COORDINATING RESEARCH COUNCIL, INC.
5755 NORTH POINT PARKWAY, SUITE 265
ALPHARETTA, GA 30022
TEL: 678/795-0506 FAX: 678/795-0509
WWW.CRCAO.ORG

December 10, 2013
In reply, refer to:
CRC Project A-88 Request for Proposal

Dear Prospective Bidder:

The Coordinating Research Council, Inc. (CRC) invites you to submit a written proposal to provide improved data for the database of on-road mobile inputs used to create emissions for the 2011-amended National Emissions Inventory (NEI), with particular focus on obtaining default data following EPA best practices for "State Supported MOVES Inputs Improvements" as described in the attached Statement of Work, Exhibit A, for CRC Project A-88.

Please indicate via letter, fax, or email by **December 13, 2013** whether or not your organization intends to submit a written proposal for the project. CRC will answer technical questions regarding the Request for Proposal if they are submitted in writing. CRC will then return written answers to all of the bidders, along with a copy of the original questions.

The CRC technical group composed of equipment, petroleum, and government representatives will evaluate your proposal. CRC reserves the right to accept or reject any or all proposals.

The reporting requirement will be monthly reports to CRC in accordance with Exhibit A Statement of Work and Exhibit B Reports. A Final Report documenting the results of the study will be published. The reporting requirement is described in more detail in the attachment entitled, "Reports" (Exhibit B).

The "Intellectual Property Rights Clause" (Exhibit C) and "Liability Clause" (Exhibit D) will be a part of the agreement, which will be executed as a result of this Request for Proposal solicitation.

The proposal must be submitted as two separate documents and is limited to 10 pages in length. 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. Please note that the budget for this project is $80,000.

CRC expects to negotiate either a cost reimbursable or a fixed price contract. Important selection factors to be taken into account are listed in Exhibit E. 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.

Electronic copies of the technical and cost proposals should be submitted to:

Mr. Brent Bailey
Coordinating Research Council, Inc.
5755 North Point Parkway, Suite 265
Alpharetta, GA 30022
Phone: 678-795-0506, Ext. 107
Fax: 678-795-0509
E-mail: bkbailey@crcao.org

The deadline for receipt of your proposal is **January 3, 2014**.

Sincerely,

Brent K. Bailey
Executive Director

EXHIBIT A

STATEMENT OF WORK

State Supported MOVES Inputs Improvements

Objective:

The ultimate goal is to provide to state and local air agencies and US EPA more accurate input for the MOVES (Motor Vehicle Emission System) model. There are many parameters and many inputs for those parameters, but this project intends to focus its efforts on a limited number of parameters previous studies have identified as critical. To achieve the ultimate goal, this project is to provide improved data for the database of on-road mobile inputs used to create emissions for the 2011-amended National Emissions Inventory (NEI), with particular focus on obtaining default data following EPA best practices. The intent of the project is to provide improved default inputs that are state specific and reflect any known differences between various areas of the state. This can be provided either as county by county data, or data grouped by the existing county groups in the most recent version of NEI inputs or differences between urban and rural areas of the state. These inputs will be especially important for states that do not provide inputs to EPA for the NEI.

Background:

The NEI is an inventory of annual total emissions. For on-road emissions, the NEI is produced by EPA using emissions totals and model inputs provide by state and local air agencies. EPA runs the MOVES model and related tools[1] to produce hourly emission estimates, which are then summed to the annual values published in the NEI. Where emissions have been provided by state and local agencies, EPA uses these data. EPA is currently working on the 2011-amended NEI and expects the deadline for NEI v1 comments to be in March 2014 and to produce the annual emissions estimates by August 2014. The first version of the 2011 NEI is available on EPA's website. This project is expected to deliver updated files by May 2014 for the August 2014 version of the NEI. We expect to select 2-4 subject areas for research.

Methodology:

Provide a list of subject areas or best practices for air agencies to obtain MOVES inputs for extended exploration of 2-4 data input categories such as those shown below and defined in the MOVES website http://www.epa.gov/otaq/models/moves/#generalinfo. Select the input categories which can be completed in 3 to 4 months. These are input categories such as:

- Vehicle age distribution
- Vehicle population
- Vehicle Miles Traveled Mix (Light Duty Gasoline Vehicle (LDGV)/Heavy Duty Diesel Vehicle (HDDV)); and/or long haul trucks, intercity buses, etc. travel throughout regions.

[1] EPA runs MOVES emission factors using cloud computing and then runs the Sparse Matrix Operator Kernel Emissions (SMOKE)/MOVES scripts and SMOKE programs to produce the emissions.

