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March 31, 2003

Docket Management System
U.S. Department of Transportation
Docket number FAA-2002-13458
Room Plaza 401, 400 Seventh Street, SW.
Washington, DC 20590-0001.

SUBJECT: Proposed Rule: Corrosion Prevention and Control Program (CPCP)

Madame/Sirs;

The Regional Airline Association (RAA) submits the following comments on behalf of our membership (Attachment A).

RAA requests that the FAA withdraw the proposed rule.

The cost benefit analysis (Analysis) of this proposal is flawed and when "corrected" results in a negative benefit.

We all agree that prevention and control of structural corrosion is a critical safety component of every air carrier's maintenance and inspection program. At issue in responding to this proposal is whether the current maintenance and inspection programs in place for the affected operators are not adequate such that they should "re-certify" their program, begin a new baseline and/or otherwise completely revise their programs so as to conform to the standards provided by this proposal.

Every air carrier affected by this proposal currently has a "FAA approved" CPCP. It is an integral part of their maintenance and inspection program. The proposal noted that the FAA has issued CPCP Airworthiness Directives (ADs) for 11 airplane models and that the CPCP's mandated by these AD' are "of the kind that would be required by this NPRM". The Analysis confirms that the aircraft affected by the AD's would not incur any "additional costs" since they are already in compliance. The proposed rule provisions are similar in scope and content to those contained in the ADs. Also the referenced guidance material, AC 120-CPCP, in effect tells an operators how to conform to the standards provided by the ADs.

The preamble states "*The remaining 2,900 airplanes would be affected by this proposal in one manner or another, and as such would incur costs.*" RAA represents the majority of the air carriers who operate the "remaining 2,900 airplanes".

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The ADs were written to address the airworthiness issue relating to the 1988 Aloha accident. The first AD issued affected the early model Boeing 737 airplanes (AD 90-25-01). ADs were written for the early model Boeing, McDonnell- Douglas and the Airbus A300 airplanes because of their maintenance and inspection programs were similar to the program for the early model Boeing 737 airplanes. Such programs were based on ATA's Maintenance Steering Group Document 2 (MSG-2). MSG-2 was subsequently revised to MSG-3 to address specific corrosion detection inspection tasks, among other changes. For the last 10 years, the FAA have viewed the CPCPs for the later manufactured airplanes with MSG-3 maintenance and inspection programs as sufficiently robust since they never issued AD's for airplanes with MSG-3 programs. An air carrier's program has to be FAA approved before the newly delivered airplane could be placed into service; The air carrier cannot change the basic elements of the program without FAA approval.

In reviewing the docket comments, we notice that Transport Canada read the proposed rule and accompanying AC as suggesting that a aircraft that has a "*MSG-3 maintenance program does not fully comply with the type of CPCP as will be required by the rule".* A MSG-3, Revision 2 maintenance program contains basically the same requirements sought by the proposal yet there is no mention in the proposal that MSG-3, Revision 2 airplanes are in compliance with the proposal. Indeed the cost benefit analysis identifies the cost of compliance for MSG-3, Revision 2 compliant airplanes as substantial. Surely the FAA is under some obligation to comment why they now consider MSG-3, Revision 2 maintenance program as inadequate to the program proposed by this rule and mandated by the earlier ADs.

Similarly, earlier versions of MSG-3 airplane maintenance programs contained "environmental damage" tasks and thus were responsive to safety concerns regarding structural corrosion. Again we find nothing in the proposal to indicate why any or all versions of MSG-3 maintenance programs are not considered to be in compliance with the standards sought by the proposed rule. The only reference to how the FAA views a CPCP conducted in accordance with MSG-3 is in the cost benefit analysis in which a "development factor of .1" was created to describe the cost of compliance for "these newer models".

Indeed, very little is stated in the preamble to this proposal to describe the CPCP differences among the various airplane types. Why are the AD mandated programs viewed as satisfactory when the other equally robust programs are viewed as less than satisfactory? This lack of information makes it extremely difficult for us to adequately comment on the merit of this proposal. It is difficult for us to see what benefit this rule will provide for the traveling public when we know that current CPCP's for our members are already very effective. For someone outside the industry, their reading of the rule will likely lead them to believe that current CPCP's for 142 operators that are not mandated by CPCP AD's are inadequate to the point of being unsafe. One only has to review the entire service history in managing corrosion among the other fleet type operators to realize this perception is totally false.

