

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY



**REQUEST FOR PROPOSALS
AIR QUALITY MODELING, EMISSIONS INVENTORY, AND
OTHER TECHNICAL SUPPORT (AMEIOTS)**

582-15-50022

**Class 926, Item 15
Class 926, Item 42**

Pre-Proposal Conference: Friday, March 28, 2014 at 9:30 a.m. (Central Time); 12100 Park 35 Circle Bldg. E, Room 201S, Austin, TX 78753

Conference Call Available

Dial the Access Number: 1-877-820-7831

Then enter Pass code: 207085 #

The Pre-Proposal Conference is Non-Mandatory.

Deadline for Submission of Questions: April 4, 2014 at 2:00 pm (Central Time)**Responses Due: April 30, 2014 at 2:00 pm (Central Time)**

Responses should be submitted via hard copy (signed original and three (3) copies) with a CD disk that includes entire proposal as one pdf file.

Description:

The TCEQ intends to award scientific and technical environmental service contracts for air quality modeling, State Implementation Plan (SIP) development and support, emissions inventory, and related matters, as more fully described herein. Multiple awards may be made. TCEQ reserves the right to make any number of awards, partial awards, or to cancel this procurement, in the best interest of the state. Each Responder that is awarded a contract will receive two contracts: one for work similar to work regularly or routinely performed within the TCEQ by modeling, planning, and emissions inventory staff and one for work which will be distinct from work regularly or routinely performed within the TCEQ by modeling, planning, and emissions inventory staff.

PURCHASING AUTHORITY:

- ☐ Competitive Sealed Proposals (RFP) Gov't Code 2156, Subchapter C
- ☒ Scientific & Technical Environmental Services (RFP) Section 5.2291 (b) Texas Water Code, Chapter 2254 Gov. Code, Subchapter A
- ☐ Purchase of Automated Information Systems (RFO) Gov't Code 2157
- ☐ Professional and Consulting Services (RFQ) Gov't Code 2254
- ☐ Authority to Award Grants (RFGA) Texas Water Code, Chapter 5, Section 5.124
- ☐ Biddable Goods and Services (IFB) Gov't Code 2155

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TCEQ Procurements and Contracts Representative

Name: LaTresa Stroud, or Clifford Calley

Telephone: (512)-239-4598

Email: Clifford.Calley@TCEQ.Texas.gov

Addresses for Delivery of Responses: (All the information below must be visible on the outside of all packages received by TCEQ.)

By US Postal Service Mail:

Clifford Calley

TCEQ

Solicitation Number: 582-15-50022

Procurements & Contracts MC182

PO Box 13087

Austin, Texas 78711-3087

Overnight Delivery or Hand-delivery:

Clifford Calley

TCEQ

Solicitation Number: 582-15-50022

Procurements & Contracts MC182

12100 Park 35 Circle

Bldg. A, 3rd Floor

Financial Administration Division Reception Desk

Austin, Texas 78753

TCEQ Historically Underutilized Business (HUB) Coordinator

Name: Laura Cagle

Telephone: (512) 239-1293

Email: Laura.Cagle@tceq.texas.gov

The HUB requirements are found in Chapter 2161, Texas Government Code and 34 Texas Administrative Code, Chapter 20, Subchapter B. The HSP forms and additional information about the HUB program are found at: [State of Texas HUB Subcontracting Plan](http://www.window.state.tx.us/procurement/prog/hub/hub-subcontracting-plan/)(www.window.state.tx.us/procurement/prog/hub/hub-subcontracting-plan/).

RESPONDER GENERAL INSTRUCTIONS

Pre-Proposal Conference

If a Pre-Proposal Conference is scheduled for this Solicitation, the date, time and location are on the Cover Page. Any Pre-Proposal Conference scheduled after release of this Solicitation will be announced in an addendum posted on the [Electronic State Business Daily \(ESBD\) Link](http://esbd.cpa.state.tx.us) (<http://esbd.cpa.state.tx.us>).

Questions Regarding the Solicitation

Deliver questions in writing by the due date on the Cover Page to the TCEQ Procurements and Contracts Representative by e-mail, mail or other delivery. It is preferred to receive questions by e-mail to document proof of delivery date and time. Please label the mailing envelope containing questions with Solicitation Name, Solicitation Number and the Due Date for Responses. TCEQ has sole discretion as to whether to respond to questions.

Addenda

Any changes to the Solicitation, deadline dates, and all responses to questions will be posted as addenda on the ESBD. All addenda are part of the Solicitation. No other explanations, interpretations, or changes will be considered official or binding. It is Responder's responsibility to ensure review all of the addenda.

Changes to the Terms and Conditions

Exceptions that are not advantageous to TCEQ may result in the deduction of points in the evaluation or disqualification of the Response.

Cost of Preparing the Response

The Responder is responsible for all costs incurred in the preparation and submission of a Response.

Quantity and Nature of the Work

Responders are required to inform themselves of all conditions which may affect the performance or the prices. By submitting a Response, Responder expressly waives any claims that there was a misunderstanding concerning the quantities or the nature of the Work.

Submission of Responses

Responses become TCEQ records and cannot be returned. Responses should be in the format of one (1) original and three (3) hard copies and one (1) CD with only one (1) PDF document of the entire proposal. In order for the proposal to be responsive, the CD must contain the entire proposal as one pdf document. If this requirement is not met; your response may be disqualified.

Prepare the Response per the selected submission format and as follows:

- Include all information listed on the Response Contents Page;
- Obtain any missing applicable forms from TCEQ with sufficient time to complete and submit them in the Response;
- Complete the applicable forms in this Solicitation;
- Create any other applicable documents;
- Insert all the applicable documents behind the specified tabbed sections; and
- Sign the Response on the Responder's Signature and Information page. Unsigned Responses will not be considered.

Historically Underutilized Business (HUB) Subcontracting Plan (HSP)

The Table of Contents indicates whether an HSP is required. Even if an HSP is not indicated, any Response submitted with costs of \$100,000 or more over the life of the contract (including any possible renewals) must include a completed HSP. Failure to submit a HUB Subcontracting Plan, if required for the Solicitation, will result in rejection of the Response.

You are encouraged to seek assistance in completing the HUB Plan from the TCEQ HUB Coordinator, Laura Cagle, at (512) 239-12793 or at laura.cagle@tceq.texas.gov. TCEQ will respond whenever possible, but does not guarantee a response to all inquiries. The HUB Plan must demonstrate you made a good faith effort to include HUBs in subcontract work. If there are any changes to the information in the HUB Plan after it is submitted, you must obtain prior approval from TCEQ.

Delivery to TCEQ

Submit the Response by the due date on the Cover Page as follows. Do not submit Responses by any other method.

Submission in Paper Format and on Compact Disc (CD)- The Responder must submit the original, three (3) hard copies and one (1) CD of the Response.

Original and Hard Copies:

- Prepare and submit the original (designate the original) and three (3) hard copies of the Response.
- Secure all documents in a manner that readily permits copying, i.e. binder clips or three-ring notebook.
- Include either cover pages or tabs between sections.

Compact Disc (CD) (Flash drives are acceptable.)

- Submit the entire Response in one Adobe portable document format (pdf) file. **TCEQ requires that the entire proposal be submitted as (1) one (pdf) file.** TCEQ uses this one (1) pdf for historical purposes. For the tabbed sections, include a cover page between tabbed sections.

Place the original of the Response, the copies, and the CD in a sealed envelope or container and mark the envelope/container prominently with:

- Responder name;
- Solicitation name;
- Solicitation number;
- Solicitation Due Date/Time; and
- Submit the Response to one of the addresses specified for the TCEQ Procurements and Contracts Representative.

TCEQ is not responsible for documents that cannot be read. Unreadable proposals may be, at TCEQ's discretion, rejected as non-compliant.

Due Date/Late Responses

It is Responder's responsibility to ensure timely delivery of the Response to TCEQ by the date and time on the Cover Page. Late responses will not be considered under any circumstances. TCEQ will not be responsible for failure of service on the part of the U.S. Postal Service, courier companies, or any other form of delivery service chosen by the Responder. Responses cannot be altered, amended or withdrawn after the Due Date and Time.

TCEQ's Acceptance of Responses

TCEQ may reject Responses that do not comply with requirements in the Solicitation and state and federal laws. TCEQ may accept or reject all or any part of any response, waive procedures for submitting Responses, waive formalities and/or minor technicalities, and award by item or groups of items, whichever best serves the interests of TCEQ. TCEQ may also cancel this procurement and withdraw this Solicitation at any time before a contract is signed by TCEQ. TCEQ shall be the sole judge of the best interests of TCEQ. TCEQ may award one or more contracts for all or part of the Work.

Evaluation

The pricing and all terms and conditions of Responses are fixed for 120 days from receipt by TCEQ. Best and Final Offers (BAFOs), if requested by TCEQ, are fixed for 60 days. To determine the most advantageous Response, in addition to price, TCEQ may consider other relevant criteria, which are described more fully in the Submittal and Evaluation of Statement of Qualifications, Technical Approach, and Price section.

Selection

Depending on the applicable procurement method and solicitation type, in order to secure the best value for the State, TCEQ may take one or more of the following actions in the selection process:

- Accept the highest scoring Response without changes.
- Request clarifications, assurances and corrections.

- Conduct discussions on Responses scoring within a competitive range and request Best and Final Offers (BAFOs).
- Change the selection criteria and apply it to BAFOs.
- Select the highest scoring BAFO and accept it without changes or negotiate better terms.
- In an invitation to submit BAFOs, TCEQ may include any noncompliant Responses which TCEQ deems in its sole discretion are susceptible to being made acceptable, as long as the Response contains a compliant HSP. The BAFO must be in compliance with all requirements.
- In the case of a tie which cannot be resolved by application of one or more statutory preferences, a selection may be made that is in the best interest of the State.
- The TCEQ may award one or more contracts for all or part of the work.

Protest Procedures

An actual or prospective responder or contractor who is aggrieved in connection with the Solicitation, evaluation, or award of a contract by TCEQ may formally protest to the TCEQ Manager of Procurements and Contracts. TCEQ Protest Procedures can be found at [30 Texas Administrative Code Part 1, Chapter 11, Subchapter B, § 11.2](#).

Public Information

The Response is a public record. By signing and submitting a response, Responder hereby acknowledges:

- That the Response and subsequent documents submitted to TCEQ are subject to the Texas Public Information Act (PIA);
- That it is Responder's obligation to specifically identify information it contends to be confidential or proprietary and accepts that TCEQ may in its sole discretions deem a Response as non-compliant; and
- That Responder grants a royalty-free, non-revocable, world-wide, perpetual license to reproduce, any copyrighted portions of the Response and subsequent documents to comply with LBB reporting requirements, PIA disclosures, or any other reporting requirements mandated by law or statute.

Conflict of Interest

Disclose apparent, potential or actual conflicts of interest known with the Response in **Tab 7**. Responder has a continuing obligation to disclose conflicts of interest during this Solicitation, and if awarded, during the Contract Period. TCEQ may refuse to contract with Responder or terminate any Contract due to an apparent, potential, or actual conflict of interest.

SECTION 2:

SCOPE OF WORK AND EVALUATION CRITERIA

SCOPE OF WORK

I. THE WORK

Contractor will provide support services for the technical functions of the TCEQ, on an as-needed basis, in carrying out programs as specified in the Clean Air Act, (as amended by the Clean Air Act Amendments of 1990), the Texas Clean Air Act, the rules of the TCEQ, and to meet other ad hoc requirements. Contractor shall be available for internal and public meetings, as needed, to provide overviews and/or explanations of work performed. The Contractor shall perform the work as specified in Work Orders. Work will be ordered in the following performance/subject areas:

	AREAS OF WORK	RELATIONSHIP OF SAMPLE WORK ORDERS TO AREAS OF WORK
1.	Air Quality Modeling Services	
1.a.	Photochemical Modeling Services	Sample Work Order 6 and 12
1.b.	Meteorological Modeling Services	Sample Work Order 7
2.	Air Quality Modeling Support Services	
2.a.	Atmospheric Chemistry Research and Analysis	Sample Work Order 12 and 13
2.b.	Meteorological and Atmospheric Research and Analysis	Sample Work Order 14
2.c.	Technical Analysis of Air Quality Related Issues	Sample Work Order 5 and 11
3.	Area Source Emissions Inventory Services	Sample Work Order 10
4.	On-road Mobile Source Emissions Inventory Services	Sample Work Order 4
5.	Non-road Mobile Source Emissions Inventory Services	Sample Work Order 2
6.	Point Source Emissions Inventory Services	Sample Work Orders 8 and 9
7.	Program Technical Support Services	Sample Work Orders 1 and 3
8.	Mobile Technical Support Services	Sample Work Orders 1 and 4

The Areas of Work identified in the table above are more fully described in Section II below:

AREAS OF WORK

1. Air Quality Modeling Services

The Contractor shall provide services to the TCEQ by applying and/or providing improvements to photochemical grid models, meteorological models, emissions models, and other air quality models for use in attainment demonstration modeling, rate of progress (ROP) modeling, control strategy modeling, and other modeling assignments as required.

A. PHOTOCHEMICAL MODELING SERVICES

Photochemical modeling services may be used to assess the efficacy of mobile, point, and area source control strategies in various regulatory determinations or demonstrations (attainment, ROP, visibility, exceptional events, etc.). Examples of assigned work may include any or all of the following: application of photochemical models to support State Implementation Plan (SIP) revisions, application of established models and procedures to improve emissions estimates for a specified time period and/or prepare those emissions estimations for use in the photochemical model, development of emissions related modeling inputs, preparation and delivering of various types of input data and files, development and delivering of spatial and temporal profiles related to emissions, assessment of the sensitivity of the photochemical or meteorological models to variations in emissions related parameters or inputs, establishment of background or boundary pollutant concentrations in baseline or future cases, assessment of source receptor relationships, performance of quality assurance/quality control (QA/QC) tasks, performance of technology transfer, and other modeling assignments as required.

B. METEOROLOGICAL MODELING SERVICES

Meteorological modeling services may be used in the following scenarios: assessing the efficacy of mobile, point, and area source control strategies in various regulatory determinations or demonstrations (attainment, ROP, visibility, exceptional events, etc.). Examples of assigned work may include any or all of the following: application of meteorological models in support of SIP revisions, performance of dispersion modeling for various tasks as needed, application of established models and procedures to improve meteorological modeling inputs for a specified time period, development of meteorological modeling inputs, preparation and delivering of various types of input data and files, development and delivering of spatial and temporal profiles for various parameters such as soil type or moisture, assessment of the sensitivity of the photochemical or meteorological models to variations in meteorological parameters or inputs, establishment of background or boundary pollutant concentrations in baseline or future cases, assessment of source receptor relationships, performance of QA/QC tasks, performance of technology transfer, and other modeling assignments as required.

2. Air Quality Modeling Support Services

The Contractor shall perform air pollution control regulatory analyses; point, area, non-road, and mobile source control strategy studies; impact analyses; and supporting implementation work incidental to modeling work assignments. Modeling analyses shall require the application and/or enhancement of models, which can be used to develop approvable SIP submittals. The models used in these analyses may include but are not limited to the following:

- Comprehensive Air Quality Model with Extensions (CAMx),
- Community Multi-scale Air Quality Modeling (CMAQ) System,
- American Meteorological Society (AMS)/Environmental Protection Agency (EPA) Regulatory Model (AERMOD),
- Consolidated Community Emissions Processing Tool (CONCEPT),
- Eastern Regional Technical Advisory Committee (ERTAC) Electric Generation Unit Emission Projection Tool,
- Emissions Processing System (EPS),
- EPA's Highway Vehicle Particulate Emission Modeling Software (PART5),
- EPA's Vehicle Emission Modeling Software (MOBILE6.2),
- EPA's Motor Vehicle Emission Simulator (MOVES),
- EPA's Emission Model for non-road engines, equipment and vehicles (NONROAD),
- Global Biosphere Emissions and Interactions System (GloBEIS),
- Hybrid Single Particle Lagrangian Integrated Trajectory (HYSPLIT) Model
- Model of Emissions of Gases and Aerosols from Nature (MEGAN),
- Goddard Earth Observing System Chemical Transport (GEOSChem),
- Model of Ozone and Related Tracers (MOZART), and
- Weather Research Forecasting (WRF) Model.

The following services are typical of those that may be required in support of modeling or to improve existing modeling:

A. ATMOSPHERIC CHEMISTRY RESEARCH AND ANALYSIS

The Contractor shall complete tasks needed to improve the state of knowledge about atmospheric chemistry related to the formation of ozone, PM, and air pollution. Examples of such work might include any and all of the following: research and experimentation to investigate theories or hypotheses related to atmospheric chemistry; development and testing of chemical mechanisms in air quality models; comparison of existing or proposed photochemical models or mechanisms; development and testing of new emissions estimation models or techniques; collection, laboratory analysis, and interpretation of ambient data (aerosol and visibility data; volatile organic compound data; land use/land cover data; mobile, point, or area source emissions related data; airborne data; and/or remote sensing data); and training of TCEQ staff to utilize and understand new modeling or analytical techniques. These tasks will include the development of Quality Assurance Project Plans (QAPP) as necessary.

B. METEOROLOGICAL AND ATMOSPHERIC RESEARCH AND ANALYSIS

The Contractor shall complete tasks needed to improve the state of knowledge about meteorological and atmospheric science related to the formation of ozone, PM, and air pollution. Examples of such work may include any or all of the following: research of theories or hypotheses related to the meteorology or the atmospheric sciences; development and testing of new models or modeling mechanisms that improve existing meteorological models or procedures; training of TCEQ staff to utilize and understand new modeling or analytical techniques; evaluation and testing of existing and proposed meteorological modeling mechanisms or models; peer review of meteorological or atmospheric science studies; collection, analysis, and interpretation of meteorological or atmospheric data to increase the state of knowledge regarding meteorological and atmospheric science. These tasks will include the development of Quality Assurance Project Plans (QAPP) as necessary.

C. TECHNICAL ANALYSIS OF AIR QUALITY-RELATED ISSUES

The Contractor shall complete tasks needed to increase the TCEQ's technical understanding of specific air quality-related issues. Examples of this work may include any or all of the following:

- collection, laboratory analysis, and interpretation of ambient air quality or meteorological data [routine meteorological data (wind speed and direction, air temperature, relative humidity and dew point),;vertical atmospheric profiles of wind or pollutants; aerosol and visibility data; volatile organic compound data; land use/land cover data; mobile, point, or area source emissions related data; airborne data; and/or remote sensing data], or socioeconomic data (population data, economics data, and/or sociological data);
- development of new data analysis tools for TCEQ staff;
- training of TCEQ staff to understand and utilize various data analysis tools;
- analysis of wind trajectories;
- analysis of wildfire and prescribed burns;
- development of conceptual air quality models of particular areas; and
- analysis of control strategies and technologies.

These tasks will include the development of Quality Assurance Project Plans (QAPP) as necessary.

3. Area Source Emissions Inventory Services

The Contractor shall provide area source inventory support and technical services to the TCEQ on an as needed basis to meet emission inventory requirements of programs such as the Federal Clean Air Act (as amended by the Clean Air Act Amendments of 1990), the Texas Clean Air Act, the rules of the TCEQ, and to meet other emissions inventory requirements. Work may include emissions inventory data development, inventory assessment, control strategy assessment, and emissions modeling. Services

may include the collection of activity data, development of relevant emission factors, collection of emissions data, development and application of growth rates, incorporation of local activity data for inventory development, control technology assessment, regulatory analysis, developing spatial and temporal profiles and relating them to emissions data, and other assignments as required. Examples of other related assignments may include scenarios such as: planning and implementing surveys for collecting emissions inventory data, preparing various types of input data and files, using monitoring equipment to collect emissions and activity data, developing emissions data for modeling, performing QA/QC functions, formatting emissions data for reporting to the EPA, and providing support for the TCEQ's emissions assessment staff.

The Contractor shall perform air pollution control regulatory analyses, work, area source air pollution control measurement studies, and impact analyses. Analyses shall also require the application of EPA approved/accepted methods and models. The following services may be required in support of emissions inventory development:

- *Data Collection, Compilation, Analysis, Assessment, Management, Quality Assurance, Formatting, and Database Development*

The Contractor shall perform tasks related to data collection, establishment of activity profiles, data compilation, data analysis, data management, data quality assurance, and data formatting.

The Contractor may also perform database development work which may be related to:

- temporal and spatial studies;
- area source, studies;
- back cast and/or forecast of emissions;
- ROP projections;
- airborne and/or ambient air sampling projects, and
- regulatory and control strategy analysis.

Data collection must be adequate to estimate emissions. Methods for collection of activity data include but are not limited to completed surveys, purchasing data, site visits, telephone calls or interviews with industry and/or process experts, electronic monitoring, establishing emission profiles, and researching production or process information. The Contractor shall complete such field work, data collection, experimentation, literature searches, laboratory analyses, and other work as required to provide updates and improvements to the emissions inventory and to develop chemical speciation profiles for substances, material properties, and/or activities of interest (e.g., laboratory analysis of paint samples). This work may require the development of new test methods, and/or the use of approved test methods and shall include writing QAPPs where necessary.

Data compilation tasks may require purchase of specific data, software/license, technical support, or other related services as designated by the TCEQ Project Manager. Copies of Statistical Analysis System software (SAS), Geographic Information System (ArcGIS), Interactive Data Language (IDL) or other software applications may be required to satisfy report and/or data requirements as specified by the Work Order.

Data analysis tasks may include complete and thorough analysis of inventory components, quality assurance, regulatory and technical analysis, and development of emission reduction strategies. Analysis may include a review of the emission sources, process equipment and materials, abatements and resulting emissions. Raw data, reports, databases, conclusions, emission estimates and other supporting data must be completely documented and quality assured as specified in the required QAPPs.

