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# Safety Management Systems for Part 121 Certificate Holders (Docket Number FAA–2009–0671)

The Aircraft Electronics Association (AEA) appreciates the opportunity to comment on the FAA's proposal to mandate Safety Management Systems (SMS) for air carriers.

The Association represents more than 1,300 aviation businesses worldwide including repair stations, manufactures and operators. AEA membership also includes instrument facilities, manufacturers of avionics equipment, instrument manufacturers, airframe manufacturers, test equipment manufacturers, major distributors, and educational institutions.

While not representing air carriers directly covered by this regulation, the association submits these comments regarding the foundation of SMS in the anticipation of further rulemaking and later applicability of Part 5 and AC 120-92.

In general, the Aircraft Electronics Association objects to this proposal and DOES NOT support this rulemaking. While understanding the U.S. flag air carrier's need to have an ICAO complaint SMS option available within the FAA framework, this proposal is unbound, subjective with an undefined objective, and contrary to proper rulemaking. In addition, the Association finds the cost benefit analysis to be flawed and misrepresents costs and benefits of this proposal.

**International Harmonization.**

On page 68230 of the Federal Register (FR), the Agency cites the need for international harmonization with the International Civil Aviation Organization (ICAO) regarding the implementation of Safety Management Systems (SMS). The Association is disappointed with the Agency for this misleading representation of the "independent" ICAO mandate. In fact, the FAA played a key role in introducing and developing the system safety concept with includes the provision of SMS. The Agency's portrayal of this mandate as if it is completely governed by an independent international body (ICAO) is false and misleading to the American public and should be thoroughly reviewed by the Office of Management and Budget, Office of Information and Regulatory Affairs. This type of misleading information is unacceptable in rulemaking.

**Flowdown.**

The Association does support the Agency's proposal to limit flowdown to maintenance organizations under the provision of 145.205. While it is understood that an air carrier may require certain data from their maintenance providers, the idea of a contractual requirement to adopt an SMS program outside of the regulations would lead to each customer mandating a slightly different requirement, leading to serious financial impacts on the maintenance provider as

well as creating a serious human factors concern due to the variability in each customer' programs.

**The regulation as proposed is undefined.**

The proposal defines *Hazard* as "a condition that can lead to injury, illness or death to people; damage to or loss of a system, equipment, or property; or damage to the environment." And then further defines *Risk* as "the composite of predicted severity and likelihood of the potential effect of a hazard." However, the Agency fails to bind this definition. ICAO specifically lists the SMS mandate as a function of the larger National Aviation Authority's System Safety mandate within Annex 6, a portion of their regulations that applies to international commercial air service. Therefore, the bound of the definition of "hazard" is bound within the standards contained within Annex 6. On the other hand, by establishing an independent new Federal Aviation Regulation (FAR) Part 5, the FAA has chosen to be vague and misleading in their scope of an aviation hazards which will lead to misinterpretation and over regulations.

While SMS is defined and the elements of SMS are defined by the proposed Title 14 of the Code of Federal Regulations (CFR) Part 5, the Agency has failed to identify the necessary output of this exercise. When researching public Safety Management Systems (SMS), SMS is a "management system" which is intended to provide a path to corporate-wide system safety, similar to the path that Quality Management Systems (QMS) provide towards corporate quality objectives. But like QMS, without defining the intended safety output (goal), SMS is destined to fail. The regulation simply specifies the management process to reach the undefined safety goals of the organization. While the regulation, guidance and policy anecdotally speak beyond the background safety standards of Title 14 of the Code of Federal Regulations, without redefining the safety standards as a function of this proposal, the management system can only focus on the current safety regulatory standards.

Based on numerous public presentations made by senior FAA officials, as well as knowledgeable individuals within the Agency, one of the goals of SMS is to migrate the Agency's long held regulatory philosophy from an accident management philosophy to one of incident management philosophy. The AEA does not object to the need and benefit of evaluating and reacting to incidents in an effort to prevent accidents. However, in the accidents cited in the NPRM, the Agency has not accounted for its role in cross corporate responsibilities which will not be accounted for in mandating a management system at the corporate level. Without the Agency assuming the role of the umbrella organization over the industry to link incidents identified by one corporation that identifies a safety risk with another corporation or a safety risk whose responsibility is with another government agency, SMS will only be partially effective in addressing incidents. As an example, when a pilot identified questionable marking at an airport there is nothing within this proposal that would cause the airport authority to react to an incident identified through a airline pilot reporting program. As well, there is nothing within the proposal that would take an identification of a text error in a maintenance manual within one maintenance organization and disseminate the information throughout the affected maintenance industry. In order to maximize the effectiveness of SMS for the aviation industry, the FAA MUST become the umbrella organization of SMS and not simply mandate that individual companies adopt this management program.

