

CASE NOT YET SCHEDULED FOR ORAL ARGUMENT

CASE NO. 11-1483
Consolidated with Case No. 15-1027

**UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT**

INDEPENDENT PILOTS ASSOCIATION,
Petitioner,

v.

FEDERAL AVIATION ADMINISTRATION,
Respondent.

FINAL BRIEF OF PETITIONER INDEPENDENT PILOTS ASSOCIATION

Review of FAA Rule, Flightcrew Member Duty and Rest Requirements,
Docket No. FAA-2009-1093; Amdt. Nos. 117-1, 119-16, 121-357 issued on
December 21, 2011.

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**CERTIFICATE OF PARTIES, RULINGS UNDER REVIEW,
AND RELATED CASES**

Pursuant to Circuit Rule 28(a)(1), Petitioner certifies as follows:

1. Parties and Amici: The Petitioner is the Independent Pilots Association. The Respondent is the Federal Aviation Administration. The Cargo Airline Association has intervened. A number of entities filed comment letters and otherwise participated in the agency proceedings below, but none have challenged the Final Rule.
2. Rulings Under Review: The ruling under review is Flightcrew Member Duty and Rest Requirements, amending 14 C.F.R. Parts 117, 119 and 121, issued on December 21, 2011, and published in the Federal Register on January 4, 2012, 77 Fed. Reg.330 (Jan 4, 2012). A Supplemental Final Regulatory Analysis was issued on December 9, 2014, at which time the FAA also announced that it was not amending the Final Rule.
3. Related Cases: This case has not previously been before this Court or any other court.

/S/

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**STATEMENT REGARDING ADDENDUM OF STATUTES AND
REGULATIONS**

Pursuant to Circuit Rule 28(a)(5), copies of the following pertinent statutes and regulations, and a copy of the FAA’s decisions under review, are set forth in the attached Addendum:

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GLOSSARY OF ABBREVIATIONS

APA	Administrative Procedure Act, 5 U.S.C. § 702 <i>et seq.</i>
A4A	Airlines for America
ALPA	Air Line Pilots Association
ARC	Flight and Duty Time Limitations and Rest Requirements Aviation Rulemaking Committee
EO12866 Compliance	FAA Compliance with EO12866 for Final Rule, FAA Dckt. No. 2009-1093-2518 (Jan. 23, 2012)
EPA	Environmental Protection Agency
ETOPS	Extended-range Twin-engine Operational Performance Standards
FAA	Federal Aviation Administration
FDP	Flight Duty Period
FedEx	Federal Express
Final RIA	Federal Aviation Administration Regulatory Impact Analysis for Flightcrew Member Duty and Rest Requirements Final Rule, FAA Dckt. No. FAA-2009-1093-2477 (Nov. 18, 2011)
Final Rule	Flightcrew Member Duty and Rest Requirements, Final Rule, 77 Fed. Reg. 330, FAA Dckt. No. FAA-2009-1093-2517 (Jan. 4, 2012)
FMCSA	Federal Motor Carrier Safety Administration
IPA	Independent Pilots Association
NHTSA	National Highway Traffic Safety Administration
NPRM	Flightcrew Member Duty and Rest Requirements,

Proposed Rule, 75 Fed. Reg. 55852,
FAA Dckt. No. FAA-2009-1093-0001 (Sept. 14, 2010)

NPRM RIA Federal Aviation Administration Regulatory Impact
Analysis for Flightcrew Member Duty and Rest Requirements
Notice of Proposed Rulemaking,
FAA Dckt. No. FAA-2009-1093-0019 (Sept. 3, 2010)

NTSB National Transportation Safety Board

OIRA Office of Information and Regulatory Affairs,
Office of Management and Budget

Safety Act Airline Safety and Federal Aviation Administration
Extension Act of 2010, Public Law 11-216,
§ 212, 124 Stat. 2348, 2362 (2010)

UPS United Parcel Service

WOCL Window of Circadian Low

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December 21, 2011.

JURISDICTIONAL STATEMENT

The Independent Pilots Association (“IPA”) challenges the Federal Aviation Administration’s (“FAA”) decision to *exclude* all-cargo operations from its December 21, 2011 rule governing flightcrew member duty and rest requirements for air carrier operations. IPA timely filed its Petition for Review on December 22, 2011, pursuant to 49 U.S.C. § 46110(a) (Addendum of Statutes and Regulations (“Addendum”) 1). Following a voluntary remand, the FAA issued a Final

Supplemental Regulatory Impact Analysis on December 9, 2014. IPA timely filed a protective Petition for Review of that action, and the two cases were consolidated on February 11, 2015. This court has jurisdiction pursuant to 49 U.S.C. § 46110(c) (Addendum 1), and the Administrative Procedure Act, 5 U.S.C. § 702 *et seq.* (“APA”) (Addendum 3-4).

STATEMENT OF ISSUES

1. Did the FAA exceed its authority or otherwise violate the APA by leaving all-cargo operations subject to flightcrew member duty and rest rules deemed inadequate by Congress and the FAA based only on a cost-benefit analysis that Congress did not authorize the FAA to employ?

2. Did the FAA violate the APA or otherwise exceed its authority by relying solely on a cost-benefit analysis that failed to account for safety and understated the benefits of applying the Final Rule to all-cargo operations?

STATEMENT OF THE CASE

The FAA has long considered changing the flight, duty and rest time rules for flightcrew members operating passenger and cargo aircraft to better reflect modern scientific and medical understanding of how fatigue impairs performance and safety. Flightcrew Member Duty and Rest Requirements, 75 Fed. Reg. 55852, 55853–54 (Sept. 14, 2010) (FAA Dckt. No. FAA-2009-1093-0001) (“NPRM”) (Joint Appendix (“J.A.”) 558-59). Frustrated by the FAA’s inability to make such

changes, and concerned by aircraft accidents where fatigue was a causal element, Congress adopted legislation in 2010 directing the FAA to issue “regulations, based on the best available scientific information, to specify limitations on the hours of flight and duty time allowed for pilots to address problems relating to pilot fatigue.” Airline Safety and Federal Aviation Administration Extension Act of 2010, Pub. L. No. 111-216, § 212(a)(1), 124 Stat. 2348, 2362 (2010) (“Safety Act”) (Addendum 5-26).

On September 14, 2010, the FAA issued the NPRM for new flightcrew member duty and rest rules. The FAA specifically rejected the idea that all-cargo operations should be treated differently than other operations based on their different business models and operational issues because “fatigue factors . . . are universal” regardless of whether the pilot is flying a cargo or passenger plane. NPRM at 55857, 55863 (J.A. 562, 568). Indeed, the FAA had never adopted different flightcrew member duty and rest rules for cargo and passenger pilots.

On December 21, 2011, the FAA issued a final rule establishing new flightcrew member duty and rest rules for passenger and certain other operations, but keeping the existing rules in place for all-cargo operations. Flightcrew Member Duty and Rest Requirements, Final Rule, 77 Fed. Reg. 330 (Jan. 4, 2012) (FAA Dckt. No. FAA-2009-1093-2517) (“Final Rule”) (J.A. 1). The only support the FAA provided for its decision was a cost-benefit analysis purportedly showing

that the costs to all-cargo operators of complying with the new rules far outweighed the societal benefit.

IPA timely filed a Petition for Review challenging the FAA's decision to exclude cargo from the Final Rule. After IPA filed its Opening Brief, the FAA voluntarily remanded the case in order correct errors in the Regulatory Impact Analysis. The FAA prepared a Draft Supplemental Regulatory Impact Analysis, solicited comments on it, and, on December 9, 2014, issued a Final Supplemental Regulatory Impact Analysis which reaffirmed the FAA's decision to exclude all-cargo operations from the Final Rule based solely on the results of a cost-benefit analysis.

STATEMENT OF THE FACTS AND STATUTORY FRAMEWORK

A. Statutory Framework

Congress has charged the FAA with making safety in aviation its highest priority: The FAA

shall consider the following matters, among others, as being in the public interest:

- (1) Assigning, maintaining and enhancing safety and security as the highest priorities in air commerce.
- (2) Regulating air commerce in a way that best promotes safety and fulfills national defense requirements.

49 U.S.C. § 40101(d) (Addendum 28). As part of its safety duties, Congress has mandated that the FAA regulate maximum hours of duty for aircraft crewmembers:

(a) Promoting Safety.—The Administrator of the Federal Aviation Administration shall promote safe flight of civil aircraft in air commerce by prescribing—

...

(4) regulations in the interest of safety for the maximum hours or periods of service of airmen and other employees of air carriers

49 U.S.C. § 44701 (Addendum 29-37). *See* NPRM at 55881 (J.A. 586) (citing 49

U.S.C. §§ 44701(a)(4) and 40101(d) (Addendum 28).

Congress specifically directed the FAA to address the problem of pilot fatigue in Section 212 of the Safety Act (Addendum 20-23):

(a) FLIGHT AND DUTY TIME REGULATIONS.—

(1) IN GENERAL.—In accordance with paragraph (3), the Administrator of the Federal Aviation Administration shall issue regulations, *based on the best available scientific information*, to specify limitations on the hours of flight and duty time allowed for pilots *to address problems relating to pilot fatigue*.

(2) MATTERS TO BE ADDRESSED.—In conducting the rulemaking proceeding under this subsection, the Administrator shall consider and review the following:

(A) Time of day of flights in a duty period.

(B) Number of takeoff and landings in a duty period.

(C) Number of time zones crossed in a duty period.

(D) The impact of functioning in multiple time zones on different daily schedules.

(E) Research conducted on fatigue, sleep, and circadian rhythms.

(F) Sleep and rest requirements recommended by the National Transportation Safety Board and the National Aeronautics and Space Administration.

(G) International standards regarding flight schedules and duty periods.

(H) Alternative procedures to facilitate alertness in the cockpit.

- (I) Scheduling and attendance policies and practices, including sick leave.
- (J) The effects of commuting, the means of commuting, and the length of the commute.
- (K) Medical screening and treatment.
- (L) Rest environments.
- (M) Any other matters the Administrator considers appropriate. (emphasis added.)