The rule presented no data to respond to inquiries regarding the suitability of MSG-3 compliant maintenance and inspection programs other than to say that an estimate for their development cost is .1 or 10% the cost of a completely revised CPCP. Given the financial uncertainties in the

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industry today, we consider it inappropriate for the FAA to mandate even minor changes to a carriers CPCP without a demonstration of a positive benefit for making such changes.

The Cost Benefit Analysis is fundamentally flawed and when "corrected", results in a negative benefit.

The Analysis noted that it was "difficult to link (NTSB) incident and service difficulty reports (of corrosion) with observed or anticipated changes in accident or incident rates" and therefore created an "event tree" analysis to project "25-50 corrosion induced accidents over a 20 year period". The Analysis further assumed that the rule would be 40 to 80% effective leading to the conclusion that the benefit of the rule would be the prevention of 9 accidents (lower bound estimate). The analysis estimated the "average casualty count" from the 1,551 NTSB accident data to populate the "tree" and concluded that 1.6 fatalities per accident would be averted. The 1,551 accidents of course, are not accidents where corrosion was a casual factor. Some may be but there was no attempt by the Analysis writer to determine just how many of the 1,551 accidents had corrosion as a casual factor.

We reviewed the NTSB accident data involving fatalities on current regional/commuter airplanes from 1982 to present and found only one accident where corrosion was a casual factor; that was a 1984 accident of a Twin Otter in Tau Manua, a South Pacific Island and resulted in 1 fatality. We find it difficult to believe that 9 corrosion initiated accidents will occur in the future based upon NTSB accidents involving fatalities for the last 20 years, particularly since the South Pacific accident cannot be "counted" as a U.S. accident. However for the sake of discussion on what the Analysis considers in estimating a benefit, we will assume that 9 accidents involving 1.6 fatalities are "equivalent" to 1 accident involving 14.4 fatalities in the next 20 years; At issue is whether we should conclude that within the "remaining 2,900 airplanes", we will have a corrosion induced accident involving at least 14.4 fatalities within the next 20 years.

Since the "event tree" analysis is based upon the probability of occurrence, the Analysis estimated the total number of "take-offs and landings" for 1996 at 23.232 million, then excluded the aircraft already subject to the existing AD's and "discounted the number of operations for other overlapping directives and rules". This reduced the Analysis estimate on the number of 1996 flights to 7.151 million. For the year 2008, the Analysis adjusted the number of total flights upward to 9.133 million in order to accommodate a "projected growth rate". There was nothing in the docket to explain what was meant by "other overlapping directives and rules" nor "take-offs and landings".

RAA questions the Analysis data in determining the number of yearly operations. For 1996, ATA estimates the number of U.S. revenue aircraft departures at 8.23 million. Regional and commuter operations (Part 121 regional and Part 135 scheduled) accounts for 4.46 (of the 8.23) million departures. We recognize that Part 129 operations are also affected by this rule but the number of such operations is a small percentage of operations conducted by U.S. operators. Is the Analysis counting take-off and landing as separate occurrences and if so what is the rationale for doing this, particularly when the only accident cited, the Aloha accident, had structural damage during the cruise phase of flight?

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We also question whether the Analysis accounted for all the airplanes certificated to MSG-3 maintenance programs. The cost side of the equation recognized the value of an aircraft having a MSG-3 program as "one tenth of a full development cost" (.1 dev-factor) of re-certifying to a full "AD CPCP" standard but for the benefit side of the equation, we read the Analysis as assuming no benefit for operating newer aircraft with the latest CPCP's (MSG-3 compliant).