- Temporal Profiles (Day of week, Hour of day, Month of year) in SMOKE ready format Road type distribution
- Speed distribution HDDV idle fractions. Although extended idle emissions is not part of the current County Data Manager created county databases (CDBs), extended idle emissions are a significant part of many county inventories, especially those with large interstate freeways and little local traffic. EPA would need to provide the format and description of the tables where the information regarding extended idle activity is stored in the new MOVES model, since this information is not part of any public documentation.
- Engine starts (trips). Although this is not a current (MOVES2010b) input, EPA's new model (MOVES2014) will have user inputs for starts. Start emissions are a significant portion of the inventory and having detailed information about how many starts occur (by vehicle type) and when starts occur (by hour of the day and day of the week and month) would improve inventories. EPA would need to provide the format and description of the tables where the information regarding starts will be stored in the new MOVES model, since this information is not yet public.

The contractor is expected to demonstrate why their proposed methods are an improvement over what's currently implemented in the 2011NEI.

Provide a method to disseminate this information to air quality responsible parties such as EPA, state agencies and other identified entities.

Project Deliverables:

Monthly status reports and a final report suitable for journal publication are required. If any computer code is developed as part of this project, the code should be made available without any licensing restrictions. If there is any reason the contractor cannot produce a product in 3-4 months from the initiation of the contract, it should be explained clearly in the proposal. All products should have data formatted properly by running it through the MOVES QA checker and be able to be integrated into the NEI county databases with minimal work. The QA script is located at: http://www.epa.gov/ttn/chief/eis/2011nei/qa_tools.zip.

Products should reflect each state's attributes with delineations for urban and rural areas based on the current representative county groupings in the current version of the NEI (image attached). Regional or national averages are not an acceptable work product for this contract. The proposal should include a rough outline of the data collection and analysis techniques, and any expected impediments to the analysis. The proposal should factor the purchase of any data into the cost. It is not the responsibility of CRC to provide or purchase data. CRC's preference is for tables in CSV format, with the column headings matching the corresponding MOVES variables that appear in the MOVES default or county databases. Outputs must include the current county group definitions in the V1 2011 modeling framework. In this, the contractor would provide the county IDs for the primary county of each group. If only state defaults are available, then data should be reproduced for each county group in that state. This would require no change in county ID coding.

The contractor would additionally provide a table that indicates which counties (FIPS codes) are included in any sub-state regions. The contractor may suggest alternate schemes for providing data that allows for indicating county specific, state wide and sub-state regions. However, since the data will be county or region specific, each table will require an additional field that indicates the county or sub-state region covered by each record. The additional field will either be:

1. The FIPS county code for the county multiplied by 10 for individual counties,
2. The FIPS state code multiplied by 10000 for state wide values, or
3. The FIPS state code multiplied by 10000 plus a value indicating the sub-state region.

Utilization of Deliverables: The National Emissions Inventory is the foundation of other air quality inventories, including those used in the development of air quality regulations. Improved inventories provide more accurate information on the impact of regulations, activity changes and other measures on air quality.

