THE INTERNATIONAL COUNCIL ON CLEAN TRANSPORTATION

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www.theicct.org

19 May 2015

Request for Proposals for Air Quality Modeling Inputs to Rapid Health Impact Assessment Tool for Port Emissions

Letter of Invitation

Dear Consultant:

The International Council on Clean Transportation (ICCT) is seeking an experienced consulting group or individual with expertise in atmospheric chemistry and air quality modeling, urban- and regional-scale air pollution exposure assessment, and generalized exposure metrics (e.g. intake fractions). The proposed project seeks to design a set of factors for use in a rapid health impact assessment tool for ports in developing countries.

ICCT Point of Contact

Sarah Chambliss will be the ICCT project manager and point of contact for this contract. For inquiries, please send questions to sarah@theicct.org or call [415] 202-5745. Any requests for clarification or exceptions to RFP requirements must be received no later than 5 p.m. on 8 June, 2015 to guarantee response or consideration.

Proposal Due Date

Interested firms must submit their proposal electronically in PDF format via email to Sarah Chambliss (sarah@theicct.org) by 10 June, 2015 at 5 p.m. Pacific Time. Proposals received after this date and time will not be considered. Proposals received by the due date will be used to select the top candidate for this work.

Budget, schedule, and scope of work

Proposals can be up to $14,000 USD

The ICCT expects this work to be completed around **15 weeks** after an initial scoping meeting with the project consultant. A firm completion date will be established with the consultant once the project has been awarded.

A description of desired deliverables is provided in this RFP. The selected consultant will be expected to work with the ICCT project manager to refine and agree to a detailed work plan during the initial stage of this project.

Proposal Evaluation

The ICCT reserves the right to accept or reject any or all proposals submitted, waive minor irregularities in proposals, request additional information or revisions to offers, and to negotiate with any or all consultants. Any contract award will be to the firm that presents the proposal that, in the opinion of the ICCT, is the most advantageous to the ICCT.

Consultant Selection Timetable

8 June 2015, 5 p.m. Pacific	Closing date and time for requests for clarifications and exceptions. Responses will be compiled and sent to all firms who have bid by this date, including an option to revise and resubmit based on this new information.
10 June 2015, 5 p.m. Pacific	Closing date and time for receipt of proposals.

Guidelines for Proposal Submission

At a minimum, RFP responses should include the following:

Transmittal letter

The transmittal letter shall be in the form of a standard business letter on the consultant's letterhead, signed by an individual authorized to legally bind the consultant and shall include the name, title, address, email address and telephone number of the individual(s) who can be contacted for questions regarding the RFP response.

Disclosure of any real or potential conflict of interest must be provided based on the firm's clients, proposals to pending clients, direct business or significant personal relationship with any ICCT council member, board member or staff member.

Draft scope of work

1. Provide a summary and detailed text on how the goals and tasks of this project will be achieved by your team. This technical text will serve as the bulk of the proposal and great consideration should be given to communicating approach, data, methodologies, expected outcome, and any other technical aspect of the proposal deemed necessary to be communicate the technical merit of the submitted proposal.
2. Along with the scope of work, provide a timeline for the development of the tasks.

Team and organization overview

3. Provide brief biographical information (education and experience) of the persons including the research team that would be assigned to the ICCT project.
4. Describe relevant experience, capabilities including hardware, software, and access to data relevant to performing this study.
5. Describe your ability to model air quality impacts of port emissions.
6. Provide three references from previous clients for whom work was completed related to air quality modeling and exposure assessment.

Project management process

7. Describe your firm's process for managing the project and dealing with clients, including the frequency, and method of regular communications regarding project status with client.
8. Describe your firm's process for quality assurance and quality control, project cost controls, and timeline adherence.

Fees

9. Provide a breakdown of all fee areas, individuals involved, and individual's fee rates by individual process step and deliverable. Fees should be all-inclusive.
10. Describe the frequency and timing of your preferred fee payment requirements.

Terms and conditions

The written RFP responses and any subsequent bids made during the procurement process will be considered binding commitments by the prospective vendors. The ICCT may request additional information or clarification of any obligation, if a contract is awarded.

