FAA Screening Information Request (SIR)

Unleaded Avgas

Presented to: ASTM Aviation Fuel Subcommittee
By: FAA Fuels Program Office, AIR-20
Date: December 9, 2013
Background

• FAA SIR DTFACT-13-R-00015
• Issued June 10, 2013
• Purpose:
  – to solicit candidate unleaded avgas formulations for testing to identify the most viable replacements for the existing 100LL avgas with the least impact on the existing fleet of piston aircraft and fuel availability.
Background

• SIR Revised December 6, 2013
  – Added Appendix 2
    • Pre-Screening Data Submission Template
  – Feasibility Assessment Limited to USA Only
  – FAA Option to Request More than 10,000 gals for Phase 2
• See Next Slide
How to Find New SIR Revision

https://faaco.faa.gov/index.cfm/announcement/view/15435
How to Find New SIR Revision

https://faaco.faa.gov/index.cfm/announcement/view/15435
How to Find New SIR Revision

https://faaco.faa.gov/index.cfm/announcement/view/15435
SIR Test Plan

Pre-Screening Phase

Step 1 Evaluation

PASS

Rejected

Selected Offerors

Offeror

Pre-Screening Data

Phase 1 (Fuel Testing)

Phase 2 (Equipment Testing)

Testing at FAA Tech Center

Selected Offerors

100 gals of fuel each

10,000 gals of fuel each

CRADA

PASS

Rejected

Phase 1 Data

Phase 2 Data

Federal Aviation Administration

FAA Fuels Program Office, AIR-20
December 9, 2013
Pg 27, Section L.4.d: (2) **Date and Time:** Pre-Screening data submittals shall be submitted not later than 4 pm, local time on 7/1/2014. All Pre-screening data must be included in one report, using the template provided in the template attached as Attachment II. Pre-screening data packages shall be submitted as described in Section L.5.
Instructions (Section L)

• Pre-Screening Data Requirements for Admission into Phase 1
  – Contact Info
  – MSDS
  – ASTM Test Spec
    • Appendix 1 Provides Requirements for Alternative Spec
  – Preliminary Feasibility Assessment
    • Production & Distribution
    • Environmental & Toxicology
    • Business Plan
  – Data Requirements
    • Factor 1: Fuel Properties and Performance
    • Factor 2: Fuel Deployment Feasibility
  – Appendix 2 Provides Pre-Screening Data Submission Template
Step 1 Evaluation (Section M)

• Pre-Screening Data Evaluation for Admission into Phase 1
  – Fuel Properties and Performance
  – Fuel Deployment Feasibility

• Conducted by FAA Technical Evaluation Committee (TEC)
Step 1 Evaluation (Section M)

• FAA Response (Pg 34, Section M.3)
  – After review of the pre-screening fuel data in accordance with Step 1 above, the FAA will respond to offerors in one of three ways:
    • 1) Requesting that the offeror provide 100 gallons of unleaded avgas fuel in specified batches formulated to span the compositional range of the fuel specification in the offeror’s pre-screening fuel data for Phase I testing and request that the offeror enter into an OTA that defines the Phase I test program and the composition and volumes of the batches that comprise the 100 gallon requirement.
    • 2) Recommending that the offeror submit a revised pre-screening fuel data package with certain changes made or conditions met.
    • 3) Notifying the offeror that the pre-screening fuel data does not support admittance into the Phase 1 testing program.
The FAA may select some of the fuels associated with the pre-screening data for Phase 1 fuel testing in accordance with section M no later than September 1, 2014.

Pg 27, Section L.4.d (2):
Pg 30, Section L.5:

Fuel Delivery Requirements for Phase 1 Testing Upon Completion of Pre-Screening Data Review

If requested by the FAA, offerors shall deliver 100 gallons of unleaded avgas fuel for Phase 1 testing in specified batches formulated to span the compositional range of the fuel specification and meeting the fuel property and performance requirements specified in the offeror’s pre-screening fuel data. This fuel shall be delivered in accordance with arrangements made with the FAA William J. Hughes Technical Center. Fuel submissions for Phase 1 testing must be made not more than sixty (60) working days after the date of the request.
Instructions (Section L)

• Phase 1 Test Data Requirements for Admittance into Phase 2 Testing
  – The offeror must provide an ASTM International avgas test specification and the associated research report (not later than 6 months after Phase 2 selection)
  – The offer may provide an update to the preliminary feasibility assessment (not later than Dec 31, 2015)
  – The FAA will provide the data produced from the Phase 1 testing.
  – Data Must Address Following:
    • Factor 1: Fuel Properties and Performance
    • Factor 2: Fuel Deployment Feasibility
Step 2 Evaluation (Section M)