Congress made its intent clear that “[a]n updated rule will more adequately reflect the operating environment of today’s pilots and will reflect scientific research on fatigue.” Airline Safety and Pilot Training Improvement Act of 2009, H.R. REP. NO. 11-284, at 7 (discussing bill that became Section 212 of the Safety Act) (Addendum 20-23).

B. Historic Flight Time and Duty Rules

The prior flight time and duty rules, which continue to apply to all-cargo operators, did not distinguish between cargo and passenger operations but did provide different rules for domestic, flag and supplemental air carriers. NPRM at 55852 (J.A. 557).¹ In general, the rules provide for maximum flight times on an annual, monthly, weekly and daily basis, as well for minimum rest periods between flights. 14 C.F.R. § 121.470–.525 (Addendum 49-55). The amount of flight and

¹ Domestic operators are scheduled air carriers operating within the lower 48 states or within Alaska or Hawaii. 14 C.F.R. § 110.2 (Addendum 56-59). Flag carriers are scheduled air carriers operating between any state and foreign countries (and U.S. territories) or between any state and Alaska or Hawaii. *Id.* Supplemental carriers are all other commercial air carriers, including charter operations. *Id.* All-cargo operations are included in each category.

rest time for flag and supplemental carriers varies depending on the size of the crew and other factors. *Id.* As the FAA has acknowledged, those rules are “overly complicated” and fail to adequately address the risk of fatigue. NPRM at 55855 (J.A. 560); Final Rule at 334 (J.A. 6).

C. Prior Efforts to Amend Flight Time and Duty Rules

The FAA and the NTSB have long recognized that pilot fatigue is a serious safety problem and that existing regulations do not adequately address the problem. The NTSB has recommended that the FAA adopt new rules to address the problem of pilot fatigue since 1972, and addressing pilot fatigue was on NTSB’s list of Most Wanted Transportation Safety Improvements for many years. NPRM at 55855 (J.A. 560).

The FAA has been considering new flight time and duty regulations for at least 20 years, based in part on the recognition that the science on fatigue did not justify different rules for different kinds of operations because fatigue affects all people in the same way. NPRM at 55853 (J.A. 558). The current rulemaking effort began in June 2009, when the FAA created the Flight and Duty Time Limitations and Rest Requirements Aviation Rulemaking Committee (“ARC”), comprised of labor, industry and the FAA representatives, to, *inter alia*, consider and address a single approach for addressing fatigue in light of scientific research. *Id.* ARC was unable to reach consensus on a single approach for new rules,

however, and the FAA did not adopt ARC's recommendations, or the industry alternatives. *Id.*

D. Congressional Mandate to Amend Flightcrew Member Duty and Rest Rules Based on the Best Available Scientific Information

Motivated by the 2009 Colgan crash that killed 50 people in which fatigue was cited as a contributing factor, and the FAA's inability to achieve a consensus on new anti-fatigue flight time and duty rules, Congress passed the Safety Act which included a provision requiring the FAA to adopt new flight crewmember duty and rest rules based on modern scientific knowledge about fatigue. H.R. REP. NO. 11-284 at 7 (Addendum 40). The Safety Act required the FAA to issue an NPRM within 6 months and to issue a rule within one year of enactment. Safety Act at § 212(a)(3) (Addendum 21).

E. The September 14, 2010 Notice of Proposed Rulemaking

The NPRM acknowledges the inadequacies of the existing flight time and duty rules:

The FAA believes its current regulations do not adequately address the risk of fatigue As the NTSB repeatedly notes, the FAA's regulations do not account for the impact of circadian rhythms on alertness, and the entire set of regulations is overly complicated, with a different set of regulations for domestic operations, flag operations, and supplemental operations.

NPRM at 55855 (emphasis added) (J.A. 560). Adhering to the Congressional directives to make safety its highest priority, the FAA stated that its proposal:

takes a new approach whereby the distinctions between domestic, flag, and supplemental operations are eliminated. Rather, all types of operations would take into account the effects of circadian rhythms, inadequate rest opportunities and cumulative fatigue.

Id. at 55854 (J.A. 559). The FAA’s proposal “addresses the impact of changing time zones and flying through the night by reducing the amount of flight time and FDP [flight duty period] available for these operations.” *Id.*

Relying on the best scientific information, as required by the Safety Act, the FAA determined that “there is ample science indicating that performance degrades during windows of circadian low [2 A.M.–6 A.M. or “WOCL”] and that regular sleep is necessary to sustain performance,” *id.* at 55858 (J.A. 563), and the “reduction in maximum FDP during nighttime hours is broadly supported by existing sleep science.” *Id.* at 55860 (J.A. 565). *See also id.* at 55855 (“Several aviation-specific work schedule factors can affect sleep and subsequent alertness includ[ing] early start times, extended work periods, insufficient time off between work periods, . . . night work through one’s window of circadian low, daytime sleep periods”) (J.A. 563) (footnote omitted); *id.* at 55867 & n.34 (consecutive nights of work degrades productivity within three days because it is very difficult for most people to sleep effectively during the day) (J.A. 572); *id.* at 55872 & nn.44–49 (“The most effective fatigue mitigation is sleep . . . daytime

sleep is less restorative than nighttime sleep [A]n individual's circadian clock is sensitive to rapid time zone changes.”) (J.A. 577).

The NPRM addressed these and other fatigue issues by placing weekly and 28-day limits on flightcrew member duty time, and 28-day and annual limits on flight time, and by requiring that flightcrew members be given 30 consecutive hours each week free of all duty, “a 25 percent increase over the current requirements.” *Id.* at 55874 (J.A. 579). The proposal provided credit (through extended FDP) for carriers that augment crews above the required complement and provide them with on-board rest facilities, so they can sleep in shifts.

The FAA determined that scientific evidence demonstrated that split sleep during a circadian night can be better than longer sleep periods during the day, with the most productive sleep occurring during the WOCL. *Id.* at 55866, 55885 (J.A. 571, 590). The NPRM endorsed the concept of “split duty rest,” by allowing carriers to extend the FDPs for their flightcrew members by 50 percent of the duration of the rest period, to a maximum FDP of 12 hours, if they provided at least four hours of sleep opportunity to crewmembers. *Id.* at 55866 (J.A. 571).

The FAA also proposed to allow a carrier to assign a flightcrew member to more than three consecutive nighttime FDPs if it provided the flightcrew member with an opportunity for rest during each nighttime FDP that complied with the split duty rest provision, *i.e.*, four hours of mid-duty rest. *Id.* at 55867, 55888 (J.A. 572,

593). This was of particular importance for all-cargo operations because major overnight package delivery services provide sleep facilities for their flightcrew members at their primary sortation hubs so crewmembers can rest in between their inbound and outbound flights.

The NPRM also provided for limited exceptions and extensions of FDP for unexpected circumstances, emergencies and operations under government contract. *Id.* Finally, the NPRM allowed carriers to develop “a carrier-specific fatigue risk management system (FRMS),” which would allow a carrier to “customize its operations based on a scientifically validated demonstration of fatigue mitigating approaches and their impact on a flightcrew member’s ability to safely fly an airplane” outside of the limitations contained in the rules. *Id.* at 55854, 55874, 55886 (J.A. 559, 579, 591).

F. The December 21, 2011 Final Rule

On December 21, 2011, FAA issued the Final Rule, which reconfirmed that existing rules do not adequately address fatigue, do not account for circadian rhythms, are overly complicated, and that “maintaining the status quo . . . subjects society to an ‘unacceptably high aviation accident risk.’” Final Rule at 334, 391 (J.A. 6, 63) (quoting NPRM at 55882 (J.A. 587)). The FAA further reaffirmed “the universality of factors that lead to fatigue in most individuals” and that

“[f]atigue threatens aviation safety because it increases the risk of pilot error that could lead to an accident.” *Id.* at 395 (J.A. 67).

FAA observed that “fatigue is most likely, and, when present, most severe, between the hours of 2 A.M. and 6 A.M.,” also known as the “Window of Circadian Low.” *Id.* at 333, 348 (J.A. 5, 20). The FAA also listed several “aviation-specific work schedule factors” that “can affect sleep and subsequent alertness,” including “night work through one’s window of circadian low, daytime sleep periods, and day-to-night or night-to-day transitions.” *Id.* at 333–34 (J.A. 5–6). It noted that “according to the industry commenters . . . these types of nighttime and around-the-world operations are the norm for all-cargo carriers.” *Id.* at 336 (J.A. 8).

Despite these considerations, the FAA stated that it “has removed all-cargo operations from the applicability section of the new Part 117 because their compliance costs significantly exceed the quantified societal benefits.” *Id.* at 332 (J.A. 4). The FAA offered no explanation for the exclusion based on fatigue science or aviation safety.² This cost-benefit analysis was disclosed for the first

² The FAA stated that “in the past, it has excluded all-cargo operations from certain mandatory requirements due to the different cost-benefit comparison that applies to all-cargo operations,” citing a single example of excluding aircraft with more than two engines from “many of the requirements of the extended range operations (ETOPS) rule” EO12866 Compliance at 31 (J.A. 2204). *See also* Final Rule at 336 (J.A. 8).

time in the Final Rule, and the Regulatory Impact Analysis was placed in the public docket one day *after* the Final Rule was issued. FAA Regulatory Impact Analysis for Flightcrew Member Duty and Rest Requirements Final Rule (Nov. 18, 2011) (FAA Dckt. No. FAA-2009-1093-2477) (“Final RIA”) (J.A. 2076).

G. IPA’s Petition for Review and the FAA’s Voluntary Remand

IPA timely filed a Petition for Review challenging the FAA’s decision to exclude all-cargo operations from the Final Rule. Shortly after IPA filed its Opening Brief, the FAA filed a motion to voluntarily remand the matter noting that it had discovered certain “mistakes” in its Regulatory Impact Analysis. The Court granted the motion and required the FAA to submit periodic reports on the status of the remand. On October 4, 2012, the FAA issued a draft Supplemental Regulatory Impact Analysis (“SRIA”) presenting a much more detailed cost-benefit analysis regarding all-cargo operations than presented in the original regulatory impact analysis. IPA and others submitted extensive comments on the draft. IPA’s comments pointed out numerous flaws in the analysis which, if corrected, would have justified a determination that the benefits of including all-cargo operations in the Final Rule outweighed the costs. IPA also showed that under the terms of Section 212 of the Safety Act, the FAA was precluded as a matter of law from basing its decision on the results of a cost-benefit analysis and

disregarding the scientific information showing that all-cargo operations were particularly subject to fatigue.

