



COORDINATING RESEARCH COUNCIL, INC.

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February 25, 2026

In reply, refer to:

CRC Project No. AV-36-25

Dear Prospective Bidder:

The Coordinating Research Council (CRC) invites you to submit a written proposal to provide services for “CRC Aviation Fuel Properties Handbook 5th Edition” (CRC Project No. AV-36-25). A description of the project is presented in Exhibit A, “Statement of Work.”

Please indicate your intention to bid at [THIS LINK](#) on or before **March 11, 2026** if you or your organization intends to submit a written proposal for this research program. CRC will answer technical questions regarding the Request for Proposal if they are submitted in writing at least one week before the proposal submission deadline here [Q & A LINK](#). CRC will then return written answers to all of the bidders, along with a copy of the original questions. Questions submitted within a week of the deadline may not be answered before the proposal submission deadline.

A CRC technical group composed of industry representatives will evaluate your proposal. CRC reserves the right to accept or reject any or all proposals.

The reporting requirements will be monthly progress reports and a summary technical report at the end of the contractual period. The reporting requirements are described in more detail in the attachment entitled “Reports” (Exhibit B).

Key contract language examples are presented in Exhibits B, C, D, and E. CRC must adhere to standard contract language with minor adjustments only in extraordinary circumstances. **Failure to agree to these contract clauses as written may result in the project being awarded to another contractor.**

Important selection factors are listed in Exhibit G. CRC evaluation procedures require the technical group to complete a thorough technical evaluation before considering costs. After developing a recommendation based on technical considerations, the costs are revealed and the recommendation is modified as needed.

The proposal must be submitted as two separate documents. The technical approach to the problem will be described in part one, and a cost breakdown that is priced by task will be described in part two. The cost proposal document should include all costs associated with conducting the proposed program. The technical proposal should not be longer than 10 pages in length (not including resumes). **The schedule / timeline information must be included in the technical proposal; failure to do so may result in your proposal being set aside as non-responsive.**

CRC expects to negotiate a cost-plus fixed fee or cost reimbursement contract for the research program.

The technical and cost proposals should be submitted to:
Christopher J. Tennant Email: ctennant@crcao.org

The deadline for receipt of your proposal is **March 25, 2026**.

EXHIBIT A

Statement of Work

CRC Aviation Fuel Properties Handbook 5th Edition

Background

The CRC Aviation Fuel Properties Handbook, CRC Report Number 663, has been a staple in the arena of fuel properties for decades. As aviation fuels have evolved and the industry grown, improvements in analytical methods have allowed an even greater insight into fuel physical and chemical attributes. During this time, the CRC has worked to update the Handbook with data and text to remain representative and relevant to the chemists and engineers who use it. The current (4th) edition was released in 2014 and represented a significant revision in content and upgrade in production.

It is time again to update the Handbook to reflect more contemporary data, to respond to user requests, and to address concerns with some content. Over the past three years, the CRC Publications committee has developed a list of goals for content improvement which will be incorporated into the forthcoming 5th edition. This is not a request for a total revision of the manuscript, but rather a list of targeted improvements. The focus of the program and funding it to add new data which is already available, rather than on technical projects to develop further data.

Scope

To progress development of the Handbook 5th edition, the CRC Aviation Steering Committee is requesting Offers from the industry to achieve 10 goals listed as a series of work packages. Ideally, a single organization would seek to meet all objectives or act as the primary contractor supported by a series of subcontracting organizations. However, it is recognized that the listed goals require a breadth of expertise which may or may not be held by a single person or organization. Under these circumstances, the CRC will also entertain proposals which only address individual goals, groups of goals, or other contractual arrangements to achieve the goals. In such a case, the CRC Publications committee and/or a general contractor will consolidate the work into an agreed format. The final product from the work, as listed below, will then be incorporated into the master electronic file of the Handbook held by the CRC. On completion, this will be used for subsequent printing and distribution.

The 9 goals, detailed as a series of work packages, are given below. Offers for each goal should include an estimate of time-line and cost for that individual goal. This is to allow flexibility for applicants applying for a range of different goals.

1) Key Data and Chart Review

It has been suggested that there may be shifts in “typical values” as reported in the individual charts in the Handbook. While it is not practical to update all the charts in the Handbook, new data is available, or shortly to become available through CRC aviation fuel surveys, to allow a range of charts to be updated. For example, with:

- Minimum, maximum and mean values
- Bar charts illustrating data distribution.

With respect to specific items of interest:

- a) A review and update of density charts would be timely, including ranges as above.
- b) Text regarding JP-8 and F-24 references is required.
- c) Editorial work to remove all references to JP-10 would be appreciated to simplify approval.

Offers address the above are invited. In addition, Offerors are invited to select 2 key data / chart sets, in addition to density, for update of their choice. Rationale for selection of the three key data/chart sets is requested to assist the Steering Committee in assessing value/impact of the proposed update.