The bidder agrees to be bound by this RFP response for a period of 45 calendar days from the RFP response due date during which the ICCT may request clarification of correction of the RFP response if necessary for the purpose of evaluation.

The cost of preparing the RFP response is the sole responsibility of the bidder, whether or not any award results from solicitation. The ICCT will not reimburse any consultants for the costs related to preparing and submitting a proposal.

The ICCT reserves the right to add provisions to the contract consistent with the contractor's bid and to negotiate with the contractor other additions to, deletions from, and/or changes in the language in the contract — provided that such addition, deletion, or change in contract language would not, in the sole direction of the ICCT, affect the evaluation criteria set forth herein, or give any bidder a competitive advantage. A synopsis of the ICCT's contract provisions is enclosed in Appendix A. If an applicant proposes to change any standard ICCT contract provision, the proposed alternative language must be submitted along with the main proposal. If no such change is requested, it is assumed the applicant accepts the standard contract provisions.

Sincerely,

Sarah Chambliss

International Council on Clean Transportation

International Council on Clean Transportation

Request for Proposals for

Air Quality Modeling Inputs to Rapid Health Impact Assessment Tool for Port Emissions

19 May 2015

One Post Street, Suite 2700

San Francisco, CA 94104

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Background

Overview

The International Council on Clean Transportation (ICCT) is a non-profit research organization dedicated to improving the environmental performance and energy efficiency of transportation to improve air quality and address climate change. The ICCT provides national and local policymakers with technical analysis of regulations, fiscal incentives, and other technology-based measures for clean vehicles and fuels. The ICCT works across modes including passenger cars, light commercial vehicles, heavy-duty trucks and buses, two- and three-wheelers, international aviation and marine, conducting global outreach with a focus on major and growing vehicle markets. Within the ICCT, the Clean Air Program works across mode- and country-specific programs to advance policies that reduce the harmful impacts of air pollution.

The ICCT Clean Air Program has developed methods to evaluate the health impacts of on-road vehicle emissions (Chambliss et al. 2013). The ICCT is now developing additional methods that extend beyond the on-road sector and can be applied to port emissions. The work is funded through a grant from the Climate and Clean Air Coalition (CCAC) and will be implemented in partnership with the United Nations Environment Program (UNEP) and a select number of developing ports worldwide. The resulting methodologies will be integrated into an online toolkit for use by those ports to estimate the benefits of port emission control policies.

The framework in Figure 1 summarizes the key steps taken to calculate the health impacts of a change in emissions. One of these steps is to convert a change in emissions to a change in concentration within a defined geographical area. In previous work, the ICCT has completed this step using a set of urban intake fractions calculated for on-road vehicle emissions (Apte et al. 2012). The intake fraction itself is a unitless value that expresses the fraction of the total mass of emitted pollutant that is inhaled by exposed populations (Bennett et al. 2002); this value is useful in determining priorities in emissions reduction strategies but does not itself provide the necessary information to feed into a concentration-response function. However, given the assumed breathing rate and size of exposed population, the intake fraction equation can be manipulated to give a factor that expresses the change in urban $PM_{2.5}$ concentrations ($\mu g/m^3$) resulting from a change in on-road vehicle emissions of primary $PM_{2.5}$ (ktons). The change in concentration is then processed through a concentration-response function to predict a change in health impacts. The use of intake fractions has several modeling advantages for a first order assessment of policy impacts: they allow a rapid calculation of concentration change for multiple intervention scenarios and multiple years, and they require very limited input data.