H. The Final Supplemental Regulatory Impact Analysis

On December 9, 2014, the FAA published the Final Supplemental Regulatory Impact Analysis (“FSRIA”). Although the FAA accepted a number of changes suggested by IPA, it also accepted changes suggested by industry groups and concluded that the costs of including all-cargo operators in the Final Rule exceeded the benefits. Accordingly, the FAA decided to stand on its earlier decision to exclude all-cargo operations from the Final Rule, leaving all-cargo operations subject to the old Part 121 rules.

On February 5, 2015, IPA filed a protective Petition for Review challenging the FAA’s December 9, 2014 decision and simultaneously moved to consolidate that new case, No. 15-1027, with the earlier case. The Court granted that motion and entered a stipulated briefing schedule.

SUMMARY OF ARGUMENT

IPA challenges FAA’s decision to exclude all-cargo operations from the new flightcrew member duty and rest rules, codified at 14 C.F.R. Part 117; IPA does not challenge the substance of the Final Rule as applied to passenger operations. IPA seeks a remand to the FAA to apply the new Part 117 rules to all-cargo

operations in accordance with Congress's express direction and the APA. A remand to the agency is justified for two reasons.

1. By excluding all-cargo operations from Part 117 and leaving them subject to the old Part 121 rules that FAA admits do not adequately address the problems of pilot fatigue and leave the public exposed to an unacceptable safety risk, the FAA disregarded its congressionally mandated duties to make safety its highest priority and to issue new flight and duty rules based on the best available scientific information to address the problems of pilot fatigue. Because Congress did not authorize the FAA to dilute its safety obligations with considerations of cost when issuing the new flight time and duty rules, the FAA's reliance on a cost-benefit analysis to exclude all-cargo operations from the Final Rule was impermissible.

2. Even if the FAA was authorized to base its decision on a cost-benefit analysis, the cost-benefit analysis the FAA relied upon does not support the all-cargo exclusion because it (1) failed to accurately assess the benefits of applying the new rules to all-cargo operations, and (2) failed to include other obvious public benefits of applying the new rules to all-cargo operations.

STANDING

Pursuant to Circuit Rule 28(a)(7), IPA has standing to bring this action on behalf of itself and its members because flightcrew member duty and rest rules

directly affect the health, safety and daily working conditions of IPA's members and affect the collective bargaining IPA undertakes for its members. IPA participated in the rulemaking proceeding below by submitting comments on the NPRM and participating in the ARC. Independent Pilots Association Comments on Flightcrew Member Duty and Rest Requirements (Nov. 15, 2010) (FAA Dckt. No. FAA-2009-1093-1893) (J.A. 1419); NPRM at 55853 (J.A. 558). IPA and its members are thus persons affected by the Final Rule within the meaning of 49 U.S.C. § 46110 (Addendum 1-2).

In order to establish standing, a petitioner “must show that ‘(1) it has suffered an ‘injury in fact’ that is (a) concrete and particularized and (b) actual or imminent, not conjectural or hypothetical; (2) the injury is fairly traceable to the challenged action of the defendant; and (3) it is likely, as opposed to merely speculative, that the injury will be redressed by a favorable decision.’” *Friends of the Earth, Inc. v. Laidlaw Envtl. Servs., Inc.*, 528 U.S. 167, 180–181 (2000) (citation omitted). An organization “has standing to bring suit on behalf of its members when its members would otherwise have standing to sue in their own right, the interests at stake are germane to the organization’s purpose, and neither the claim asserted nor the relief requested requires the participation of individual members in the lawsuit.” *Id.* at 181. A Union can assert standing on behalf of itself as an institution or on behalf of its members. *Nat’l Treasury Emps. Union v.*

Chertoff, 452 F.3d 839, 853 (D.C. Cir. 2006). *See also Cronin v. FAA*, 73 F.3d 1126, 1130 (D.C. Cir. 1996) (union had representational standing to challenge rule when its members were in the regulated class). As the collective bargaining unit representing the more than 2,500 professional pilots who fly in service of UPS, IPA has standing to challenge the Final Rule on behalf of its members. Addressing working conditions that affect the health and safety of its members is at the very core of IPA's mission.

The Final Rule has imposed a constitutionally cognizable injury on IPA's members in at least two ways. First, as the FAA, Congress, and the NTSB recognize, fatigue represents a serious safety problem for aviation pilots and crews. Although the FAA understated the benefits of the Final Rule, it recognized that avoiding the fatality of all-cargo crewmembers was a benefit. Final Rule at 332 n.1 (J.A. 4). Moreover, the FAA acknowledged that fatigue has negative long-term health effects on pilots, *id.* at 392 (J.A. 64), and that "chronic fatigue can cause illness and even death." Final RIA at 7 (J.A. 2084) (footnote omitted). Failing to address those serious health and safety problems, and leaving IPA's members exposed to an existing rule that even the FAA admits does "not adequately address the risk of fatigue," NPRM at 55855 (J.A. 2084), is a sufficient injury to confer standing.

Because the decision to omit all-cargo operations was contained in the Final Rule, the injury is fairly traceable to the rulemaking IPA challenges here. Finally, a remand to revise the Final Rule in accordance with the APA and the Safety Act would redress the injuries by requiring the FAA to issue a rule that adequately addresses the health and safety risks left unaddressed by the Final Rule. *See, e.g., Advocates for Highway & Auto Safety v. Fed. Motor Carrier Safety Admin.*, 429 F.3d 1136 (D.C. Cir. 2005) (associations representing interests of commercial motor vehicle drivers successfully challenged hours of service rules for truck drivers because rules failed to address problems of fatigue; no discussion or challenge regarding standing).

In addition to associational standing, IPA is directly injured by the Final Rule because the Final Rule relates directly to work rules that are the subject of collective bargaining. Final Rule at 394 n.101 (“flight and duty limitations are unique because they address both safety considerations, which are regulatory in nature, and lifestyle considerations, which are properly addressed in collective bargaining agreements.”) (J.A. 66). UPS has confirmed that it does not intend to comply voluntarily with the Final Rule. *See* Letter from Ray LaHood, The Secretary of Transp., to Captain Robert W. Travis, President, IPA (April 10, 2012) (Addendum 68-70). The Final Rule, accordingly, relates directly to matters of collective bargaining for IPA and its members and materially affects the scope and

balance of power in IPA's collective bargaining with UPS. *See, e.g., Nat'l Treasury Emps. Union*, 452 F.3d at 853–54 (Union had standing to challenge rule that materially affected scope of collective bargaining).

ARGUMENT

The FAA's decision to exclude all-cargo operators from Part 117 represents a significant departure from more than seven decades of agency practice. Historically, flightcrew member duty and rest rules did not distinguish between cargo and passenger operations, but rather differed based on whether the operator was considered a domestic, flag, or supplemental air carrier, apparently on the assumption that length of flight related to fatigue. *Supra* 6-7. Similarly, in other safety regulations focusing on pilot conduct and health, the FAA has not distinguished between cargo and passenger pilots. *See* 14 C.F.R. Part 120 (drug and alcohol use and testing); 14 C.F.R. § 61.151-.199 (license requirements for all Airline Transport Pilots); 14 C.F.R. Part 67 (health and vision requirements for pilots). The underlying rationale for similar treatment of cargo and passenger pilots is obvious: pilots are humans and all humans are subject to the same medical and health issues in the same basic ways.

The FAA recognized that irrefutable principle when it began this rulemaking process, but abandoned it when it excluded all-cargo operators from the new Part 117 flightcrew member duty and rest rules, leaving all-cargo pilots subject to the

inadequate Part 121 rules. The FAA attempts to justify this departure from historic practice and medical common sense by relying *solely* on a cost-benefit analysis purporting to show that the costs to all-cargo operators of complying with Part 117 exceed societal benefits. As detailed below, that rationale must be rejected because (1) Congress foreclosed any consideration of costs by commanding the FAA to issue new regulations based on the best available scientific information in order to address the problems of pilot fatigue, and (2) the FAA’s cost-benefit analysis is arbitrary and capricious and cannot support the FAA’s decision.

I. STANDARD OF REVIEW

Pursuant to the APA a “rule must be set aside if it is ‘arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law’ [], or if it was promulgated ‘without observance of procedure required by law.’” *Owner-Operator Indep. Drivers Ass’n v. Fed. Motor Carrier Safety Admin.*, 494 F.3d 188, 198 (D.C. Cir. 2007) (quoting 5 U.S.C. § 706(2)(A) & (D)).

An agency’s rule will be found arbitrary and capricious “if the agency has relied on factors which Congress has not intended it to consider, entirely failed to consider an important aspect of the problem, offered an explanation for its decision that runs counter to the evidence before the agency, or is so implausible that it could not be ascribed to difference in view or the product of agency expertise.”

Advocates for Highway & Auto Safety, 429 F.3d at 1144–45 (quoting *Motor Vehicle Mfrs. Ass’n v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983)).

Moreover, an agency’s final rule is arbitrary and capricious when it shows “little apparent connection to the inadequacies it purport[s] to address,” or “inexplicably abandon[s]” its own earlier legitimate, reasoned findings, particularly where the earlier determination was “entirely structured around” the abandoned premise. *Id.* Finally, an “agency action is arbitrary and capricious if it rests upon a factual premise that is unsupported by substantial evidence.” *Ctr. for Auto Safety v. Fed. Highway Admin.*, 956 F.2d 309, 314 (D.C. Cir. 1992). “The substantial evidence standard ‘requires more than a scintilla, but can be satisfied by something less than a preponderance of the evidence.’” *Town of Barnstable v. FAA*, 740 F.3d 681, 687 (D.C. Cir. 2014) (quoting *Fla. Gas Transmission Co. v. FERC*, 604 F.3d 636, 645 (D.C. Cir. 2010)). However, “mere assertions” are insufficient to meet that substantial evidence standard. *Nat’l Ass’n of Clean Water Agencies v. EPA*, 734 F.3d 1115, 1131 (D.C. Cir. 2013) (quoting *Sierra Club v. EPA*, 167 F.3d 658, 663 (D.C. Cir. 1999)).