The ICAO mandate starts with the State Aviation Authority's responsibility to assure that the regulations are built from a System Safety program and uses SMS as a tool at the local corporate level. The Agency has failed to integrate the industry mandate into the overall system safety

program or defined how the Agency intends to integrate the incident management elements of SMS into the overall aviation system safety program mandated by ICAO.

In addition, without defining the ultimate performance goal, the Agency's attempts to define cost-effective alternative paths which results in equivalent safety outputs for single silo small businesses is flawed and substantially incomplete. The agency has not defined the ultimate safety goal, but simply mandated the very administrative burdensome management system. There has been NO attempt by the agency to define an alternative management system that would provide equal safety results for small businesses without the multi-tiered organizational structure that system safety was originally designed for.

**SMS and Labor Agreements are not compatible.**

The accidents and incidents cited in the NPRM suggest that there are inherent risks in the negotiated labor agreements within the airlines. The FAA cited an accident in Buffalo that the scheduling of a low-time junior Captain with a low-time junior first officer contributed to the scenario that led to the accident. A complete program risk assessment and mitigation might lead a company to the conclusion that the practice of allowing seniority to be the determinant for scheduling is inherently more risky that requiring a junior captain to fly with a senior first officer and a junior first officer fly with a senior captain, which would be contrary to the negotiated labor agreement. Likewise, basic human factors studies have shown that the third shift (2200 – 0600) contains more risk than first shift (0800 – 1600), and, as a result, a risk assessment might show that senior mechanics and technicians should be assigned to the third shift and that junior technicians and new hires should be assigned to first shift. While both of these scenarios are contrary to most negotiated labor agreements, the FAA MUST address how a company should address conflicts that arise from risk mitigation strategies that are limited by labor agreements. If negotiated labor agreements take precedence over proper risk assessment and mitigation strategies, SMS had failed before it begins.

**SMS proposal as written will lead to differing interpretations.**

There is no way to objectively enforce this rule. The proposal mandates a Safety Management System, however does not define the safety goal that SMS is intended to achieve. As defined in the ICAO Annex 6 criteria, SMS is a path to enhance the overall industry System Safety mandate. The proposal does not assume this logical approach to SMS, but rather to propose and market SMS as a product in and of itself. As such, it must be assumed that without this lacking standard some inspectors will correctly assume that the standard of achievement is Title 14 of the Code of Federal Regulations. However, other ASI's may assume the arbitrary safety discussions contained in the FAA guidance and policy and the broad and unbound definition of hazard is de facto new standard. In addition, since the effectiveness of the SMS program is subjective, and the Agency has made no attempt to standardize its enforcement of this rule except for the basic training for ASIs, each operator will be subject to slightly different requirements augmented by the ASIs personal background or lack of background in SMS.

**AEA supports using SMS to implement incident management and in making regulatory strategic decisions.**

However, there are some significant issues that first must be resolved:

There is no standard for when the system has met the requirements, because the SMS is, by definition, a continuous cycle of hazard identification and risk assessment and mitigation.

This is a potential misallocation of resources because you spend resources trying to comply with the SMS program instead of trying to comply with the regulations. The program could lead to endless analysis of hazards which might rob resources from regulatory compliance efforts as well as safety improvement efforts.

This program has the potential to eviscerate the Administrative Procedures Act, as well as other statutes that affect regulatory compliance. FAA SMS personnel have made it clear in oral comments that mitigations will, at times, be expected to go beyond the scope of the current regulatory standards. This is clear from page 68227 of the NPRM, for example, which suggests that a company assumes unnecessary risk by using a Part 65 mechanic to obtain maintenance services, despite the fact that using a Part 65 mechanic for maintenance otherwise meets regulatory standards. Thus, it appears that SMS mitigations will impose new safety standards (on a company-by-company basis) which impose new requirements that are not described in the regulations, and that have not been vetted through the existing APA and other statutory protections normally associated with rulemaking.

As proposed, the public cannot have any faith that the FAA regulations are currently correct or valid and through a risk assessment, any and all regulations are open to interpretation and evaluation. This simply CANNOT be acceptable. The public must be able to assume regulatory compliance is an acceptable level of safety.