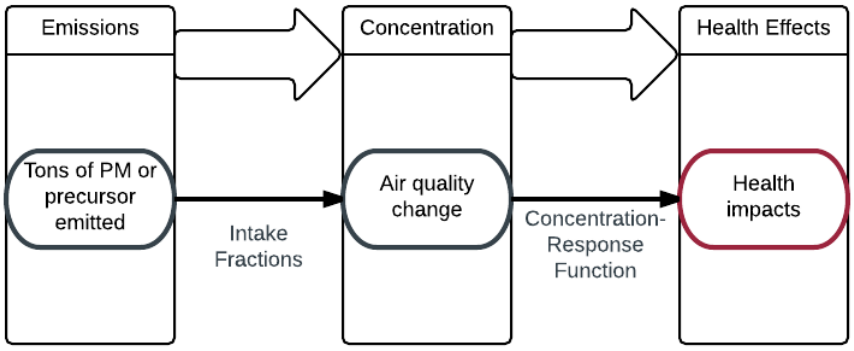

Figure 1: Framework for simplified evaluation of health impacts of conventional pollutant emissions

We aim to use a similar approach to model the health benefits of port emission control, relying on pre-calculated factors like intake fractions to perform simplified exposure modeling. Intake fractions vary significantly across different sources and different areas, depending on factors including the height of emissions and the size of nearby populations (Humbert et al. 2011). Intake fractions for port emissions are expected to differ significantly from those for on-road transportation, as they occur at varying heights (from ground-level for trucking activity at ports to the height of the stacks of ocean-going vessels), are more localized, and are often located on coasts where some of the surrounding area is unpopulated. Intake fractions for diesel PM emissions have been developed for 43 ports in the US, and can inform work in this area (Rosenbaum et al. 2011).

Another characteristic of port emissions is the often high share of SO_2 emitted along with primary $PM_{2.5}$ and NOx, which increases the importance of intake fractions of secondary $PM_{2.5}$ formed from SO_2 and NOx (for examples, see Greco et al., 2006; Humbert et al. 2011). Secondary PM affects the population within a much larger area than primary PM. Greco et al. (2012) modeled that for most US counties, the majority of primary PM exposure takes place within 150 km, while the majority of secondary PM exposure occurs over a much larger radius—450 km for sulfates from SO_2 and 390 km for nitrates from NOx.

The factors used for this approach do not need to fit the form of “intake fraction” specifically; they need only express the relationship between emissions of a given pollutant from port sources and the change in concentration or exposure to $PM_{2.5}$ in a defined area. These factors could be derived from the relationships between emissions and concentrations that have been calculated in a source-receptor model or adjoint model. In a notable recent application, Lee et al. (2015) used the adjoint of the GEOS-Chem chemical transport model to determine the response of global $PM_{2.5}$-related mortality to local changes in inorganic $PM_{2.5}$ precursor gases and primary carbonaceous emissions.

Other assessments of the health impacts of port emissions have used dispersion modeling to inform the development of port-specific intake fractions or other emissions-to-concentration

factors, specifically the area that should be considered for the intake fraction of primary and secondary PM. Two studies conducted in California looked specifically at the effects of primary PM emissions from ports and found that the highest-impact area is localized within an area of about 400 km^2 (Di et al. 2006, Joe et al. 2014), although "potential cancer risk levels decrease but continue to exceed 50 in a million for more than 15 miles" beyond the port (Di et al. 2006). In contrast, a study modeling the long-distance contribution of sulfates to the west coast of the US found a detectable contribution of marine emissions at sites hundreds of miles inland (Xu et al. 2006).

Goals

The ICCT is creating a tool that allows users to estimate the baseline impacts of port emissions and the benefits of control measures. The tool will rely on simplifying factors such as intake fractions to convert changes in port emissions to local and regional $PM_{2.5}$ concentrations for subsequent use in health impacts modeling. Two areas will be considered for emissions sources: the port itself, and the ocean area a specified distance from the port. At least three geographic areas should be considered for impacts: the high-exposure zone within 2 km of the port, the metropolitan area within 20 km of the port, and the broader regional impact zone within approximately 200 km from the port. These impact areas may change depending on the modeling methodology proposed by the contractor. The tool will be designed for application at any developing country port, and will be first applied in five specific ports that have been identified for this project (listed below). The tool will estimate a change in health impacts, such as annual premature deaths, that would be associated with a change in local pollutants, such as annual concentrations of ambient fine particulate matter. These data will be used by local officials to develop an initial understanding of port emissions, to scope out potential control measures, and to justify additional resources for analysis using more refined methods.