II. THE RULE FAILS TO DO ANYTHING TO ADDRESS THE PROBLEMS OF PILOT FATIGUE FOR ALL-CARGO OPERATIONS AS MANDATED BY THE SAFETY ACT

A. The FAA Failed to Execute Congress’ Command to Promulgate Regulations that Address the Acknowledged Problems Relating to Pilot Fatigue in All-Cargo Operations

Congress directed the FAA to “issue regulations, *based on the best available scientific information*, to specify limitations on the hours of flight and duty time

allowed for pilots *to address problems relating to pilot fatigue.*” Safety Act at § 212(a)(1) (emphasis added) (Addendum 20). The FAA determined that the scientific research showed that existing flightcrew member duty and rest rules “do not adequately address the risk of fatigue,” including problems faced by cargo pilots. NPRM at 55855 (J.A. 560); Final Rule at 334 (J.A. 6). The FAA concluded that “the status quo subjects society to an ‘unacceptably high aviation accident risk.’” Final Rule at 391 (J.A. 63) (quoting NPRM at 55882 (J.A. 587)). The FAA made no attempt to distinguish cargo pilots from passenger pilots based on the science or physiology of fatigue.

Ignoring its own conclusions that the Part 121 rules do not adequately address pilot fatigue, the FAA nonetheless left all-cargo operations subject to the admittedly inadequate Part 121 rules. By doing *nothing* to address the admitted problems of pilot fatigue in all-cargo operations, and leaving cargo pilots subject to the same rules that Congress, NTSB, and the FAA have recognized do not adequately address pilot fatigue, the FAA has failed to comply with Congress’ clear directive to issue regulations that “address problems relating to pilot fatigue.” Safety Act at § 212(a)(1) (Addendum 20). Thus, the FAA failed to carry out the plain terms of the Safety Act. This also violates the APA because, by failing to do *anything* to address fatigue in all-cargo operations, the FAA “has adopted a rule with little apparent connection to the inadequacies it purports to address.”

Advocates for Highway & Auto Safety, 429 F.3d at 1145.

B. The Scientific Information on Fatigue Does Not Support the FAA’s Exclusion of All-Cargo Operators From the Final Rule

The FAA’s decision to leave all-cargo operations subject to the Part 121 rules also violates the Safety Act because the decision leaves cargo pilots subject to rules that do not reflect the “best available scientific information” about pilot fatigue. Rather than supporting the FAA’s decision to exclude all-cargo operations from the Final Rule, the FAA’s analysis of the “best available scientific information” underscores the *greater need* to adopt new rules for all-cargo operations, because those operations are *particularly* subject to factors that create dangerous levels of fatigue.

The FAA summarized the key scientific findings as follows:

most people need eight hours of sleep to function effectively, most people find it more difficult to sleep during the day than during the night, resulting in greater fatigue if working at night; the longer one has been awake and the longer one spends on task, the greater the likelihood of fatigue; and fatigue leads to an increased risk of making a mistake.

Final Rule at 335 (J.A. 7). The FAA found that flying conditions such as *nighttime operations* (during pilots’ circadian lows) and *operations that cross multiple time zones* warrant *stricter* measures to guard against fatigue. *Id.* at 330 (J.A. 2).

Specifically, “[t]he primary time-of-day safety concern . . . is that flightcrew

members who fly during the WOCL *suffer a severe degradation of performance.*” *Id.* at 358 (emphasis added) (J.A. 30). *See also id.* at 331, 355 (J.A. 3, 27).³

The FAA further concluded that “factors that lead to fatigue are universal.” *Id.* at 330 (J.A. 2). Indeed, the FAA’s findings show that all-cargo operations are particularly subject to fatigue because cargo carriers “regularly operate long-haul flights and point-to-point operations outside the United States, traveling across multiple time zones and at all hours of the day and night . . . According to the industry commenters, these types of nighttime and around-the-world operations are the norm for all-cargo carriers.” *Id.* at 336 (J.A. 8).

Applying the scientific findings to the existing rules, the FAA concluded that its “current regulations do not adequately address the risk of fatigue,” and specifically “do not account for the impact of circadian rhythms on alertness.” *Id.* at 334 (J.A. 6). The FAA also concluded that “a fatigued crew is dangerous no matter what ‘type’ or segment of operation is examined and the requirements in this final rule will eliminate the distinctions between various operations.” Final RIA at 30 (J.A. 2107). Finally, the FAA determined that new duty and rest rules

³ FAA also cited scientific evidence that “long duty periods that take place during the WOCL substantially increase the risk of an accident;” that “each additional hour worked after approximately 8 or 9 hours exponentially increases the risk of an accident;” and that “there is little evidence that a flightcrew member who repeatedly works on nightshifts will experience substantial safety-relevant changes to his or her circadian rhythm through acclimation.” Final Rule at 357 (J.A. 29).

were necessary “because the status quo subjects society to an ‘unacceptably high aviation accident risk.’” Final Rule at 391 (J.A. 63) (quoting NPRM at 55882 (J.A. 587)). The FAA stated that “[t]hese uncontroversial scientific findings form the basis for almost all of the major provisions in this rule.” Final Rule at 390 (J.A. 62).

Having reached these uncontroversial conclusions based on the best scientific information and its own expert analysis of the former flight time and duty rules, the FAA’s decision to exclude all-cargo operations from the new rules and leave all-cargo operations subject to the existing rules is arbitrary and capricious.

First, the FAA’s decision flatly disregards Congress’ command to adopt flight time and duty rules based on “the best available scientific information” By leaving cargo pilots subject to rules that the FAA admits are inadequate and are not based on the best available science. The exclusion is even more difficult to understand in light of the FAA’s decision to subject all pilots to the same rules regarding drug and alcohol use and testing. 14 C.F.R. Part 120. Because fatigue results in impairment equivalent to having been drinking, the FAA’s decision cannot be justified. *See IPA Comments on SRIA* at 75 (J.A. 2965) (citing studies).

The FAA does not even attempt to explain this departure from its scientific conclusions in scientific, medical, or safety terms. The FAA apparently recognized that dilemma and attempted to resolve the clear contradiction between

its scientific findings and its cost-benefit driven decision by making editorial changes to the RIA and by simply *deleting* references to the science.

EO12866 Compliance (J.A. 2173) is a redlined mark-up of the Final Rule and Preamble that reflects OIRA's recommended changes, including in particular the exclusion of all-cargo operations based on the cost-benefit analysis. *E.g., Id.* at 1, 12–13, 19, 32–38 (J.A. 2174, 2185–86, 2192, 2205–2211). For example, in the section of the Final Rule discussing the possibility of issuing different rules for different types of Part 121 operations, the unedited language, consistent with the NPRM, rejected that approach and presented science-based reasons why it was particularly important to include all-cargo operations in the Final Rule. OIRA edited the sentence to read: “Accordingly, this rule uniformly regulates the universal fatigue factors in passenger operations regardless of the specific Part 121 passenger operation that is involved.” *Id.* at 259 (J.A. 2432) (OIRA inserts underlined). *See also* Final Rule at 391 (J.A. 63). But this editorial change does not change the scientific conclusion that pilots in all-cargo operations *are* subject to the same universal fatigue factors as pilots in passenger operations or the determination that Part 121 is inadequate to address the problems of pilot fatigue.

More significantly, when faced with scientific findings it could not edit, OIRA and the FAA simply deleted them, including, for example, these findings:

However, the risk from these types of long FDPs is even higher for nighttime unaugmented operations because

studies have shown that working during the WOCL causes a substantial degradation in human performance. Because of the substantial safety risks caused by long FDPs and working during the WOCL, the FAA has concluded certificate holders conducting all-cargo operations can no longer be permitted to schedule 16-hour unaugmented nighttime FDPs and 30-hour augmented FDPs. In addition, as discussed in other parts of this preamble, because nighttime operations raise additional safety concerns, the FAA has decided to subject certificate holders who conduct all-cargo operations to the flight, duty, and rest limits imposed by this rule.

EO12866 Compliance at 37 (J.A. 2210).

Those changes highlight that all-cargo operations were excluded from the new rules *despite* the scientific findings showing that cargo pilots are *particularly* affected by fatigue. Neither OIRA nor the FAA refute or rebut those scientific findings, and they cannot, with the mere stroke of a bureaucratic pen, pretend those findings do not exist, and ignore Congress' express charge to address pilot fatigue for *all* pilots.⁴

⁴ Further, statements by Dr. James Fraser, Federal Air Surgeon at the Air Line Pilot Association, International 2014 Air Safety Forum, Panel on Pilot Health (Aug. 7, 2014), make clear that the decision to exclude all-cargo operators from the Final Rule was a political decision, not a medical or scientific decision:

Captain John Taylor, Airline Pilots Association, International (ALPA), Aeromedical Chair:

“[]Where do we stand with the cargo carriers? Is it still stagnant or are we looking at expanding FAR-117 to the cargo?”

Dr. James Fraser:

The FAA did not correct these deficiencies in the FSRIA, which simply revised the cost-benefit analysis without addressing any of the underlying scientific findings. Accordingly, the FAA has still failed to justify the all-cargo exclusion from Part 117 based on the science of fatigue which Congress established as the sole basis for the rulemaking.

