding a request from California before granting such authorization. Other states may enact emission standards identical to California's and may enforce these standards after California has received its authorization, as long as two years of lead time has been provided.

Regarding use restrictions, EPA agrees that certain regulations of vehicles in use, for example retrofit requirements, would generally be considered emission standards, rather than use restrictions and thus covered by the preemption of section 209(e). However, EPA also notes, and the commenter

acknowledges, that many types of restrictions (idling restrictions, for example) can validly be called use restrictions. As the commenter notes, Congress and the courts have held that such restrictions were inherently local in nature. EPA's regulations contain further discussion on this point. See 40 CFR part 89, Subpart A, Appendix A.

EPA's statement in the proposal that there was no federal preemption of state initiatives regarding the use of nonroad engines was only intended to apply to federal preemption under the Clean Air Act. State regulation of specific types of nonroad engines may be subject to other federal restrictions besides those under section 209 of the Clean Air Act. EPA does not need to make any determinations in this rulemaking regarding whether federal aviation law restricts the ability of states to regulate airport ground service equipment. States and localities should keep the arguments of ATA in mind if they attempt to regulate airport ground service equipment in the future.

ATTACHMENT C

U.S. Department
of Transportation
Federal Aviation
Administration

300 Independence Ave., S.W.
Washington, D.C. 20591

April 24, 2001

Mr. Gerald Fontenot
Acting Administrator
United States Environmental Protection
Agency, Region VI
Dallas, TX 75202-2733

Dear Mr. Fontenot:

This letter is intended to convey the concerns of the Federal Aviation Administration (FAA) regarding the Environmental Protection Agency's (EPA) March 26, 2001, notice of its proposed State Implementation Plan (SIP) approval of the Texas Natural Resource Conservation Commission's (TNRCC) Dallas-Fort Worth Ground Support Equipment Rule (the GSE Rule).[1] 66 Fed. Reg. 16432 (2001). As explained more fully below, FAA believes that EPA's proposed approval: (1) is inconsistent with previous notices regarding the GSE Rule, (2) may potentially damage cooperative efforts undertaken by TNRCC and the regulated community to reduce GSE emissions and achieve attainment, (3) is unnecessary in light of recent litigation developments related to the GSE Rule, and (4) fails to address the issues that were addressed in an FAA letter transmitted last year to EPA headquarters and Region VI, which provided a detailed analysis of the GSE Rule and how it would impinge on aircraft operations in violation of the Federal Aviation Act.

With respect to the approval itself, EPA's March 26 notice appears to be a departure from the views it expressed in its January 18, 2001 proposed approval for the Dallas/Fort Worth Ozone Nonattainment State Implementation Plan. See Approval and Promulgation of Implementation Plans; Texas; the Dallas/Fort Worth Nonattainment Area; Ozone; Proposed Rule, 66 Fed. Reg. 4756 (2001). As EPA indicated in that notice, the legality of the GSE Rule has been challenged in both Federal and state court and the litigation will determine whether EPA can approve the GSE Rule. Accordingly, the January 18 Proposed Approval stated that EPA intended to take no action with respect to the GSE Rule. See 66 Fed. Reg. at 4756-57, 4760.

Additionally, the substance of the March 26 notice appears to be at odds with the comments that EPA provided to TNRCC on an identical GSE measure that had been proposed for the Houston Galveston Nonattainment Area. In those comments, EPA stated that it was not aware of any

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1 "Airport Ground Support Equipment," 30 TAC §§114.400, 114.402, 114.406, 114.409.

California requirement for NOx reduction systems similar to that proposed by TNRCC and, therefore, the rule was preempted by Section 209(e) of the Clean Air Act.[2]

The March 26 Proposed Approval also raises serious concerns with respect to its impact on cooperative efforts between EPA, state environmental officials, the FAA, airport officials, and the aviation industry to address emissions concerns relating to GSE. In this instance, TNRCC, the airlines, and the affected airports have been able to reach agreement on measures to address emissions inventories relating to GSE that will achieve the emissions reductions necessary to demonstrate attainment. These agreements were reached in the context of a settlement of the above-referenced legal challenge to the GSE Rule brought by the Air Transport Association of America, Inc. (ATA), on behalf of its member carriers. As a result of the agreements, equivalent emission reductions have been found, TNRCC has proposed repealing the GSE Rule, and the airlines have agreed to stay and ultimately dismiss their legal challenge in conjunction with TNRCC's action.