• Step 2: Phase 1 Data Evaluation for Admission into Phase 2
  – Fuel Properties and Performance
  – Fuel Deployment Feasibility

• Conducted by FAA Technical Evaluation Committee (TEC)
Step 2 Evaluation (Section M)

- FAA Response (Pg 35, Section M.3)
  - After review of the Phase 1 test data, the ASTM avgas test specification and associated research report, and the updated preliminary feasibility assessment (if provided), in accordance with Step 2 above, the FAA will provide the Phase 1 test data and respond to offerors in one of two ways:
    - Requesting (1) that the offeror provide 10,000 gallons of unleaded avgas fuel in specified batches formulated to span the compositional range of the fuel specification in the offeror’s pre-screening fuel data for Phase 2 testing and (2) that the offeror enter into an OTA that defines the Phase 2 test program and the composition and volumes of the batches that comprise the 10,000 gallon requirement. Additional fuel may be required depending on the extent of Phase 2 testing required.
    - Notifying the offeror that the Phase 1 fuel data does not support admittance into the Phase 2 testing program.
Federal Aviation Administration

June 10, 2013 FAA SIR Issued

July 1, 2014 Pre-Screening Data Due

Sept 1, 2014 FAA Requests 100 Gals Fuel

Pre-Screening Phase

Step 1 Evaluation

PASS

CRADA

Rejected

Offeror

Pre-Screening Data

Selected Offerors

Testing at FAA Tech Center

Phase 1 (Fuel Testing)

Step 2 Evaluation

PASS

Phase 1 Data

Selected Offerors

Phase 2 (Equipment Testing)

100 gals of fuel each

Pg 27, Section L.4.d (2):
The FAA may select some of the Phase 1 fuels for Phase 2 testing in accordance with Section M, no earlier than March 31, 2015.

The FAA reserves the right to request 10000 gallons of unleaded avgas fuel from selected Phase 1 fuel data submittals for the purpose of developing Phase 2 test data for that fuel until January 30, 2016. Additional quantities may be required depending on required extent of Phase 2 testing.

Mar 31, 2015 to Jan 30, 2016 FAA Requests 10,000 Gals Fuel

Nov 1, 2014 Offeror Delivers 100 Gals Fuel

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December 9, 2013
Pg 34, Section L.5:

Fuel Delivery Requirements for Phase 2 Testing Upon Completion of Phase I Testing
If requested by the FAA, offerors shall deliver 10,000 gallons of unleaded avgas fuel for Phase 2 testing in specified batches formulated to span the compositional range of the fuel specification and meeting the fuel property and performance requirements specified in the offeror’s pre-screening fuel data. The fuel shall be delivered in accordance with arrangements made with the FAA William J. Hughes Technical Center. Fuel submissions for Phase 2 testing must be made not more than six months after the date of the request. The FAA reserves the right to request additional fuel if required, depending upon the extent of the Phase 2 testing required.
June 10, 2013 
FAA SIR Issued

July 1, 2014 
Pre-Screening Data Due

Sept 1, 2014 
FAA Requests 100 Gals Fuel

Pre-Screening Phase

Step 1 Evaluation

Pass

Rejected

Selected Offerors

Offeror Delivers 100 Gals Fuel

Sept 30, 2015 to Jul 30, 2016
Offeror Delivers 10,000 Gals Fuel

March 31, 2015 to Jan 30, 2016
FAA Requests 10,000 Gals Fuel

Testing at FAA Tech Center

Phase 1 (Fuel Testing)

Phase 2 (Equipment Testing)

Sept 1, 2014 
FAA Requests 100 Gals Fuel

Nov 1, 2014 
Offeror Delivers 100 Gals Fuel

Offeror Delivers 10,000 Gals Fuel

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December 9, 2013
FAA SIR Feeds Data to ASTM/FAA Processes

FAA Centralized Certification

Fleetwide Approval

FAA SIR Feeds Data to ASTM/FAA Processes

Pre-Screening Phase

FAA Centralized Certification

Phase 1 & 2 Data

ASTM Review & Balloting

Testing at FAA Tech Center

Phase 1 (Fuel Testing)

Phase 2 (Equipment Testing)

ASTM Review & Balloting

Test Spec

Production Spec

Fuel Offeror

ASTM

Certification

100 gallons of fuel each

10,000 gallons of fuel each

100 gallons of fuel each

FAA Fuels Program Office, AIR-20
December 9, 2013