- ***Emissions Inventory Assessment***

The Contractor shall perform emissions inventory support, technical assistance, and training for emissions inventory development, modeling and allocation of emissions to support projects related to the SIP control strategy analysis [including ozone, coarse and fine particulate matter (particles with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM₁₀), and/or particles with an aerodynamic diameter less than or equal to a nominal 2.5 micrometers (PM_{2.5})], Sulfur Dioxide (SO₂), Nitrogen Dioxide (NO₂), and visibility), toxic emissions, and regional EPA emissions reporting requirements. Emission estimates include but are not limited to: nitrogen oxides (NO_x), PM, volatile organic compounds (VOC) (including specific highly reactive VOCs (HRVOCs)), sulfur oxides (SO_x), carbon monoxide (CO), ammonia (NH₃), carbon dioxide (CO₂), chlorine (Cl), and Cl based compounds, lead, PM precursors, toxics, and other pollutants and species. The Contractor shall use the best available methodologies to develop emissions inventories using source-specific activity data and databases or other pertinent information. Emissions estimates shall be developed using relevant surrogate data and/or activity profiles. The Contractor will use current EPA guidance and emission estimation models, Emission Inventory Improvement Program (EIIP) methods or other methods acceptable to TCEQ for identifying sources, collecting activity data, collecting samples, estimating emissions, preparing written documentation, and delivering electronic files.

- ***Data Collection, Data Analysis and Technical Analysis***

The Contractor shall complete field work, literature searches, data analysis and laboratory analyses as required to support emissions inventory development, quantification of potentially under-reported emissions sources, emissions control assessments and related activities. Laboratory analysis may be used to develop chemically speciated emissions profiles for the substance or activity of interest (e.g., paint samples, fuels). Collection of data in the field and laboratory analysis shall use approved test methods and shall be performed in accordance with QAPPs as

required. Examples of work may include: direct measurement of emissions, automated monitoring of emissions or activities, collection and laboratory analysis of fuel samples, collection and laboratory analysis of ambient aerosol data, collection and laboratory analysis of ambient VOC data, area or point source emissions studies, analysis of collected air emissions or air emissions-related data, airborne and/or ambient air sampling projects, and control technology assessment.

4. On-road Mobile Source Emissions Inventory Services

The Contractor shall provide on-road mobile source inventory support and technical services to the TCEQ on an as needed basis to meet emission inventory requirements of programs such as the Federal Clean Air Act (as amended by the Clean Air Act Amendments of 1990), the Texas Clean Air Act, and the rules of the TCEQ, and to meet other emissions inventory requirements. Work may include emissions inventory data development, inventory assessment, control strategy assessment, and emissions modeling. Services may include the collection of activity data, development of relevant emission factors, collection of emissions data, development and application of growth rates, incorporation of local activity data for inventory development, control technology assessment, regulatory analysis, developing spatial and temporal profiles and relating them to emissions data, and other assignments as required. Examples of other related assignments may include scenarios such as: developing survey methods and conducting surveys for collecting emissions inventory data, preparing various types of input data and files, data, using monitoring equipment to collect emissions and activity data, developing emissions data for modeling, performing QA/QC functions, formatting emissions data for reporting to EPA, and providing support for the TCEQ's emissions assessment staff.

The Contractor shall perform air pollution control regulatory analyses, database work, on-road mobile source air pollution control measurement studies, and impact analyses. Analyses shall also require the application of EPA approved/accepted methods and models. The following services may be required in support of emissions inventory development:

- ***Data Collection, Compilation, Analysis, Assessment, Management, Quality Assurance, Formatting, and Database Development***

The Contractor shall perform tasks related to data collection, establishment of activity profiles, data compilation, data analysis, data management, data quality assurance, data formatting, and/or database development work which may be related to: temporal and spatial studies; mobile source studies; back cast and/or forecast of emissions; ROP projections; airborne and/or ambient air sampling projects; and regulatory and control strategy analysis.

Data collection must be adequate to estimate emissions. Methods for collection of activity data include but are not limited to completed surveys, purchasing data, site visits, telephone calls or interviews with industry and/or process experts, electronic monitoring, establishing emission profiles, and researching production or process information. The Contractor shall complete such field work, data collection, experimentation, literature searches, laboratory analyses, and other work as

required to provide updates and improvements to the emissions inventory and to develop chemical speciation profiles for substances, material properties, and/or activities of interest (e.g., fuel sulfur content). This work may require the development of new test methods, and/or the use of approved test methods and shall include writing QAPPs where necessary.

Data compilation tasks may require purchase of specific data, software/license, technical support, or other related services as designated by the TCEQ Project Manager. Copies of SAS, Arc/Info, IDL or other software applications may be required to satisfy report and/or data requirements as specified by the Work Order.

Data analysis tasks may include complete and thorough analysis of inventory components, quality assurance, regulatory and technical analysis, and development of emission reduction strategies. Analysis may include a review of the emission sources, process equipment and materials, abatements and resulting emissions. Raw data, reports, databases, conclusions, emission estimates and other supporting data must be completely documented and quality assured as specified in the required QAPPs.

- ***Emissions Inventory Assessment***

The Contractor shall perform emissions inventory support, technical assistance, and training for emissions inventory development, modeling and allocation of emissions to support projects related to the SIP control strategy analysis (including ozone, PM₁₀ and/or PM_{2.5}, SO₂, NO₂, and visibility), toxic emissions, and regional EPA emissions reporting requirements. Emission estimates include but are not limited to: NO_x, PM, VOC (including specific HRVOCs) SO_x, CO, NH₃, CO₂, Cl, and Cl based compounds, lead, PM precursors, toxics, and other pollutants and chemical species. The Contractor shall use the best available methodologies to develop emissions inventories using source-specific activity data and databases or other pertinent information. Emissions estimates shall be developed using relevant surrogate data and/or activity profiles. The Contractor will use current EPA guidance and emission estimation models, EIIP methods or other methods acceptable to TCEQ for identifying sources, collecting activity data, collecting samples, estimating emissions, preparing written documentation, and delivering electronic files.

- ***Data Collection, Data Analysis and Laboratory Analysis***

The Contractor shall complete field work, literature searches, and laboratory analyses as required to support emissions inventory development and related activities. Laboratory analysis may be used to develop chemically speciated emissions profiles for the substance or activity of interest (e.g., fuel contents). Collection of data in the field and laboratory analysis shall use approved test methods and shall be performed in accordance with QAPPs as required. Examples of work may include: direct measurement of emissions, automated monitoring of emissions or activities, collection and laboratory analysis of fuel samples, collection and laboratory analysis of ambient aerosol data, collection and laboratory analysis

of ambient VOC data, on-road mobile source studies, airborne and/or ambient air sampling projects, and control technology assessment.

5. Non-road Mobile Source Emissions Inventory Services

The Contractor shall provide non-road mobile source inventory support and technical services to the TCEQ on an as needed basis to meet emission inventory requirements of programs such as the Federal Clean Air Act (as amended by the Clean Air Act Amendments of 1990), the Texas Clean Air Act, and the rules of the TCEQ, and to meet other emissions inventory requirements. Work may include emissions inventory data development, inventory assessment, control strategy assessment, and emissions modeling. Services may include the collection of activity data, development of relevant emission factors, collection of emissions data, development and application of growth rates, incorporation of local activity data for inventory development, control technology assessment, regulatory analysis, developing spatial and temporal profiles and relating them to emissions data, and other assignments as required. Examples of other related assignments may include scenarios such as: developing survey methods and conducting surveys for collecting emissions inventory data, preparing various types of input data and files, using monitoring equipment to collect emissions and activity data, developing emissions data for modeling, performing QA/QC tasks, formatting emissions data for reporting to EPA, and providing support for the TCEQ's emissions assessment staff.

The Contractor shall perform air pollution control regulatory analyses, database work, non-road mobile source air pollution control measurement studies, and impact analyses. Analyses shall also require the application of EPA approved/accepted methods and models. The following services may be required in support of emissions inventory development:

- ***Data Collection, Compilation, Analysis, Assessment, Management, Quality Assurance, Formatting, and Database Development***

The Contractor shall perform tasks related to data collection, establishment of activity profiles, data compilation, data analysis, data management, data quality assurance, data formatting, and/or database development work which may be related to: temporal and spatial studies; non-road mobile source studies; back cast and/or forecast of emissions; ROP projections; and regulatory and control strategy analysis.

Data collection must be adequate to estimate emissions. Methods for collection of activity data include but are not limited to completed surveys, purchasing data, site visits, telephone calls or interviews with industry and/or process experts, electronic monitoring, establishing emission profiles, and researching production or process information. The Contractor shall complete such field work, data collection, experimentation, literature searches, laboratory analyses, and other work as required to provide updates and improvements to the emissions inventory and to develop chemical speciation profiles for substances, material properties, and/or activities of interest (e.g., fuel sulfur content). This work may require the

development of new test methods, and/or the use of approved test methods and shall include writing QAPPs where necessary.

Data compilation tasks may require purchase of specific data, software/license, technical support, or other related services as designated by the TCEQ Project Manager. Copies of SAS, Arc/Info, IDL or other software applications may be required to satisfy report and/or data requirements as specified by the Work Order.

Data analysis tasks may include complete and thorough analysis of inventory components, quality assurance, regulatory and technical analysis, and development of emission reduction strategies. Analysis may include a review of the emission sources, process equipment and materials, abatements and resulting emissions. Raw data, reports, databases, conclusions, emission estimates and other supporting data must be completely documented and quality assured as specified in the required QAPPs.

- ***Emissions Inventory Assessment***

The Contractor shall perform emissions inventory support, technical assistance, and training for emissions inventory development, modeling and allocation of emissions to support projects related to the SIP control strategy analysis (including ozone, PM₁₀ and/or PM_{2.5}, SO₂, NO₂, and visibility), toxic emissions, and regional EPA emissions reporting requirements. Emission estimates include but are not limited to: NO_x, PM, VOC (including specific HRVOCs), SO_x, CO, NH₃, CO₂, Cl, and Cl based compounds, lead, PM precursors, toxics, and other pollutants and chemical species. The Contractor shall use the best available methodologies to develop emissions inventories using source-specific activity data and databases or other pertinent information. Emissions estimates shall be developed using relevant surrogate data and/or activity profiles. The Contractor shall use current EPA guidance and emission estimation models, EIIP methods or other methods acceptable to TCEQ for identifying sources, collecting activity data, collecting samples, estimating emissions, preparing written documentation, and delivering electronic files.

- ***Data Collection, Data Analysis and Laboratory Analysis***

The Contractor shall complete field work, literature searches, and laboratory analyses as required to support emissions inventory development and related activities. Laboratory analysis may be used to develop chemically speciated emissions profiles for the substance or activity of interest (e.g., fuels). Collection of data in the field and laboratory analysis shall use approved test methods and shall be performed in accordance with QAPPs as required. Examples of work may include: direct measurement of emissions, automated monitoring of emissions or activities, collection and laboratory analysis of fuel samples, collection and laboratory analysis of ambient aerosol data, collection and laboratory analysis of ambient VOC data, non-road mobile source studies, airborne and/or ambient air sampling projects, and control technology assessment.

6. Point Source Emissions Inventory Services

The Contractor shall provide point source inventory support and technical services to the TCEQ on an as needed basis to meet emission inventory requirements of programs such as the Federal Clean Air Act, the Texas Clean Air Act (as amended by the Clean Air Act Amendments of 1990), the rules of the TCEQ, and to meet other emissions inventory requirements. Work may include emissions inventory data development, inventory assessment, control strategy assessment, and emissions modeling. Services may include the collection of activity data, development of relevant emission factors, collection of emissions data, development and application of growth rates, incorporation of local activity data for inventory development, control technology assessment, regulatory analysis, developing spatial and temporal profiles and relating them to emissions data, and other assignments as required. Examples of other related assignments may include scenarios such as: developing survey methods and conducting surveys for collecting emissions inventory data, preparing various types of input data and files, using monitoring equipment to collect emissions and activity data, developing emissions data for modeling, performing QA/QC functions, formatting emissions data for reporting to EPA, and providing support for the TCEQ's emissions assessment staff.

The Contractor shall perform air pollution control regulatory analyses, database work, control measurement studies, and impact analyses. Analyses shall also require the application of EPA approved/accepted methods and models. The following services may be required in support of emissions inventory development:

- *Data Collection, Compilation, Analysis, Assessment, Management, Quality Assurance, Formatting, and Database Development*

The Contractor shall perform tasks related to data collection, establishment of activity profiles, data compilation, data analysis, data management, data quality assurance, data formatting, and/or database development work which may be related to: temporal and spatial studies; point source emissions studies; back cast and/or forecast of emissions; ROP projections; airborne and/or ambient air sampling projects, and regulatory and control strategy analysis.

Data collection must be adequate to estimate emissions. Methods for collection of activity data include but are not limited to completed surveys, purchasing data, site visits, telephone calls or interviews with industry and/or process experts, electronic monitoring, establishing emission profiles, and researching production or process information. The Contractor shall complete such field work, data collection, experimentation, literature searches, laboratory analyses, and other work as required to provide updates and improvements to the emissions inventory and to develop chemical speciation profiles for substances, material properties, and/or activities of interest (e.g., laboratory analysis of chemical constituents or products). This work may require the development of new test methods, and/or the use of approved test methods and shall include writing QAPPs where necessary. Data compilation tasks may require purchase of specific data, software/license,

technical support, or other related services as designated by the TCEQ Project Manager. Copies of SAS, Arc/Info, IDL or other software applications may be required to satisfy report and/or data requirements as specified by the Work Order.

Data analysis tasks may include complete and thorough analysis of inventory components, quality assurance, regulatory and technical analysis, and development of emission reduction strategies. Analysis may include a review of the emission sources, process equipment and materials, abatements and resulting emissions. Raw data, reports, databases, conclusions, emission estimates and other supporting data must be completely documented and quality assured as specified in the required QAPPs.

- ***Emissions Inventory Assessment***

The Contractor shall perform emissions inventory support, technical assistance, and training for emissions inventory development, modeling and allocation of emissions to support projects related to the SIP control strategy analysis (including ozone, PM₁₀, and/or PM_{2.5}, SO₂, NO₂, and visibility), toxic emissions, and regional EPA emissions reporting requirements. Emission estimates include but are not limited to: NO_x, PM, VOC (including specific HRVOCs), SO_x, CO, NH₃, CO₂, Cl, and Cl based compounds, lead, PM precursors, toxics, and other pollutants and chemical species. The Contractor shall use the best available methodologies to develop emissions inventories using source-specific activity data and databases or other pertinent information. Emissions estimates shall be developed using relevant surrogate data and/or activity profiles. The Contractor will use current EPA guidance and emission estimation models, EIIP methods or other methods acceptable to TCEQ for identifying sources, collecting activity data, collecting samples, estimating emissions, preparing written documentation, and delivering electronic files.

- ***Data Collection, Data Analysis and Laboratory Analysis***

The Contractor shall complete field work, literature searches, and laboratory analyses as required to support emissions inventory development and related activities. Laboratory analysis may be used to develop chemically speciated emissions profiles for the substance or activity of interest (e.g., chemical constituents or products). Collection of data in the field and laboratory analysis shall use approved test methods and shall be performed in accordance with QAPPs as required. Examples of work may include: direct measurement of emissions, automated monitoring of emissions or activities, collection and laboratory analysis of fuel samples, collection and laboratory analysis of ambient aerosol data, collection and laboratory analysis of ambient VOC data, point source emissions studies, airborne and/or ambient air sampling projects, and control technology assessment.

- ***Technical Analysis of Emissions Measurement Technology***

The Contractor shall complete such field work, experimentation, literature searches, laboratory analyses, and so on as are required to improve the state of knowledge

related to technology able to actively or passively measure emissions. This may involve the assessment of new instruments and/or techniques as well as the adaptation or use of approved test methods for sources of interest. Field demonstration of technologies may be performed as appropriate. Available measurement capabilities, quality assurance procedures, and protocols would be documented. A detailed assessment of instrument capabilities would be performed, including the identification, speciation, quantification, and cause of emissions from emission sources of interest.

7. Program Technical Support Services

The Contractor shall provide services to the TCEQ using standard practice methodologies and analysis tools to assess control strategies, monitor TCEQ programs and complete other planning and technical support assignments as required. The methodologies and tools implemented by the Contractor may be used to quantify the effectiveness of area, mobile, and stationary source control strategies, to assess the cost of proposed control strategies, to assess the possible market penetration of control strategies, to assess the rule effectiveness of proposed control strategies, to assess the efficacy of proposed or current TCEQ emission control programs, and to provide technical support for program monitoring as required by federal or TCEQ rules. Examples of technical support assignments may include: assessing the effectiveness of the Texas Inspection and Maintenance (I/M) programs, performing fee analysis for the Texas I/M programs, determining rule effectiveness for point source NO_x, SO₂, VOC and/or HRVOC controls, determining projected emission reductions for existing control programs such as the Texas Emission Reduction Plan (TERP), and generally providing support for the TCEQ's SIP planning staff, and emission assessment and inventory staff.

8. Mobile Technical Support Services

The Contractor shall provide services to the TCEQ for mobile sources using standard practice methodologies and analysis tools to assess control strategies, monitor TCEQ programs, develop emission inventories, and complete other planning and technical support assignments as required. The methodologies and tools implemented by the Contractor may be used to quantify the effects of mobile source control strategies, to assess the cost of proposed control strategies, to assess the possible market penetration of control strategies, to assess the rule effectiveness of proposed control strategies, to assess proposed or current TCEQ emission control programs, to develop an inventory for a subset of the mobile source population and/or to provide technical support for program monitoring as required by federal or TCEQ rules. Examples of technical support assignments may include: assessing the effectiveness of the Texas I/M programs, performing fee analysis for the Texas I/M programs, determining projected emission reductions for existing or proposed control programs such as the TERP, and generally providing support for the TCEQ's SIP planning, and emission assessment and inventory staff.

II. REQUIREMENTS APPLICABLE TO ALL WORK

Contractor will provide reports of the progress of the Work and projections of the future Work as requested by the TCEQ. At a minimum, Contractor will provide the following reports at the specified intervals, or more frequently as required in the applicable Work Order:

- Once per month, a graphical presentation of projected cumulative labor hours by month for each task or other local segment of Work for the total Work Order.
- Quarterly, a report summary of Work Order amounts invoiced and paid with outstanding balances by Work Order number.

Acceptance

If TCEQ has not specified the applicable acceptance testing procedures or acceptance criteria for a Work Order, Contractor will request the information prior to performing the Work.

QA/QC Procedures

The Contractor will thoroughly and completely perform QA/QC checks for all work performed, including perform QA/QC checks of raw data (e.g., check for data entry errors), conduct checks of spreadsheet calculations, check validity of modeling inputs, conduct checks of programming algorithms, employ appropriate automated procedures to verify data reasonability, conduct range/parameter checks that may be applicable to the data, or perform similar procedures. The contractor will also employ statistical and/or graphical analysis techniques as appropriate. Delivered Work or reports that have not been quality assured or are determined to contain inaccurate information will be deemed unacceptable. Data collection shall be in a quantity sufficient to illustrate significant representation of activity profiles.

Each Work Plan prepared under this Contract must include a formal QAPP that will ensure products are of known and acceptable quality. The Contractor may not commence technical activities until the QAPP is approved by the TCEQ Project Manager, unless the TCEQ Project Manager and the Air Quality Division Quality Assurance Officer both provide specific, prior, written approval. TCEQ may waive the requirement for a QAPP in a work order. If TCEQ waives the requirement for a QAPP and the Contractor believes that a QAPP is necessary, the Contractor must notify TCEQ.

These QA/QC requirements have been developed to be consistent with the applicable elements of American National Standards Institute/American Society for Quality (ANSI/ASQ) E4-2004: Specifications and Guidelines for Quality Systems for Environmental Data Collection and Technology Programs and the TCEQ Quality Management Plan. The required QAPP elements and associated audit types, frequencies, and quality reports are further described in this section.

The approved National Emissions Inventory (NEI) QAPP establishes appropriate requirements for project specific QAPPs for the applicable types of air quality division research activities according to the categories shown below. The intended use of the data dictates the required level of control quality. For example, the quality controls of a

developmental research program are different from that of a regulatory compliance program because the purpose or intended use of the data is different.

The four QA categories are:

Category I – establishes QAPP requirements for projects involving areas such as enforcement activities, or litigation;

Category II – establishes QAPP requirements for important, highly visible Agency projects involving areas such as supporting the development of environmental regulations or standards;

Category III – establishes QAPP requirements for projects involving applied research or technology evaluations; and

Category IV – establishes QAPP requirements for projects involving basic research or preliminary data gathering activities.

For QA Categories I and II, QAPPs shall meet the EPA requirements specified in [EPA Requirements for QA Project Plans \(QA/R-5\) \(PDF\)](#) (40 pp, 121 KB) and follow the guidance outlined in [Guidance for Quality Assurance Project Plans, EPA QA/G-5](#).

For QA Categories III and IV, QAPPs shall meet a subset of the above requirements (depending on the type of project), which must be consistent with the [EPA National Risk Management Research Laboratory QAPP](#) requirements (<http://www.epa.gov/nrmrl/qa/qappreq.html>) and the requirements shown below:

QAPP CATEGORY	TYPE OF PROJECT ^A	REQUIRED QAPP
I, II	Monitoring for NAAQS Compliance	EPA Requirements for QA Project Plans (QA/R-5) (PDF)
I, II	Modeling	Guidance for Quality Assurance Project Plans for Modeling, EPA QA/G-5M (PDF)
I, II	Geospatial	Guidance for Geospatial Data Quality Assurance Project Plans, EPA QA/G-5G (PDF)
III, IV	Measurement	NRMRL QAPP Requirements for Measurement Projects (PDF)
III, IV	Data Evaluation or Use for Secondary Purpose	NRMRL QAPP Requirements for Secondary Data Projects (PDF)
III, IV	Software Development	NRMRL QAPP Requirements for Software Development Projects (PDF)
III, IV	Method Development	NRMRL QAPP Requirements for Method Development Projects (PDF)
Footnotes	^A Project descriptions can be found in the EPA National Risk Management Research Laboratory QAPP http://www.epa.gov/nrmrl/qa/qappreq.html	

The minimum QA Category Level required for a work order will be specified in the work order.