In light of these cooperative efforts, EPA's March 26 proposed approval of the DFW GSE Rule now appears unnecessary and potentially counter-productive. Certainly, there appears to be no reason why EPA should seek to SIP-approve a rule that TNRCC is in the process of withdrawing. Indeed, EPA's proposed action risks undermining the settlement reached between TNRCC and the stakeholders and resurrecting the litigation, notwithstanding the fact that it has been resolved by the parties in a matter wholly consistent with both the public interest in emissions reductions and the preservation of the National Aviation System.

FAA is similarly concerned that the proposed action sends a negative message to the broader group of stakeholders who are engaged in a national effort to achieve negotiated GSE emissions reductions in the ongoing initiative that is being pursued under the joint auspices of the FAA and EPA. The ability to conclude a voluntary agreement on GSE emission reductions as part of that process may be jeopardized if the parties believe their willingness to reach constructive compromise may be subsequently disregarded and perhaps even used against them by regulators.

Finally, FAA also has concerns regarding the potential impact of the views that EPA expressed in the proposed approval regarding the GSE Rule. The Federal regulatory regime for aviation is grounded in a number of statutory and regulatory provisions that generally preempt states from regulating the area of commercial aviation. Such statutes include the Federal Aviation Act, the Airline Deregulation Act, the Airport Noise and Capacity Act, and Sections 209(e) and 233 of the Clean Air Act.

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[2] See Letter from Carl E. Edlund, EPA Region VI, to Jeffrey M. Saitas, TNRCC, at 26 (Sept. 25, 2000) ("*Engine Manufacturers Association of America v. EPA*, 88 F.3d 1075 (D.C. Cir. 1996) held that State regulation of non-road engines is preempted by the CAA unless it is a use restriction. Requirements to install NOx reduction systems do not qualify as use restrictions, therefore, this rule is preempted for non-road engines, unless it is identical to a California rule as provided in Section 209(e)(2) of the Clean Air Act. We are not aware of any California requirement for NOx reduction systems similar to that proposed by Texas, so we believe this rule is preempted for controls on non-road engines.").

In a letter transmitted last year to EPA's headquarters and Region VI, FAA provided a detailed analysis of the GSE Rule and how it would impinge on aircraft operations in violation of the Federal Aviation Act. That letter also expressed the view that the GSE Rule potentially violated other aspects of Federal aviation law. See Letter from Paul Dykeman, Deputy Director, FAA's Office of Environment and Energy, to Donald Zinger, Assistant Director for Transportation and Air Quality, U.S. EPA, and Ben Harrison, Region VI Office of Regional Counsel (August 24, 2000) (FAA Letter). EPA's March 26 Proposed Approval of the GSE Rule does not, however, address any of the issues raised in the FAA Letter. Nor was FAA's input sought before the publication of the proposed approval in the Federal Register.

Although this apparent oversight may have a diminished impact because of the GSE Rule's pending withdrawal, the proposed approval's approach to GSE preemption issues suggests a potentially problematic precedent for future actions by EPA with respect to state efforts to regulate emissions from aviation sources. In the proposed approval, EPA appears to take the position that a unilaterally imposed state-GSE rule need only avoid the preemption provision set forth in Section 209(e) of the Clean Air Act. Without expressing any opinion on the validity of state GSE rules under Section 209(e), FAA strongly believes that potential preemption under Federal aviation law must be considered as well when evaluating the legality of state environmental rules relating to commercial aviation.

In conclusion, FAA has serious concerns regarding both the necessity of the March 26 Proposed Approval of the GSE Rule and EPA's views regarding the role of states in regulating the area of commercial aviation. Accordingly, we recommend that the notice be withdrawn or amended.