RAA requests that the "benefits" side of the Analysis be recalculated to further reduce the number of operations conducted by MSG-3 compliant airplanes by "nine tenths". We of course, can accurately project the growth rate of the regional fleet for newly delivered airplanes as compliant to MSG-3, Revision 2 standards by nearly 100%. Of the 2,901 aircraft affected by this rule, Table 1 of the Analysis list 1,820 airplanes as having a dev-factor of .1 (MSG-3 compliant). We think to be fair, the number of operations used to determine the probability of occurrence must be further reduced to account for the MSG-3 compliant airplanes. For example the Analysis reduced the estimate to account for the number of operations conducted in airplanes that have CPCP ADs to 7.151 million. Of the 2,901 airplanes that conducted the 7.151 million operations, 1,820 airplanes are MSG-3 compliant (.1 dev-factor). Based upon the cost side analysis we assume the FAA views the value of a MSG-3 airplane (when compared to a CPCP AD airplane) as 90% equivalent. Therefore (assuming equal number of operations in each fleet type) the "benefits" side of the Analysis should be reduced by 90% of the percentage of the remaining fleet

7.151 million operations for 2,901 airplanes minus [(1820/2901) 63% of 7.151 million operations times 90%] equals (7.151-4.055) million or 3.096 million operations.

If you look at the fleet types that are most affected by this proposal (Dev-Factor greater than .1) you will immediately see that they are the airplanes that operate at (yearly) flight frequencies significantly less than the airplane types that account for most of the 7.151 million operations in 1996. In other words you cannot assume that there are an equal number of operations in each fleet type since their mission varies greatly among the various fleet types. RAA estimates that for the remaining airplanes (airplanes with no CPCP AD's and those not in conformance with a MSG-3 maintenance and inspection program), the yearly number of operations should be reduced by at least one third. For the Analysis estimate of operations for 1996, the probability of occurrence for the "event tree" should be based upon approximately 2.096 million operations.

Further for the airplanes most affected by this proposal we are seeing a significant reduction in fleet size compared to the data presented by Table 1 of the analysis. The data used in the Analysis is now nearly nine years old. It is outdated. The Analysis assumption that there is a "project growth rate" for the regional/commuter fleet certainly does not apply for the airplane types most affected by this proposal. For example:

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Largest Model/ Groups with Dev-Factor greater than .1 (derived from Table 1 of Analysis)	**Fleet Size in 1996**	**Fleet Size in 2001**
Cessna 208	243	31
Beech 1900	178	154
DHC-8 Dash 8	143	166
Fairchild SA227	105	23
Bae Jetstream 31/32	102	36
Cessna 401/402	87	80
Piper 31 Navajo	66	64
Shorts 360 (cargo only)	53	66
DHC-6 Twin Otter	51	25
PBN Islander	32	15
Beech 99	27	2
Fleet Size Totals	1087	662

This too will greatly affect the number of operations projected for the 10/20 year period. As an example for 1996, the probability of occurrence for the "event tree" should again be adjusted downward. RAA estimates that if we use the Analysis numbers, the number of operations for 1996 at now approximately .8195 million (2.096 minus [662/1087] times 2.096 million).

By our analysis we determine that the frequency of operations most affected by this proposal (i.e. airplane type with CPCP's at the most risk) is substantially less than the frequency of operations used in the proposal's Analysis. If for example, we use the Analysis 1996 estimate for the number of operations at 7.151 million; we estimate the number of operations at much less than a million. The reduction in operations will greatly affect the probability of occurrence that a corrosion induced accident will occur in the fleet type considered out of compliance with the proposed CPCP standards. Using our analysis (which considers both the cost side and the benefits side in assessing risk) we would estimate the risk of having a corrosion induced accident involving at least 14.4 fatalities within the next 20 years as substantially less than one. Within the U.S. fleet, the service experience within the past 20 years would support our analysis. The relative newness of the regional fleet further supports our conclusion that the risks of having a future corrosion induced accident are significantly less than those presented by the proposal's Analysis.

The Cost Benefit Analysis makes no attempt to distinguish the smaller airplane CPCP's from the larger airplane types with AD mandated CPCP's.

What is particularly disturbing about this proposal and cost benefit analysis is that it uses accident and SDR data from very large airplane types to justify the expenditure of a program that affects primarily the smaller airplane types. There was no attempt to demonstrate that the corrosion findings found in the large airplanes are comparable to findings found in the smaller airplane fleets (more importantly the effectiveness of the CPCPs used to find the corrosion). While we recognize that corrosion can and does exist between both fleets, surely the FAA is under some obligation to show that the maintenance and inspection programs for the airplane

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types that incur the greatest cost of this regulatory change pose a greater risk of susceptibility to corrosion than the examples given. There simply was no comparison made between the various maintenance and inspection programs. Why should we assume that the AD mandated CPCP's are any more effective than the current CPCP's used by operators for the smaller airplane fleets when there is no service experience cited nor any analysis provided to substantiate the proposal?