If TCEQ has not specified the applicable Category Level for a Work Order or the Contractor believes a higher Category Level is required Contractor shall notify TCEQ.

In addition, the QAPP must address technical systems audits, audits of data quality, and reports of QA findings in accordance with the requirements shown in the following table:

QA REQUIREMENT	CATEGORY I*	CATEGORY II*	CATEGORY III*	CATEGORY IV*
Technical Systems Audits	Required for each project	Required for each project	Not Required for the project	Not Required for the project
Audits of Data Quality**	Required (50% of the data sets)	Required (25% of the data sets)	Required (10%)	Not Required
Report of QA Findings	Required in draft final and final report	Required in draft final and final report	Required in final report	Required in final report
*Additional sets of requirements may also be required depending on the nature of the project.				
**If problems are found, all data sets will be audited. This includes independent verification of every spreadsheet or automated calculation once and the percentage shown of manual calculations.				

III. DEFINITIONS OF LABOR CLASSIFICATIONS

The following labor classifications will be used in the performance of this Contract. The labor rate to be charged for any given service under a Work Order will be based on the services being provided, rather than the normal position or title of the individual actually performing those services (for example, normal air modeling data analysis activities under a Work Order task will be charged at the labor rate for Data Analysts (Level 2), even if performed by a person who normally performs Project Manager or Senior Scientist functions). The labor classifications to be charged for services under a Work Order must be specified in the Work Plan budget, and the Contractor shall not bill for different labor classifications under a Work Order without specific written authorization from TCEQ.

All work is to be performed by persons meeting the minimum qualifications specified below. All persons identified to perform at Level 4, Level 3, Level 2, or Level 1 are key personnel and must be approved as key personnel by TCEQ.

- **LEVEL 4 - TYPICAL TITLE: PROJECT MANAGER.**

Plans, conducts and supervises projects of major significance, necessitating advanced knowledge and the ability to originate and apply new and unique methods and procedures. Supplies technical advice and counsel to other professionals and operates with wide latitude for non-reviewed action.

Minimum Qualifications: Ph.D. Degree or equivalent in engineering, mathematics, statistics, meteorology, toxicology, physics, biology, chemistry, environmental science, or other related science; and

Experience: 10 years or more as the primary manager in the planning and implementation of projects of complexity and scope comparable to those described in the solicitation.

- **LEVEL 3 - TYPICAL TITLE: GROUP MANAGER; SENIOR SCIENTIST.**

Under general supervision of project manager, plans, conducts and supervises assignments normally involving smaller or less complicated projects. Estimates and schedules work to meet completion dates. Directs assistance, reviews progress and evaluates results; makes changes in methods, design or equipment where necessary and operates with latitude for non-reviewed action or decision.

Minimum Qualifications: Master's Degree or equivalent in engineering, mathematics, statistics, meteorology, toxicology, physics, biology, chemistry, environmental science, or other related science; and

Experience: 6 years or more performing projects of complexity and scope comparable to those described in the solicitation.

- **LEVEL 2 - TYPICAL TITLE: SCIENTIFIC/TECHNICAL ANALYST, DATA ANALYST, MODELING SPECIALIST.**

Under supervision of a senior staff or project manager, carries out assignments associated with projects. Translates technical guidance received from supervisor into usable data applicable to the particular assignment and coordinates the activities of junior staff or technicians. Work assignments are varied and require some originality and ingenuity.

Minimum Qualifications: B.S. Degree or equivalent in engineering, mathematics, statistics, meteorology, toxicology, physics, biology, chemistry, environmental science, or other related science; and

Experience: 3 years or more performing activities of the nature described above for projects of complexity and scope comparable to those described in the solicitation.

- **LEVEL 1 - TYPICAL TITLE: TECHNICIAN.**

Entrance Level Class. Works under close supervision of senior staff or project manager, gathers and correlates basic data and performs routine analyses.

Works on less complicated assignments where little evaluation is required.

Minimum Qualifications: B.S. Degree or equivalent in engineering, mathematics, statistics, meteorology, toxicology, physics, biology, chemistry, environmental science, or other related science.

- **(NO LEVEL) - TYPICAL TITLE: WORD PROCESSOR, SECRETARY, ADMINISTRATIVE ASSISTANT.**

Administrative Staff – Works under close supervision of senior staff or project manager. Administrative Services to be billed on an hourly basis are those services relating to the direct preparation of deliverables, such as presentation-quality draft and final technical memoranda, reports, and graphics. These services must be pre-approved by the TCEQ. Other supportive services such as preparing invoices, retyping documents, tracking money, and tracking encumbrances are included in loaded rates for the related Work in Levels 1 through 4 and must not be billed at all.

Key Personnel Substitutions and Experience/Qualifications Substitutions:

If the Contractor wishes to (or is required to) replace any key personnel during the term of the Contract, the replacement personnel must have the same level of experience and qualifications required of the original personnel.

Appropriate experience or successful coursework not associated with a degree (with course descriptions) may be substituted for the educational requirements described above. Experience may substitute for educational requirements, provided the Contractor describes the relevant experience in detail, with an explanation for how the experience substitutes for education. TCEQ must review and approve all such proposed substitutions. In general, it is anticipated that appropriate, successful experience or coursework may substitute for the minimum educational levels as follows:

- a) Any combination of additional years of experience in the proposed field of expertise plus full time college level study in the particular field totaling four (4) years will be an acceptable substitute for a B.S. Degree.
- b) A B.S. Degree plus any combination of additional years of experience and graduate level study in the proposed field of expertise totaling two (2) years will be an acceptable substitute for a Master's Degree.
- c) A B.S. Degree plus any combination of additional years of experience and graduate level study in the proposed field of expertise totaling four (4) years or a Master's Degree plus two (2) years of either additional experience or graduate level study in the proposed field of expertise will be an acceptable substitute for a Ph.D. Degree.
- d) Additional years of graduate level study in an appropriate field will be considered equal to years of experience on a one-for-one basis.

(END OF SCOPE OF WORK SECTION)

**SUBMITTAL AND EVALUATION OF STATEMENT OF
QUALIFICATIONS, TECHNICAL APPROACH, SAMPLE WORK
ORDERS, AND PRICE**

EVALUATION CRITERIA

Responses and Best and Final Offers will be scored on the basis of factors constituting demonstrated competence, qualifications, and reasonableness of price using the following general categories for which maximum possible scores are shown:

- Responder's Company Qualifications – 20 points
- Key Personnel Qualifications and Experience – 25 points
- Technical Approach – 40 points
- Price – 15 points

The TCEQ may consider, for the assignment of points for Qualifications, information regarding the Responder's past performance for TCEQ, other governmental entities and businesses.

STATEMENT OF QUALIFICATIONS

The Responder's Statement of Qualifications (including, but not limited to, Responder's ability to perform, response to Sample Work Orders, past performance, client references, and personnel qualifications) will be evaluated to determine the Responder's competence and qualifications to address TCEQ's needs and requirements for a reasonable price for the technical areas (Areas of Work) listed in the Scope of Work. These evaluation results will be used to select Responders for award of contract(s). These determinations may also be used subsequent to award (along with performance experience on completed work), as part of the determination of the Contractor to which a Work Order will be issued.

TCEQ reserves the right to contract separately for Work, or perform it internally using TCEQ resources, when TCEQ determines that it is in the best interest of the State to do so.

Primary Purpose Areas. If one or more Responses appear to indicate that a significantly better value for the State may be obtained for work within a particular Area of Work, scores may also be calculated for such particular Areas of Work and Areas of Work may be marked as a Primary Purpose Area in the Contract for the highest scoring Responders for those Areas of Work. In the event that such Primary Purpose Area are marked, those Contractors will have priority in TCEQ's issuing of Work Orders for Work within those Areas of Work (subject to the necessary division between unrestricted and FTE-limited work, where applicable), but TCEQ will not be bound to issue all such Work Orders to those Contractors. If more than one contract includes specific Areas of Work, TCEQ will determine which contractor to award a particular Work Order to by using factors listed in the Special Terms and Conditions. Furthermore, TCEQ does not promise any minimum expenditure, nor that all work falling within the Scope of Work of the contracts will be ordered under these contracts.

Partial Awards. In addition, the Responses may be evaluated to determine whether it would be in the best interest of the State to consider awards for particular Areas of Work. A proposer may submit a proposal to cover part of the work included in this RFP if that proposer wishes to be considered only for a partial award for that particular Area(s) of Work. All proposers must fill out the Checklist for Areas of Work in Section 4: Response Documents to indicate which Areas of Work they wish to be considered for; proposers who wish to be considered for overall awards should check all boxes (note: all proposers may be considered for partial awards even if all boxes are checked, if TCEQ determines that making partial awards would be in the best interest of the State). This checklist indicates which Sample Work Plans must be submitted for each Area of Work within the Scope of Services.

1. STATEMENT OF QUALIFICATIONS

RESPONDER'S COMPANY QUALIFICATIONS STATEMENT: 20 POINTS (TAB 2A) (NO FORM)

The Responder shall include the following information and submit with Response:

- **Company Organization:** Describe the Company's organization including at a minimum: type of business organization, (e.g., corporation, partnership, sole proprietorship, etc.); date established; state of incorporation; Texas authorization(s) to conduct business; location of your company headquarters; relevant branch offices.
- **Company Ability to Perform:** Describe the Company's physical equipment and other resources you deem necessary to fulfill the requirements of the Scope of Work. Provide a general explanation and/or chart. Specify project leadership and reporting responsibilities, and indicate which team members will interface with TCEQ project management. Team members might include the Program Manager who has overall responsibility for the contract, case coordinators/project managers, researchers, database specialists, QA/QC specialists, administrative personnel, technical specialists, and any other proposed personnel you deem necessary for TCEQ to evaluate your response. Include proposed number of personnel by discipline to be dedicated to perform the Work for TCEQ.
- **Company Past Performance:** Responders shall submit information on the three (3) most recently completed contracts or contracts currently in progress for similar work to that described in the Scope of Work. Three (3) examples must also be provided for the company for which each subcontractor works that is listed as key personnel in your submitted statement of qualifications. These example contracts may include contracts with Federal, state and local governments, as well as commercial businesses. Include the following information for each contract and subcontract:
 1. Name of contracting activity.

2. Contract number, if applicable.
3. Contract title.
4. Brief description of contract or subcontract.
5. Total contract amount.
6. Period of performance.
7. Project or program manager and telephone.
8. List of major subcontractors (if applicable).

If the Responder has no relevant (similar) past performance history, the Responder must affirmatively state that it possesses no relevant past performance history. If the Responder does not indicate whether past performance history exists, the Responder's proposal may be considered ineligible for award.

If the Responder does not provide all of the required past performance examples, the Responder must affirmatively state the reason. Part of the evaluation procedure may involve contacting the project or program manager listed and requesting information related to the project. If the project or program manager cannot be contacted for any reason, including the information supplied was erroneous or incomplete or the project or program manager refused to provide information, points may be deducted.

List all work performed for the TCEQ as prime Contractor or subcontractor during the last twenty-four (24) months including contracts, purchase orders, and sole source and emergency procurements. For each specific project, list the TCEQ contact associated with the project and the TCEQ division for which the work was performed. You may include these projects as one or more of the three projects required above.

- ***Responder Company's Client References:*** In addition to the client contact information listed in the Company Past Performance above, provide at least three (3) client references for clients for whom the Responder has performed similar Work as described in the Scope of Work. You must provide the following information for each client reference: name, entity for which they work, and phone number(s). The Responder or its subcontractor, as applicable, must provide the Reference Notification Letter, using the form in Section 4: Response Documents, to each reference and the Responder must provide a copy of all of its and the subcontractors' letters behind Tab 7.

If the Responder does not provide all of the required references, the Responder must affirmatively state the reason. Part of the evaluation procedure will involve contacting references and requesting information related to their knowledge of the Responder's work. If references cannot be contacted for any reason, including the information supplied was erroneous or incomplete or the reference refused to provide information, those references will be counted as "unsatisfactory" and may result in points being deducted.

2. STATEMENT OF QUALIFICATIONS

RESPONDER'S KEY PERSONNEL QUALIFICATIONS AND EXPERIENCE:

25 POINTS (TAB 2B) (NO FORM)

List all personnel and subcontractors who will perform Work under the contract in any of the Labor Classification(s) indicated as key personnel in the Scope of Work.

For the personnel listed, Responder shall provide the following information:

- describe specific, relevant experience(s). Not limited to work performed for the Responder. Include any related contract numbers, the dates performed work, and the project officers/team leaders for work listed
- for each person, list the Areas of Work qualified to perform
- indicate the key personnel Labor Classification(s) under which the person will perform work and whether they are a subcontractor

The Responder shall also provide detailed resumes for all key personnel.

3. TECHNICAL APPROACH

TECHNICAL APPROACH: 40 POINTS (TAB 3) (NO FORM)

PROVIDE A DESCRIPTION OF THE TECHNICAL APPROACH THAT INCLUDES:

- A General Technical Work Plan for providing the services described in the Scope of Work, with additional detail included for providing relevant services not covered by the Sample Work Orders.
- Sample Work Plan(s) for completing the specific tasks as described in the Sample Work Orders.

The score for this category will be divided between the TCEQ evaluation of the Responder's General Technical Work Plan (Technical Approach Part A), especially that work not covered in the Sample Work Plan and the TCEQ's evaluation of the Responder's Sample Work Plan(s) for performing the Sample Work Orders (Technical Approach Part B).

TECHNICAL APPROACH PART A: GENERAL TECHNICAL WORK PLAN FOR THE CONTRACT SCOPE OF WORK (NO FORM)

Describe generally your technical approach for performing the services described in the Scope of Work. The General Technical Work Plan should demonstrate the Responder's comprehensive understanding of the required effort and any other factors necessary for successful completion of the work. These descriptions are not expected to exhaustively illustrate all of the Responder's capabilities but instead should provide examples of areas

where Responder's abilities can be of service to the TCEQ in its SIP development process and other activities.

The Responder must use the labor classifications listed and described in the Scope of Work. The Responder may provide the titles used within the Responder's own organization, but the Responder must include those titles in the indicated column in the Price form to demonstrate how the titles relate to the labor classifications described in the Scope of Work and listed in the Price Form.

Responses to this portion of the RFP will be used to evaluate Part A of the Technical Approach, which constitutes 10 points of the 40 points for Technical Approach.

TECHNICAL APPROACH PART B: SAMPLE WORK PLAN(S) FOR THE SAMPLE WORK ORDER(S) (NO FORM)

PREPARATION OF SAMPLE WORK PLAN(S)

Responses to this portion of the RFP will be used to evaluate Part B of the Technical Approach, which constitutes 30 points of the 40 points for Technical Approach.

On the following pages, a series of 14 Sample Work Orders is presented. The Sample Work Orders describe projects typical of those that the successful Responder will be asked to perform under the Contract. Responders should develop a Work Plan for each of the Sample Work Orders. Responders who do not wish to be considered for overall awards as described above but wish to be considered for partial awards, may choose to develop Work Plans for Sample Work Orders in certain Areas of Work only, and be evaluated only for the specific work for those Sample Work Orders. (in the event that TCEQ considers partial awards). To be considered for Work under an area or sub-area of Work listed in the Scope of Work, the Contractor must provide a Sample Work Plan for all Sample Work Orders indicated in the list in the Scope of Work as applying to the specific area or sub-area of Work. *The Areas of Scope of Work and Sample Work Orders Crosswalk* indicates the percentage awarded for the sample work orders specific to each area of work. *The Areas of Scope of Work and Sample Work Orders Crosswalk* document is at the end of this section.

For each Sample Work Plan, provide sufficient detail to demonstrate a comprehensive understanding of the work involved. The Sample Work Order includes a Total Cost figure that TCEQ believes is a realistic estimate of the total cost for the project. Responders shall keep the level of effort within the total amount of work order listed within each Sample Work Order. *Responders should keep in mind that the Sample Work Plans will be scored on best value within the total amount of work order listed within each Sample Work Order.*

Responders may propose additional tasks which could be conducted in order to enhance the value of one or more of the tasks listed in the selected Sample Work Order. If additional tasks are proposed, include a description of each task and its associated deliverable. The cost of the additional task must be within the total amount of work order listed within each Sample Work Order. While not explicitly listed in the Sample Work

Orders, the first task implicitly is the development of the Sample Work Plan, which should include a Schedule of Deliverables, Task Descriptions for the remaining tasks, a list of the personnel to be assigned to the various tasks with expected hours, and a description of Quality Assurance (QA) procedures to be employed. Cost of preparation of the Sample Work Plan and the Quality Assurance Project Plan (QAPP) should be included in the total cost of the Work Order.

Note that the Sample Work Orders are somewhat abbreviated, and are representative of the types of work that may be required under the Contract, but are themselves only hypothetical Work Orders.

ALL INFORMATION SUBMITTED IN THE TECHNICAL WORK PLAN WILL BE EVALUATED USING THE FOLLOWING FACTORS:

1. Adequacy and innovativeness of the plan and the description of how the assignment would be carried to its conclusion, by task and deliverable.
2. The Sample Work Plans will be evaluated on the Responder's demonstrated understanding of the TCEQ's requirements as described in the Sample Work Orders. Demonstrated understanding is reflected by factors such as: choice of project example documentation; attention to detail in the proposal; and the quality of the overall Sample Work Plan.
3. Recognition of the assignment objectives and the Responder's description of the specific details in accomplishing assignment objectives.
4. How the final product would be developed. A technical approach which produces sound technical results and encompasses innovative techniques that save time or money or produce a better product is preferred over a standard response.
5. How the final product (summary) would look when completed. Responders are encouraged to include diagrams showing the tasks and milestones related to draft and final reports.
6. Demonstration of the appropriate and timely use of key personnel:
 - a. Participation directed to the assignment, what the appropriate professional effort is, and at what stages/phases of the assignment the effort is to be applied. The use of graphs and charts is encouraged.
 - b. The Responder must use the labor classifications listed and described in the Scope of Work. The Responder may provide the titles used within the Responder's own organization, but the Responder must include those titles in the indicated column in the Price form to demonstrate how the titles relate to the labor classifications described in the Scope of Work and listed in the Price Form.
 - c. Distribution of labor hours among labor classifications. Work Plans should strive to achieve a fair balance between price and appropriate use of higher-level employees. Using too few high-level staff hours will result in a lower price, but may reduce the quality of the work product, and vice versa. When showing

staff assignments, the Sample Work Plan should use the labor classifications listed and described in the Scope of Work.

7. List resources, except key personnel provided above in item 6, to be used that will be charged under the work order including, but not limited to, software, equipment, supplies, travel, data acquisition, and contractual services. **NOTE: DO NOT INCLUDE DOLLAR AMOUNTS FOR THESE ITEMS.**
8. Quality Assurance/Quality Control (QA/QC) Procedures. Responders must include a QAPP in only one Sample Work Order. For that one Sample Work Order: Include a QAPP as a deliverable as only described in detail below. Responders will be evaluated on the adequacy of their sample QAPP. Do not include a QAPP for more than one Sample Work Order.

The Work Plan must include a formal QAPP that will ensure products are of known and acceptable quality. These QA/QC requirements have been developed to be consistent with the applicable elements of American National Standards Institute/American Society for Quality (ANSI/ASQ) E4-2004: Specifications and Guidelines for Quality Systems for: Environmental Data Collection and Technology Programs and the TCEQ Quality Management Plan.

The Work Plan shall include a QAPP as a deliverable and key QA checks to be utilized during the Sample Work Order. The required QAPP elements and associated audit types, frequencies, and quality reports are further described in this section.

The approved National Emissions Inventory (NEI) QAPP establishes appropriate requirements for project specific quality assurance project plans for the applicable types of air quality division research activities according to the categories shown below. The intended use of the data dictates the required level of control quality. For example, the quality controls of developmental research program are different from that of a regulatory compliance program because the purpose or intended use of the data is different. The four QA categories are:

- Category I - establishes QAPP requirements for projects involving areas such as enforcement activities, or litigation;
- Category II - establishes QAPP requirements for important, highly visible Agency projects involving areas such as supporting the development of environmental regulations or standards;
- Category III - establishes QAPP requirements for projects involving applied research or technology evaluations; and
- Category IV - establishes QAPP requirements for projects involving basic research or preliminary data gathering activities.

For QA Categories I and II, QAPPs shall meet the EPA requirements specified in EPA Requirements for QA Project Plans (QA/R-5) (PDF) (40 pp, 121 KB) and follow the guidance outlined in Guidance for Quality Assurance Project Plans, EPA QA/G-5.

For QA Categories III and IV, QAPPs shall meet a subset of the above requirements (depending on the type of project) which must be consistent with the EPA National Risk

Management Research Laboratory QAPP requirements (<http://www.epa.gov/nrmrl/qa/qappreq.html>) and the requirements shown below:

QAPP CATEGORY	TYPE OF PROJECT ^a	REQUIRED QAPP
I, II	Monitoring for NAAQS Compliance	EPA Requirements for QA Project Plans (QA/R-5) (PDF)
I, II	Modeling	Guidance for Quality Assurance Project Plans for Modeling. EPA QA/G-5M (PDF)
I, II	Geospatial	Guidance for Geospatial Data Quality Assurance Project Plans. EPA QA/G-5G (PDF)
III, IV	Measurement	NRMRL QAPP Requirements for Measurement Projects (PDF)
III, IV	Data Evaluation or Use for Secondary Purpose	NRMRL QAPP Requirements for Secondary Data Projects (PDF)
III, IV	Software Development	NRMRL QAPP Requirements for Software Development Projects (PDF)
III, IV	Method Development	NRMRL QAPP Requirements for Method Development Projects (PDF)
Footnote	a. Project descriptions can be found at: EPA Quality Assurance Project Plan (QAPP) Requirements http://www.epa.gov/nrmrl/qa/qappreq.html	

In addition, the QAPP must address technical systems audits, audits of data quality and reports of QA findings in accordance with the requirements shown in the following table:

QA Requirement	CATEGORY I	CATEGORY II	CATEGORY III	CATEGORY IV
Technical Systems Audits	Required for each project	Required for each project	Not Required for the project	Not Required for the project
Audits of Data Quality	Required (50%) of the data sets	Required (25%) of the data sets	Required (10%) of the data sets	Not Required
Report of QA Findings	Required in draft final and final report	Required in draft final and final report	Required in final report	Required in final report

The QA Category Level for the one Sample Work Order will be determined by the Responder. The Responder will be evaluated on the appropriateness of the QA Category Level for the applicable Sample Work Order.