Objectives, Tasks, Timeline, Deliverables, & Budget

Objectives

In pursuit of these goals, the ICCT is soliciting project proposals to develop a method for calculating simplified factors such as intake fractions to estimate the changes in local and regional $PM_{2.5}$ concentration and exposure resulting from developing country port emissions. Based on this method, specific intake fractions or similar factors should be developed for the ports of Jakarta, Indonesia; Chittagong, Bangladesh; and Valparaiso, Chile. The proposed project should further demonstrate the applicability of this method to any developing country port, accounting for differences in population density, general urban form, and simple meteorological factors. The generalized method should be applied to create factors for the two remaining port cities: Tema, Ghana; and Aqaba, Jordan.

This work provides a critical component to a toolkit that assesses the health impact of port emissions. The ICCT is developing emission inventories of primary $PM_{2.5}$, NOx and SO_2 at the five ports mentioned above, including emissions by oceangoing vessels, harbor craft, cargo

handling equipment, and trucks operating at the port terminal. Project consultants would be expected to use an air quality model that is sensitive to the key parameters of the port emissions data to create factors that can be used in a tool for rapid assessment of port health impacts. These factors should cover:

1. Exposure to primary PM emissions. Data should include the average change in both concentration and exposure within the highest impact zone (within approximately 2 km of the port) and within the greater metropolitan area (within approximately 20km of the port).
2. Exposure to secondary PM. These factors should take into account the wider dispersal area of the precursor emissions (within >200km of the port).
3. At least the three focal port cities (Jakarta, Chittagong, and Valparaiso), with a clear methodology for extending the work to cover additional ports.

Tasks

To provide these data, we suggest the following tasks:

1. **Define project scope.**
   Expected date: within 1 week of contract signing.
   a. Initial meeting (by phone or in-person) to clarify scope of work and finalize the project timeline
   b. *Deliverable: final project workplan with tasks, timeline, and deliverables*

2. **Develop approach to create intake fractions (or similar emissions-to-exposure ratios) for port emissions.**
   Expected date: within 6 weeks of contract signing.
   a. Approach should account for port emission source characteristics, local meteorological factors, and nearby urban form in defining the exposure zone for which each intake fraction applies.
   b. The approach should specify the minimum amount of data that would need to be made available about a given port and port location to support this analysis. This may include the location, temporal patterns, and stack height of emissions from various port sources (ocean-going vessels, harbor craft, cargo handling equipment, and trucks operating at port), as well as population density and other population characteristics in regions surrounding the port.
   c. Exposure estimation should be described for both primary and secondary $PM_{2.5}$
   d. Approach should be informed by
      i. Description of capabilities and assumptions of the air quality model used to provide factors. If multiple models are used, a description of each model should be provided.
      ii. If multiple models are used, a description of how air quality impacts and exposure will be compared across models within overlapping domains.

iii. Brief review of literature where similar methods have been applied, including summary of results.

e. The approach described here may result in factors that take a functional form rather than a single value. This is an acceptable approach as long as the function parameters (e.g. distance to port) are clearly defined and described sufficiently to be derived by a third party.

f. *Deliverable: Detailed memo describing the approach and methodology*

3. Apply approach for three focal port cities and propose method for adapting values for other ports.

Expected date: Draft within 12 weeks of contract signing. Final 2 weeks after receiving ICCT comments.

a. Create set of factors to predict change in exposure or change in concentration within set zones

i. A set of factors should be developed for each port, unless there is strong evidence that a generalized factor is sufficient for all ports.

ii. Separate factors should be developed for emissions local to the port and emissions in the larger harbor region unless there is strong evidence that a generalized factor is sufficient for emissions in both areas.

iii. Results may be delivered as:

	Primary $PM_{2.5}$	$PM_{2.5}$ from NO_X	$PM_{2.5}$ from SO_2	Additional notes
Jakarta Port (high impact zone, metropolitan area, regional)				
Chittagong Port				
Valparaiso Port				
Generalized Port				

The delivered results may include more detail than this table but not less. Additional detail may consider the emission source (ocean-going vessel, harbor craft, cargo handling equipment, trucks) and location of emissions (hotelling/at port, within reduced speed zone, etc.)