Second, the FAA violated basic principles of APA rulemaking. The FAA abandoned the science-based methodology around which the entire rulemaking was purportedly structured in favor of a cost-based approach. The FAA contradicted the evidence before the agency by leaving all-cargo pilots subject to the Part 121 rules the FAA admits are inadequate. The FAA further failed to give weight to the fact that all-cargo pilots are particularly subject to fatigue due to the nighttime nature of cargo operations. For all of those reasons, the FAA's decision is arbitrary and capricious. *Advocates for Highway & Auto Safety*, 429 F.3d at

“You know, ... that's a question where you're going to get me in trouble John. But certainly, you know certainly those of us at the FAA, all of the pilots in flight standards that have been there, done that, and those of us in aerospace medicine know that from a human perspective there's no difference between cargo pilots and those that are flying passengers. Uh, but there is a significant political side of the issue when the cargo carriers, uh, tell us they'll be bankrupt if they're expected to adhere to the same rules that the other pilots are required to adhere to. So I'm, I'm gonna leave that for the political arena and um, and, and just tell you that it's, it's not just those of us who are in the trenches at the FAA headquarters that are against it; it's an OMB and a political issue in terms of the cost of making those changes for cargo pilots.”

A video of the exchange can be found here: <http://www.c-span.org/video/?320914-2/discussion-pilot-health-safety> (last accessed Nov. 17, 2015).

1145. *See also Owner-Operator*, 494 F.3d at 199. Moreover, by leaving all-cargo operators subject to the Part 121 Rules the FAA itself admits are inadequate, the “has adopted a rule with little apparent connection to the inadequacies it purports to address.” *Advocates for Highway & Auto Safety*, 429 F.3d at 1145.

C. The FAA Impermissibly Relied on a Cost-Benefit Analysis to Ignore Congress’ Directive to Utilize Scientific Information on Pilot Fatigue

The FAA’s only stated reason for ignoring Congress’ clear command to issue science-based regulations to address the problem of pilot fatigue is that the costs of compliance for all-cargo operations exceed the societal benefits. Final Rule at 332 (J.A. 4). The question presented, therefore, is whether the Safety Act authorized the FAA to base the new anti-fatigue rules on a cost-benefit analysis rather than the best scientific information about pilot fatigue. The Supreme Court has made clear that the factors an agency may consider in issuing regulations depend “on what authority the statute confers.” *Whitman v. Am. Trucking Ass’n*, 531 U.S. 457, 465 (2001). Where Congress has specified the factors to be used in issuing regulations, an agency may consider costs only if Congress made a “textual commitment of authority to the agency to consider costs” *Id.* at 468.

Whether Congress made such a “textual commitment” to allow the FAA to consider costs in the Safety Act is a question of statutory construction to be decided by the Court. Under the analytical framework of *Chevron U.S.A., Inc. v.*

Natural Res. Def. Council, 467 U.S. 837 (1984), if “Congress has directly spoken to the precise question at issue,” the agency’s view of the statute is afforded no deference:

At step one, we employ the traditional rules of statutory construction. In so doing, we consider the overall statutory scheme, legislative history, the history of evolving congressional regulation in the area, and . . . other relevant statutes. At this stage, the court gives no weight to the agency’s interpretation. If the court determines that Congress’s intent is clear, then the inquiry ends and Congress’s intent is given effect.

Philip Morris USA, Inc. v. Vilsack, 736 F.3d 284, 289 (D.C. Cir. 2013) (citations and quotation marks omitted). Only if Congress has not spoken directly to the issue will the court consider the more deferential question of “whether the agency’s interpretation of the statute is based upon a permissible construction of the governing statute.” *Id.*

1. Congress Has Spoken Directly to The Issue In Unambiguous Terms That Preclude Reliance on a Cost-Benefit Analysis
 - a) The Plain Language of Section 212 of the Safety Act

The starting point of the analysis is the language of the statute itself. In the Safety Act Congress directed the FAA to “issue regulations, based on the best available scientific information, to specify limitations on the hours of flight and duty time allowed for pilots to address problems relating to pilot fatigue.” Safety Act at § 212(a)(1) (Addendum 6). Congress then identified a number of factors the FAA could consider in issuing the new regulations, all of which relate to the causes

of fatigue and ways to address fatigue. Safety Act at § 212(a)(2) (Addendum 20-21).

Where Congress has specified the factors to be used in issuing regulations, an agency may consider costs only if Congress made a “textual commitment of authority to the agency to consider costs” *Whitman*, 531 U.S. at 468. Absent such a commitment of authority, “economic considerations play no part in the promulgation of [regulations].” *Id.* at 464 (quoting *Lead Indus. Ass’n v. EPA*, 647 F.2d 1130, 1148 (D.C. Cir. 1980) (finding that Congress did not authorize EPA to consider costs in promulgating ambient air quality standards under the Clean Air Act)). “When Congress has intended that an agency engage in cost-benefit analysis, it has clearly indicated such intent on the face of the statute.” *Am. Textile Mfrs. Inst., Inc. v. Donovan*, 452 U.S. 490, 510 (1981). This Court has emphasized that an agency “is not permitted to substitute its view of the costs and benefits of regulation for Congress’s views of the costs and benefits of regulation.” *Ctr. for Biological Diversity v. EPA*, 722 F.3d 401, 414 (D.C. Cir. 2013) (Kavanaugh, J., concurring).

Section 212 is an unambiguous textual commitment to new regulations based on “best available scientific information.” That commitment to *science* in order to address a *safety* problem precludes consideration of cost or other non-scientific factors. The FAA was not authorized to use costs and benefits as the

basis for the new anti-fatigue rules.

Where Congress did indicate the specific factors the FAA could consider, Section 212(a)(2), it listed factual matters that relate only to the possible causes of fatigue and ways to mitigate fatigue. There is no suggestion that the FAA could or should consider costs in issuing new regulations. In the simplest of terms, the FAA cannot establish the science-based safety standards Congress demanded if the terms of the Final Rule are determined by cost considerations alone.

Other provisions of Section 212 further underscore the commitment to a science-based approach. Section 212(c) focuses on the “effects of commuting on pilot fatigue” and directs the FAA to commission the National Academy of Sciences to study that issue based on a list of factors that, like Section 212(a)(2), do not include cost considerations. (Addendum 20-21). Based on the results of that study, the FAA is to consider changes to the final Rule. If Congress had intended the FAA to consider cost issues, it would have directed the FAA to obtain a study from Office of Management and Budget, the Congressional Budget Office, or from industry itself. Instead, consistent with its commitment to science-based solutions, Congress directed the FAA to work with an independent scientific body, and directed that body to consider factors other than costs, to determine if further refinements to the Final Rule were warranted.

b) The Legislative History of the Safety Act

Congress' intent to address the problem of fatigue based only on science is made clear in the legislative history as well. An "updated rule will more adequately reflect the operating environment of today's pilots and will reflect scientific research on fatigue." H.R. REP. NO. 11-284, at 7 (Addendum 40).⁵ Consideration of operating costs to the carriers does not reflect the pilot's operating environment or scientific research on fatigue, and Congress did not discuss the expected costs of the Safety Act during its deliberations. Moreover, Congress enacted the anti-fatigue provisions of the Safety Act, in part, to force the FAA to act despite its inability to find a consensus solution. *Id.* As the FAA itself has made clear, one of the major stumbling blocks to reaching consensus was the concern on aircraft operators that the costs of new science based rules would be too high. NPRM at 55853 (J.A. 558). Congress intended to direct the FAA to adopt new rules based on modern fatigue science rather than the cost impacts to any sector of the industry.

c) The FAA's General Obligation to Make Safety Its Highest Priority

This focus on safety and science is consistent with Congress' general charge that the FAA "assign[], maintain[], and enhanc[e] safety and security as the highest

⁵ In other statutes, Congress has indicated in the legislative history that it expected the agency to consider costs, even when safety was the "overriding consideration." *See Motor Vehicle Mfrs. Ass'n*, 463 U.S. at 55 (discussing agency consideration of costs in crash protection rulemaking). Congress made no such indication in the Safety Act's legislative history.

priorities in air commerce.” 49 U.S.C. § 40101(d) (Addendum 28). Congress applied that general commitment to safety to the FAA’s obligation to regulate duty hours by directing the FAA to

promote safe flight of civil aircraft in air commerce by prescribing—

...

- (4) regulations in the interest of safety for the maximum hours or periods of service of airmen and other employees of air carriers

49 U.S.C. § 44701(a) (Addendum 29). Neither Section 40401(d) nor 44701(a) authorize the FAA to consider costs in meeting its duty to promote aviation safety. It is inconsistent with the entire statutory structure and delegation of authority for the FAA to make costs the overriding factor in the Final Rule.

Consistent with that overriding safety priority, Congress has allowed the FAA to consider costs in only a few specific instances, underscoring that, in the Safety Act, Congress deliberately withheld such authorization. 49 U.S.C. § 44706(d) (Addendum 126) (cost considerations are a factor for setting the terms of airport operating certificates for commuter airports); 49 U.S.C. § 44706(c) (Addendum 126) (allowing waivers from firefighting and rescue equipment certification requirements is compliance would be unreasonably costly).

Similarly, when addressing duty hours in other segments of the transportation industry, Congress has explicitly stated when costs and benefits should be considered. *See* 49 U.S.C. § 31136(c)(2) (FMCSA “to consider, to the

extent practicable and consistent with the purposes of this chapter (A) costs and benefits” before prescribing new hours of service rules for truckers). (Addendum 128). The fact that Congress withheld similar instructions in Section 212 shows that Congress did not intend the FAA to base its decision on a cost-benefit analysis.

2. Section 212(a)(2)(M) Does Not Authorize the FAA to Disregard the Best Available Scientific Information and Exclude All-Cargo Operations from the Final Rule Based Only on a Cost-Benefit Analysis

The only statutory language the FAA cites to support its reliance on a cost-benefit analysis is Section 212(a)(2)(M) of the Safety Act, which allows the FAA to “consider and review” . . . [a]ny other matters the Administrator considers appropriate.” Safety Act at § 212(a)(2)(M) (Addendum 21). The FAA argues that the “any other matters” clause allows it to base its decision on a cost-benefit analysis. 79 Fed. Reg. at 72972-74 (J.A. 3310-12).