Further, one of the challenges with some of the charts is a lack of source data provenance. Without knowledge of the source data, it is difficult or impossible to provide any statistical considerations for data spread, precision and selected test methods for example. While the last decade has resulted in a larger population of data with known providence, these data are often at single conditions and do not provide trend information. Identification of any charts which could be improved with contemporary data by the Offeror would be helpful. The CRC Aviation Steering Committee may also be able to provide assistance with sourcing data. In the proposal, the offeror must identify data deficiencies and specific information needed from the CRC Steering Committee to meet the SOW objectives.

2) Materials Compatibility Chart

To reintroduce the material compatibility chart featured in earlier editions of the Handbook with assistance from the Aviation Steering Committee to capture current knowledge.

3) Non-Standard Fuel Types

To prepare a section consolidating C-1, RP and TS-1 fuel data from the other parts of the handbook, updating information as appropriate. Assistance will be provided by the Aviation Steering Committee in sourcing data.

4) Heat of Vaporization / Enthalpy

To incorporate CRC Project AV-20-14 Heat of Vaporization / Enthalpy data, revising current text, tables and charts as appropriate.

5) Gas Solubility

Using provided information and guidance, update the section covering ASTM D2779 gas solubility. This section was found to have incomplete information and requires review.

6) Synthetic Jet Fuel

To revise the section covering synthetic aviation fuel development, approval, current status, and deployment. The aim is to offer a general explanatory section on the history of synthetic aviation fuel to date and include references to other documents for greater detail, covering both standalone synthetic blending components (ASTM D7566) and coprocessed synthetic streams (ASTM D1655). A full description of D7566 Table 1 and Synthetic Blending Component specifications is not required.

7) Dielectric Constant

To work with industry members to incorporate dielectric constant data and methods of measurement, for example, IP 638. Assistance will be provided by the Aviation Steering Committee.

8) Cetane

To update / include text and data charts related to Jet Cetane quality and usage relevance covering:

- a) A discussion / definition of Cetane in Handbook Section 1.
- b) A discussion of aviation diesel piston engine developments.
- c) New cetane data, shortly to be available from the new CRC Jet World Survey.

9) Aviation Gasoline (Avgas)

To update aviation gasoline text covering ASTM D7826, , where appropriate, and include:

- a) Avgas charts where new CRC Certificate of Analysis data is available.
- b) Additional Grade UL91 and UL94 Avgas data if available.

Goal Delivery Format

To simplify editorial revision of the master handbook file, use of standard Microsoft Office (Word, Excel, PowerPoint) file format is required for delivery of each goal.

Monthly Status Reports

Monthly status reports will be required by the Steering Committee to help manage project delivery and assist with any challenges.

EXHIBIT B

REPORTS

A. CONTRACTOR shall submit a technical progress report covering work accomplished during each month of the contract performance. The report shall contain a description of overall progress, plus a separate description for each task or other logical segment of work on which effort was expended during the reporting period. Periodic conference calls may also be requested by CRC to update the technical committee overseeing the project.

B. CONTRACTOR shall submit to CRC a draft final report on or before DRAFT FINAL REPORT DUE DATE. The *Draft Final Report* shall be reviewed and returned to CONTRACTOR with comments no later than forty-five (45) days thereafter. The report shall document, in detail, all of the work performed under the contract including data, analyses, and interpretations, as well as recommendations and conclusions based upon results obtained. The report shall include tables, graphs, diagrams, curves, sketches, photographs, and drawings in sufficient detail to comprehensively explain the results achieved under the contract. The report shall be complete in itself and contain no reference, directly or indirectly, to the monthly progress reports and should be suitable for publication in the peer-review literature. Additional rounds of review may be required prior to acceptance of the Final Report. If applicable, data from the research shall be provided in a format suitable for releasing to the public along with the final report.

The draft report must have appropriate editorial review corrections made by the contractor prior to submission to CRC to avoid obvious formatting, grammar, and spelling errors. The report should be written in a formal technical style employing a format that best communicates the work conducted, results observed, and conclusions derived. Standard practice typically calls for a report structure that includes:

- CRC Title Page and Disclaimer Statement (both provided by CRC)
- Table of Contents
- List of Figures
- List of Tables
- List of Acronyms and Abbreviations
- Executive Summary
- Background
- Approach (including a full description of all experimental materials and methods)
- Results
- Conclusions (may also include Recommendations if CRC requests them)
- List of References
- Appendices as appropriate for the scope of the study.

Incomplete draft reports or reports of poor quality requiring additional outside editorial review may have outside editorial services charged back to the project budget.

EXHIBIT C

INTELLECTUAL PROPERTY RIGHTS

NOTE: This example language describes CRC's preferred approach to IP. There are alternative clauses to IP that can be used if necessary. All approaches require unlimited royalty-free access to any IP generated by CRC-funded research for CRC and its members.