9. Demonstration of schedule control procedures, including a sample schedule demonstrating how the project will be developed.

Reminder regarding Sample Work Plans: While not explicitly listed in the Sample Work Orders the first task implicitly is the development of the Sample Work Plan. See above for additional information.

Also, all Sample Work Orders implicitly require monthly progress reports.

AREAS OF SCOPE OF WORK AND SAMPLE WORK PLANS CROSSWALK

SAMPLE WORK PLAN	1. AIR QUALITY MODELING SERVICES		
	A. Photochemical Modeling Services	B. Meteorological Modeling Services	
Overall Technical WP	25.0%	25.0%	
Sample WP #6	37.5%		
Sample WP #12	37.5%		
Sample WP #7		75.0%	
Total Percentage	100.0%	100.0%	
SAMPLE WORK PLAN	2. AIR QUALITY MODELING SUPPORT SERVICES		
	A. Atmospheric Chemistry Research and Analysis	B. Meteorological and Atmospheric Research and Analysis	C. Technical Analysis of Air Quality Related Issues
Overall Technical WP	25.0%	25.0%	25.0%
Sample WP #12	37.5%		
Sample WP #13	37.5%		
Sample WP #14		75.0%	
Sample WP #5			37.5%
Sample WP #11			37.5%
Total Percentage	100.0%	100.0%	100.0%
SAMPLE WORK PLAN	3. AREA SOURCE EMISSIONS INVENTORY SERVICES		
Overall Technical WP	25.0%		
Sample WP #10	75.0%		
Total Percentage	100.0%		
SAMPLE WORK PLAN	4. ON-ROAD MOBILE SOURCE EMISSIONS INVENTORY SERVICES		
Overall Technical WP	25.0%		
Sample WP #4	75.0%		
Total Percentage	100.0%		
SAMPLE WORK PLAN	5. NON-ROAD MOBILE SOURCE EMISSIONS INVENTORY SERVICES		
Overall Technical WP	25.0%		
Sample WP #2	75.0%		
Total Percentage	100.0%		

SAMPLE WORK PLAN	6. POINT SOURCE EMISSIONS INVENTORY SERVICES
<i>Overall Technical WP</i>	<i>25.0%</i>
<i>Sample WP #8</i>	<i>37.5%</i>
<i>Sample WP #9</i>	<i>37.5%</i>
<i>Total Percentage</i>	<i>100.0%</i>
SAMPLE WORK PLAN	7. PROGRAM TECHNICAL SUPPORT SERVICES
<i>Overall Technical WP</i>	<i>25.0%</i>
<i>Sample WP #1</i>	<i>37.5%</i>
<i>Sample WP #3</i>	<i>37.5%</i>
<i>Total Percentage</i>	<i>100.0%</i>
SAMPLE WORK PLAN	8. MOBILE TECHNICAL SUPPORT SERVICES
<i>Overall Technical WP</i>	<i>25.0%</i>
<i>Sample WP #1</i>	<i>37.5%</i>
<i>Sample WP #4</i>	<i>37.5%</i>
<i>Total Percentage</i>	<i>100.0%</i>

SAMPLE WORK ORDERS 1 THROUGH 14

SAMPLE WORK ORDER #1:

Impact Analysis of the Revised Ozone National Ambient Air Quality Standard (NAAQS) on the Inspection and Maintenance Program in Texas

Background and Purpose

The Texas Health and Safety Code Subchapter G §§382.202-382.203 requires emissions-related inspections of motor vehicles consistent with the requirements of the Federal Clean Air Act and the State Implementation Plan (SIP). The Texas Commission on Environmental Quality (TCEQ) by rule “may require emissions-related inspection and maintenance of land vehicles, including testing exhaust emissions, examining emission control devices and systems, verifying compliance with applicable standards, and other requirements as provided by federal law or regulation.”

The TCEQ adopted a revised air pollution control strategy involving emissions inspections in order to reduce oxides of nitrogen and volatile organic compounds on October 6, 2000. This strategy, a low-enhanced inspection and maintenance (I/M) program, was implemented on May 1, 2002, in Collin, Dallas, Denton, and Tarrant Counties in the Dallas-Fort Worth (DFW) area and Harris County in the Houston-Galveston-Brazoria (HGB) area. On May 1, 2003, the program was expanded to include Ellis, Johnson, Kaufman, Parker, and Rockwall Counties in the DFW area and Brazoria, Fort Bend, Galveston, and Montgomery Counties in the HGB area. The Austin area, which includes Travis and Williamson Counties, implemented a low-enhanced I/M program on September 1, 2005, and El Paso County implemented a low-enhanced I/M program on January 1, 2007.

30 Texas Administrative Code §114.50(a) requires that all gasoline-powered motor vehicles, model-year 2 through 24 that are registered and primarily operated in affected counties, are subject to an annual emissions inspection. All model-year 1996 and newer subject vehicles registered and operated in affected counties are inspected using the United States Environmental Protection Agency (EPA) approved on-board diagnostics (OBD) inspection procedures. All pre-1996 model-year subject vehicles registered and primarily operated in affected counties are inspected using the EPA approved two-speed idle (TSI) or acceleration simulation mode (ASM) inspection procedures. The OBD, ASM, and TSI emissions inspection technologies in these areas comprehensively assist in reducing ground level ozone emissions.

The EPA has proposed to lower the eight-hour primary ozone National Ambient Air Quality Standard (NAAQS) to a level within the range of 0.060 to 0.070 parts per million. If adopted, this change would increase the vehicle fleet required to have emissions inspections and the number of counties required to participate in the I/M program. The 2009 ozone design values, which are based on the average of 2007 and 2009 data, estimate that up to 50 additional counties may exceed the proposed new standard and would therefore be required to participate in the Texas I/M program.

Estimated Amount of This Work Order: \$100,000

Task 1: Survey the inspection stations in counties that could be required to implement the Texas I/M program Survey the inspection stations in the 50 counties that could be required to participate in the I/M program to determine which and how many of those stations would be interested in serving as emissions inspection stations.

The Contractor will develop the survey instrument, collect the station data from the Texas Department of Public Safety, send out the survey instrument, and compile the results.

Deliverable 1: Complete documentation of the survey results which will include the total number of stations in each county, number of stations that responded per county, and analysis of the results.

Task 2: Evaluate whether the surveys indicate that the number of emissions inspection stations will accommodate the subject vehicle fleet that could be required to implement the Texas I/M program.

The Contractor will collect the number of currently registered vehicles from the Texas Department of Motor Vehicles (TxDMV) that could be subject to the Texas I/M program requirements. The Contractor shall perform an analysis of the current I/M program to determine the range of vehicle inspections conducted at current inspection stations. The Contractor will apply the survey results to the number of currently registered vehicles to determine whether the number of inspection stations is comparable to the current subject fleet. The analysis shall be conducted for each county and overall.

Deliverable 2: The Contractor will write a detailed task project report documenting activities for the two tasks of the project. The report will include details on the survey collection procedures, the methodology of the analysis, and the results of the analysis. The report will also include appendices containing the survey instrument and the survey responses from the station.

SAMPLE WORK ORDER #2:

Improvements to Selected Categories of the Non-road Mobile Source Emissions Inventory (Non-Road Mobile)

Background and Purpose

The purpose of this project is to update the equipment population, activity, fuel usage, and emissions from yard locomotive, lawn and garden equipment, recreational boats, and commercial equipment within the Houston-Galveston-Brazoria (HGB), Dallas-Fort Worth (DFW), and Beaumont-Port Arthur (BPA) metropolitan areas.

Non-road mobile source emissions will continue to increase in importance as on-road emissions decrease due to more stringent standards, restrictions on fuel sulfur content, and longer control device lifetimes. Therefore, accurate non-road mobile source emission inventories are needed to create and evaluate proposed air quality regulations, state implementation plans, and subsequent compliance required by the Federal Clean Air Act for National Ambient Air Quality Standards for nonattainment areas.

Estimated Amount of This Work Order: \$250,000

Task 1: Data Collection

The Contractor shall describe a recommended approach for data collection and methodologies for developing an improved emissions inventory for the selected non-road mobile source categories. The equipment population and activity data collection will include proven survey techniques for creating local activity patterns with updated emissions measurement data. The Contractor will assess current sources of activity information and collect activity data to fill data gaps for the selected non-road mobile source categories operating in the DFW, HGB, and BPA areas. The Contractor will analyze, process, and then update the Texas specific NONROAD model (TexN) to reflect county specific updates to equipment populations, activity profiles, or other surrogates used in the development of the emissions inventory where appropriate. Complete documentation of all task activities will be required, including an assessment of existing activity data, format of files used in updating the TexN model, how the data gaps were filled and the methodology for analyzing the data to develop activity levels, and geographic distributions of activity and equipment populations.

Task 2: Development and Analyses of Emission Inventories

The Contractor will use the TexN model and other EPA approved methodologies to create updated emissions inventories for the non-road yard locomotive, lawn and garden equipment, recreational boats, and commercial equipment operating in the DFW, HGB and BPA metropolitan areas. The emissions inventory will be developed for both annual and ozone season daily for the selected areas. The Contractor shall analyze and compare the previous TexN model's emissions with the updated model's resulting emissions to ensure proper application of the updated equipment data including equipment population, activity profiles, or other surrogates. Contractor will also compare the updated inventories with inventories developed using EPA's latest NONROAD model with default information for the selected metropolitan areas.

Task 3: Final Report

A Final Report documenting all task activities in detail will be required. The Final Report shall include a description of the tasks, details and approaches used in the data collection procedures, all data analyses, emissions development methodologies, comparison of the activity and emissions estimates, and task results. The Final Report shall be provided in both Microsoft Word (MS-Word) 2003 and Adobe Acrobat Portable Document Format (PDF), and shall be delivered in conjunction with supporting electronic document files needed for the TCEQ staff to reproduce the emissions estimates and with documentation of all methods, data sources and references used.

Sample Work Order #3:

Portable Engine Study

Purpose and Background

Portable engines are currently exempt from regulation under 30 Texas Administrative Code (TAC) Chapter 117, as well as most other agency regulations. Previously suggested control measures associated with ozone attainment demonstration strategies have included regulating portable engines in programs such as the Houston-Galveston-Brazoria (HGB) Chapter 117 rules and the 30 TAC Chapter 101, Subchapter H, Division 3 oxides of nitrogen (NO_x) Mass Emission Cap and Trade (MECT) Program. Including portable engines under such regulations is problematic because the agency has no means by which to track portable engines. Most portable engines are authorized under Permit-By-Rule 30 TAC §106.511; however, registration is not required. Including portable engines in regulations such as the MECT Program would have questionable effectiveness without a means by which to track the ownership, location, and activity of the engines.

The purpose of this study is to research and evaluate possible means for registering and tracking portable engines such as portable generators and portable engines used in the upstream oil and gas industry (e.g., compressor pumps) and other industrial facilities. To help facilitate this evaluation, this study will also include an evaluation of the current fleet of portable engines in the East Texas region. This study will provide information for the agency to consider whether a registration program for portable engines is practical and, if so, what mechanism would be the most efficient means of implementing a registration program.

Estimated Amount of This Work Order: \$30,000

Task 1: Texas Portable Engine Fleet Characterization

The Contractor shall estimate the population of the portable engine fleet in Texas. This estimate is not intended for actual inventory purposes, but only to provide a basis for evaluating and comparing potential registration programs in Texas. Examples of sources for this information include generator vendor sales information, Texas Railroad Commission information, and information provided by oil and gas trade associations. The scope of this evaluation of the portable engine fleet in Texas is limited to the East Texas region, as defined in 30 TAC §101.330. For the purposes of this study, a portable engine is any fossil fuel-fired engine that does not meet the definition of a stationary engine in 30 TAC §117.10 and is not used to propel a vehicle. Engines attached to mobile equipment but are not used to propel a vehicle (on-road or non-road) are considered portable engines for this study.

This includes the following:

- Portable gaseous- or liquid-fired generators (both primary power suppliers as well as back-up generators);

- Portable engines used in the oil and gas industry, such as portable compressors and pump engines used on portable drilling rigs; and
- Portable engines used at petrochemical and petroleum refinery facilities.

The following are not included in the scope of this study:

- Portable lawn and garden equipment (e.g., trimmers, mowers, wood chippers, etc.) and any other fossil fuel-fired portable hand tools;
- Any engine used to propel a vehicle (on-road or non-road); and
- Any engines meeting the definition of stationary engines in 30 TAC §117.10.

Deliverable 1: Draft Report

The Contractor shall prepare and submit to the TCEQ a draft report presenting the findings of Task 1. The draft report shall include for each category of portable engine included in the study, as defined in Task 1, the estimated engine population size by fuel type (gaseous, diesel, gasoline, etc.) segregated into the following geographic areas:

East Texas Region, as defined in 30 TAC §101.330

HGB Eight-Hour Ozone Nonattainment Area

Dallas-Fort Worth (DFW) Eight-Hour Ozone Nonattainment Area

Task 2: Portable Engine Registration Program Research

The Contractor shall research and evaluate existing equipment registration programs implemented by other regulatory agencies in Texas or in other states, both those specific to portable engines and those for other equipment, but might be applied to an engine registration program.

For each identified registration program, this research shall include the following:

- The mechanism by which the program was implemented, i.e., by regulatory means or by other means;
- The scope of the registration program, i.e., the type of equipment included in the program;
- The steps involved in the registration process;
- The physical means by which the registration process occurs, e.g., on-line electronic registration, registration via submission of physical documents, etc.;
- The tracking of portable engines after initial registration, if applicable;
- The parameters included in the registration program, e.g., owner, location, engine make and model, engine size, usage, etc.;
- The estimated costs, if any, to owners of portable engines associated with the registration program (registration, documentation, recordkeeping, etc.);
- The estimated costs to the implementing authority to initiate and maintain the registration program; and
- Any problems encountered by the implementing authority during the course of the registration program.

Cost information may not be available through published literature and may require the Contractor to contact the agency administering such a registration program. The Contractor shall attempt to gather information from these agencies on the costs of the

program to the extent that this information is available.

Deliverable 2: Draft Report

The Contractor shall prepare and submit to the TCEQ a draft report presenting the findings of Task 2. The draft report shall include for each registration program identified as part of Task 2, the following:

- Each of the items specifically listed in Task 2;
- Copies of any rules and guidance documents developed by the implementing authority of the registration program; and
- The names and contact information for regulatory agencies that have implemented equipment registration programs included in this study.

Task 3: Evaluation and Final Report

Based on the findings of Tasks 1 and 2, the Contractor shall evaluate the identified equipment registration programs for possible application to the fleet of portable engines identified in the specified geographic areas.

Deliverable 3: Final Report

NOTE: The Contractor shall prepare and submit to the TCEQ for approval a final report presenting the findings of Tasks 1 - 3.

SAMPLE WORK ORDER #4:

School Bus Activity and Emissions Study (On-Road Mobile)

Purpose and Background

To develop an updated on-road mobile emissions inventory for School Buses using updated activity data.

The TCEQ is often required to develop emission inventory estimates or emission control strategy reduction estimates to support the Texas State Implementation Plans (SIPs), trend analyses, and/or technical support. The U. S. Environmental Protection Agency (EPA) provides default activity levels and activity profiles to estimate emissions. However, emission and control strategy reduction estimates can often be refined if better activity information is collected, analyzed, and prepared for use in emissions calculations.

Note: As part of the Sample Work Plan the Contractor will provide a data collection plan to the TCEQ.

Estimated Amount of This Work Order: \$250,000

Task 1: Collect and Analyze Activity data for School Buses Operating in the Dallas-Fort Worth (DFW) and Houston-Galveston-Brazoria (HGB) Nonattainment Counties
The Contractor will assess current sources of activity information and collect activity data to fill data gaps for school buses operating in the HGB and DFW areas. The Contractor will analyze and process the data. The Contractor will use the data to develop activity levels, identify activity modes, and determine activity mode profiles for the school buses. The analyses will include an assessment of where and when the activity occurs. Complete documentation of all task activities will be required, including an assessment of existing activity data, the plan to fill data gaps and the methodology for analyzing the data to develop activity levels, activity temporal distributions, activity geographic distributions, and activity mode profiles.

Task 2: Detailed Emission Inventory for School Buses Operating in the DFW and HGB Nonattainment Counties

Using the results from Task 1 in conjunction with the EPA default information, the Contractor will develop and compare two estimates of emissions produced by school buses operating in DFW and HGB 8-hour ozone nonattainment areas. An inventory for DFW and HGB will be developed using the results of Task 1. A second inventory will be developed using EPA default information. As part of the task, the Contractor will determine temporal and spatial allocation for the emissions estimates. The Contractor will use the latest emission factor model to develop the emission estimates.

Complete documentation of all task activities will be required, including:

- a description of the activity data; a description of the methodology for using the data in DFW and HGB for the emission factor development process;
- a description of the emissions estimation methodology;

- the temporal distribution of emissions;
- the geographic distribution of emissions; and
- a summary of the county-level emission inventory for each area.

Task 3: Comparison of the National Default and Locally-Specific Activity and Emissions for School Buses Operating in the DFW and HGB Nonattainment Counties
The Contractor will compare and assess the emissions and activity results from Tasks 1 and 2. The comparison will be used to assess significant differences between the national default and locally-specific information.

The comparison will include:

- an assessment of significant differences between the activity levels;
- an assessment of significant differences in activity operating mode profiles;
- an assessment of differences in emissions estimates due to significant activity modes such as idling during bus loading and unloading; and
- a discussion of the reasons for the differences.

Task 4: Final Report

The Contractor will write a detailed final report documenting all activities for all three tasks of the project. The report will include details concerning the data collection procedures, the data analysis, the emissions development methodology, a comparison of the activity estimates, a comparison of emissions estimates, and a discussion of the reasons for identified differences. The report will include a reference section. The report will also include appendices containing all relevant information collected during the completion of the tasks.

Since the results of this project may be used to modify the Texas SIP or may be used to develop rules for the control of air emissions, it is important to be able to provide rule writers and SIP developers with information concerning the relative certainty of the emissions estimates based upon data sample size relative to the total vehicle population. The Contractor shall provide statistical analysis of the data collection plan and the final data set collected during this task with sufficient detail to allow for determination of the statistical significance of the collected data.

Sample Work Order #5:

Analysis of Regional Background Ozone Affecting the Waco Area

Purpose and Background

The Waco metropolitan area currently observes ozone greater than the proposed range of ozone standards (i.e., between 60 and 70 ppbv). In order to determine the types of emission control strategies that are likely to be effective in Waco, it is necessary to determine how much ozone forms from the emissions of distant sources and cannot be controlled by local emission controls.

The purpose of this work order is to determine:

- the distribution of observed regional background ozone concentrations,
- the transport patterns that affect the Waco area during the ozone season from April thru October of each year,
- the relationship between transport patterns and observed regional background ozone arriving in the Waco area,
- the potential source contribution from different Texas cities, and from different states, and the observed trends in regional background ozone, and urban ozone in Waco.

Estimated Amount of This Work Order: \$100,000

Task 1: Collection of Vertical Wind Profiles in the Waco area

To supplement transport pattern information for the Waco area, the Contractor shall deploy a vertical profiler capable of measuring wind direction and speed at multiple heights. This profiler shall be deployed at the Texas State Technical College airfield just north of Waco. The Contractor shall collect vertical profiles every 15 minutes from April thru October.

Deliverable 1.1: The Contractor shall deliver a technical memo to the TCEQ describing the collection and analysis of the vertical profiler data as well as directions needed to access the vertical profiler dataset. The technical memo shall contain a discussion of the vertical profiler data and how it relates to transport patterns.

Deliverable 1.2: The Contractor shall deliver a dataset containing the vertical profiler data collected in the Waco area. The data shall be formatted in a manner that will be readily usable by the TCEQ Air Modeling and Data Analysis Section.

Task 2: Estimation of Regional Background Ozone Levels

The Contractor shall estimate background ozone levels arriving in the Waco area through the analysis of data obtained at local and nearby ozone monitors. The Contractor shall obtain the TCEQ's approval of its choice of ozone monitors prior to estimating background ozone levels. After obtaining relevant ambient ozone data, the Contractor shall use that data, vertical profiler data, and trajectory analyses, and other relevant analyses to satisfy the six objectives listed in the Purpose and Background above. The report shall also discuss the application of Quality Assurance and Quality Control

measures used in the project.

The Contractor shall also submit electronic copies of the data used in this project.

Deliverable 2: A Final Report discussing all elements of Task 1 and Task 2 above shall be delivered to the TCEQ Project Manager electronically (i.e., via file transfer protocol (FTP) or e-mail) in Microsoft Word format.

The **Final Report** shall include the following components:

- An executive summary or abstract.
- A brief introduction that discusses background and objectives. Include relationships to other studies if applicable.
- A discussion of the pertinent accomplishments, shortfalls, and limitations of the work completed under each Work Plan task.
- Recommendations, if any, for what should be considered next as a new study.

The Final Report shall provide a comprehensive overview of activities undertaken and data collected and analyzed during the work. The Final Report must highlight major activities and key findings, provide pertinent analysis, describe encountered problems and associated corrective actions, and detail relevant statistics including data, parameter, or model completeness, accuracy and precision.

