

Engine/APU Halon Replacement Industry Consortium – Halon Alternatives for Aircraft Propulsion Systems (HAAPS)

22 October 2015

*INTERNATIONAL AIRCRAFT SYSTEMS FIRE PROTECTION WORKING GROUP
MEETING*

Atlantic City, New Jersey, U.S.A.

By

Alan Macias (Boeing – BCA)

In Review...Industry is leading a broad stakeholder approach

The consortium will . . .

- Define common non-halon fire extinguishing solution(s) for use in engine/APU fire zones that...
 - is compliant to basic industry and regulatory requirements
 - meets multiple OEM (airframe, engine, APU, nacelle, etc.) requirements
 - meets multiple governmental agency regulatory requirements;
 - provides a viable business solution for Consortium partners; and
 - is production-ready
- Engage...
 - Primary Stakeholders = Airframer OEMs
 - Members = Firex Agents/System Suppliers, Airlines, engine companies, nacelle suppliers, airworthiness authorities, etc.
 - A focal point, facilitator & fiscal/contracting “Managing Entity” (ME)

Ohio Aerospace Institute (OAI) Selected 1 Oct. 2014 as ME

- Services Agreement signature initiated activities to form the Halon Alternatives for Aircraft Propulsion Systems (HAAPS) consortium
- Signatories: OAI and founding OEM Airframers (Airbus SAS, The Boeing Company, Bombardier Inc., Embraer S.A., Textron Inc.)

In Review...Executing to a Plan

- Phase I – initial engagement, confirm interest, launch consortium formation activities, engage ME, business & working together agreements
- Phase II – develop technical statement of work (requirements, performance validation, down selection criteria, certification path, suppliers requests for proposal, etc.)
- Phase III – execute activities required to produce the solution(s)

Consortium Proposal to Industry

IASFPWG Meeting, Cologne, Germany;
(HARC) sponsored Aviation Stakeholder's
Meeting Chicago, Illinois, U.S.A.