The only reference to a corrosion induced accident is the 1988 Aloha accident in a Boeing 737 airplane. Many will contend that this accident was caused primarily by structural damage fatigue and not corrosion. Regardless, it simply doesn't make sense to describe the safety concern over corrosion for the airplane types unaffected by the proposal and then to propose a rule affecting other airplane types without some discussion on the relevance of the effectiveness of the current CPCP's for the airplanes most affected by the proposal.

The proposal is unclear as to the relevance of the Service Difficulty Reports review.

The proposal notes that a *"review of the annual total of the number of SDR's involving corrosion over a subset of airplanes provides a sense of the magnitude of the problem."* The "subset" reviewed though were the airplanes that are unaffected by the proposal (i.e. all the "subset" airplanes are already in compliance). Further, the years selected for the review were largely the years AFTER the CPCP AD's were issued affecting the airplanes in the subset (The Boeing AD's were issued in mid 1990, the McDonnell Douglas AD's were issued in mid-1992, and the Airbus AD was issued in 1994). The SDR study reviewed the findings of corrosion found on airplanes already in compliance with the proposed rule. What is the relevance of this study? Is it to show that operator's already in compliance with the proposed rule will find more corrosion because their inspection programs are more effective? If that is indeed the rationale for the SDR study, how does it correlate to corrosion findings on airplanes that are considered out of compliance with the proposed rule? Will the airplanes out of compliance with the proposal have more or less findings of corrosion than the airplanes in compliance? The proposal provides absolutely no data to substantiate the safety objective sought by the proposal.

The proposed rule should account for the significant economic impact that this rule has on the small number of entities.

The Regulatory Flexibility (Reg Flex) Analysis states that adoption of this proposal would have a significant impact on a substantial number of small entities. The Reg Flex noted that the program costs would be "prohibited" for 11 airplanes models operated primarily by small entities and simply reduced their value by 50% in determining the cost of this proposal. Presumably the 50% cost reduction is the scrap value of the airplanes removed from service. In describing the "alternatives" to what is proposed, the FAA noted one alternative was to "rely on the existing corrosion maintenance and inspection programs but that they have determined that existing programs have not always resulted in a comprehensive and systematic CPCP for either transport, commuter, or small category airplanes". RAA considers the FAA "determination" as vague. Certainly there was nothing in the preamble or in the Analysis to suggest that the FAA has made any attempt at all to determine the effectiveness of the current CPCP's for small airplanes. The only determinations referenced by the proposal were on large transport category airplanes which are unaffected by the proposal because the fleets are already in compliance.

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The FAA also noted that inaction (to exclude small entities) would not respond to the requirements of the "Aging Aircraft Act". Late last year, the FAA adopted a rule [Docket No. FAA-1999-5401; Amendments. Nos. 119-6, 121-284, 129-34, 135-81, and 183-11] that requires all airplanes operated under FAR Part 121, U.S.-registered multiengine airplanes operated under Part 129, and multiengine airplanes used in scheduled operations under 14 CFR part 135 to undergo inspections and records reviews in response to all requirements of the "Aging Aircraft Act". We do not understand the FAA's rationale in determining why the proposed rule is also required to respond to the "Aging Aircraft Act". It seems to us that this would be a duplicative effort and therefore unnecessary.

If our request to withdraw the proposed rule is denied, then RAA requests that before a final rule is adopted, the FAA provide another opportunity to comment on the proposal after the FAA's prepared response to docket comments is available. If necessary, the opportunity to comment could be confined solely to the discrepancies in the Analysis.

We found the proposal and Analysis so confusing in content that it was difficult for us to adequately respond to the docket. The Analysis referenced a document prepared by GRA and stated that it was filed in the docket but none was found. We also consider the data in which the analysis is based is completely outdated, adding to our inability to adequately respond to the docket.

In summary, RAA requests that the FAA withdraw the proposed rule because the proposed rule cannot be cost justified. If our request to withdraw the proposed rule is denied, then RAA requests that before a final rule is adopted, the FAA provide another opportunity to comment on the proposal after the FAA's prepared response to docket comments is available.