SAMPLE WORK ORDER #6:

Effects of Changes in Chemical Mechanisms upon Regional and Urban Ozone Simulations

Purpose and Background

Recent studies in the scientific literature have indicated that radical production may be underestimated by the chemical mechanisms used in photochemical modeling. The newest versions of these chemical mechanisms have been modified to include the new findings, but they have not been adequately tested in photochemical grid modeling. The purpose of this work is to test how the modified chemical mechanisms behave in base case modeling and control strategy scenario modeling. The effects of chemical mechanism changes will be evaluated with 2 advanced model probing tools: higher-order decoupled direct method (HDDM) and process analysis.

Estimated Amount of This Work Order: \$250,000

Task 1: Modeling Plan Preparation and Approval

The Contractor will prepare a detailed modeling plan that describes the model performance evaluations, domain size, grid resolution, vertical layers and other pertinent features, for the TCEQ regional base case and control case scenarios. For the base case and the control case, the Contractor will use both the older version of the Carbon Bond 06 (CBO6) chemical mechanism, and the newest version of CBO6 (CBNew) that includes improved aromatic chemistry, activated nitrogen dioxide chemistry, heterogeneous nitrous acid formation mechanisms, improved isoprene chemistry, and nitryl chloride chemistry. The modeling plan will also include plans for use of advanced modeling tools, HDDM and process analysis, and will describe in depth how each of these tools will be used to assess the effects of the changes in the chemical mechanism.

Deliverable 1: A modeling plan that describes the model performance evaluations, domain size, grid resolution, vertical layers and other pertinent features, for the TCEQ regional base case and control case scenarios, and a description of the advanced modeling analyses to be performed.

Task 2: Base Case Modeling with CBO6 Chemical Mechanism

The Contractor will model the 2005-2006 regional episodes using base case TCEQ emissions inventories at 4km resolution, and employing the CBO6 chemical mechanism with no modifications.

Task 3: Control Case Modeling with CBO6 Chemical Mechanism

The Contractor will model the 2005-2006 regional episodes using control case TCEQ emissions inventories at 4km resolution, and employing the CBO6 chemical mechanism with no modifications.

Task 4: Base Case Modeling with CBNew Chemical Mechanism

The Contractor will model the 2005-2006 regional episodes using base case TCEQ emissions inventories at 4km resolution, and employing the CBNew Chemical Mechanism.

Task 5: Control Case Modeling with CBNew Chemical Mechanism

The Contractor will model the 2005-2006 regional episodes using control case TCEQ emissions inventories at 4km resolution, and employing the CBNew Chemical Mechanism.

Task 6: Comparison of model performance for base case, with CBo6 and CBNew Chemical Mechanisms

The Contractor will perform model performance evaluations for both versions of the base case, comparing the model output to measurements to evaluate whether the new chemical mechanism has improved the performance.

Task 7: Comparison of Model Output for Control Case with CBo6 and CBNew Chemical Mechanisms

The Contractor will perform model performance evaluations for both versions of the control case modeling analyses, comparing the model output to measurements to evaluate whether the new chemical mechanism has changed the model response to the proposed controls.

Task 8: Process Analysis of Base Case and Control Case Using the 2 Versions of the Chemical Mechanisms

The Contractor will examine process analysis results to evaluate changes in ozone production rates, volatile organic compounds (VOC) and oxides of nitrogen (NO_x) sensitivity of ozone formation, radical budgets, hydroxyl radical (OH) loss, OH chain length, and other relevant chemical processes due to emission changes, chemical mechanism changes, and the combined effects of emission and mechanism changes.

Task 9: Examination of the Changes in Model Sensitivity Due to Chemical Mechanism Changes

The Contractor will examine the changes in model sensitivity as determined by HDDM analysis, to ascertain how the changes in chemical mechanism have altered the sensitivity to changes in emissions.

Task 10: Draft and Final Reports

The Contractor will provide a draft of the Final Report one month before completion of the work order. Upon the TCEQ approval of the draft report, the Contractor will complete the Final Report. All modeling and analysis files will be made available to the TCEQ at the end of the project. The Contractor will travel to the TCEQ for a presentation of the final results.

SAMPLE WORK ORDER #7:

Weather Research & Forecasting (WRF) Meteorological Modeling for El Paso, Texas for Use in Photochemical Modeling

Purpose and Background

The TCEQ has determined a need to begin modeling a four week long ozone episode for the El Paso, Texas, metropolitan area. This modeling episode will be used to expand the agency's understanding of ozone formation in that area and prepare for possible federally required ozone SIP modeling. Under this Work Order the Contractor will assist the TCEQ by preparing WRF modeling for El Paso, Texas.

NOTE: The Work Plan for this task must describe the modeling to be conducted and criteria to be used in evaluating model performance. The work plan will describe the Contractor's ideas for estimating input parameters and how the Contractor will collect available data to establish reasonableness of these estimates.

Estimated Amount of This Work Order: \$100,000

Task 1: Configure and Execute WRF for an Ozone Episode for El Paso, Texas

In consultation with the TCEQ, the Contractor will select an ozone episode to model for El Paso, Texas. The TCEQ will define a gridded, nested domain centered on the El Paso metropolitan area using grid sizes of 4 kilometers (km), 12 km, and 36 km. The Contractor will then determine the parameter configuration of WRF and execute the WRF model for the four week period. The Contractor shall hold weekly telephone conferences with the TCEQ project manager to discuss the status of the meteorological modeling.

Deliverable 1: Weekly phone conferences with TCEQ staff with updates on status of this task.

Task 2: Evaluate WRF Model Output, and Re-run WRF as Necessary

The Contractor will use a variety of objective and subjective methods to evaluate the WRF model outputs against observed data. The Contractor will use the MetStat Program for objective comparisons along with other tools as appropriate. Subjective comparisons will be based on expert meteorological judgment regarding whether or not the model replicates the large- and small-scale features adequately, and the synoptic wind patterns. In the event the WRF does not provide what the TCEQ considers to be an output data set suitable for input into Comprehensive Air Model with Extensions (CAMx), the Contractor will modify the parameter settings and re-run WRF until a suitable output data set is produced or the TCEQ determines that it is not productive to continue. This Work Order provides for up to 2 additional model runs. Additional runs would require a Work Order Amendment.

Deliverable 2: A report describing the parameter settings used in the WRF model run(s), results of the objective and subjective comparisons with observed data. The Contractor will provide statistics on the resource requirements of WRF including run times and storage requirements. Also provide the output data set.

SAMPLE WORK ORDER #8:

Benzene Survey: Helicopter-Mounted DIAL (POINT SOURCE)

Purpose and Background

The purpose of this project is to demonstrate and document the benzene detection capabilities of a helicopter-mounted differential absorption light detection and ranging (DIAL) system by surveying and locating sources of benzene emissions from industrial facilities in the Houston-Galveston-Brazoria (HGB) eight-county nonattainment area. The helicopter-mounted DIAL system required for this project was originally developed to detect methane leaks during flyovers of natural gas pipelines. The system relies upon the infrared (IR) absorption of methane to detect natural gas leaks. The helicopter-mounted DIAL system selected shall have been used extensively and successfully to find pipeline leaks. Benzene has an IR absorption spectrum similar to methane, and trial laboratory tests have demonstrated the helicopter-mounted DIAL system can be tuned to detect benzene in the same manner current systems detect methane.

Estimated Amount of This Work Order: \$250,000

Task 1: Survey Work Plan

The Contractor shall submit and obtain TCEQ approval of a Survey Work Plan that details the industrial areas to be surveyed, potential sub-contractors, total hours of anticipated flight time, cost per hour for flight time, procedure for in-field data analysis, and selection criteria for any sub-contractors to be used. The Survey Plan shall also state that the TCEQ shall pay no more than \$3,000.00 in total towards any stand-by or similar costs charged by either the Contractor or the sub-contractor for the duration of this Work Order. The Contractor must ensure that the helicopter is covered by the amount of Aircraft Liability Insurance required in the Insurance Section of the Contract.

The Contractor shall not perform any further work on this Work Order until the Survey Work Plan is completed, approved by the TCEQ, and incorporated into the Work Plan.

Task 2: Secure Use of Helicopter-Mounted DIAL Instrument

The Contractor shall retain the services of a sub-contractor capable of providing the necessary personnel and equipment needed to conduct all activities detailed in this Work Order. The sub-contractor shall be able to conduct helicopter flyovers of industrial areas using a DIAL instrument to survey for benzene leaks. The use of a helicopter is integral to this project since a fixed-wing aircraft is not capable of flying safely at the low speeds and low altitudes necessary for the proposed surveys. The sub-contractor shall be fully bonded, insured, trained, and authorized to fly the helicopter and conduct all activities detailed in this Work Order. The DIAL instrument to be used shall be capable of detecting benzene in concentrations as low as 100 parts per million, although lower detection limits should be investigated.

The Contractor shall propose a sub-contractor to the TCEQ Project Manager for approval. The Contractor's proposal shall include the proposed sub-contractor's name, address, contact information, and relevant qualifications, including previous survey experience and proposed benzene detection capabilities. Further work on this Work Order shall not occur until the TCEQ approves the sub-contractor in writing.

Once the TCEQ Project Manager has approved the DIAL helicopter sub-contractor, the Contractor may retain the services of the sub-contractor to perform the work detailed in this Work Order. The Contractor's sub-contractor shall at all times observe and comply with all TCEQ policies, rules, and regulations in the course of performance under the Work Order, in addition to complying with all laws, rules, and regulations.

Task 3: Benzene Emissions Sources Surveys

The Contractor shall conduct aerial surveys of the industrial sites in the HGB nonattainment area specified by the TCEQ and incorporated into the Work Plan and Survey Work Plan. The Contractor and sub-contractor shall be responsible for coordinating and completing all activities necessary for the helicopter to conduct operations in the survey areas. The TCEQ Project Manager shall designate the areas to be surveyed. Additionally, during the survey period the TCEQ may direct the Contractor to fly over specific areas within the HGB nonattainment area not listed in the Work Plan and Survey Work Plan. Once notified, the Contractor shall survey the TCEQ-specified area(s) during the next scheduled flight. Total in-air DIAL benzene measurements shall total approximately 20 hours.

After each individual designated area is surveyed, the Contractor, the sub-contractor, and TCEQ representatives shall conduct preliminary in-field analysis of potential benzene emissions surveyed during that flight before surveying the next designated area. The Contractor, the sub-contractor, and the TCEQ representatives shall use this in-field analysis to evaluate the performance of the DIAL instrument, adjust the tuning of the DIAL instrument, and assess whether re-flying an area with the re-tuned instrument would enhance the possibility of detecting benzene emissions.

The Contractor shall deliver preliminary benzene measurement and location data daily to the TCEQ in hard copy and/or electronic format during the course of the surveys.

Task 4: Documentation, Analysis, and Reporting

A Draft version of the Final report shall be delivered to the TCEQ Project Manager electronically (i.e., via file transfer protocol [FTP] or e-mail) in Microsoft Word format. The project report shall include the following components:

- An executive summary or abstract.
- A brief introduction that discusses background and objectives. Include relationships to other studies if applicable.
- A discussion on the pertinent accomplishments and the areas for improvement of the activities.
- A discussion of the strengths and weaknesses of a helicopter-mounted DIAL system.

For each survey flight, a list and map of all benzene emissions detected, including latitude (North American Datum [NAD] 83) and longitude (NAD 83) of benzene emissions, relative emissions indication size, approximate concentration or range of concentrations, wind direction and speed, and any corresponding visual observations. The TCEQ Project Manager may request these files in ArcGIS format, and may provide (an) additional map layer(s) to the Contractor to be incorporated into the final product.

An interactive DVD that combines maps and high-resolution digital imaging to allow the user to replay the entire survey.

Recommendations, if any, for area(s) for further study.

The Draft report shall provide a comprehensive overview of activities undertaken and data collected and analyzed during the Work Order. The Draft report shall highlight major activities and key findings, provide pertinent analysis, describe encountered problems and associated corrective actions, and detail relevant statistics including parameter accuracy and precision.

The TCEQ will review the Draft version of the Final report within two weeks of receipt and provide written recommendations to the Contractor. The Contractor will have two weeks to incorporate TCEQ's recommendations and provide a Final report.

SAMPLE WORK ORDER #9:

Quantifying Emissions for Brine from Underground Hydrocarbon Storage Caverns (Point Source)

Purpose and Background

To derive an emissions factor for ethylene, propylene, and/or other associated volatile organic compounds (VOC) in the brine from underground storage caverns with degassing drums. The Contractor shall develop emissions factors by measuring brine VOC content from a selected underground storage facility.

VOC atmospheric measurements indicate emissions from industrial sources in the Houston nonattainment area are potentially under-reported to the TCEQ. Although the TCEQ has performed qualitative research to identify under-reported VOC emissions sources, quantitative measurements are necessary to improve emissions inventory estimates.

Industrial processes in the area include underground storage caverns holding hydrocarbons above a layer of brine. As hydrocarbons are pumped into the caverns, brine is pumped out to surface impoundments. As the brine is brought to the surface, it is degassed in a flash drum or burn pit prior to entering surface impoundments. Because of the large throughput of brine, even small differences in solubility and concentration can mean significant differences in emissions.

Estimated Amount of This Work Order: \$100,000

Task 1: Data Sampling Plan

The Contractor shall visit the candidate site(s) to develop the detailed Data Sampling Plan. The Data Sampling Plan will specify how the Contractor shall gather all data needed to perform data and sample collection as specified in Task 2, emissions estimates as described in Task 3, and the corresponding data analysis as described in Task 3. The Data Sampling Plan will also include:

- the proposed sampling period;
- the sampler's experience and qualifications (including company qualifications if a subcontractor is used);
- data collection forms to ensure all required data is collected;
- the location, and descriptions of the wells/streams to be sampled;
- the sampling frequency and period;
- field sampling and/or measurement methods for emissions;
- field sampling and/or measurement methods for speciation profiles and other required data;
- other methods used to gather required data;
- quality assurance and quality control procedures, if modified since the QAPP was approved; and
- detailed descriptions of the data analysis to be performed.

The Contractor should determine which, if any, of these data or materials should be

supplemented or revised in the context of this project. The TCEQ Project Manager may specify additional material to be included in the Data Sampling Plan as necessary. The sampler must possess the source sampling technical skills needed to adapt to the wide range of source configurations likely to be encountered in this project.

Task 2: Data Collection

Operating Data: The Contractor shall gather the following operating information, at a minimum:

- number, volume, and type of wells served by the brine line being sampled;
- brine flow rate into the brine pond;
- type and flow rate of the different hydrocarbons into the wells supplying the brine;
- temperature of the brine in the underground cavern(s);
- temperature of the brine at the sample point;
- temperature of the brine in the pond;
- pressure of the brine in the well(s);
- pressure drop along degassing drum (or pressure of the brine just before the degassing drum);
- brine pressure at the sample point;
- diameter of pipe before degassing drum;
- dimensions of degassing drum;
- diameter of pipe after degassing drum;
- gas flow rate from the degassing drum;
- gas composition from the degassing drum;
- depth of the casing head(s);
- depth of the interface(s) at the beginning of the brine withdrawal, during the sampling period, and at the end of the brine withdrawal (this may be a calculated value from the volume of hydrocarbon and brine in the well); and
- depth of the brine intake(s).

Measurement Data: The sampler shall measure the concentration of total and speciated hydrocarbons in the brine downstream of degassing drums and shall provide the method, equipment, and personnel for measuring the concentration of these gases in brine. The sampler shall use the Air Stripping Method (Modified El Paso Method) for Determination of VOC Emissions from Water Sources, detailed in Appendix P of the TCEQ “Sampling Procedures Manual,” as the primary analytical method. The sampler shall prioritize sampling brine from wells handling ethylene and propylene. Sampling shall be performed at participating site.

Task 3: Data Analysis and Emissions Estimation

From the measurement and operational data, the Contractor shall determine the dissolved total and speciated VOC concentration in the brine samples following the degassing operation and estimate the maximum emissions rates for each of the species of hydrocarbons sampled. The emissions rate will take into consideration such parameters as temperature in the well, temperature in the pond, pressure in the well, pressure after the flash tank, point in a filling cycle, and flow rate.

Using the measurement and operational data, the Contractor shall develop hourly and

annual VOC mass emission factors for brine ponds in terms of pounds of VOC per gallon of brine degassed (or other appropriate English units) for each of the species of hydrocarbons sampled. The Contractor shall use statistical methods to determine the mean, variance, standard deviation, and related parameters for each emissions factor developed. The Contractor shall evaluate the robustness of the emissions factors developed based upon this statistical analysis and other relevant data.

Task 4: Weekly Teleconferences

The Contractor shall report to the TCEQ via weekly teleconferences on progress made toward achieving the project goals.

Task 5: Draft and Final Reports

Draft and final reports will be prepared and submitted to the TCEQ to document the methods, results, and conclusions of this project. A Draft Report shall be delivered to the TCEQ Project Manager electronically (i.e., via file transfer protocol (FTP) or e-mail) in Microsoft Word format. The Draft Report shall include the following components:

- An executive summary or abstract.
- A brief introduction that discusses background and objectives. Include relationships to other studies if applicable.
- A discussion of the pertinent accomplishments, shortfalls, and limitations of the work completed under each Work Plan task.
- Recommendations, if any, for what should be considered next as a new study.

The Draft Report shall provide a comprehensive overview of activities undertaken and data collected and analyzed during the Work Order. The Draft Report must highlight major activities and key findings, provide pertinent analysis, describe encountered problems and associated corrective actions, and detail relevant statistics including data, parameter, or model completeness, accuracy and precision.

The TCEQ will review the Draft version of the Final report within two weeks of receipt and provide written recommendations to the Contractor. The Contractor will have two weeks to incorporate TCEQ's recommendations and provide a Final report.

SAMPLE WORK ORDER #10:

Oil and Gas Well Completion Emissions Inventory Update (Area Source)

Purpose and Background

To develop updated area source emissions inventory estimates for oil and gas well completions at upstream oil and gas facilities using regional specific production data. In the oil and gas industry, completion is the process of making a well ready for production. The process of completing a well results in the emitting of regulated pollutants such as carbon monoxide (CO), volatile organic compounds (VOC), and oxides of nitrogen (NO_x). Well completion activities include the use of engines and flares.

Estimated Amount of This Work Order: \$50,000

Task 1: Area Source Inventory Improvement and Survey of Oil and Gas Completion Activities

Under this task, the Contractor shall propose improvements to the area source inventory to improve and refine inventory estimates for oil and gas well completions. Engines are used during well completions and recompletions performed in unconventional oil and gas formations such as shale gas and tight sands oil/gas. Engines are generally large diesel-fueled pumps that can be a significant NO_x emissions source. Average emissions factors for engines used in the EPA oil and gas tool were derived from EPA's NONROAD2008 model based on the oil equipment source category bin in NONROAD. The process of completing an oil or gas well also includes venting or flaring of gas.

Activity data needed to refine the estimate for this source category include:

- Number of Flares;
- Updated value for typical number of days flaring or venting;
- Number of engines;
- Engine size;
- Engine load factor;
- Number of fracturing stages; and
- Hours of operation per stage.

Refinements to the inventory may include revising activity data, emission factors, or process information relevant to the emission estimation methodology (e.g., number of engines or engine size). Updated data for oil and gas well completions shall be obtained through literature review and through phone or mail surveys. The Contractor shall obtain the proper TCEQ letter of authority from the TCEQ Project Manager to conduct any phone or telephone surveys prior to commencing the data collection effort.

Task 2: Update Oil and Gas Calculator

The Contractor shall update the TCEQ-supplied oil and gas calculator based upon the findings of Task 1.

Task 3: Develop the Formatted Data for Texas Air Emissions Repository (TEXAER)

Upon TCEQ approval, the Contractor shall place the emissions and associated data developed for this project into the Consolidated Emissions Reporting Schema (CERS)

Extensible Markup Language (XML) format suitable for entry into TexAER. All CERS XML files must be complete with all mandatory fields validated. Emissions should be quality assured using the EPA's Critical Emissions Range Check. Any errors or discrepancies identified must be corrected by the Contractor, or otherwise addressed in consultation with the TCEQ. All resulting TexAER loadable files must be successfully entered into TexAER. Any errors identified through the TexAER loading process must be corrected by the Contractor.

In addition, the Contractor shall include all the associated activity data for the fields that are required to be reported to the current EPA National Emissions Inventory (NEI) and in accordance with the EPA's *Emissions Inventory System Implementation Plan*.

Task 4: Draft and Final Reports

A Draft Report shall be delivered to the TCEQ Project Manager electronically (i.e., via file transfer protocol (FTP) or e-mail) in Microsoft Word format. The Draft Report shall include the following components:

- An executive summary or abstract.
- A brief introduction that discusses background and objectives. Include relationships to other studies if applicable.
- A discussion of the pertinent accomplishments, shortfalls, and limitations of the work completed under each Work Plan task.
- Recommendations, if any, for what should be considered next as a new study.

The Draft Report shall provide a comprehensive overview of activities undertaken and data collected and analyzed during the work. The Draft Report must highlight major activities and key findings, provide pertinent analysis, describe encountered problems and associated corrective actions, and detail relevant statistics including data, parameter, or model completeness, accuracy and precision.

The TCEQ will review the Draft version of the Final report within two weeks of receipt and provide written recommendations to the Contractor. The Contractor will have two weeks to incorporate TCEQ's recommendations and provide a Final report.

SAMPLE WORK ORDER #11:

Survey of Stationary Marine Vessel Emissions

Purpose and Background

Marine vessels that are docked typically generate power on-board using either a main engine or auxiliary power generator. In some cases, these vessels may use on-shore power sources instead. Because the emissions from these operations often occur near other large emission sources (e.g. the Houston Ship Channel), the TCEQ desires to improve its inventory of docked ocean-going vessel emissions along the Houston Ship Channel and also at the Bayport, Barbour's Cut, Texas City, and Galveston ports.

Estimated Amount of This Work Order: \$200,000

Task 1: Sampling plan

The Contractor will develop a plan to survey the activities of ships in port at the requisite locations, select a representative sample of ships, determine type of power used, aggregate the sampled emissions into location-specific emissions estimates, and estimate uncertainty of these aggregated values. The sampling plan will also include a detailed discussion of the remote-sensing instruments to be used, how they will be employed, and the measurement uncertainty.