That position is unsupportable under the plain language of Section 212. When Congress expressly sets forth factors for issuing regulations that do not include costs, agency discretion to consider costs must be express; Congress “does not alter the fundamental details of a regulatory scheme in vague terms or ancillary provisions—it does not, one might say, hide elephants in mouseholes.” *Whitman*, 531 U.S. at 464. In *Whitman*, the Court considered whether a cost-benefit analysis was appropriate in setting National Ambient Air Quality Standards under the Clean

Air Act. The Court concluded that the cost “factor is *both* so indirectly related to public health *and* so full of potential for canceling the conclusions drawn from direct health effects that it would surely have been expressly mentioned in §§ 108 and 109 [of the Clean Air Act] had Congress meant it to be considered.” *Id.* at 469 (emphasis in original).

The rationale of *Whitman*, *Lead Industries*, and *Donovan*, *supra*, applies here to preclude the FAA from using cost considerations to exclude all-cargo operations from the Final Rule. As with the provision of the Clean Air Act at issue in *Whitman*, cost issues are both “far removed” from addressing the problems of pilot fatigue based on science, and, as the FAA’s decision demonstrates, cost considerations can “cancel” the science-based conclusions Congress sought. *See Whitman*, 531 U.S. at 469. It would effectively nullify Section 212(a)(1) if an ancillary provision like Section 212(a)(2)(M) created a loophole big enough to allow the FAA to ignore the factors Congress *expressly* required the FAA to consider and to issue rules based on a methodology contrary to the scientific basis it expressly ordered. *Whitman*, 531 U.S. at 468. Congress would not have relied on such a “modest” phrase as “other matters [FAA] considers appropriate” to allow cost considerations to cancel out the scientific information and safety issues it specified. *Id.*

Moreover, this Court has rejected such a fixated reliance on a single word or

phrase without taking into account the overall context, purpose, and structure of the statute. *Cal. Indep. Sys. Operator Corp. v. FERC*, 372 F.3d 395, 400 (D.C. Cir. 2004) (when a word has “sufficiently diverse definitions . . . the only realistic approach to determining Congress’s ‘plain meaning,’ if any, is to regard the word in its context.”); *Am. Mining Cong. v. EPA*, 824 F.2d 1177, 1185 (D.C. Cir. 1987) (“everyday meaning” of a word must give way to the purpose and structure of the statute at *Chevron* step one). The purpose, structure, and plain language of Section 212 foreclose the FAA’s unbounded interpretation of Section 212(a)(2)(M).

Section 212(a)(1) requires the FAA to adopt new rules to address the problem of pilot fatigue “based on the best available scientific evidence.” Section 212(a)(2) identifies 12 specific factors that Congress determined would be appropriate for the FAA to consider “[i]n conducting the rulemaking proceeding under this subsection.” Section 212(a)(2)’s 12 factors all relate to matters that Congress believed cause or contribute to fatigue or that relate to ways to address fatigue. Recognizing that it may not have identified all of the relevant factors, Congress included a catch-all provision to insure that the FAA was not precluded from considering other matters “as appropriate” that might help the FAA develop regulations based on the “best scientific information available.” The FAA’s interpretation of the Safety Act ignores its structure, purpose, and language, and leads to new regulations that are not based on the best scientific information and do

not address the problem of pilot fatigue, which is precisely to opposite of what Congress expressly ordered in Section 212(a)(1).

This natural reading of the Safety Act is reinforced by the applying traditional canons of statutory construction. First, the canon of *ejusdem generis* teaches that “[w]here general words follow specific words,’ the general words are ‘construed to embrace only objects similar in nature to those objects enumerated by the preceding specific words.’” *Cement Kiln Recycling Coal. v. EPA*, 493 F.3d 207, 221 (D.C. Cir 2007) (quoting *Edison Elec. Inst. v. Occupational Safety & Health Admin.*, 411 F.3d 272, 281 (D.C. Cir. 2005)). In *Cement Kiln*, this Court applied the canon of *ejusdem generis* to limit the meaning of a catchall phrase similar to Section 212(a)(2)(M), regarding “such other factors as may be appropriate” to matters “similar in nature” to the factors enumerated in the preceding list. *Id.* See also *Tax Analysts v. IRS*, 117 F.3d 607, 613-614 (D.C. Cir. 1997) (applying *ejusdem generis* at *Chevron* step one).

Similarly, the canon of “*noscitur a sociis*” – “a word is known by the company it keeps” – applies to give specific meaning to a general word capable of many meanings. *Cal. Indep. Sys.*, 372 F.3d at 400 (rejecting FERC’s interpretation of “practices” as overly broad compared to other specific words in the statute). See also *Wash. State Dep’t of Soc. & Health Servs. v. Guardianship Estate of Keffeler*, 537 U.S. 371, 384-85 (2003). Here, the list of twelve factors in

Sections 212(a)(2)(A)-(L), all of which identify factual matters that might bear on the scientific study of pilot fatigue and solutions to pilot fatigue, limits the meaning of Section 212(a)(2)(M) to other *similar* factual matters that Congress did not anticipate but that might help the FAA better formulate scientific information upon which to base its new anti-fatigue rules.

3. The FAA's Other Attempts to Justify Its Reliance on a Cost Benefit Analysis Instead of The Best Available Scientific Information Fail to Justify Its Disregard of Congress's Command

First, the FAA explains that it is required to prepare a cost-benefit analysis pursuant to Executive Orders 12866 and 13563. 79 Fed. Reg. at 72972. This argument is unavailing for the simple reason that “the President is without authority to set aside congressional legislation by executive order, and the 1993 executive order [12866] does not purport to do so.” *In re United Mine Workers of Am. Intern. Union*, 190 F.3d 545, 551 (D.C. Cir. 1999). *See also Helicopter Ass'n Int'l, Inc. v. FAA*, 722 F.3d 430, 439 (D.C. Cir. 2013) (Executive Order 12866 does not provide a basis to challenge a regulation). Cass Sunstein, *The Real World of Cost-Benefit Analysis: Thirty-Six Questions (And Almost As Many Answers)*, 114 COL. L. REV. 167, 181 (2014) (“If the statute requires the agency to proceed, or if it forbids consideration of costs, the question may well be at an end; agencies must follow the law.”). Despite the provisions of the Executive Orders, therefore, the FAA cannot base its decision on that cost-benefit analysis when Congress has

foreclosed that as a basis of decision.

Second, the FAA relies on *Entergy Corp. v. Riverkeeper, Inc.*, 556 U.S. 208 (2009), to argue that the Safety Act did not expressly foreclose the FAA's consideration of costs. 79 Fed. Reg. at 72973 (J.A. 3311). Relying on *Riverkeeper*, the FAA argues that *Whitman* stands for the proposition that a statute forecloses consideration of costs only when some sections of the statute allow consideration of costs but others do not. *Id.* Because no other provision of the Safety Act expressly allows consideration of costs, the FAA argues, Section 212 cannot be read as precluding consideration of costs. *Id.* at 79973-74. That argument misconstrues the meaning of both *Whitman* and *Riverkeeper*, and would result in an absurd new rule of statutory construction.

In *Whitman* Congress had specified the factors to use in a rulemaking and did not include cost as a factor. The Court held that the language of the provision at issue directed the EPA to set certain air quality standards in order to achieve public health goals, which language *in itself* precluded consideration of costs because the statute did not "leave room" for EPA to consider costs. 531 U.S. at 468. To *reinforce* that point, the Court then pointed out that Congress allowed consideration of costs in other sections of the Clean Air Act to show that Congress will tell agencies when to consider costs without relying on inferences from Congressional silence. *Id.* at 467. *Whitman* does not stand for the principle that a

statute only precludes the use of a cost-benefit analysis when other provisions expressly allow the use of a cost-benefit analysis.

Furthermore, *Riverkeeper* is a *Chevron* step two case where the Court found that the term “best” was ambiguous enough to allow the EPA to consider costs. *Riverkeeper, Inc.*, 556 U.S. at 218. *Riverkeeper* does not stand for the sweeping notion that a cost-benefit analysis is permitted unless other provisions in the statute foreclose that interpretation. *Riverkeeper* stands for the unremarkable proposition, like *Whitman*, that a cost-benefit analysis is only permitted where Congress has expressly authorized it or implicitly permitted it through the use of ambiguous statutory language. Here, the phrase the FAA “shall issue regulations, based on the best available scientific information, to specify limitations on the hours of flight and duty time allowed for pilots to address problems relating to pilot fatigue” is unambiguous and simply leaves no room for the consideration of non-scientific factors.

Moreover, the FAA’s position would place one of two absurd conditions on how Congress must express its intent. First, the FAA relies on Congressional silence on the single issue of a cost-benefit analysis to argue that Congress did not expressly foreclose the use of cost-benefit analysis. That argument ignores what Congress *did say*, however, which as *Whitman* teaches is the touchstone of statutory analysis. 531 U.S. at 468. Under the FAA’s position, it is not enough for

Congress to say what it means; it must also enumerate *everything* that it did *not* mean. The FAA's unsupported position would turn the *Chevron* step two rule on its head if an agency could construe an unambiguous statute in any way it chooses provided only that Congress did not include a provision that expressly precluded that interpretation.

Second, the FAA's position would require Congress express its intent on the use of cost-benefit analyses through multiple provisions, some allowing them and others not. That simply makes no sense when dealing with a straightforward statute like the Safety Act. Fundamentally, that position would turn a blind eye to Congress's expressed intent and impose a rule of drafting on Congress rather than applying a rule of statutory construction to determine Congress' meaning.

4. Even Considered Under Chevron Step Two, the FAA's Reliance on a Cost-Benefit Analysis Cannot Be Sustained

Even if there were some basis to find some ambiguity in the plain language of Section 212(a) that the FAA could plausibly construe as allowing it to base the scope of the Final Rule of a cost-benefit analysis, that position would fail scrutiny under *Chevron* step two because it is not a permissible or reasonable construction of the Safety Act. As detailed above, the FAA's position runs afoul of virtually every indicia of a reasonable interpretation of a statute:

- It is not based on any statutory language that plausibly allows the FAA to consider costs.
- It creates an implied exception that allows the FAA to ignore Congress'

express command to issue science-based regulations in order to address the problem of pilot fatigue.

- It ignores the purpose and structure of the Safety Act.
- It ignores the structure and purpose of Section 212 of the Safety Act in a manner that renders Congress’s command to base the Final Rule on the “best available scientific information” surplusage.
- It is inconsistent with appropriate canons of statutory construction.