iv. If the approach detailed in task 2 specifies a functional form, the suggested range of values for each parameter should be given for each port.

b. A written description (10-15 pgs) should be provided with the table of factors explaining any assumptions beyond those provided in the Task 2 deliverable and a comparison of these results with relevant prior work.

c. A discussion of how the intake fractions or equivalent factors could be modified to apply to other ports, accounting for differences in population density, general urban form, and simple meteorological factors

d. An additional discussion of the uncertainty in these estimates and limitations of this methodology, including the use of a linear representation of secondary pollutant formation, the focus on $PM_{2.5}$ and exclusion of the effects of air toxics, and the use of an annual value that ignores seasonal differences.
e. *Deliverable: Technical report of model results including table of factors, description of uncertainties and possible areas for future research*

Timeline

The overall project should be completed within a target date of 15 weeks from the completion of task 1, subject to agreement between project consultant and the ICCT project manager.

Deliverables

1. Detailed memo describing approach and methodology
2. Technical report of model results including table of factors, description of uncertainties and possible areas for future research

Project Budget

A maximum of $14,000 is available for this project. Overall funding will depend on the final agreed-upon scope of work and available resources. This is a competitive bidding process.

Personnel

Any change in key staff persons identified in the contract is subject to the approval of the ICCT. Removal by the consultant of any key staff persons identified in the contract without written consent of the ICCT project manager may be considered a material breach of contract.

Works Cited

Apte, J. S., Bombrun, E., Marshall, J. D., & Nazaroff, W. W. (2012). Global Intraurban Intake Fractions for Primary Air Pollutants from Vehicles and Other Distributed Sources. *Environmental Science & Technology*, *46*(6), 3415–3423. http://doi.org/10.1021/es204021h

Bennett, D. H., McKone, T. E., Evans, J. S., Nazaroff, W. W., Margni, M. D., Jolliet, O., & Smith, K. R. (2002). Defining intake fraction. *Environmental Science & Technology*, *36*(9), 207–216.

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Di, P., Servin, A., Rosenkranz, K., Schwehr, B., & Tran. (2006). *Diesel Particulate Matter Exposure Assessment Study for the Ports of Los Angeles and Long Beach*. California Air Resources Board.

Greco, S. L., Wilson, A. M., Spengler, J. D., & Levy, J. I. (2007). Spatial patterns of mobile source particulate matter emissions-to-exposure relationships across the United States. *Atmospheric Environment*, *41*(5), 1011–1025. http://doi.org/10.1016/j.atmosenv.2006.09.025

Humbert, S., Marshall, J. D., Shaked, S., Spadaro, J. V., Nishioka, Y., Preiss, P., … Jolliet, O. (2011). Intake Fraction for Particulate Matter: Recommendations for Life Cycle Impact Assessment. *Environmental Science & Technology*, *45*(11), 4808–4816. http://doi.org/10.1021/es103563z

Joe, D. K., Zhang, H., DeNero, S. P., Lee, H.-H., Chen, S.-H., McDonald, B. C., … Kleeman, M. J. (2014). Implementation of a high-resolution Source-Oriented WRF/Chem model at the Port of Oakland. *Atmospheric Environment*, *82*, 351–363. http://doi.org/10.1016/j.atmosenv.2013.09.055

Lee, C. J., Martin, R. V., Henze, D. K., Brauer, M., Cohen, A., & Donkelaar, A. van. (2015). Response of Global Particulate-Matter-Related Mortality to Changes in Local Precursor Emissions. *Environmental Science & Technology*, *49*(7), 4335–4344. http://doi.org/10.1021/acs.est.5b00873

Rosenbaum, A., Hartley, S., & Holder, C. (2011). Analysis of diesel particulate matter health risk disparities in selected US harbor areas. *American Journal of Public Health*, *101*(S1), S217–S223.