Title to all inventions, improvements, and data, hereinafter, collectively referred to as ("Inventions"), whether or not patentable, resulting from the performance of work under this Agreement shall be assigned to CRC. CONTRACTOR shall promptly disclose to CRC any Invention which is made or conceived by CONTRACTOR, its employees, agents, or representatives, either alone or jointly with others, during the term of this agreement, which result from the performance of work under this agreement, or are a result of confidential information provided to CONTRACTOR by CRC or its Participants. CONTRACTOR agrees to assign to CRC the entire right, title, and interest in and to any and all such Inventions, and to execute and cause its employees or representatives to execute such documents as may be required to file applications and to obtain patents covering such Inventions in CRC's name or in the name of CRC's Participants or nominees. At CRC's expense, CONTRACTOR shall provide reasonable assistance to CRC or its designee in obtaining patents on such Inventions.

To the extent that a CRC member makes available any of its intellectual property (including but not limited to patents, patent applications, copyrighted material, trade secrets, or trademarks) to CONTRACTOR, CONTRACTOR shall have only a limited license to such intellectual property for the sole purpose of performing work pursuant to this Agreement and shall have no other right or license, express or implied, or by estoppel. To the extent a CRC member contributes materials, tangible items, or information for use in the project, CONTRACTOR acknowledges that it obtains only the right to use the materials, items, or information supplied for the purposes of performing the work provided for in this Agreement, and obtains no rights to copy, distribute, disclose, make, use, sell or offer to sell such materials or items outside of the performance of this Agreement.

EXHIBIT D

RELATIONSHIP OF PARTIES

It is agreed and understood that CONTRACTOR is acting as an independent contractor in the performance of any and all work hereunder, and to the extent caused by CONTRACTOR, CONTRACTOR shall be solely liable and responsible for the payment of all legal claims for damages made by its employees or agents, or by another person or persons, on account of any property damage or on account of personal injury sustained or suffered by, or on account of the death, of any person or persons, or on account of any other legal claims arising or growing out of CONTRACTOR's negligence in the performance of the agreement; and CONTRACTOR undertakes to indemnify CRC against any such liability.

EXHIBIT E

KEY PERSONNEL REQUIREMENTS

Certain skilled experienced professional and/or technical personnel are essential for successful performance by CONTRACTOR of its obligations and work under this Agreement. These personnel are persons whose resumes were submitted for evaluation of the Proposal and are identified by CRC as “Key Personnel”. CRC awards contracts based on several requirements and the reputation and experience of Key Personnel are a significant requirement. CONTRACTOR agrees that CONTRACTOR will not remove or replace any Key Personnel from the contract work without compliance with paragraphs (a) and (b) hereof.

(a) If any Key Personnel for whatever reason becomes, or is expected to become, unavailable for work under this Agreement (or any specific Project) for a continuous period exceeding thirty (30) work days, or is not expected to perform the work hours and volume of work indicated in the proposal or initially anticipated, the CONTRACTOR shall immediately notify CRC and shall, subject to the concurrence of CRC, promptly replace such Key Personnel with personnel of at least substantially equal ability and qualifications acceptable to CRC.

(b) All requests for approval of substitutions of Key Personnel hereunder must be in writing to CRC and provide a detailed explanation of the circumstances necessitating the proposed substitutions. Requests for substitution must contain a complete resume for the proposed substitute Key Personnel, and any other information requested by CRC needed to approve or disapprove the proposed substitution. CRC will evaluate such requests and notify CONTRACTOR of approval or disapproval thereof in writing. CRC is not responsible for, and shall not be charged, any fees or other costs related to such replacement Key Personnel’s performance of the services until the replacement Key Consultant has obtained the same proficiency and knowledge regarding the services as the former Key Personnel.

(c) If CRC determines that suitable and timely replacement of Key Personnel who have been reassigned, terminated or have otherwise become unavailable for the contract work is not reasonably forthcoming or that the proposed replacement Key Personnel would impair the successful completion of the contract or the services ordered, at the option of CRC, (i) the Agreement (in whole or in part related to the applicable contract work) may be terminated by CRC or (ii) the contract price or fixed fee may be equitably adjusted downward to compensate CRC for any resultant delay, loss, or damage, in an amount acceptable to CRC

EXHIBIT F
CRC POLICIES

It is understood that CONTRACTORS agree to follow CRC policies and procedures, including meeting attendance, project participation, and Anti-trust policies. A copy of these policies can be made available upon request.

It is understood that the major purpose of the work performed by CONTRACTOR is to obtain information that may be made available to industry and the public through publications or otherwise. Any announcement or publication of work under this agreement by CONTRACTOR shall be subject to review and approval by CRC and its committee members and shall recognize and give credit in the text and on the title pages to the cooperation of the CRC. This applies (but is not limited to) conference presentations, journal articles, and social media posts.

EXHIBIT G
PROPOSAL EVALUATION CRITERIA

- 1) Merits of proposed technical approach.
- 2) Previous performance on related research studies.
- 3) Personnel available for proposed study – related experience.
- 4) Timeliness of study completion.
- 5) Cost.