Accordingly, the FAA’s interpretation of the Safety Act as allowing the use of a cost-benefit analysis to determine the scope of the Final Rule cannot be upheld even under the more deferential standard of *Chevron* step two.

III. THE FAA’S COST-BENEFIT ANALYSIS FAILS TO JUSTIFY ITS DECISION TO EXCLUDE ALL-CARGO OPERATIONS

Even under the FAA’s interpretation of Section 212(a)(2)(M), the FAA was authorized only to *consider* “other factors”; it was not *required* to conduct a cost-benefit analysis or base its decision on costs and benefits. *See Nat’l Ass’n of Home Builders v. EPA*, 682 F.3d 1032, 1039 (D.C. Cir. 2012) (authorization to “consider” economic consequences does not mandate preparation of a cost-benefit analysis); *Nat’l Wildlife Fed’n v. EPA*, 286 F.3d 554, 570-71 (D.C. Cir. 2002) (same). Where Congress authorizes an agency to consider costs in its rulemaking, but otherwise makes clear that safety is the overriding goal of the statute, the agency must temper its focus on costs and benefits to assure that its regulations meet Congress’ overriding safety goal. *Motor Vehicles Mfrs. Ass’n*, 463 U.S. at 55 (directing the NHTSA to reconsider its cost-benefit analysis while “bear[ing] in

mind that Congress intended safety to be the preeminent factor under the Motor Vehicle Safety Act.”). In evaluating the benefits of the Final Rule, the FAA must take into account all of the benefits of applying the Final Rule to all-cargo operators. *See Office of Commc’n of United Church of Christ v. FCC*, 707 F.2d 1413, 1440 (D.C. Cir. 1983) (FCC’s decision to eliminate a rule requiring radio stations to keep logs of their programming was arbitrary and capricious, because the FCC had not fully considered the benefits of the logging requirements in its cost-benefit analysis, which was the exclusive basis for the agency’s decision).

Finally, “when an agency decides to rely on a cost-benefit analysis as part of its rulemaking, a serious flaw undermining that analysis can render the rule unreasonable.” *Nat’l Ass’n of Home Builders*, 682 F.3d at 1040. This Court recognizes that such a serious flaw “or otherwise arbitrary and capricious reasoning can crash an agency’s cost/benefit analysis.” *Am. Trucking Ass’ns v. Fed. Motor Carrier Safety Admin.*, 724 F.3d 243, 254 (D.C. Cir. 2013). Although the Court reviews an agency’s cost-benefit analysis deferentially, “we will [not] tolerate rules based on arbitrary and capricious cost-benefit analyses.” *City of Portland v. EPA*, 507 F.3d 706, 713 (D.C. Cir. 2007).

As detailed below, the FAA’s cost-benefit analysis was constructed in a manner that understated the safety benefits of the rule as applied to all-cargo operations. At bottom, the FAA concluded that saving the lives of all cargo pilots

and crew was “not worth it,” in complete disregard of its overall mission of ensuring safety and Congress’s specific command to issue new anti-fatigue rules to address the problems of fatigue in aviation.

To determine the benefits of applying the Final Rule to aircraft operators, the FAA attempted to place a value on the accidents that would be avoided by applying the new rule and then comparing that value to the costs of compliance with the Final Rule. FSRIA at 73-81 (J.A. 3389-97). The FAA based its value calculations on an examination of accidents in which fatigue was a causal factor over a ten-year period. *Id.* at 74 (J.A. 3390). For each accident, the FAA calculated the costs of the accident and assigned an effectiveness rating based on the degree to which the Final Rule would have helped to prevent that accident. *Id.* at 75-81 (J.A. 3391-3397). In calculating the costs of each accident, the FAA assigned monetary values for the lives lost, the aircraft lost, and certain other items. FSRIA at 78 (J.A. 3394). The FAA identified only one all-cargo accident in the ten-year study period – a 2002 crash of a FedEx 727 aircraft in Tallahassee, Florida. *Id.* The FAA used the exact circumstances and details of that accident as the sole basis for evaluating the costs of all future fatal all-cargo accidents.

The FAA’s approach to evaluating the benefits of applying the Final Rule to all-cargo operators is arbitrary and capricious for several reasons, and demonstrates that the FAA structured the FSRIA in a way that consistently understated the

benefits of applying the Final Rule to all-cargo operators and ignored important safety benefits of the Final Rule. Had the FAA accurately identified the safety benefits of applying the Final Rule to all-cargo operators, and given those benefits their full weight as required by the Safety Act, the FAA's decision should have concluded that the costs of the Final Rule were justified by the benefits of saving lives and improving safety.

A. The Ten-Year Study Period Is Arbitrary and Capricious

By limiting the study period for all-cargo accidents to 10 years, the FAA excluded from consideration two additional cargo crashes,⁶ all of which involved fatalities. As a result, the FAA's base case assumes that in the future ten-year period there will be *zero* fatalities in fatigue related all-cargo crashes. This assumption fails to withstand scrutiny.

⁶ In addition, the FAA classified a February 16, 1995 fatal accident, FSRIA at 68 (J.A. 3384), as a passenger flight when the record shows that it was an all-cargo flight. The aircraft crashed when conducting a ferry flight – the movement of an empty aircraft to the starting point for its next revenue-producing flight. But the fatigue that contributed to the accident had been caused by a previous *cargo* flight operated by the same crew. The FAA characterized the fatigue-inducing flight operation as a “demanding round trip flight to Europe that crossed multiple time zones . . . [and] involved multiple legs flown at night following daytime rest periods that caused the flightcrew to experience circadian rhythm disruption.” Final Rule at 334 (J.A. 6); Final RIA at 11–13, 72–73 (J.A. 2088–2090, 2149–50). The NTSB recognized that that prior flight was “a regular cargo flight from Germany.” NTSB Aircraft Accident Report PB95-910406 at 2 (J.A. 604). By classifying the flight as a passenger operation, the FAA understated the benefits of applying the Final Rule to all-cargo operations and overstated the benefits of applying it to passenger operations.

The FAA first gathered accident data for a 20-year period, and then explained that there were fewer accidents per million cargo departures from 2001-2010 than would have been predicted by the number of accidents from 1991-2000. FSRIA at 23 (J.A. 3339). Even though the FAA acknowledged that the flightcrew duty and rest rules had not changed during that entire twenty-year period, the FAA *assumed* that *something* caused the change in the accident rate that justified ignoring the accident history from 1991-2000:

Although the regulations regarding flightcrew duty and rest may not have changed during the 20-year period, other safety initiatives have *likely partially* mitigated the impacts of fatigue issues such that the end result is a lower number of accidents related to fatigue.

Id. at 24 (J.A. 3340) (emphasis added).

This is pure speculation by the FAA. The FAA does not identify any single safety initiative, or group of safety initiatives, that could have, much less did, lead to a reduction in fatigue-related crashes.⁷ Although the FAA states that there may have been a “partial” mitigation of fatigue, it never states how much mitigation there was or how it was achieved. The Court may defer to an agency’s expertise,

⁷ The only support for this statement is comments from the industry trade association Air Transport Association of America (now known as Airlines for America) (“A4A”). FSRIA at 23 n.42 (citing comments). But those comments merely summarize the overall safety record of the entire commercial aviation industry, and point generally to safety improvements without identifying any specific measure or set of measures that have mitigated *fatigue*. A4A Comments at 13-15 (J.A. 810-12).

but not when an agency relies on mere assertion and speculation. *Nat'l Ass'n of Clean Water Agencies*, 734 F.3d at 1131 (mere assertions do not meet the substantial evidence test). The FAA's assumption that other, unnamed safety initiatives may have partially have mitigated the effects of fatigue despite no changes in flightcrew member duty and rest rules must be rejected.

Furthermore, the basis of the FAA's analysis is statistical sleight of hand. The reason the FAA believed there was a difference between the period 1991-2000 and the period 2001-2010 was the different accident rates in the two periods. FSRIA at 23 (J.A. 3339). However, the FAA explains that because of the infrequent nature of fatigue-related accidents, "it is difficult to tell whether the observed difference in accident rates during the two periods is statistically significant." *Id.* at 23, n. 45 (J.A. 3339). If there is no statistically significant difference between the accident rates in the two periods, it follows that the FAA's basis for distinguishing the period 2001-2010 from 1991-2000 lacks any statistical validity.

Without any statistical or regulatory basis, the FAA's exclusion of accidents from 1991-2000 is arbitrary and capricious. The result is to arbitrarily reduce the expected benefits of including all-cargo operators in the Final Rule by excluding from consideration fatal accidents in which fatigue played a substantial causal role. Although the deaths from all-cargo operations will never equal the deaths from

passenger operations, avoiding the deaths of all-cargo crewmembers is a vital safety benefit that was systematically understated and undervalued in the FAA's analysis. Had the FAA given full consideration to the numbers of lives at risk, it would have been fully justified in reaching a different result.

B. The FAA Underestimated The Effectiveness of the Final Rule To Prevent All-Cargo Accidents

In the SRIA, the FAA assumed that the new Part 117 rules would have been 75% effective in preventing the FedEx Tallahassee accident, and accordingly applied a 75% effectiveness value to all future all-cargo crashes. FSRIA at 66 (J.A. 3382). In the FSRIA, however, relying on information supplied by industry groups, the FAA concluded that the pilots' schedules in the FedEx Tallahassee crash complied with the new Part 117 rules and that Part 117 would only have been only 15% effective in preventing that crash. *Id.* Based on that assessment, the FAA assumed that the new Part 117 rules would be only 15% effective in preventing *any* future all-cargo crash and thus the benefit of the new rule would be to save only \$0.15 for every dollar of costs associated with each future crash.

This conclusion does not withstand scrutiny, however. Because the FAA applied the 15% effectiveness factor to all assessments of future benefits of the Final Rule, the FAA's entire cost-benefit analysis presumes that all-cargo operators will *already be using the Part 117 rules*. On its face, that is a counterfactual assumption because UPS and other all-cargo carriers have already admitted that

they do not intend to comply with the new Part 117 rules, and have vigorously opposed including all-cargo operations in Part 117, in large part due to the claimed costs of compliance.