Xu, J., DuBois, D., Pitchford, M., Green, M., & Etyemezian, V. (2006). Attribution of sulfate aerosols in Federal Class I areas of the western United States based on trajectory regression analysis. *Atmospheric Environment*, *40*(19), 3433–3447. http://doi.org/10.1016/j.atmosenv.2006.02.009

Appendix A: General Contract Language

This Agreement (the “Agreement”) is made and entered into the [date] day of [year] by and between THE INTERNATIONAL COUNCIL ON CLEAN TRANSPORTATION, a Delaware nonprofit public benefit corporation with a principal place of business at 1225 Eye Street, NW, Suite 900, Washington, DC 20005 (the “International Council on Clean Transportation”) and [consultant name] , with a principal place of business at [consultant primary address] (the "Consultant"). It is executed in consideration of the mutual promises of the Parties, who agree as follows:

A. Definitions

“Party” shall mean the International Council on Clean Transportation or the Consultant as the case may be. “Parties” shall mean the International Council on Clean Transportation and the Consultant.

“Statement of Work” shall mean the document annexed hereto and entitled [project name], which, together with any attachments thereto, is incorporated herein by this reference.

B. Services To Be Provided

Consultant will furnish certain services (the "Work") described in the Workplan section of the [project name] statement of work, also known as the Statement of Work and any attachment thereto.

C. Period of Performance

The Work is to be performed during the term of this Agreement, as set forth in the Workplan section of the [project name] Statement of Work. This Agreement shall terminate on [date] without further notice to either Party, unless extended in a writing signed by both Parties or terminated early as provided in Article H of this Agreement.

D. Payment of Fees and Reimbursement

The International Council on Clean Transportation shall pay the Consultant a fee of [X] and shall reimburse Consultant’s reasonable expenses as approved in advance by the International Council on Clean Transportation.

E. Warranty

Consultant warrants that the Work will be performed in a competent, thorough and professional manner, and that any report provided by Consultant to the International Council on Clean Transportation will be the original work of Consultant apart from quotations from the works of others clearly so marked and with appropriate citations thereto. Consultant will pursue all her/his/its duties and obligations under this Agreement with diligence and dispatch.

F. Interaction Between the Parties

Consultant shall coordinate work efforts with and report progress regularly to project manager [ICCT project manager name]. All invoices shall be presented for payment to project manager [ICCT project manager name], who is responsible for reviewing and approving and then forwarding for payment. All reports and written components of the Work shall likewise be presented to the project manager [ICCT project manager name].

G. Nondiscrimination

In any hiring or employment by Consultant for the purpose of or concerning the Work, Consultant agrees not to discriminate against any person regardless of race, creed, color, sex, national origin, age, or physical or mental handicap for any position for which employee or applicant for employment is qualified.

H. Early Termination

This Agreement can be terminated without fault of either Party on at least twenty (20) days' written notice. The International Council on Clean Transportation's sole obligation in the event of such termination shall be to reimburse the Consultant for services actually performed by Consultant up to the effective date of termination. Termination shall not relieve Consultant of any continuing obligations under this Agreement, particularly the requirements of Articles M and N hereof, which shall survive termination or expiration of this Agreement.

I. Nature of Relationship: Independent Contractor

The Consultant is an independent contractor and will not act as an agent nor shall be deemed an employee of the International Council on Clean Transportation for the purposes of any employee benefit programs, income tax withholding, FICA taxes, unemployment benefits or otherwise. The Consultant shall not enter into any agreement or incur any obligations on the International Council on Clean Transportation's behalf, or commit the International Council on Clean Transportation in any manner, without the International Council on Clean Transportation's prior written consent. The Work is under Consultant's sole control and discretion. The International Council on Clean Transportation's only interest is in the results of the Work. Consultant will represent her/him/itself to the public as the International Council on Clean Transportation's independent contractor when performing the Work.

J. Nonexclusive Services

Consultant may, during the term of this Agreement, render professional services on her/his own account or for any other person or entity as Consultant, in Consultant's sole discretion, provided that such services do not materially interfere with her/his performance under this Agreement.

K. Assignment

Consultant shall not assign, subcontract, or transfer his/her/its interest in this Agreement or the work thereunder without the International Council on Clean Transportation's prior written consent, which may be withheld in the International Council on Clean Transportation's sole discretion.