Take a roadway speed limit as an example. When the government establishes the speed limit, drivers are required to comply with that limit. Drivers are not expected to perform a formal risk assessment to reassess the speed limit and determine whether the speed limit is appropriate, not withstanding the fact that a prudent driver may drive more slowly in inclimate weather. There is no obligation for a driver to assume that there is an unnecessary risk inherent in the speed limit. They should be permitted to rely on the government's assignment of the speed limit as in normal circumstances should be permitted to continue to meet (but not exceed) the limit.

On page 68227 while describing the January 8, 2003, Air Midwest accident and how SMS might have been used to prevent this accident, the FAA suggests that current regulations are inadequate and that the company has the responsibility under SMS to evaluate a regulatory compliant company and determine if the regulations are adequate. Using the same logic, is a company permitted to use SMS as a justification for non-compliance with a regulation? If the SMS program identifies a safer way to do things – but the safer way deviates from the regulatory requirements – then can a company use its SMS program as a justification for deviation from the regulations? Is the company *required* to deviate from the regulations, or risk non-compliance with the SMS regulations? What does a company do if its SMS risk assessment shows that the regulation is outdated or no longer appropriate?

The proposal does not address how and when systematic risks are elevated to rulemaking rather than simply notifying the public though the Agency's various informal public communications mediums.

The Association suggests the Agency perform an extensive review of the regulations (as recommended by the ICAO SMS mandate) to see if they are adequate to address known or

reasonably identifiable hazards. Then SMS should be focused on regulatory compliance. If the SMS identifies a hazard that is outside the scope of the regulations, then it must be identified to the FAA, and the FAA must address it under their State Safety Program.

**The Cost-Benefit Analysis is flawed.**

The benefits analysis is based on the benefits to be realized from the implementation of mitigations. But the cost section does not examine the costs of those mitigations. This is a serious flaw that fails to compare apples-to-apples, because the benefits section assigns value to the benefits of mitigations that will be required by the rule but the offsetting costs section fails to assess the costs of any mitigation that will be required by this rule.

The *Regulatory Flexibility Determination* analysis is flawed because the proposal does not define what the intended goal of mandating SMS is, and therefore the proposal does not evaluate alternative methods of achieving the same goal. The Regulatory Flexibility Act of 1980 (Pub L. 96–354) (RFA) establishes ‘‘as a principle of regulatory issuance that agencies shall endeavor, consistent with the objectives of the rule and of applicable statutes, to fit regulatory and informational requirements to the scale of the businesses, organizations, and governmental jurisdictions subject to regulation.” The FAA estimates that there are approximately 90 Part 121 operators, of which 64 of these operators meet the definition of a small entity; therefore the FAA believes that there are a substantial number of small entities impacted by this rule.

ICAO defines SMS as a path toward and in support of system safety. The Regulatory Flexibility Act of 1980 (Pub L. 96–354) (RFA) mandates that the FAA not just evaluate a means of stuffing this behemoth major air carrier modeled pathway in a small business, but rather the Act mandates that the Agency evaluate other paths that will achieve the same safety outcome: a path towards and support of an appropriately defined incident management and strategic decision evaluation tool, i.e. system safety.

Many small companies do not have enough incidents to make SMS (as an incident-management tool) worthwhile. As such, there are not complex operations that will benefit from the overall system management tools contained within SMS. Therefore, the benefits cited in the NPRM by previously inefficient businesses will not be gained by well-run small businesses.

The Aircraft Electronics Association objects to this proposal and DOES NOT support this rulemaking. The Association does support the Agency’s proposal to limit flowdown to maintenance organizations under the provision of 145.205 as well as supporting the use of the tenants of SMS to implement incident management and in making regulatory strategic decisions.

AEA suggests that the Agency define the ultimate goal of SMS; and bind the definition of Hazard to those aviation safety hazards that the Agency already has authority over. The Agency must address how they will integrate identified systematic risks into the FAA’s overall rulemaking/regulatory program; the Agency must address how a company is suppose to find a compromise between negotiated labor which introduce an undesirable risk into company operations, such as employee scheduling; the FAA must recalculate the *Regulatory Flexibility Determination* focusing on the intended outcome and evaluating alternative paths to achieve this goal; and finally, the Agency must not attempt to expand SMS to other regulated entities until SMS has had a minimum of 5 years of experience as a regulated requirement in Part 121.

The Aircraft Electronics Association appreciates the opportunity to comment on this policy and looks forward to discussing these challenges further. Should you have any questions, please do not hesitate to contact us at (202) 589-1144 or e-mail at: ricp@aea.net.

Sincerely,

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