Deliverable 1: The completed sampling plan

Task 2: Conduct sampling

The Contractor will conduct the sampling as described in the Sampling Plan as approved by the TCEQ Project Manager.

Deliverable 2: The Contractor will provide the Project Manager with a report of the sampling activities and a copy of the raw data collected.

Task 3: Draft and Final Reports

The Contractor will provide a Draft version of the Final Report one month before completion of the work order. Upon the TCEQ approval of the Draft report, the Contractor will complete the Final Report. All data collected and final emissions estimates will be made available to the TCEQ at the end of the project in electronic form.

Deliverable 3.1: A draft of the final project report

Deliverable 3.2: A final project report as approved by the TCEQ Project Manager

Deliverable 3.3: All data collected and final emission estimates in electronic form.

SAMPLE WORK ORDER #12:

Improvement of Marine Boundary Conditions

Purpose and Background

A positive bias on the order of 20 parts/billion in modeled ozone concentrations along the Texas Coast has been observed in just about every photochemical modeling exercise conducted in recent years. This bias may result in over-prediction of peak ozone concentrations for coastal areas, and more importantly can dampen the model's response to emission reductions. Global models used to establish boundary conditions typically over-predict ozone concentrations over the Gulf of Mexico. The purpose of this work is to develop an adjustment to the boundary conditions that provides better model performance in the Houston-Galveston-Brazoria ozone nonattainment area. While Gulf boundary conditions certainly influence on-shore modeled concentrations, the relationship is clearly not straightforward, so the Contractor must avoid making physically unreasonable adjustments simply to optimize performance. If (as we anticipate) no reasonable adjustment to boundary conditions is sufficient to completely remove the prediction bias along coastal areas, the Contractor will explore alternative explanations for bias remaining after adjustment of the boundary conditions.

The work will be based on the TCEQ's 2006 modeling platform developed for eastern Texas nonattainment and near-nonattainment areas, which uses the CAMx photochemical model. The boundary conditions used in this model are extracted from the GEOS-Chem global atmospheric model. The Contractor will establish the sensitivity of the bias (most evident at night with southerly winds) seen in the CAMx model, and the boundary conditions at each model layer, then derive an adjustment or adjustments that provide improved CAMx performance. These adjustments may vary with model layer, lateral position along the boundaries, and time of the year. The Contractor will then evaluate the adjustments for reasonableness, using any available observation data (satellite, aircraft, ship, sonde, etc.) and known atmospheric properties. Adjustments will be constrained to be "reasonable", then the Contractor will provide credible explanations for any bias not corrected by the adjustments.

Estimated Amount of This Work Order: \$60,000

NOTE: The Work Plan for this Work Order must describe the modeling to be conducted and methods to be used to determine the sensitivity of coastal modeled ozone concentrations to boundary conditions. The work plan will describe how initial adjustment factors will be derived, and how the Contractor will collect available data to establish reasonableness of these estimates. Finally, the Contractor will discuss plans for assessing the credibility of alternate explanations of bias, and will describe QA/QC procedures to be followed.

Estimated Amount of This Work Order: \$100,000

Task 1: Determine sensitivity of coastal monitor ozone bias to boundary conditions
The Contractor will use appropriate methods to estimate the sensitivity of the observed

biases in modeled coastal ozone concentrations to boundary conditions as described above.

Deliverable 1: A progress report detailing findings of Task 1.

Task 2: Develop adjustment factors to mitigate biases caused by boundary conditions. The Contractor will determine adjustments that can be applied to the boundary conditions that reduce the modeled biases in coastal areas of Texas. These adjustments will be constrained to be reasonable as described above.

Deliverable 2: A progress report detailing findings of Task 2.

Task 3: Draft and Final Reports

The Contractor will provide a Draft version of the Final Report one month before completion of the work order. In addition to the discussions of the two previous tasks, the Contractor will include discussion of alternate physically-reasonable processes which may be responsible for any biases not corrected by reasonable adjustments made to the boundary conditions. Upon the TCEQ approval of the draft report, the Contractor will complete the Final Report. All data collected and final adjustment factors will be made available to the TCEQ at the end of the project in electronic form.

Deliverable 3.1: A draft of the Final project report

Deliverable 3.2: A Final project report as approved by the TCEQ Project Manager

SAMPLE WORK ORDER 13:

Atmospheric chemistry in the marine boundary layer overlying the hypoxic zone (“dead zone”) in the Gulf of Mexico

Purpose and Background

The Mississippi River discharges large amounts of anthropogenic nitrogen and phosphorus from crop fertilization into the Gulf of Mexico each year. The enhanced nutrient loading causes blooms of algae in the Gulf, which in turn causes an overabundance of phytoplankton and bacteria that feed on the algae and waste products. The overall effect of the added burden of nutrients is to deplete the Gulf discharge zone of oxygen, and to degrade water quality enough to cause organisms to flee the area. All of the links in this chain reaction may cause changes in the atmospheric chemistry in the layer of air overlying the ocean surface. Since the atmospheric chemistry in Houston and Beaumont are linked to the atmospheric chemistry of the Gulf of Mexico marine boundary layer, the effects of hypoxia could affect atmospheric chemistry in Texas cities. The purpose of this project is to review relevant scientific studies that have investigated the oceanic and atmospheric chemistry of hypoxic zones, and to incorporate appropriate atmospheric chemistry findings into the Carbon Bond 6 atmospheric chemistry mechanism.

Estimated Amount of This Work Order: \$50,000

NOTE: The Work Plan for this Work Order must describe relevant literature sources and a plan to incorporate these findings into a concise treatment of the atmospheric chemistry mechanisms which may come into play above marine hypoxic zones. The work plan will describe how these findings will be implemented and tested in the Carbon Bond 6 chemistry mechanism (CB6), and will provide a qualitative assessment of the uncertainty in this implementation. Finally, the Contractor will describe QA/QC procedures to be followed.

Task 1: The Contractor will prepare a report summarizing the findings of the relevant scientific literature and plan for implementing these findings into the CB6 mechanism. Deliverable 1: A report summarizing the findings of the relevant scientific literature and plan for implementing these findings into the Carbon Bond 6 mechanism.

Task 2: Implement the findings of Task 1 into the CB6 chemical mechanism. Contractor may recommend against implementing the findings if they are negative or highly uncertain. Deliverable 2: A progress report detailing implementation of the findings of Task 1 into CB6, or alternatively a report describing why such implementation is not recommended.

Task 3: Draft and Final Reports and delivery of modified CB6 mechanism. The Contractor will provide a Draft version of the Final Report one month before completion of the work order. Upon the TCEQ approval of the Draft report, the Contractor will complete the Final Report. If modifications to the CB6 mechanism are

implemented, the revised mechanism and user information will be provided to the TCEQ. All data collected will be made available to the TCEQ at the end of the project in electronic form.

Deliverable 3.1: A draft of the Final project report.

Deliverable 3.2: A Final project report as approved by the TCEQ Project Manager.

Deliverable 3.3: The revised CB6 mechanism in electronic form and any associated information.

Deliverable 3.4: All data collected in final electronic form.

SAMPLE WORK ORDER #14:

Weather Research & Forecasting (WRF) Meteorological Modeling Vertical Structure

Background and Purpose

Recent research has shown the vertical layer structure for global and regional-scale meteorological models may need to be optimized at specific heights to represent the vertical mixing and transport of pollutants well. Additional layers at the tropopause and near the surface have been suggested. The purpose of this work is to test new vertical layer structures for WRF that will optimize wind speed and direction performance at the surface and aloft.

Estimated Amount of This Work Order: \$100,000

Task 1: Literature Review

The Contractor shall conduct a literature review of published papers regarding the vertical layer representation of the atmosphere in meteorological and air quality models.

Deliverable 1: A report summarizing the papers reviewed in terms of vertical layer representation.

Task 2: WRF Model Sensitivities

The Contractor, in coordination with TCEQ, shall conduct WRF model sensitivities with alternate vertical layer structures using a TCEQ-defined model configuration. A minimum of 43 vertical layers shall be used from the surface to approximately 20,000 meters above ground level (AGL). Sensitivities with enhanced vertical resolution near the tropopause and surface shall be completed. The Contractor shall choose a modeling episode(s) with varying synoptic wind patterns and evaluate the model results with surface and aloft (aircraft, balloon, profiler, satellite, etc.) observations (winds, temperature, humidity, etc.).

Deliverable 2: A report detailing the vertical layer proposals (heights and pressure levels), setup of model sensitivities, and comparison to observations. The WRF Preprocessing System (WPS) and WRF run scripts, model output, and model performance evaluation products shall also be delivered to the TCEQ project manager.

Task 3: Draft and Final Reports

A Draft Report shall be delivered to the TCEQ Project Manager electronically (i.e., via file transfer protocol (FTP) or e-mail) in Microsoft Word format no later than the deliverable due date shown below.

The Final Report shall include the following components:

- An executive summary or abstract.
- A brief introduction that discusses background and objectives. Include relationships to other studies if applicable.

- A discussion of the pertinent accomplishments, shortfalls, and limitations of the work completed under each Work Plan task.
- Recommendations, if any, for what should be considered next as a new study.

The Draft Report shall provide a comprehensive overview of activities undertaken and data collected and analyzed during the work. The Draft Report must highlight major activities and key findings, provide pertinent analysis, describe encountered problems and associated corrective actions, and detail relevant statistics including data, parameter, or model completeness, accuracy and precision.

Deliverable 3: Draft and Final report

Deliverable Date: Four weeks and one week prior to Work Order completion date, respectively. TCEQ comments on the Draft report will be addressed in the Final report.

PRICE
PRICE: 15 POINTS (TAB 4)

Instructions for Completing the Price Form

Proposer must enter a price for each item listed.

Propose your hourly rates (fully loaded prices) in the spaces provided (Column D of the Price Form). The hourly rates shall include all costs of performance of the Work, including materials, equipment, labor, communication, and planning to successfully complete all Work. No other amount may be charged to TCEQ or paid by TCEQ except as allowed for reimbursable items (see the Price Form for more information).

You must calculate the extended amount (Column E) by multiplying the weight factor (Column C) by the fully loaded price (Column D). The weight factors and the extended amounts are only for use in evaluating the prices and may not reflect the ratios of the Work ordered under any resulting contracts. If you receive a contract, you will use the fully loaded prices to prepare the Work Plan budgets.

You must fill in the price evaluation total (at the bottom of Column E in the Price Form), which is the sum of all extended amounts shown in Column E.

You must fill in Column B with the Responder's job titles that equate to the TCEQ labor classifications listed in Column A.

SCORING THE PRICE

The TCEQ will calculate a Price Score for each Responder and assign a number of points for Price (the maximum number of points is 15), using the following formula for Price Score:

$$\text{Price Score} = \left[1 - \frac{((\text{Responder's price total}) - (\text{Lowest price total of a Responder}))}{(\text{Highest price total of a Responder})} \right] \times 15$$

SECTION 3:
SAMPLE CONTRACT TERMS AND CONDITIONS

CONTRACT SIGNATURE PAGE

TCEQ Contract 582-15-50022: Air Quality Modeling, Emissions Inventory, and Other Technical Support (AMEIOTS)

The Maximum TCEQ Obligation is \$_____.

The Effective Date is the later of the date of the latest signature below or __<<DATE>>>_____.

The Expiration Date is <<Date>>.

☒ This Contract is funded with federal funds.

CFDA Number:

Federal Grant Number:

Parties to the Contract	Texas Commission on Environmental Quality (TCEQ)	(Contractor Name)
By (Authorized Signature)		Sample Contract Signature Page – Do Not Sign
Printed Name		
Title		
Date of Signature		
Vendor ID Number		
Procurement and Contracts Representative (Authorized Signature)		
Printed Name		
Public Purchasing Certification		
Date		

CONTRACT DOCUMENTS LIST

The entire Contract between TCEQ and Contractor consists of the Contract Documents listed on this page and marked with an "X."

- ☐ Contract Signature Page
- ☐ Contract Documents List
- ☐ Scope of Work
- ☐ List of Key Personnel
- ☐ Approved Price Form
- ☐ Federal Conditions and Forms (incorporated by reference when completed)
- ☐ Special Terms and Conditions
- ☐ General Terms and Conditions
- ☐ Procedures for Work Orders
- ☐ Work Orders and related documents created during the Contract (incorporated by reference):
 - Work Orders
 - Notices to Proceed
 - TCEQ-Approved Work Plans
- ☐ HUB Subcontracting Plan and HUB Progress Assessment Forms (incorporated by reference)
- ☐ Insurance Section
- ☐ Insurance Certificate Submitted by Contractor (incorporated by reference when completed)
- ☐ Notices, Project Representatives, and Records Location
- ☐ Attachments (listed below)
 - Attachment A: Sample Release of Claims Form (Release of Claims are incorporated by reference when completed)
- ☐ Solicitation, including any addenda (incorporated by reference)
- ☐ Contractor's Response to Solicitation (incorporated by reference)

FEDERAL CONDITIONS AND FORMS (EPA)

Federal Terms and Conditions and Forms

ARTICLE 1. FEDERAL REQUIREMENTS

This Agreement is funded in whole or in part with federal grant money. All applicable requirements of TCEQ's federal grants; 40 Code of Federal Regulations (CFR) Chapter 1, Subchapter B, including but not limited to, Parts 7, 31 through 35; and any additional federal funding conditions that arise during the Agreement period, are incorporated herein by reference. (TCEQ will provide copies of applicable federal grants or regulations upon request). The term "Performing Party" as used in these *Federal Conditions* means either Performing Party, Grantee, or Contractor, as applicable.

ARTICLE 2. FEDERAL INTELLECTUAL PROPERTY REQUIREMENTS

A royalty-free, nonexclusive, and irrevocable license to use, copy, publish, and modify any intellectual property to which rights are granted or assigned to TCEQ in this Agreement are also granted to, assigned to, or reserved by the Federal Government.

ARTICLE 3. ACKNOWLEDGMENT OF FINANCIAL SUPPORT

The Performing Party shall acknowledge the financial support of the TCEQ and the U.S. EPA whenever work funded, in whole or part, by this Agreement is publicized or reported in news media or publications. All reports and other documents completed as a part of this Agreement, other than documents prepared exclusively for internal use within the TCEQ, shall carry the following notation on the front cover or title page:

PREPARED IN COOPERATION WITH THE
TEXAS COMMISSION ON ENVIRONMENTAL QUALITY AND
U.S. ENVIRONMENTAL PROTECTION AGENCY

The preparation of this report was financed through grants from the U.S. Environmental Protection Agency through the Texas Commission on Environmental Quality.

If the funding source is a U.S. agency other than U.S. EPA, the name of the appropriate federal agency should be substituted.

ARTICLE 4. COST AND PRICE OF THIS AGREEMENT

If this Agreement was not competitively procured or if payment is based on reimbursement of actual costs, then Performing Party shall submit cost information sufficient for a cost analysis as required by 40 CFR § 31.36. This information must be submitted on the Cost or Price Summary Format form found below.

ARTICLE 5. ACCOUNTING SYSTEMS AND PROPERTY MANAGEMENT SYSTEMS

1. Performing Party shall have an accounting system which accounts for costs in accordance with generally accepted accounting standards or principles and complies with 40 CFR § 31.20. This system shall provide for the identification, accumulation, and segregation of allowable and unallowable project costs among projects.

2. Performing Party shall have a property management system that complies with 40 CFR §§ 31.32 through 31.33.

ARTICLE 6. RECORD DOCUMENTS, DATA, RECORDS, ACCESS, AND AUDIT

1. The Federal Government and its agencies will have the same rights of access to records as are granted to, assigned to, or reserved by the TCEQ under this Agreement. The Performing Party shall maintain fiscal records and supporting documentation for all expenditures of funds pursuant to Office of Management and Budget (OMB) Circulars A-21, A-87, A-102, or A-110, as appropriate.

2. In accordance with OMB Circular A-133, the Performing Party shall obtain a single audit if it expends \$500,000 or more a year in federal awards.

ARTICLE 7. SUSPENSION AND DEBARMENT

1. Performing Party shall fully comply with Subpart C of 2 CFR Part 180, entitled "Responsibilities of Participants Regarding Transactions Doing Business With Other Persons." Performing Party is responsible for ensuring that any lower tier covered transaction, as described in Subpart B of 2 CFR Part 180, entitled "Covered Transactions," includes a term or condition requiring compliance with Subpart C. Performing Party is responsible for further requiring the inclusion of a similar term or condition in any subsequent lower tier covered transactions. Performing Party acknowledges that failing to disclose the information required under 2 CFR 180.335 may result in the delay or negation of this agreement or pursuance of legal remedies.

2. Contractor may access the System for Award Management at: SAM Government Contract Registration.

ARTICLE 8. DISADVANTAGED BUSINESS ENTERPRISES (DBEs)

1. The Performing Party shall not discriminate on the basis of race, color, national origin or sex in the performance of this contract. The Performing Party shall carry out applicable requirements of 40 CFR Part 33 in the award and administration of contracts awarded under EPA financial assistance agreements. Failure by the Performing Party to carry out these requirements is a material breach of this contract which may result in the termination of this contract or other legally available remedies.
2. Performing Party agrees that qualified DBEs shall have the maximum practicable opportunity to participate in the performance of the Work required under this Contract through possible subcontracts to carry out portions of the Work or any goods and/or services procurements that directly support the required Work.
3. The Performing Party is required to make a good faith effort to include Historically Underutilized Businesses (HUBs) or DBEs on any solicitations for subcontractors and for suppliers (vendors) of contract-required goods and/or services. Records documenting compliance with the six good faith efforts found in 40 CFR Section 33.301 shall be retained.

4. Performing Party must submit a completed HUB Progress Assessment Report (PAR) or the EPA Form 5700-a (if a HUB Subcontracting Plan (HSP) is not required) with each reimbursement request submitted. At a minimum this report shall include the name of the HUB or DBE, a description of the work, services or materials provided, the amount paid to the HUB or DBE, and the name and telephone number of a contact person within the HUB or DBE.
5. Before terminating a DBE for convenience, the Performing Party must notify TCEQ in writing for prior approval.
6. If a DBE subcontractor fails to complete work for any reason, and the Performing Party plans to procure a replacement subcontractor, the Performing Party must demonstrate the same good faith effort to procure the replacement subcontractor.
7. The Performing Party must pay its subcontractors for satisfactory performance no more than 10 days from the Performing Party's receipt of payment from TCEQ.
8. The Performing Party must complete the following forms:
 - a. The Performing Party shall provide the attached DBE Subcontractor Participation Form, Form 6100-2, to all its DBE subcontractors with instructions that each DBE may complete the form and submit it directly to the appropriate EPA DBE Coordinator for Region 6.
 - b. The Performing Party must have its DBE subcontractors complete Form 6100-3, DBE Program Subcontractor Performance Form.
 - c. The Performing Party must complete and submit Form 6100-4, DBE Program Subcontractor Utilization Form.
 - d. Performing Party must submit forms 6100-3 and 6100-4 to TCEQ prior to contract award. When the agency requires a HSP, the completed HSP and supporting documentation must be included with the proposal/bid; otherwise proposal/bid shall be deemed non-responsive for failure to comply with advertised specifications.

ARTICLE 9. PROHIBITION ON USE OF FEDERAL FUNDS FOR LOBBYING AND LITIGATION

1. The Performing Party agrees to comply with Title 40 CFR Part 34, New Restrictions on Lobbying. The Performing Party agrees that none of the funds paid under this Contract will be used to engage in the lobbying of the Federal Government or in litigation against the United States unless authorized under existing law. When Performing Party applies for final payment, Performing Party will certify on a written form provided by the TCEQ that Performing Party has complied with this provision.
2. In accordance with the Byrd Anti-Lobbying Amendment, any recipient who makes a prohibited expenditure under Title 40 CFR Part 34 or fails to file the required certification or lobbying forms shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such expenditure.

3. The Performing Party shall submit to the TCEQ the Certification Regarding Lobbying form and if applicable, the Disclosure of Lobbying Activities and file a disclosure form at the end of each calendar quarter in which there occurs any event that requires disclosure or that materially affects the accuracy of the information contained in any disclosure form previously filed.

ARTICLE 10. MISCELLANEOUS PROVISIONS

1. Drug-Free Workplace. The Performing Party must make an ongoing, good faith effort to maintain a drug-free workplace pursuant to the specific requirements set forth in Title 40 CFR 36.200-36.230. Additionally, in accordance with these regulations, the Performing Party must identify all known workplaces under its federal awards and keep this information on file during the performance of the award.
2. In accordance with EPA Order 1000.25 and Executive Order 13423, Strengthening Federal Environmental, Energy and Transportation Management (January 24, 2007), the Performing Party agrees to use recycled paper and double sided printing for all reports which are prepared as a part of this agreement and delivered to EPA. This requirement does not apply to reports prepared on forms supplied by EPA, or to Standard Forms, which are printed on recycled paper and are available through the General Services Administration.
3. Pursuant to 40 CFR 30.18, if applicable, and 15 USC 2225a, the Performing Party agrees to ensure that all space for conferences, meetings, conventions, or training seminars funded in whole or in part with federal funds complies with the protection and control guidelines of the Hotel and Motel Fire Safety Act (PL 101-391, as amended). Performing Party may search the Hotel-Motel National Master List at <http://www.usfa.dhs.gov/applications/hotel/> to see if a property is in compliance, or to find other information about the Act.
4. Trafficking in Persons. Prohibition Statement – You as the recipient, your employees, subrecipients under this award, and subrecipients' employees may not engage in severe forms of trafficking in persons during the period of time that the award is in effect; procure a commercial sex act during the period of time of the award; or used forced labor in the performance of the award or subaward under the award.
 - a. TCEQ may unilaterally terminate this award, without penalty, if a Performing Party that is a private entity: (1) is determined to have violated an applicable prohibition in the Prohibition Statement above; or (2) has an employee who is determined by the agency official authorized to terminate the award to have violated an applicable prohibition in the Prohibition Statement through conduct that is either (a) associated with performance

under this award; or (b) imputed to the subrecipient using the standards and due process for imputing the conduct of an individual to an organization that are provided in 2 CFR Part 180, “OMB Guidelines to Agencies on Governmentwide Debarment and Suspension (Nonprocurement)”, as implemented at 2 CFR Part 1532. The Performing Party must inform TCEQ immediately of any information you receive from any source alleging a violation of a prohibition in the Prohibition Statement above.