L. Indemnification

Consultant agrees to defend, hold harmless and indemnify the International Council on Clean Transportation, its officers, directors, agents, and employees from all claims, losses, and damages arising, in whole or in part, from Consultant's performance of this Agreement.

M. Intellectual Property

Consultant shall promptly and fully disclose, and provide the International Council on Clean Transportation copies of, all information, including data, reports, spreadsheets, models, or other intellectual property, developed by Consultant during performance of the Work ("Proprietary Information"), regardless of whether copyrightable or not. Such copies shall in any event be delivered to the International Council on Clean Transportation no later than the date on which this Agreement terminates. Consultant shall treat all Proprietary Information as the confidential information of the International Council on Clean Transportation. Consultant agrees to, and does hereby, assign to the International Council on Clean Transportation and its successors and assigns, without further consideration, the entire right, title and interest in and to each of the Proprietary Information, including the copyright in the case of copyrightable works. Consultant further agrees, at the reasonable request of the International Council on Clean Transportation, to execute all documents that may be useful to secure and enforce rights relating to the Proprietary Information, including applications for copyrights. Consultant understands and agrees that the International Council on Clean Transportation may make such use of the Proprietary Information as it wishes in its sole discretion, including making derivative works therefrom, or may decline to use it in any way.

It is the International Council on Clean Transportation's practice to give customary recognition of authorship in material it publishes, and to grant to authors on request a non-exclusive license to use, revise and publish materials made for the International Council on Clean Transportation in the course of consulting agreements provided that confidential information concerning the International Council on Clean Transportation, its grantees and any individuals who have not given consent is removed, but the International Council on Clean Transportation shall have no legal obligation to follow such practice in the case of Proprietary Information under this Agreement.

N. Privacy and Confidential Information

Consultant agrees not to use (except for the International Council on Clean Transportation's benefit) or divulge to anyone, either during the term of this Agreement or thereafter, any of the Proprietary Information or other information of any kind whatsoever acquired by Consultant from

the International Council on Clean Transportation or any of its grantees or consultants in carrying out the terms of this Agreement, without the prior written consent of the International Council on Clean Transportation. The Consultant further agrees to turn over to the International Council on Clean Transportation upon request, and in any event by the date on which this Agreement terminates, all copies of any material acquired by Consultant from the International Council on Clean Transportation or any of its grantees, or containing information identifiably from or about the International Council on Clean Transportation or any of its grantees that was acquired or compiled by Consultant in carrying out the terms of this Agreement.

O. Special Provisions

Special provisions of this Agreement, if any, shall be as set forth in Paragraph V of the Statement of Work. This time period may be altered by written agreement of the Parties.

P. Miscellaneous

1. Entire Agreement; Amendments. This Agreement, including the Statement of Work and any exhibits attached thereto, is the complete agreement between the Parties with respect to the subject matter contained herein and supersedes any and all prior oral or written agreements between the Parties regarding the subject matter hereof. This Agreement may be amended only by written agreement signed by both Parties.

2. Governing Law. The validity, construction and operational effect of this Agreement will be governed by the laws of the State of California.

3. Notices. All notices hereunder will be in writing, delivered by messenger or by United States certified or registered mail, postage prepaid, return receipt requested, and will be deemed received upon the date of delivery to the address of the Party to receive such notice as first set forth above.

4. Paragraph Headings. The paragraph headings of this Agreement are for reference purposes only and will not affect the interpretation or meaning of any paragraph.

5. Waiver. The waiver or failure to enforce any provision of this Agreement will not operate as a waiver of any future breach of any such provision or any other provision hereof.

IN WITNESS WHEREOF the parties have caused this Agreement to be executed and in effect as of the date first above written. It is understood that the signatures bind the parties to this Agreement and that without both signatures this Agreement shall be void.

CONSULTANT By: _[Consultant signatory]_____

_____

Organization:_[Consultant organization]_____

_____

Date

INTERNATIONAL COUNCIL ON CLEAN TRANSPORTATION

_____

Drew Kodjak, Executive Director

_____

Date