I or members of my staff are most willing to meet with you to discuss this issue, if you so desire.

Sincerely,

for Carl E. Burleson
Director of Environment and Energy

cc: Mr. Jeffrey M. Saitas, TNRCC
Mr. Donald Zinger, USEPA

ATTACHMENT D

MEMORANDUM

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To: Betty Hawkins, Esq., Air Transport Association of America, Inc.

From: Ev Ashworth and Lara Gertler, Ph.D., ALG

Re: GSE Median Life

Date: June 3, 2005

This memorandum documents the method by which median useful life has been estimated for the ATA GSE fleets. As you are aware, ATA has inventoried GSE in California, providing data on the model year of the equipment. From these data, we can calculate the average age of a given GSE fleet. However, this information does not tell us directly what the useful life of an engine is expected to be. In the course of negotiations for the South Coast GSE Memorandum of Understanding (MOU), the ARB and ATA agreed upon the following method of estimating median useful life.

First, the "median life" represents the life expectancy of a piece of GSE. Specifically, it is the age at which 50% of a given GSE category or population have been scrapped and 50% are still in operation. The ARB OFFROAD Model was developed by ARB to estimate emissions from off-road equipment, and it estimates turnover and median useful life of off-road equipment in the state for use in these emissions calculations. The ARB OFFROAD Model documentation contains a table of age distribution vs. median life for a static (i.e., constant-number) population[*]. From this table, the population-weighted average age was calculated for each of the median life values (1-16 years) considered in the OFFROAD Model. The ratio of the median life to the average age in the ARB OFFROAD Model is approximately 1.75 for all median life values. That is, the median life is considered to be 1.75 times the average age of a population. ARB agreed that the distribution curves in the ARB OFFROAD Model are applicable to the ATA GSE population; therefore the same 1.75 ratio should be applied to the average age of a GSE fleet as determined by inventory to yield an estimate of median useful life.

For example, an analysis of the California statewide LSI GSE fleet as inventoried in 2003 for the South Coast and 2004 outside the South Coast, shows an average age (at the time inventoried) of 11.3 years. The median useful life of the fleet would then be estimated at (11.3 *years*) x 1.75 = 19.7 *years*.

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[*] *Documentation of Input Factors for the New Off-road Mobile Source Emissions Inventory Model*, February 1997, Table 3-2

Note that this estimate is likely to be a conservatively low estimate of median life of the LSI GSE fleet. This is because the ARB OFFROAD Model ratio of 1.75 assumes a static population. This ratio would be higher for a growing population, in which there would be a greater fraction of newer units, and lower for a population which shrinks by natural attrition.

It should be noted that median life and expected turnover vary by equipment type (e.g., baggage tractor, belt loader, ground power unit, etc.), fuel type, and annual hours of use. Because of variations in operational practices, median life also varies among ATA members.