- b. TCEQ’s right to terminate unilaterally that is described in previous section 4.a.: (1) implements section 106(g) of the Trafficking Victims Protection Act of 2000 (TVPA), as amended (22 U.S.C. 7104(g)), and (2) is in addition to all other remedies for noncompliance that are available to TCEQ under this award.

Instructions on how to fill out attached Federal Form:

DBE Subcontractor Participation Form – *EPA Form 6100-2* - If respondent is awarded a contract, the respondent will give these forms to his/her subcontractors to fill out and turn into EPA. Forms will be submitted after award of contract.



OMB Control No: 2090-0030

Approved: 8/13/2013

Approval Expires: 8/31/2015

Disadvantaged Business Enterprise (DBE) Program DBE Subcontractor Participation Form

An EPA Financial Assistance Agreement Recipient must require its prime contractors to provide this form to its DBE subcontractors. This form gives a DBE¹ subcontractor² the opportunity to describe work received and/or report any concerns regarding the EPA-funded project (e.g., in areas such as termination by prime contractor, late payments, etc.). The DBE subcontractor can, as an option, complete and submit this form to the EPA DBE Coordinator at any time during the project period of performance.

Subcontractor Name		Project Name	
Bid/ Proposal No.	Assistance Agreement ID No. (if known)	Point of Contact	
Address			
Telephone No.		Email Address	
Prime Contractor Name		Issuing/Funding Entity:	

Contract Item Number	Description of Work Received from the Prime Contractor Involving Construction, Services , Equipment or Supplies	Amount Received by Prime Contractor

¹ A DBE is a Disadvantaged, Minority, or Woman Business Enterprise that has been certified by an entity from which EPA accepts certifications as described in 40 CFR 33.204-33.205 or certified by EPA. EPA accepts certifications from entities that meet or exceed EPA certification standards as described in 40 CFR 33.202.

² Subcontractor is defined as a company, firm, joint venture, or individual who enters into an agreement with a contractor to provide services pursuant to an EPA award of financial assistance.



Approval Expires: 8/31/2015

Disadvantaged Business Enterprise (DBE) Program

DBE Subcontractor Participation Form

Please use the space below to report any concerns regarding the above EPA-funded project:

This image shows a blank sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

Subcontractor Signature	Print Name
Title	Date

The public reporting and recordkeeping burden for this collection of information is estimated to average three (3) hours per response. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including through the use of automated collection techniques to the Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822T), 1200 Pennsylvania Ave., NW, Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed form to this address.

SPECIAL TERMS AND CONDITIONS

SPECIAL TERMS AND CONDITIONS

1. ORDERING WORK.

The Contract sets out the Areas of Work for which the Contract was awarded. Work under this Contract will be ordered within those Areas of Work. Wherever Work to be ordered falls within the Scope of Work for more than one contract entered under Solicitation No. 582-15-50022, the contract under which the Work will be ordered will be selected using the following factors:

- 1.1 balancing Work between the contractors in accordance with the maximum contract amounts specified in each contract;
- 1.2 the primary purpose of the Work to be ordered in the light of the primary purpose of each contract;
- 1.3 the projected budget for the Work Order;
- 1.4 the projected time line for the Work Order;
- 1.5 the qualifications of the contractor in the light of the particular Work to be ordered;
- 1.6 the contractor's prior performance and performance evaluations in the light of the particular Work to be ordered; and
- 1.7 other factors relevant to the nature and intended purpose of the Work to be ordered.

2. CONTRACT TERM

Article 3.2 of the General Terms and Conditions is replaced with the following:

Renewals and Extensions. This Contract may be renewed by amendment for up to two years, in any increments. TCEQ, by unilateral amendment, may extend the Contract for 180 days beyond any expiration of the Contract Period.

3. CONTRACT AMOUNT

- 3.1 **No Minimum Contract Expenditure/ TCEQ Obligation Limited to Payments Under Work Orders.** The Maximum TCEQ Obligation is not a guaranteed minimum Contract expenditure. The amount available to the Contractor is subject to issuance by TCEQ of authorization to proceed with Work under Work Orders. TCEQ shall pay only for Work performed. The authorized Work Order Amount for any given Work Order constitutes the total compensation (subject to adjustment by amendment) payable to Contractor for performing the Work under that Work Order. Except in an emergency as contemplated in the Special Terms and Conditions, Contractor shall not perform any Work that would cause the total amount to be paid by TCEQ under a Work Order to exceed the Work Order Amount.
- 3.2 Upon renewal and/or at any time during the renewal period, the Contract may be amended to increase the Maximum TCEQ Obligation by an aggregate amount equal to the initial Maximum TCEQ Obligation at the time the Contract was signed.
- 3.3 Each Work Order will indicate if it is funded with federal funds.
- 3.4 The Contractor shall track all funding obligations associated with Work that has been ordered, performed, or billed, and promptly notify TCEQ when the Work ordered from the Contractor reaches 80% of the Maximum TCEQ Obligation.

4. REIMBURSEMENT

Article 4.2 of the General Terms and Conditions is replaced with the following:
Cost Reimbursement. Reimbursement is limited to direct costs for items authorized by a Notice to Proceed approving a Work Plan budget that lists the reimbursable items.

5. ACCESS AND CLEARANCE

Contractor is solely responsible for obtaining permissions for access or security clearances needed for the purposes of performing Work Orders under this Contract.

6. EMERGENCY(IES)

For time-critical circumstances affecting the safety or protection of (i) the Work, (ii) persons who may be affected by the Work, or (iii) any property that may be affected by the Work (Emergencies), Contractor, without special instruction or authorization from TCEQ, is authorized to act to prevent actual or threatened damage, injury, or loss. Contractor shall give TCEQ prompt, written notice if Contractor believes any significant changes in the Work or variations from the Contract Documents have been caused by the emergency. If TCEQ determines that a change in the Work Order or Contract Documents is necessary, the Work Order or Contract shall be amended.

7. SUBCONTRACTOR INSURANCE

The following is added to Article 10.5 of the General Terms and Conditions:

10.5.1 ***Subcontractor Insurance.*** Contractor shall require in writing that all Subcontractors performing Work under this Contract and as appropriate, anyone directly or indirectly contracted by any of them to perform or furnish any of the Work shall obtain insurance appropriate for the risks associated with the Work performed.

10.5.1.1 If any Subcontractor or anyone directly or indirectly contracted by any of them to perform or furnish any of the Work fails to demonstrate and/or obtain such insurance or the insurance expires or is no longer available for any reason, the Contractor shall provide the insurance coverage, or shall indemnify, against claims related to the Work, the Subcontractor or anyone directly or indirectly contracted by any of them to perform or furnish any of the Work.

10.5.1.2 Required insurance for Subcontractors or anyone directly or indirectly contracted by any of them to perform or furnish any of the Work shall include workers compensation insurance if the Work will be performed using the services of employees.

8. RELATIONSHIP OF CERTAIN PROVISIONS

Unless there is a clear conflict between the requirements in the General Terms and Conditions, the Scope of Work, and a Work Order, the requirements should be read in harmony. The SOW or WO may waive or modify General Terms and Conditions regarding:

intellectual property, lab accreditation, technical data, and Quality Assurance Project Plans. The waiver or modification in the Scope of Work or Work Order must explicitly refer to the provision in the General Terms and Conditions that it waives or modifies.

9. FTE REQUIREMENTS

- 9.1 This is one of several contracts TCEQ has entered under Solicitation No. 582-15-50022. The Contract Signature Page indicates whether this Contract is Full Time Equivalent (FTE)-limited or has no FTE limit.
- 9.2 If this Contract has no FTE limit, then it is awarded for Work that is distinct from work regularly or routinely performed within the TCEQ by modeling, planning, and emissions inventory staff. This Contract will not be subject to FTE limitations specified in Section 6.10 ***Limitation on State Employment Levels***, Article IX of the 2014-2015 General Appropriations Act which can be found at <http://www.lbb.state.tx.us/>.
- 9.3 If this Contract is FTE-limited, it is awarded for Work that is similar to work regularly or routinely performed by TCEQ's modeling, planning, and emissions inventory staff. The Contract is subject to FTE limitations specified in Section 6.10 ***Limitation on State Employment Levels***, Article IX of the 2014-2015 General Appropriations Act which can be found at <http://www.lbb.state.tx.us/> and to the extent that the Contract extends into Fiscal Years governed by subsequent General Appropriations Acts, the FTE limitation provision in those General Appropriations Acts. The Contractor will be required to make regular reports to TCEQ.
- 9.4 ***Time sheet Requirements for FTE-limited Contracts.*** The following requirements apply only to FTE-limited contracts. Contractor shall submit weekly time sheets for each person providing services on behalf of Contractor (or Contractor's Subcontractors) under the Contract and such other relevant information as TCEQ requires. The time sheets must indicate the Labor Classification, from the Price Form, under which Work was performed and describe the general task(s) performed. It must also include the number of hours worked on each Labor Classification. The time sheets must be submitted to the TCEQ Contract Manager by noon Central Time on Monday of the following week.

10. INVOICING

- 10.1 ***Invoices Must be Per Work Order.*** Contractor may not combine invoices for Work Orders. Invoices requesting payment for multiple Work Orders may be rejected as Nonconforming.
- 10.2 In addition to the items required in Article 6.3 of the General Terms and Conditions to be included on the face of all invoices, the Contractor must also include the PCR number for the Work Order.

- 10.3 The Contractor shall submit invoices electronically, in PDF format, to the following address: Invoice_AQD@tceq.texas.gov. The invoices must be marked to the attention of the TCEQ Contract Manager listed in the ***Notices, Representatives, and Records Location*** Section and the TCEQ Project Manager listed in the Work Order. All invoices shall be in United States dollars and cents.
- 10.4 ***Retainage***. Pursuant to General Terms and Conditions 6.5, TCEQ may withhold 5% or less of each payment as retainage. TCEQ will indicate in a Work Order if it will apply retainage. Release of retainage may be requested in the final invoice under that Work Order.
- 10.5 **Release of Claims**. Article 6.6 of the General Terms and Conditions is replaced with the following:
Release of Claims by Contractor. The final invoice for a Work Order shall be accompanied by a complete and legally-effective release of TCEQ from all known and unknown claims relating to the Work Order, other than those specifically excepted in the release. Contractor shall use the form provided under Attachment A for the Release of Claims.

11. TAXES

Article 6.11 of the General Terms and Conditions is replaced with the following:
Liability for Taxes. The Texas Commission on Environmental Quality is exempt from state taxes. Contractor shall not include state taxes on its invoice. However, Contractor may be liable for certain taxes in the course of performing the Work. Where applicable, Contractor shall pay all sales, consumer, use and other taxes required to be paid by Contractor under Laws and Regulations.

12. ORDER OF PRECEDENCE

Article 22.18 of the General Terms and Conditions is replaced with the following:
Order of Precedence. The entire Contract between TCEQ and Contractor consists of the documents identified in the Contract Documents List. The Contract Documents are intended to be interpreted in harmony with each other. Any inconsistency in the solicitation or the Contract shall be resolved by giving precedence in the following order:

- a. Contract Signature Page
- b. Special Terms and Conditions
- c. Federal Conditions and Forms
- d. Procedures for Work Orders
- e. Scope of Work
- f. Price Form (completed)
- g. Insurance Section
- h. General Terms and Conditions
- i. Responder's (Contractor's) Affirmations
- j. HUB Subcontracting Plan and HUB Progress Assessment Forms
- k. Work Orders and Notices to Proceed
- l. Work Plans and other Work Order-related documents created during the Contract

- m. Insurance Certificate (incorporated by reference when completed and submitted)
- n. Notices, Project Representatives, and Records Location
- o. Release of Claims (as forms are completed and submitted, they are incorporated by reference)
- p. Other documents, exhibits, and attachments.

(End of Special Terms and Conditions)

GENERAL TERMS AND CONDITIONS

1. DEFINITIONS

The following terms shall have the meanings ascribed below when used in this document:

- 1.1 Conforming” and “Conformity” and similar words refer to the condition or status of a good, service, property or the Work as meeting and being compliant with the requirements of the Contract.
- 1.2 “Fiscal Year” means the period of time from September 1 of any year until August 31 of the following calendar year. For example, Fiscal Year (FY) 2014 begins on September 1, 2013 and ends on August 31, 2014.
- 1.3 Whenever used in this contract, “include,” and similar words are intended to mean include but not limited to; they are not intended to be exhaustive.
- 1.4 “Nonconforming” or “Nonconformity” means a failure of a good, service, property or the Work to conform to this Contract, and includes a defect in a good, service, property or the Work.
- 1.5 “Work” means the services, goods and property the Contractor is required to provide in this Contract. The term includes the entire completed undertaking and the various separately identifiable parts. The term also includes all duties of the Contractor.

2. CONTRACT AMENDMENTS

This Contract may only be modified by a written amendment. Amendments take effect when signed by the Contractor and TCEQ, except for unilateral amendments specifically allowed by this Contract.

3. TERM AND AMOUNT OF CONTRACT

- 3.1 *Contract Period.* The Contract Period begins on the later of: 1) the Effective Date shown on the Contract signature page, or 2) the latest date of the parties’ signatures shown on the Contract signature page. The Contract Period ends on the Expiration Date designated on the signature page.
- 3.2 *Renewals and Extensions.* This Contract may be renewed up to two one-year periods by amendment. TCEQ, by unilateral amendment, may extend the Contract for 180 days beyond any expiration of the Contract Period.
- 3.3 *Maximum TCEQ Obligation.* The Maximum TCEQ Obligation is the greatest amount TCEQ may pay for the Work.
- 3.4 *Service Adjustment/Contingency Requirement.* Because of the nature of the goods, services and property required, TCEQ may need to make allowances for unforeseen circumstances or contingency requirements. TCEQ may increase the Maximum TCEQ Obligation by an amount not to

exceed 100% of the initial Maximum TCEQ Obligation at the time the Contract was signed.

4. PRICES AND REIMBURSEMENT

- 4.1 *Prices.* Prices are firm, fixed, and fully-loaded.
- 4.2 *Cost Reimbursement.* Reimbursement is limited to direct costs for items specifically identified on the Price Form or in the Scope of Work and approved by the TCEQ Project Manager before the cost is incurred.
- 4.3 *Records.* Contractor must maintain records supporting its costs in accordance with generally accepted accounting principles. Reimbursement requests must be itemized and documented in a form acceptable to TCEQ.
- 4.4 *Reimbursement for Travel.* Travel reimbursement is limited to actual costs, and shall not exceed the maximum allowed for State employees by the Texas Comptroller of Public Accounts.

5. QUALITY AND ACCEPTANCE

- 5.1 *Quality Standard.* All Work must be complete and satisfactory to the TCEQ. All materials and equipment shall be handled in accordance with instructions of the supplier, except as otherwise provided in the Contract.
- 5.2 *Acceptance.* TCEQ relies on Contractor to inspect and test the work to ensure that it conforms to the Contract requirements. TCEQ relies on the Contractor's greater expertise in the field of the Work. Any act by TCEQ indicating acceptance, whether express or implied, shall not be deemed to mean that TCEQ has tested or inspected the work, but rather that TCEQ has accepted the work in reliance on Contractor's greater expertise and Contractor's representation that the work conforms to all Contract requirements. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. None of the following will constitute an acceptance of nonconforming Work or a release of Contractor's obligation to perform the Work in accordance with the Contract Documents:
 - payment;
 - use of the Work or any part of the Work by TCEQ;
 - review or approval of a submittal;
 - inspection or testing by TCEQ; or
 - correction of defective Work by TCEQ.
- 5.3 *Quality Assurance.* All Work that involves the acquisition of environmental data shall be performed in accordance with a TCEQ-approved Quality Assurance Project Plan (QAPP) meeting all applicable TCEQ and EPA requirements. Environmental data includes any measurements or information that describe (1) environmental processes, location, or conditions; or (2) ecological or health effects and consequences. Environmental data includes information collected directly from measurements, produced from models, and compiled from other sources such as databases or the literature. No data collection or other work covered by this requirement shall be implemented until Contractor receives the QAPP approved by TCEQ and, if necessary, the EPA. TCEQ

may refuse payment or reimbursement for any environmental data acquisition performed without an approved QAPP.

- 5.4 **Laboratory Accreditation.** Any laboratory data or analyses provided under this Contract must be prepared by a laboratory that is accredited in accordance with 30 Texas Administrative Code (TAC) Chapter 25, Subchapters A and B, for the matrices, methods, and parameters of analysis used, unless one of the regulatory exceptions specified in 30 TAC § 25.6 applies.

6. PAYMENTS AND INVOICES

- 6.1 **Funding Out.** This Contract is contingent upon the continued availability of funding. If funds become unavailable due to lack of appropriations, legislative or executive budget cuts, amendment of the Appropriations Act, state agency consolidations, or any other disruption of current appropriations, provisions of Article 19 shall apply.
- 6.2 **Invoice.** Contractor will submit invoices no later than the 15th day of every month after the services are completed. If the Contract has an approved Historically Underutilized Business (HUB) Subcontract Plan (HSP), a HUB Progress Assessment Report (PAR Form) describing subcontracting activity must also be submitted with the invoice. The invoice may be rejected for failure to comply with all invoice requirements.
- 6.3 The Contractor must include the following information on the face of all invoices: invoice number, invoice date, TCEQ Contract number, Work Order number if any, Vendor Identification Number, period covered by the invoice, item and unit description, quantity, unit price, extended price, and total amount for which Contractor is requesting payment. Contractor shall submit its invoice to the TCEQ Contract Manager.
- 6.4 **Progress Payment.** A progress payment is a payment made on a portion of the Work that is part of a line item designated on the Price Form. The Contractor's written request must include a description of the relevant portion of the Work. Contractor may request, and TCEQ at its sole discretion may issue or refuse, a progress payment. Final Payment. Contractor must submit its invoice for final payment within 30 days of completion of the Work.
- 6.5 **Retainage.** TCEQ may withhold 5% or less of each payment as retainage. Release of retainage may be requested in the final invoice.
- 6.6 **Release of Claims by Contractor.** The final invoice shall be accompanied by a complete and legally effective release of TCEQ from all known and unknown claims relating to the Contract on a form provided by TCEQ. Contractor's acceptance of final payment constitutes a waiver of all claims against TCEQ related to the Contract, known or unknown, other than those specifically excepted in the release.
- 6.7 **Assignment of Claims.** Contractor may assign its right to be paid under this Contract. Any assignment shall cover all unpaid amounts payable under this Contract. An assignment does not relieve Contractor of any contractual obligation. All assignments must be approved by both parties in writing and submitted to the TCEQ Contract Manager. Notwithstanding any contrary provision in applicable law, TCEQ shall

have no liability to Contractor or to any assignee on any claim arising from TCEQ's directing payment to Contractor instead of an assignee, or to an assignee instead of Contractor.

- 6.8 ***Claims for Overcharges.*** Contractor assigns to TCEQ any and all claims for overcharges associated with this Contract arising under the antitrust laws of the United States and the State of Texas.
- 6.9 ***Prompt Payment Act.*** In accordance with the Texas Prompt Payment Act, TCEQ will pay an acceptable invoice within 30 days of receipt.
- 6.10 ***Disputed Invoices.*** TCEQ may dispute an invoice by sending a notice in writing to the Contractor within 21 days of receipt. TCEQ may elect to make a partial payment and dispute the difference on the invoice. Under the Prompt Payment Act a dispute stops the accrual of interest on the payment.
- 6.11 ***Liability for Taxes.*** Contractor will pay all taxes resulting from this Contract including, any federal, state, or local income, sales or excise taxes of Contractor or its employees.

7. COMMUNICATIONS AND NOTICES

- 7.1 ***Notices.*** Unless otherwise specified in the Contract, all notices shall be made in writing and be delivered to a party's designated Contract Manager and Project Manager. Notices are effective upon receipt. If the Contractor has no Contract Manager, TCEQ may send notices to any address previously provided by the Contractor.
- 7.2 ***Claim.*** Contractor shall give notice to TCEQ of any claim, demand, suit, or other action (a "Claim") asserted against Contractor which either arises in relation to the Contract, or which could have an adverse material effect on Contractor's ability to perform the Work. Contractor shall give notice directly to the TCEQ Manager of Procurements and Contracts within three days of Contractor's receipt of notice of the Claim. The notice shall state the date of the Claim, the names and addresses of the claimants, the basis of the Claim, the name of each person or entity against whom the Claim is asserted, and the amount of the Claim.
- 7.3 ***Notice of Conflict of Interest.*** Contractor shall give notice to TCEQ of any actual, apparent, or potential conflict of interest regarding Contractor and any entity or individual performing any portion of the Work. As determined by TCEQ, any entity with an organizational conflict of interest and any individual with a personal conflict of interest must not take part in any way in the performance of any portion of the Work that creates the conflict of interest. TCEQ has sole discretion to decide whether a conflict exists and may at any time terminate or cancel all or part of the Contract on the grounds of actual, potential or apparent conflict of interest.
- 7.4 ***Bankruptcy.*** If Contractor becomes the subject of a voluntary or involuntary bankruptcy proceeding, Contractor shall immediately give notice to the TCEQ and send a copy of this notice to TCEQ Bankruptcy Program MC-132, P. O. Box 13087, Austin, TX 78711-3087. The notice must include the Contract number.