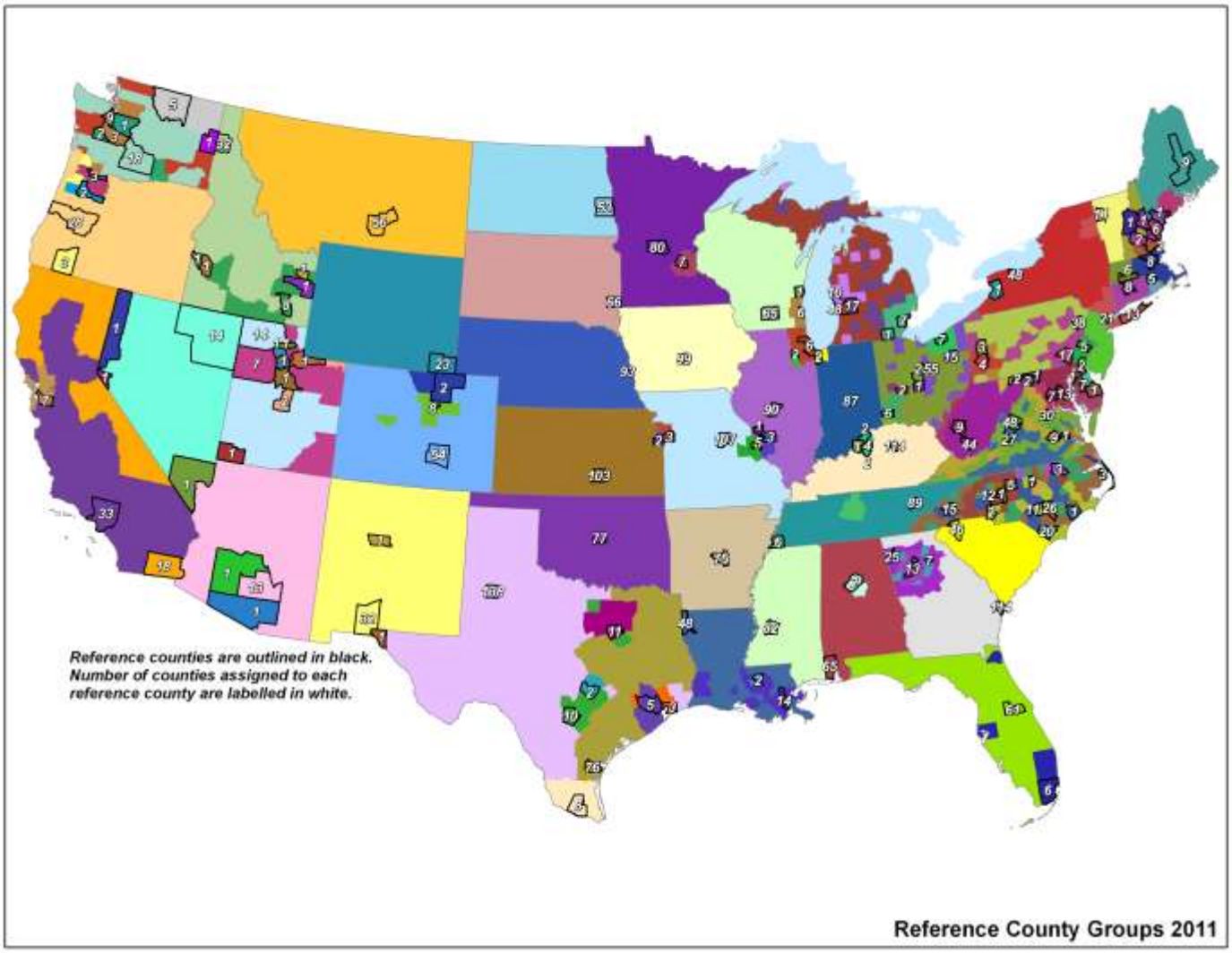

EXHIBIT B

REPORTS

MONTHLY TECHNICAL PROGRESS REPORTS

The contractor shall submit a monthly technical progress report covering work accomplished during each calendar month of the contract performance. An electronic Microsoft Word compatible file of the monthly technical progress report shall be submitted to CRC by the contractor within ten (10) calendar days after the end of each reporting period. 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 in accordance with Exhibit A Statement of Work.

DRAFT AND FINAL REPORT

The contractor shall distribute for the CRC an electronic pdf-compatible copy of a draft final report after completion of the technical effort specified in the contract. The draft final report shall document, in detail, the test program and all of the work performed under the contract. The report shall include tables, graphs, diagrams, curves, sketches, photographs and drawings in sufficient detail to comprehensively explain the test program and results achieved under the contract. The report shall be complete in itself and contain no reference, directly or indirectly, to the periodical report(s).

The CRC Atmospheric Impacts Committee shall furnish comments regarding the draft report to the contractor within one (1) month after the draft copy.

Within thirty (30) days after receipt of the approved draft copy of the annual report, the contractor shall make the requested changes and deliver to CRC thirty (30) hardcopies including a reproducible master copy of the final report. The final report shall also be submitted as an electronic copy in a WORD, pdf or pdf-convertible file format. The electronic copy will be made available for posting on the CRC website.

EXHIBIT C

INTELLECTUAL PROPERTY RIGHTS

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 X shall promptly disclose to CRC any Invention which is made or conceived by Contractor X, 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 X by CRC or its Participants. Contractor X 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 X shall provide reasonable assistance to CRC or its designee in obtaining patents on such Inventions.

EXHIBIT D

LIABILITY

It is agreed and understood that _____ is acting as an independent contractor in the performance of any and all work hereunder and, as such, has control over the performance of such work. _____ agrees to indemnify and defend CRC from and against any and all liabilities, claims, and expenses incident thereto (including, for example, reasonable attorneys' fees) which CRC may hereafter incur, become responsible for or pay out as a result of death or bodily injury to any person or destruction or damage to any property, caused, in whole or in part, by _____'s performance of, or failure to perform, the work hereunder or any other act of omission of Contractor in connection therewith.

EXHIBIT E

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.