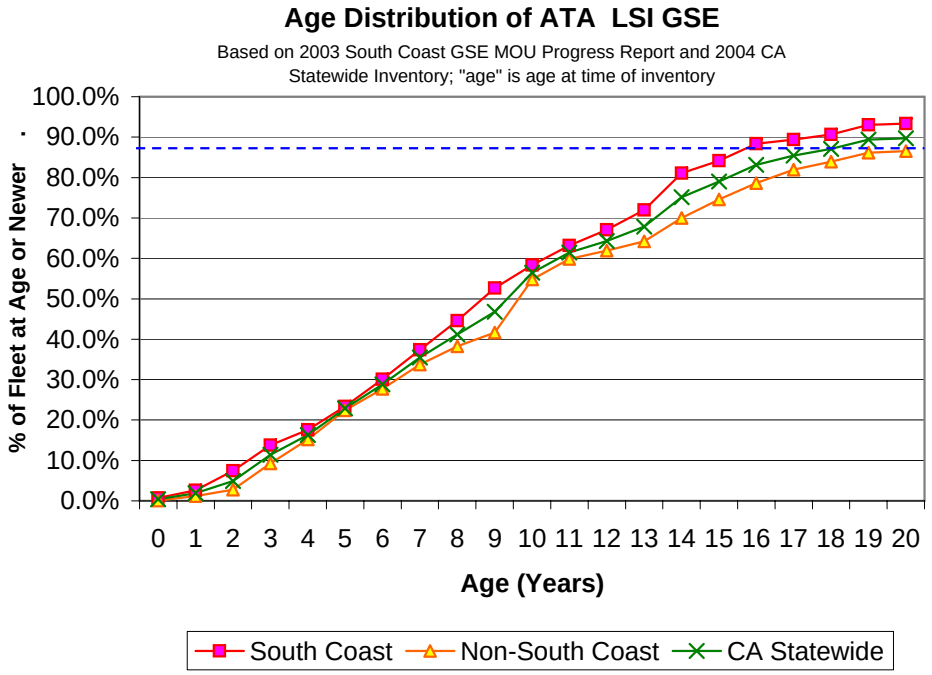
The attached tables and chart show the calculation of average age for the statewide California LSI GSE fleet (as inventoried in 2003 for the South Coast and in 2004 outside the South Coast), as well as the average age of the South Coast fleet as inventoried in 1997. Estimated median life of each of these fleets, calculated using the method described above, is included just below the average age; the values are in the 18-21 year range. In addition, the chart shows the age distributions of the statewide, South Coast, and non-South Coast California LSI GSE fleets from these 2003 and 2004 inventories.

LSI GSE Average Age Calculations

	South Coast[1]		Non-South Coast[2]		CA Statewide[3]		1997 South Coast[4]	
	Fleet Size	Ave. Age	Fleet Size	Ave. Age	Fleet Size	Ave. Age	Fleet Size	Ave. Age
Aircraft Tractor	12	24.9	10	14.8	22	20.3	24	19.8
Baggage Tractor	154	11.1	190	15.4	344	13.4	291	12.7
Belt Loader	134	10.5	189	11.6	323	11.1	176	9.4
Cargo Loader	23	13.3	9	14.2	32	13.5	33	12.3
Cargo Tractor	324	9.4	266	10.0	590	9.7	278	6.7
Cart	-	0.0	3	11.7	3	11.7	1	9.0
Deicer	3	13.7	12	17.8	15	16.9	4	18.8
Fork Lift	163	9.0	156	10.0	319	9.5	139	11.7
Generator	1	30.0	-	0.0	1	30.0	2	24.0
Lift	60	12.4	118	13.3	178	13.0	79	13.4
Other	-	0.0	37	14.4	37	14.4	73	12.7
Sweeper	3	7.3	14	11.3	17	10.6	4	10.3
All	877	10.4	1,004	12.1	1,881	11.3	1,104	10.8
Est. Median Life		18.1		21.1		19.7		18.8

Age Distribution of GSE Fleet

Years Old (or newer)	South Coast[1]	Non-South Coast[2]	CA Statewide[3]
0	0.7%	0.1%	0.4%
1	2.6%	1.2%	1.9%
2	7.4%	2.8%	4.9%
3	13.8%	9.3%	11.4%
4	17.6%	15.2%	16.3%
5	23.4%	22.4%	22.9%
6	30.1%	27.7%	28.8%
7	37.4%	33.8%	35.5%
8	44.6%	38.2%	41.2%
9	52.7%	41.6%	46.8%
10	58.4%	54.8%	56.5%
11	63.2%	59.9%	61.4%
12	67.0%	62.0%	64.3%
13	71.9%	64.2%	67.8%
14	81.1%	70.0%	75.2%
15	84.2%	74.6%	79.1%
16	88.4%	78.6%	83.1%
17	89.4%	82.0%	85.4%
18	90.6%	84.0%	87.1%
19	93.0%	86.2%	89.4%
20	93.4%	86.6%	89.7%



[1] Based on 2003 ATA survey of GSE subject to the South Coast MOU

[2] Based on 2004 ATA survey of GSE within California, but not subject to the South Coast MOU

[3] Aggregate of South Coast and non-South Coast fleets

[4] Based on 1997 GSE MOU inventory, which was used to craft the South Coast MOU