

Aircraft Fleet Recycling Association Best Management Practices

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Aviation Safety and the Environment

AFRA is a Leading Voice for Industry



- 69 companies from 18 countries + territories
- Best Management Practices & Cutting Edge Recycling Technology Collaboration
- Improving industry safety, environmental responsibility and sustainability
- Goal of improving recyclability of current fleet



Collaboration is key to success

AFRA Members Recycle Today! ... and seek more solutions for tomorrow

■ More than 150 planes / yr

Current scrapping rate:

- 54% are 737 / MD80 / A320 size
- 12% are 757 / 767 / A330 size
- 15% are 747 / 777 / DC10 / A340 size
- More than 30,000 tons aircraft aluminum recycled / yr
- More than 1,800 tons aircraft specialty alloys recycled / yr
- More than 600 tons of parts returned safely to service / yr





AP photo

Challenge: ~5M tons/yr glass/aramid interiors are still going to land fills



AFRA BMP history:

- •2006: Charter with 11 founding members from 3 countries
- •2007: Strategic alignment with Aviation Suppliers Assoc and AFRA signed and AFRA incorporation as a trade association
- •2009: Aircraft Disassembly Best Management Practice (BMP) ... 1st AFRA Accreditations
- •2012: Aircraft Recycling BMP (2nd best management practice and 2nd accreditation program)
 - Main focal points for BMPs are management processes designed to facilitate airworthiness and environmental compliance and safety

•2013: The two BMPs are merged into one (April 22, 2013 – rev. 3.0)

Steady Growth and Accomplishment



AFRA BMP Notes:

- •23 companies AFRA accredited (accredited companies found in Canada, Luxembourg, Netherlands, South Africa, UK, and the US)
- Cathay Pacific and ANA each specified AFRA Accreditation as a valid measure of environmental competence for their fleet disassembly contracts

Enhancing Safety And Environmental Compliance

Aircraft Fleet Recycling Association Best Management Practice – Common Elements



■ARTICLE I – OVERVIEW

- ARTICLE II DEFINITIONS AND BMP SYSTEM REQUIREMENTS
- ARTICLE III FACILITY (including infrastructure & management process)
- ARTICLE IV TRAINING

■ARTICLE V – DOCUMENTATION & RECORDS

- ■ARTICLE VI TOOLING
- ARTICLE VII PARTS AND MATERIALS MANAGEMENT DURING PROCESSING
- ARTICLE VIII ENVIRONMENTAL PROTECTION
- ARTICLE IX ACCOUNTABILITY TO THE CUSTOMER

Aircraft Fleet Recycling Association Best Management Practice – Disassembly Elements



ARTICLE III – FACILITY (including infrastructure and management process)

ARTICLE V – DOCUMENTATION & RECORDS

■ARTICLE IV – TRAINING

ARTICLE VIII – ENVIRONMENTAL PROTECTION

Aircraft Fleet Recycling Association Best Management Practice – Recycling Elements



ARTICLE III - FACILITY (including infrastructure & management process)

ARTICLE IV – TRAINING

ARTICLE V – DOCUMENTATION & RECORDS ARTICLE VII – PARTS AND MATERIALS MANAGEMENT DURING PROCESSING

ARTICLE VIII –
ENVIRONMENTAL
PROTECTION 25

Aircraft Fleet Recycling Association Best Management Practice – Appendices



APPENDIX ONE: Best Practice Advisory Guidance

- Practice Guides and
- Minimum Standards
- APPENDIX TWO: Disassembly Best Practice Auditing Guidance
 - Audit Checklist

- APPENDIX THREE: Recycling Best Practice Auditing Guidance
 - Audit Checklist
- APPENDIX FIVE: Best Practice Contracting Guidance for Disassembly Facilities
 - Contract Element Checklist

Why Merge the Two AFRA BMPs?



Merger Benefits:

- •Highlights the relationship between the two BMPs
- Encourages accredited companies to become familiar with the other standard
- •For companies implementing both disassembly and recycling, the systems integration is more obvious

Steady Growth and Accomplishment

Be part of the solution



Industry Leaders Making History foin US As we define the future

www.AFRAassociation.org

AFRA Accredited Companies

AELS (Aircraft End of Life Solutions (Netherlands) AerSale (US) Air Salvage International (UK) Aircraft Demolition (US) Ascent Aviation Services (US) Bombardier (US / Canada) Bonus Tech (US) eCube Solutions (UK) ELG Metals (US) Evergreen Trade (US) GECAS (US) Huron Valley Fritz West (US) JMV Aviation (Luxemburg) Magellan Group (US + Ireland) MD Turbines (US) Orange Aero (UK) Pacific Aerospace Resources & Technologies (US) Robert Gibbs Co (UK) Southern California Aviation (US) Stewart Industries (US) Universal Recycling (S. Africa) Valliere Aviation Group (Fr) VAS Aero Services (US)