Attachment B provides the comments of one of our members. Your consideration of our comments and the comments of our members is appreciated.

Sincerely,

David Lotterer
Vice President - Technical Services

Attachments

Attachment A:

Company	**City, State**
Aeromar *	Mexico City, DF
Air Canada Jazz*	Enfield, Nova Scotia, Canada
AirNet Systems	Columbus, OH
Air Serv	Redlands, CA

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Air Wisconsin	Appleton, WI
Allegheny	Middletown, PA
Alpine Aviation	Provo, UT
American Eagle	Dallas, TX
Atlantic Coast Airlines	Dulles, VA
Atlantic Southeast (ASA)	Atlanta, GA
Big Sky Airlines	Billings, MT
Boston-Maine Airways	Portsmouth, NH
Cape Air	Hyannis, MA
Chautauqua Airlines	Indianapolis, IN
Chicago Express	Chicago, Il.
Colgan Air	Manassas, VA
Comair	Cincinnati, OH
CommutAir	Plattsburgh, NY
Continental Express (aka ExpressJet)	Houston, TX
Corporate Air	Billings, MT
Corporate Airlines	Smyrna, TN
Empire Airlines	Coeur d'Alene, ID
ERA Aviation	Anchorage, AS
Executive Airlines	Farmingdale, NY
Federal Express (commuter ops)	Memphis, TN
Grand Canyon Airways	Grand Canyon, AZ
Great Lakes Aviation	Bloomington, MN
Great Plains Airlines	Columbia, MO
Gulfstream International	Miami Springs, FL
Horizon Air	Seattle, WA
IBC Airways	Miami, FL
Island (Aloha) Air	Honolulu, HI
Lookout Mountain Airways	Knoxville, TN
Lynx Air International	Fort Lauderdale, FL
Mesa Airlines	Phoenix, AZ
Mesaba	Minneapolis, MN
Midway Airlines	RDU Int'l Airport, NC
New England Airlines	Westerly, RI
North-South Airways	Atlanta, GA
Pace Aviation	Winston-Salem, NC
Piedmont Airlines	Salisbury, MD
Pinnacle Airlines	Memphis, TN
PSA Airlines	Vandalia, OH
Salmon Air	Salmon, ID
Scenic Airlines	N. Las Vegas, NV
Seaborne Airlines	US Virgin Islands
Shuttle America	Windsor Locks, CT
Skyway Airlines	Oak Creek WI
Skywest	St. George, UT

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Sunworld Int'l Airlines	Ft. Mitchell, KY
Trans States	St. Louis, MO
Virginia Airways	Chesapeake, VA
Walker's Int'l	Ft. Lauderdale, FL

* foreign based air carrier

Attachment B

It is our opinion that the aircraft OEM should incorporate the requirement of the proposed CPCP program into the MPD and MRB.

The Advisory Circular that was initially issued pertained to large transport category aircraft. These large aircraft operate in a unique environment that regional aircraft are not exposed to i.e. (greater pressure differentials due to higher altitudes) and regional carriers tend to have younger fleets.

The proposed CPCP program was cobbled together as an after thought of the FAA and the industry when they discovered that the MPD and the MRB did not adequately address the inspection requirements of older aircraft. Many years have past since the Aloha incident, and we would expect the OEM's to have learned from the past and incorporated CPCP requirements into the MPD and MRB. Currently our fleet types have corrosion inspections incorporated into the MPD, we should expect the OEM's corrosion inspections to address the requirements set forth by the Administrator and we need to challenge the Administrator to define were the deficiencies are in the current process. We feel there should be an accurate assessment of the current situation to identify and resolve the issues at the OEM level in a comprehensive format, instead of imposing a program that is outdated and cobbled together on the regional operators.

To require the individual operators to develop and gain approval of a CPCP program will burden our already troubled industry. The proposed AC circular spells out the requirements of a CPCP manual, tracking system, reporting system, and other requirements that will cost our industry significant monies. One such cost would be changing / purchasing of various computer systems to accommodate these requirements.

The other concern with an individualize CPCP program for each carrier is the inconsistencies between PMI's, we would attain a greater level of safety with one consistent program across the industry.

A RAA member