Further, if the FAA's assumption is valid, then there can be no *additional* cost associated with compliance because the carriers already were in compliance (or readily capable of compliance). Yet the FAA also *rejected* the notion that all-cargo carriers could learn to adjust their schedules to comply with Part 117 without incurring high costs. FSRIA at 43 (J.A. 3359). The FAA cannot have it both ways. Either all-cargo carriers do or can comply with Part 117 at little or no additional cost or applying Part 117 to all-cargo operators will be far more than 15% effective in preventing future all-cargo accidents.

Finally, the FAA's own experience with fatigue-related accidents precludes the FAA from applying the same effectiveness rating from a single accident to every future accident. The FAA explains that "[t]he chances of the exact same circumstances happening again and causing the 'same accident' is virtually nil but the possibility of preventing a similar set of circumstances is real." FSRIA at 69 (J.A. 3385).

Despite the FAA's admission that the chances that every future all-cargo crash will occur exactly as the FedEx Tallahassee crash are virtually "nil," the FAA analysis assumes precisely that. Instead of asking more broadly whether

applying the Final Rule to all-cargo operations can be expected to reduce fatigue and therefore reduce the likelihood of an accident by “preventing a similar set of circumstances,” the FAA asked the reductive question of whether the Final Rule would have prevented a specific crash. But the FAA should not be attempting to avoid that accident, but prevent a future accident that necessarily will involve different circumstances attributable to pilot fatigue. The FAA’s analysis rests on premise that the FAA itself agrees is counter-factual, which simply underscores the arbitrary and capricious nature of the FAA’s decision.

C. The FAA Understated the *Risk* of an All-Cargo Accident

The FAA further failed to take safety into account by calculating benefits based on the number of accidents avoided over calendar time rather than accidents avoided based on the number of departures. FSRIA at 78 (J.A. 3394). As a result, the FAA underestimated the *risk* of a fatigue-related accident, and therefore failed to address its rulemaking to limiting that risk.

In the FSRIA, the FAA made clear that measuring risk should be based on accidents per departure rather than accidents per day or year. When pressed in comments regarding its decision to limit the study period to ten years, the FAA compared the number accidents per departure for the two ten-year periods rather than the number accidents per year. FSRIA at 23 (J.A. 3339). That approach makes sense because fatigue-related accidents occur when aircraft operate, not

when the date changes.

Despite its use of accidents per departure to defend its use of the ten-year study period (ineffectively, as shown above), the FAA based its overall risk assessment on accidents per year. This is significant because the FAA's reliance on calendar time understated the benefits of applying the Final Rule to all-cargo operators (and overstated the benefits of applying the Final Rule to passenger operations). Under the FAA's simplistic analysis, the risk is that there will be one all-cargo accident every ten years compared to 6 passenger accidents in ten years. That suggests that the risk of an accident is greater for passenger operations than for all-cargo operations.

However, fatigue-related accidents occur as a function of flying, not as a function of calendar time passing. Following the FAA's departure-based approach and using the same Bureau of Transportation Statistics data relied on by the FAA, a very different assessment of risk emerges. Over the ten-year period studied by the FAA, there were approximately 4.7 million all-cargo departures and 78.5 million passenger departures. Using the FAA's fatigue-related accident history for this period (one all-cargo and six passenger accidents) yields a risk to all-cargo operations of 1 in 4.7 million and a significantly lesser risk of 1 in 13.1 million for passenger operations.⁸ Even based on the FAA's truncated ten-year study period,

⁸ Department of Transportation, Bureau of Transportation Statistics data for

it is almost three times more likely that there will be a fatigue-based accident involving an all-cargo operation compared to a passenger operation. This makes sense given that the night-time nature of most all-cargo operations means that all-cargo crews operate in an environment that puts them at the highest risk of fatigue. *Supra* at 9-10, 12. The FAA has thus focused the Final Rule on the area of lower risk, and underestimated the likelihood of a fatal all-cargo accident.

Even though a passenger accident would almost always involve more fatalities than an all-cargo accident, consideration of a different risk factor could support a different conclusion by the FAA, particularly if the FAA corrected the other fundamental flaws in its analysis and took the overall safety objective of the Safety Act into account as required by law. *Motor Vehicles Mfrs. Ass'n.*, 463 U.S. at 55.

D. The FAA Ignored Other Safety Benefits Of Including All-Cargo Operators In Part 117

The FAA improperly dismissed or ignored evidence of other benefits of including all-cargo operators in Part 117. For example, the FAA dismissed evidence that reducing fatigue would avoid fatalities and damages to people and

total departures for the period October 2002-December 2010 only were used because the BTS data for the period January 2001 – September 2002 underreported all-cargo operations. *See*. Using the database for the entire 10-year period, January 2001 - December 2010 (including the 21-month suspect period) yields similar results: 1 in 5 million risk to all-cargo operations and 1 in 15.3 million risk to passenger operations.

buildings on the ground. FSRIA at 32 (J.A. 3348). The FAA rejected evidence of those benefits because the only example of an all-cargo crash causing damage on the ground was an El Al airline Boeing 747 cargo flight that crashed into two apartment complexes on take-off in Amsterdam killing 39 people on the ground (plus three crew and one passenger for a total of 43 fatalities) and causing total destruction to a 100-yard wide area of the two buildings. *Id.* The FAA explained that because land use patterns in the United States are different than in Europe, there was no need to consider the possibility of ground fatalities in its analysis. *Id.* That assertion was offered without any supporting evidence in the record, and it seems obvious that the FAA's assertion lacks factual support. The Court can look at the proximity of high density residential and commercial buildings at airports such as Washington's Regan National Airport, New York's LaGuardia Airport, and San Diego's Lindbergh Field to see that airports are located in close proximity to densely populated areas in the United States. An important aspect of aviation safety is protecting lives and property on the ground, yet the FAA ignored that factor entirely despite the evidence in the record showing that the risk is real.

The FAA failed to consider other admitted benefits of the Final Rule that are impossible or difficult to quantify. OMB guidance on cost-benefit analyses

emphasizes the need to identify and give weight to unquantifiable benefits.⁹ The FAA identified a number of benefits to the Final Rule that were difficult to quantify. The FAA noted health benefits of reducing fatigue, including avoiding the risk of serious illness or even death. NPRM at 5585 (J.A. 560). The FAA also noted the possibility of reducing ground accidents and improving overall safety by having better-rested pilots acting as decision makers. FSRIA at 40-41 (J.A. 3356-57). Despite those significant benefits, the FAA made no effort to quantify those benefits or give them any weight in its decision making. The FAA narrowly focused on its reductive cost-benefit analysis and failed to consider any broader benefits of applying the Final Rule to all-cargo operators.

E. The FAA Improperly *Included* Main Line Passenger Operations, For Which There Is *No* Recent History Of Fatigue-Related Accidents, But *Excluded* All Cargo Operations Despite A History Of Fatigue Related Accidents

In estimating costs, the FAA consistently subdivided the industry into four categories: passenger, regional, supplemental, and freight. *E.g.* FSRIA at 104 (J.A. 3420). *See also Id.* at 10 (J.A. 3326) (FAA willing to look at “further segmentation” of the industry to better estimate costs). In estimating *benefits*, however, the FAA grouped all three passenger categories (passenger, regional, and

⁹ Office of Information and Regulatory Affairs, *Regulatory Impact Analysis: A Primer*, at 12-14, available at https://www.whitehouse.gov/sites/default/files/omb/inforeg/regpol/circular-a-4_regulatory-impact-analysis-a-primer.pdf last accessed on Nov. 7, 2015) (Addendum 132).

supplemental) into one category. This grouping hides a fundamental inconsistency in the cost-benefit analysis.

The vast majority of the benefits associated with the Final Rule stem from avoiding accidents in mainline passenger operations, whose aircraft carry hundreds of passengers. FSRIA at 138 (J.A. 3454). However, the accident history data cited by the FAA shows zero fatal accidents involving a mainline passenger aircraft in which fatigue was a factor. FSRIA at 68 (J.A. 3384). All of the fatigue-related accidents involving passenger operations in the FAA's ten-year study period supporting its cost-benefit analysis were commuter or regional passenger carriers in which the maximum fatalities were 50.

Under the cost-benefit analysis as defined by the FAA, therefore, there is no benefit to applying Part 117 to mainline passenger operations because there is no risk of a fatigue related accident. It is therefore arbitrary and capricious for the FAA to impose costs on mainline passenger operations in order to avoid accidents that under the FAA's analysis will never occur, but not to include all-cargo operators in the Part 117 despite the evidence that accidents will occur and despite the FAA's admission that the existing rules are inadequate to address the problems of fatigue.

IPA wants to be clear. It is not advocating that mainline passenger carriers be excluded from the Final Rule, or that the FAA tailor crewmember duty and rest

rules to each sub-segment of the industry. In fact, the full twenty-year history of accidents initially considered by the FAA shows that there were mainline passenger accidents in which fatigue was a causal factor. FSRIA at 68 (J.A. 3384). IPA argues that one set of rules should apply to *all* pilots, regardless of the commercial nature of the flight. The point IPA wants to emphasize is that the FAA has relied on a haphazard blend of science, costs and benefits, and risks to passengers to gerrymander a regulation that is not only arbitrary and capricious under the APA, but is contrary to the approach mandated by Congress in the Safety Act.

IV. REMEDY

IPA does not seek vacatur of the Final Rule because it does not want to unwind the Final Rule's safety improvements to passenger operations. IPA challenges *only* the FAA's decision to exclude all-cargo operations from the Final Rule. Final Rule at 330 (J.A. 2).

“The decision whether to vacate depends on the seriousness of the order's deficiency . . . and the disruptive consequences of an interim change that itself may be changed.” *Advocates for Highway & Auto Safety*, 429 F.3d at 1151 (quoting *Allied-Signal, Inc. v. Nuclear Regulatory Comm'n*, 988 F.2d 146, 150–51 (D.C. Cir. 1993)). This Court has held that when the rule as adopted is not in itself harmful, but “only that it does not go far enough,” the “final rule should be