ICAO 38th Session Assembly

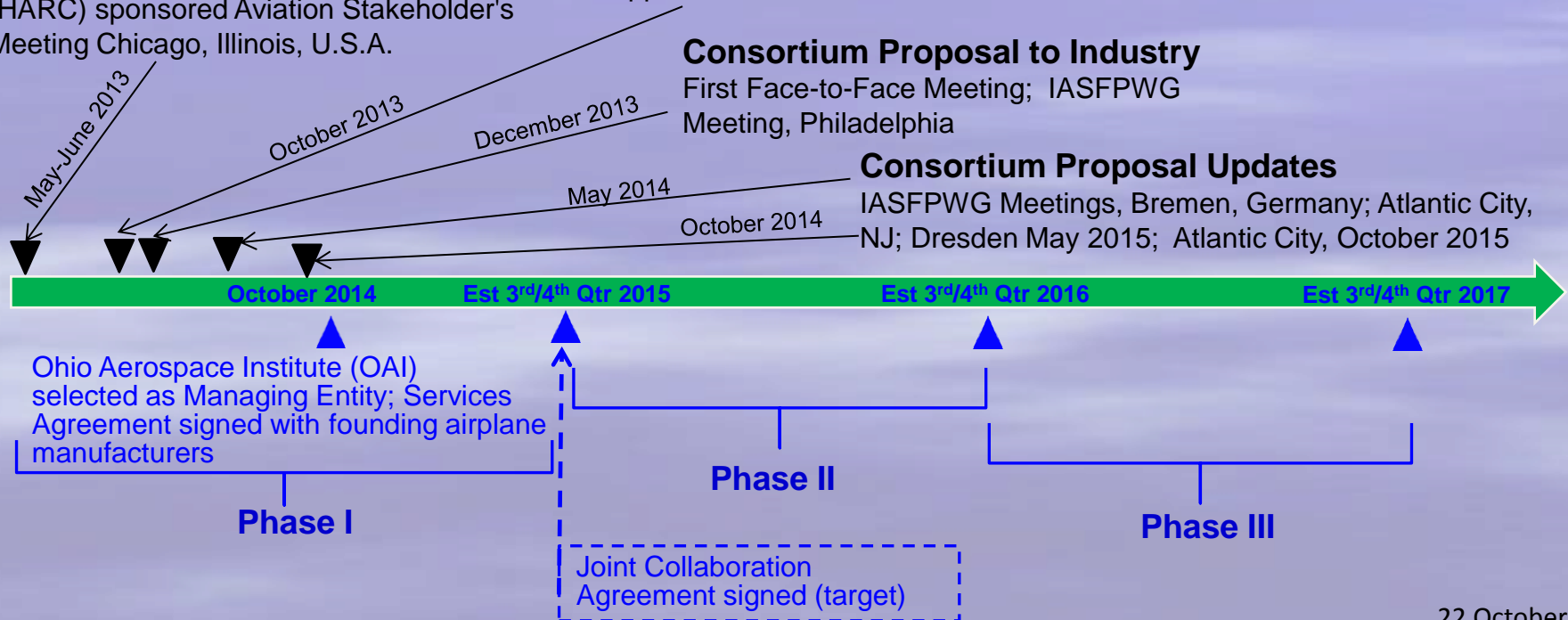
Support of consortium commitment

Consortium Proposal to Industry

First Face-to-Face Meeting; IASFPWG
Meeting, Philadelphia

Consortium Proposal Updates

IASFPWG Meetings, Bremen, Germany; Atlantic City,
NJ; Dresden May 2015; Atlantic City, October 2015



Phase I is Nearing Completion

- HAAPS Joint Collaboration Agreement (JCA) Final Draft in Review
 - Primarily a working together agreement between air framers and OAI:
 - Administration and governance rules
 - Proprietary data sharing & protection
 - Intellectual Property protection & ownership
 - Member rights, benefits, integration
 - Cost & resource sharing
 - Etc.
 - Draft is in review at founding air framers OEMs & OAI
 - Goal to sign JCA before the end of 2015
- JCA Approval by OAI and Founding Airframers Enables Next Steps
 - Start of Phase II
 - Development of Industry and Advisor Member agreements
 - Development & transmittal of solution(s) requests for proposals from industry members

HAAPS Stakeholder Outreach and Engagement

- An Invitation to...
 - Governing Members
 - Air framers
 - Industry Members
 - Fire Extinguishing Agent/System OEMs, Airlines, engine companies, nacelle suppliers, etc.
 - Advisor Members
 - Airworthiness and other regulatory authorities, etc.
 - All interested parties are welcome and encouraged to contact OAI to explore participation
- Engagement - 23 October 2015 HAAPS Stakeholder Face-to-Face Meeting
 - Consortium Overview & Participation
 - HAAPS structure, operating rhythm
 - Member involvement and roles, formal participation agreements, and involvement timing
 - Please join us tomorrow following the Cargo Compartment Halon Replacement Working Group's stakeholder face-to-face meeting

HAAPS Stakeholder Face-to-Face Meeting

October 23, 2015 Agenda

Objectives

- Reinitiate Wider Industry Coordination
- Familiarize Stakeholders on HAAPS Operations
- Coordinate Next Steps for Stakeholder Participation

Agenda

9:45 am

Introductions (All)

9:55 am

Overviews (OAI & Founding OEM Airframers)

- Ohio Aerospace Institute – A Brief Résumé
- HAAPS Structure & Operating Rhythm
- Member Involvement and Roles
- Look Ahead
 - Governing & Industry Member Participation
 - Timing
- Other?

10:30 am

Questions & Answers (All)

11:30 am

Adjourn – no later than noon

Contacts, Announcements & History

- Ohio Aerospace Institute (OAI) <http://www.oai.org/>
 - Carol Cash, HAAPS Project Manager CarolCash@oai.org, Phone: 440-962-3073
- OAI's HAAPS Press Release
 - <http://www.oai.org/docs/Final-Approved-HAAPS-Press-Release-2015-01-26.pdf>
- ICCAIA Support of HAAPS Consortium
 - http://www.aia-aerospace.org/sectors/civil_aviation/news/iccaia_supports_international_consortium_seeking_alternatives_to_halon_fire
- IASFPWG Meeting, Cologne, Germany, May 22-23, 2013 – Consortium Proposal
 - <https://www.fire.tc.faa.gov/pdf/systems/May13Meeting/BennettMacias-0513-ICInterestEgineAPU.pdf>
- Halon Alternatives Research Corporation (HARC) sponsored Aviation Stakeholder's Meeting Chicago, Illinois, U.S.A., 11 June, 2013 – Consortium Proposal
- 2013 ICAO Assembly recognized consortium commitment , Resolution 31/1: Halon replacement ([link](#))
- IASFPWG Meeting, Dresden, Germany, May 2015*
 - <https://www.fire.tc.faa.gov/pdf/systems/May15Meeting/Bennet-0515-EngineAPUHalon.pdf>

* Only most recent IASFPWG update of HAAPS activities is listed here.

Thank you!