8. SHIPMENT AND DELIVERY OF GOODS AND MATERIAL SAFETY DATA SHEETS

- 8.1 *Shipping Terms.* All shipments shall be made FOB destination, Full Freight Allowed and not invoiced. Delivery shall be made between the hours of 8 a.m. and 5 p.m. Central Time, Monday through Friday, excluding State holidays, unless prior approval for delivery outside of these hours has been granted by TCEQ. Each shipment must be accompanied by a packing slip. Packing slips should reflect the TCEQ contract number, item description, lot number and quantity, if applicable.
- 8.2 *Material Safety Data Sheet.* Contractor must provide to TCEQ, at no cost, at least one copy of any applicable manufacturer's Material Safety Data Sheet (MSDS) with all materials provided. Contractor must make available, at no cost, the relevant manufacturer's MSDS to any person that may be affected by the Work.

9. SUPERINTENDENCE BY THE CONTRACTOR

- 9.1 *Contractor's Responsibility for Subcontractors.* All acts and omissions of subcontractors, suppliers and other persons and organizations performing or furnishing any of the Work under a direct or indirect contract with Contractor ("Subcontractors") are imputed to Contractor. Nothing in this Contract creates a contractual relationship between TCEQ and any Subcontractor except for product warranties for goods supplied by a third-party manufacturer and delivered to TCEQ. Nothing in this Contract creates any obligation for TCEQ to pay any Subcontractor. Contractor is solely responsible for scheduling and coordinating the work of Subcontractors, and for all communications to Subcontractors.
- 9.2 *Superintendence of the Work.* Contractor shall supervise all Work. Contractor is solely responsible for the means, methods, design, processes, procedures and conduct of the Work. This responsibility includes control of associated hazards to assure the safety of the performance of the Work, and for the protection of all persons, property, premises and facilities which may be affected by the Work. No action by TCEQ will transfer this responsibility to TCEQ. Contractor shall maintain a superintendent capable of overseeing performance of the Work at any location where Work is performed.

10. SUBCONTRACTORS AND EMPLOYEES

- 10.1 *Personnel.* Contractor shall provide competent, suitably qualified personnel to perform the Work. Contractor shall at all times maintain good discipline and order at the site of the Work. Contractor shall require its personnel to execute any confidentiality agreements, and any other required assignments, licenses or other instruments, and to provide information related to Intellectual Property, as may be necessary to effectuate the provisions of the Contract. Contractor will, upon request of TCEQ, obtain and provide background checks on personnel performing Work at a TCEQ campus.

- 10.2 ***TCEQ Objection.*** Contractor shall not use any subcontractor, employee, supplier or other person or organization whether initially or as a substitute, against whom TCEQ has a reasonable objection.
- 10.3 ***Key Personnel and Subcontractors.*** Contractor's Project Manager and any individuals specified for the key personnel positions listed in the Contract are material to the performance of the Work. Contractor shall provide timely notice to TCEQ prior to making substitutions of key personnel.
- 10.4 Substitutes shall be at least as qualified as the personnel or subcontractors being replaced.
- 10.5 ***Flowdown of Contract Provisions.*** Contractor shall include in its subcontracts, supplier contracts, employment contracts, and employment policies any provision included in this Contract, or shall include a similar provision, whenever and to the extent necessary in order for Contractor to fulfill its obligations under this Contract, regardless of whether or not the provision expressly requires that it be included in such contracts or policies.

11. BOOKS AND RECORDS

- 11.1 ***Contractor's Books and Records.*** During the Contract and for three years thereafter, Contractor shall maintain books, records, documents, and other evidence reasonably pertinent to Contractor's performance of the Work. Contractor shall maintain all financial records in accordance with generally accepted accounting principles. Contractor shall permit representatives and agents of TCEQ, or authorized state and federal agencies, to have unrestricted access to all records, data and facilities as necessary to review, inspect, and audit all financial activities and services associated with TCEQ funds. Contractor shall provide appropriate facilities for such access and inspection.
- 11.2 ***Right to Audit.*** Pursuant to Section 2262.154 of the Texas Government Code, the State auditor may conduct an audit or investigation of the Contractor or any other entity or person receiving funds from the State directly under this contract or indirectly through a subcontract under this contract. The acceptance of funds by the Contractor or any other entity or person directly under this contract or indirectly through a subcontract under this contract acts as acceptance of the authority of the State auditor, under the direction of the legislative audit committee, to conduct an audit or investigation in connection with those funds. Under the direction of the legislative audit committee, the Contractor or other entity that is the subject of an audit or investigation by the State auditor must provide the State auditor with access to any information the State auditor considers relevant to the investigation or audit. Contractor will ensure that this clause concerning the authority to audit funds received indirectly by subcontractors through the Contractor and the requirement to cooperate is included in any subcontract it awards.
- 11.3 ***Time Sheets.*** Contractor shall maintain and, upon request by TCEQ, submit weekly time sheets for each person providing services on behalf of Contractor or a subcontractor. The time sheets must state the position held by each person and the number of hours worked. Upon request, the

timesheets must be submitted to the TCEQ Contract Manager weekly by noon Central Time on Monday of the following week.

12. WARRANTIES AND CERTIFICATIONS

- 12.1 In addition to all warranties established or implied by law, Contractor warrants that:
 - 12.1.1 All goods, services and property provided conform to this Contract and to all representations made or provided by the Contractor for the purpose of inducing the TCEQ to enter this Contract, and are merchantable, fit for the purpose intended, of best quality and workmanship, and free from all deficiencies in media, material, workmanship, and quality;
 - 12.1.2 All goods, services and property provided conform to standards established for such goods in accordance with any applicable laws and regulations, including the Occupational Safety and Health Act (29 U.S.C. §§ 651-678);
 - 12.1.3 All services are performed in a professional and workmanlike manner, consistent with relevant accepted standards and practices.
- 12.2 The warranties set forth above are effective upon TCEQ's issuance of final payment under the Contract or Work Order, and for 24 months thereafter. Nonconformities are not deemed waived by TCEQ's failure to notify Contractor upon receipt of goods, property or completion of services or by payment of invoice. Contractor shall, at its expense, repair or replace any goods and property and re-perform any services that are found to be or that become nonconforming or defective. If, after notice of a claim under these warranties, Contractor fails to promptly repair, replace, or re-perform as required, TCEQ may undertake its own remedial action and Contractor shall reimburse the TCEQ for all costs of such action. If TCEQ does not choose to repair, replace, or re-perform in place of the Contractor, Contractor shall promptly refund to TCEQ the full purchase price paid for the entire Work.
- 12.3 *Ability to Perform.* Contractor has the corporate authority, capability, experience and means to enter into this Contract and to perform the Work.

13. INTELLECTUAL PROPERTY

- 13.1 *Work for Hire.* All Work created under this Contract is a work for hire. TCEQ is the owner of the Work and all intellectual property in the Work. Contractor will enter into written agreements with its employees and subcontractors that confirm TCEQ's ownership interest.
- 13.2 *License.* If any intellectual property that is incorporated into the Work or intellectual property created under this Contract is not work for hire, Contractor grants to TCEQ a royalty-free, nonexclusive, perpetual, irrevocable, fully paid-up, enterprise-wide and worldwide license to use, reproduce, publish, modify, create derivative works, distribute, publicly perform and display the intellectual property and associated user documentation, and to authorize others to do the same.

- 13.3 *Contractor shall secure the necessary intellectual property rights from third parties to comply with this article.* Contractor's prices include all user documentation, and applicable license and/or royalty fees necessary for TCEQ to use the Work. Commercially available software that is necessary to use the Work may be exempted from this requirement with prior approval from TCEQ. Contractor shall take all necessary steps to pass-through to TCEQ all warranties, representations and other service commitments applicable to third party intellectual property incorporated into the Work.
- 13.4 *Electronic Deliverables.* Electronic deliverables must be delivered in a format approved by the TCEQ.

14. INDEMNIFICATION

- 14.1 To the fullest extent permitted by law, Contractor shall indemnify, defend, and hold harmless the State of Texas, including TCEQ and its representatives, from and against all losses, liabilities, damages, demands, proceedings, and other claims of any type arising from the performance of the Work by the Contractor or its subcontractors, suppliers or agents.

15. HISTORICALLY UNDERUTILIZED BUSINESSES

- 15.1 If applicable, Contractor will comply with the Historically Underutilized Business (HUB) requirements of Texas Government Code, Chapter 2161. If this Contract includes an approved HUB Subcontracting Plan (HSP), Contractor shall implement the HSP in good faith. Any substitutions of personnel or subcontractors that require a revision of the Contractor's approved HSP must receive prior review and approval from TCEQ and comply with the good faith effort requirements of 34 TAC § 20.14.

16. CONFIDENTIALITY AND PUBLIC INFORMATION

- 16.1 *Public Information.* The Texas Public Information Act (PIA), Texas Government Code Chapter 552, applies to all documentation, data and other information gathered or created under this Contract and is the property of TCEQ. Contractor is required to make any information created or exchanged with the state pursuant to this Contract, and not otherwise excepted from disclosure under the PIA, available in a format that is accessible by the public at no additional charge to the state.
- 16.2 *Public Information Requests.* Contractor will not release information without express written authorization of TCEQ. TCEQ will respond to all requests for public information regarding this Contract in accordance with the PIA. Contractor shall immediately forward any third party request for information about the Contract it receives to TCEQ.
- 16.3 *TCEQ's Confidential Information.* All information provided by TCEQ that is marked or otherwise identified as confidential or proprietary is confidential information. Contractor will protect, and will require Contractor's employees and subcontractors to protect, TCEQ's confidential information from unauthorized disclosure. Contractor is permitted to use, copy and disclose confidential information to Contractor's employees and

subcontractors only to the extent necessary to fulfill Contractor's obligations under this Contract.

- 16.4 ***Contractor's Confidential Information.*** Contractor shall identify and protect information created or gathered under this Contract that it considers confidential or proprietary by law. If TCEQ receives a request for information that the Contractor has identified as confidential, TCEQ will timely notify Contractor of the request. Contractor may submit arguments to the Texas Office of the Attorney General if it believes the information should not be released. TCEQ has no obligation to submit arguments on behalf of Contractor.

17. OTHER LIABILITIES

- 17.1 No employee, officer, director or agent of TCEQ assumes personal liability by signing this Contract or by reason of default in the performance of any of the Contract.

18. TIME DELAYS, SUSPENSION

- 18.1 ***Time is of the Essence.*** Contractor's timely performance is essential to this Contract.
- 18.2 ***Suspension.*** TCEQ may suspend all or part of the Work at any time, for any reason. Contractor shall resume performance within ten days of receipt from TCEQ of a notice to resume. If Contractor's performance is delayed by TCEQ, Contractor's sole remedy is an extension of the schedule for the delivery of the Work. TCEQ may extend the Contract Period to accommodate an extension of the schedule for the delivery of the Work.
- 18.3 ***Force Majeure.*** If either party's performance is delayed by acts of God, labor stoppages, or similar irresistible forces, the affected party shall give ongoing notice of the delay supported by sufficient evidence to the other party as soon as practicable after the delay is apparent. Upon timely notice, the time for performance shall be extended for a reasonable period of time. Force majeure does not include ordinary delays that are common to the industry or location.
- 18.4 ***Disaster Recovery.*** Contractor shall maintain a business continuity plan designed to enable Contractor to recover normal business operations and data within seventy-two hours of any declare disaster or force majeure event.

19. TERMINATION

- 19.1 ***Termination for Cause.*** If Contractor fails to perform a material obligation, stops Work, or becomes insolvent, TCEQ may give notice of breach of contract. Within ten days of the notice, Contractor must attempt to cure the breach or demonstrate that a breach has not occurred. If Contractor does not cure the breach or demonstrate that a breach has not occurred, TCEQ may terminate the Contract for cause by notice. A material obligation includes delivery of Conforming Work on schedule for the agreed prices, maintaining and providing evidence of required

insurance coverage, compliance with HUB requirements, and integrity in dealing with TCEQ.

- 19.2 ***Termination for Convenience.*** TCEQ may terminate this Contract without cause by giving ten days' prior notice of termination for convenience. Upon receipt of the notice, Contractor shall promptly stop all Work except as specified in the notice of termination. Contractor's exclusive remedy is payment for goods, services and property ordered, delivered and not rejected by TCEQ. TCEQ shall not be liable for anticipated profits, unabsorbed overhead, interest on borrowing, or other damages not specifically stated in this Contract.
- 19.3 ***Debarment.*** If Contractor is debarred by the State of Texas or any of its officers, directors, owners, partners, or primary managers or supervisors is subject to suspension, debarment, or similar ineligibility determined by any federal, state or local government entity, the Contractor must immediately notify TCEQ and TCEQ may terminate this contract for cause.
- 19.4 If the Contractor is adjudicated of having committed substantive, non-clerical violations resulting in an actual release of hazardous waste that presented an imminent and substantial danger to the public health and safety or the environment, the Contractor will immediately notify TCEQ and TCEQ may terminate this Contract for cause.

20. REMEDIES

- 20.1 ***Right of Set-off.*** In addition to other remedies available under the Contract or in law or equity, TCEQ or the Comptroller may set-off the State's good faith claims, whether or not adjudicated, against a Contractor's claim for payment.
- 20.2 ***Schedule of Remedies available to TCEQ.*** In accordance with Texas Government Code Chapter 2261, the following Schedule of Remedies applies to this Contract. In the event of Contractor's nonconforming performance, TCEQ may:
- 20.2.1. Issue notice of nonconforming performance;
 - 20.2.2. Reject nonconforming performance and request corrections without charge to TCEQ;
 - 20.2.3. Accept (subject to limitations on TCEQ acceptance) late performance, nonconforming performance, or correction of nonconforming performance and make payment therefore, with or without a set-off to cover damages, even if such performance is tendered after the end date of the Contract;
 - 20.2.4. Reject a payment request and/or suspend further payments pending acceptable revision of the nonconformity;
 - 20.2.5. Suspend all or part of the Work and/or payments pending accepted revision of the nonconformity;
 - 20.2.6. Demand restitution and recover payments where performance is subsequently found nonconforming;
 - 20.2.7. Recover all actual damages incurred by TCEQ, including costs of delay, costs of securing a replacement contractor, reasonable attorney's fees, court costs, and prejudgment and post-judgment interest at the maximum lawful rate;

- 20.2.8. Terminate the Contract without further obligation for payment;
- 20.2.9. File a cause of action for specific performance, rescission, damages and other relief as appropriate; and/or,
- 20.2.10. Award the Contract to another entity,

20.3 *Cumulative Remedies.* The rights and remedies provided to the TCEQ in this Contract are in addition to, and do not limit, any rights and remedies available under state or federal law.

21. DISPUTES; CLAIMS

- 21.1 *Continuing the Work.* Except as expressly permitted by law, Contractor must not delay or stop Work because of a dispute or disagreement with TCEQ.
- 21.2 *Dispute Resolution Process.* TCEQ and Contractor shall use the dispute resolution process provided for in Texas Government Code Chapter 2260 to attempt to resolve all disputes arising under the Contract. The rules of TCEQ found in 30 TAC Chapter 11, Subchapter D, describe the requirements for filing a notice of claim, conducting negotiations, and requesting a hearing.

22. MISCELLANEOUS PROVISIONS

- 22.1 *Severability of Provisions.* If any provision of this Contract is held by a court of competent jurisdiction to be invalid, illegal, or otherwise unenforceable, the remainder of the Contract shall remain in force and shall be construed to conform as closely as possible to the originally-expressed intent of the parties.
- 22.2 *Sovereign Immunity.* This Contract does not waive TCEQ's sovereign immunity or any official immunity to which TCEQ's officers, employees, or agents are entitled under law.
- 22.3 *Relationship of the Parties.* This Contract does not create an employer/employee relationship, agency relationship, partnership, or joint venture. Contractor is an independent contractor in performing the Work. Contractor shall be responsible for all compensation, coverage's, claims and taxes of its employees and subcontractors.
- 22.4 *Venue.* Contractor agrees that the Contract is being performed in Travis County, Texas, because this Contract has been solicited, executed, and will be administered in Travis County, Texas. The Contractor agrees that any permissible cause of action involving this contract arises solely in Travis County.
- 22.5 *Third-Party Beneficiaries.* There are no third-party beneficiaries to this Contract.
- 22.6 *Accessibility.* All electronic deliverables must meet State of Texas accessibility requirements in 1 TAC Chapters 206 and 213.
- 22.7 *Computation of Time.* A period of days is computed as follows: (1) exclude the day of the event that triggers the period; (2) count every day, including Saturdays, Sundays, and legal holidays; (3) include the last day of the period; (4) if the last day is a Saturday, Sunday or legal holiday, the period continues to run until the next business day.

- 22.8 **Governing Law.** This Contract and any disputes arising out of or related to it will be governed by the laws of the State of Texas, without regard to its choice of law rules and without regard to conflicts of laws principles.
- 22.9 **Waiver.** With the exception of an express, written waiver in the form of a unilateral amendment signed by TCEQ, no act or omission will constitute a waiver or release of Contractor's obligation to perform Conforming Work. No waiver on one occasion, whether expressed or implied, shall be effective as a waiver for any other occasion.
- 22.10 **Assignment of Contract Obligations.** No delegation of the obligations, rights or interests in the Contract by Contractor will be binding on TCEQ without its written consent. No assignment will release or discharge Contractor from its obligations under this Contract.
- 22.11 **Survival of Obligations.** Except where a different period is specified in this Contract or applicable law, all representations, indemnifications, and warranties made in, required by or given in accordance with the Contract, as well as all continuing obligations indicated in the Contract, survive for four years beyond the termination or completion of the Contract, or until four years after the end of a related proceeding. A related proceeding includes any litigation, legal proceeding, permit application, or State Office of Administrative Hearings proceeding, which is brought in relation to the Contract or which in TCEQ's opinion is related to the subject matter of the Contract. Either party shall notify the other of any related proceeding if notice of the proceeding has not been provided directly to that other party.
- 22.12 **Visits to Work Site.** TCEQ may make a scheduled or unscheduled visit to any location where the Work is being performed.
- 22.13 **Contractor Performance Evaluations.** TCEQ may prepare written evaluations of Contractor's performance and use its evaluations in the selection criteria for future contracts. Contractor acknowledges that these evaluations are made on a subject in which TCEQ and its officers and employees have an interest or duty, and are made for the purpose of communicating with other persons having a corresponding interest or duty. TCEQ may provide this information to state agencies and others. Contractor consents to disclosure of TCEQ's evaluations to Texas state agencies and others, including submitting CPA's Texas Procurement and Support Services Division vendor performance forms to appropriate state databases.
- 22.14 **Publicity.** Contractor shall not state or imply that TCEQ endorses or recommends its services, goods, or property. Contractor may not use the TCEQ logo or TCEQ employees in sales brochures, press releases, or other promotions, unless prior approval is obtained from the TCEQ Agency Communications Division.
- 22.15 **Compliance with Law.** Contractor must comply with all applicable federal, state, and local statutes, regulations, and other laws. Contractor has sole responsibility for obtaining all licenses and permits necessary for the Work, and for giving all notices required by law.
- 22.16 **Certifications.** Contractor will maintain the status of all certifications made in the solicitation response.
- 22.17 **Texas Made Products.** In accordance with Texas Government Code, § 2155.4441, in performing this Contract, Contractor must purchase products and materials produced in Texas when they are available at a

price and time comparable to products and materials produced outside of Texas.

22.18 *Order of Precedence.* The entire Contract between TCEQ and Contractor consists of the documents identified in the Contract Documents List. The Contract Documents are intended to be interpreted in harmony with each other. Any inconsistency in the solicitation or the Contract shall be resolved by giving precedence in the following order:

- a. Special Terms and Conditions
- b. Federal Conditions and Forms
- c. Procedures for Work Orders
- d. Scope of Work
- e. General Terms and Conditions
- f. Work Orders and related documents created during the Contract
- g. Other documents, exhibits, and attachments.

PROCEDURES FOR WORK ORDERS

Article 1. Introduction

TCEQ may order Work within the Scope of Work described in this Contract only by issuing Work Orders as described below. TCEQ will not pay for any Work under this Contract unless it is performed in accordance with a Notice to Proceed as described below. There is no guaranteed minimum amount of Work or Work Orders. If federal funds will be used to pay for a Work Order, the Federal Terms and Conditions apply to that Work Order.

Article 2. Work Orders

1. At any time during the Contract, TCEQ may issue a Work Order. Work Orders must be in writing.
2. Each Work Order shall include:
 - The Contract Number and Name;
 - The Work Order Number ;
 - The maximum dollar amount for the Work Order;
 - The maximum dollar amount for Contractor's preparation of the Work Plan and the Quality Assurance Project Plan (QAPP) [This amount is part of the maximum dollar amount for the Work Order.];
 - A statement that federal funds will be used to pay for the Work, if federal funds will be used;
 - Instructions for preparing the QAPP. TCEQ may waive the requirement for a QAPP in a Work Order. If TCEQ waives the requirement for a QAPP and the Contractor believes that a QAPP is necessary, the Contractor must notify TCEQ and the situation must be resolved before the Contractor begins Work.
 - Estimated start and end dates for the Work described in the Work Order;
 - The name and contact information of the TCEQ Project Manager and any other TCEQ contacts; and
 - A description of the Work to be performed.
3. A Work Order may include additional information or requirements at the discretion of TCEQ.

Article 3. Work Plans

1. Within 14 calendar days after TCEQ issues a Work Order, Contractor shall submit a written Work Plan to the TCEQ Project Manager. TCEQ may specify a different deadline for Work Plan submission.

2. The Work Plan shall include:

- The Contractor's name;
- The Contract Number and Name;
- The Work Order number;
- The name and contact information of the Contractor's Project Manager;
- A description of the steps the Contractor will undertake to complete the Work. Include the hours of each labor classification required to complete each task and subtask;
- A timeline for completion of the Work, including dates for all milestones and deliverables.
- Key personnel that will be assigned to the Work Order, with labor classification.
- An itemized budget that conforms to the Contract price list;
- Any additional information requested in the Work Order; and
- Contractor's signature, with printed name and title.

3. HUB Subcontracting Plan (HSP). If this Contract includes a HUB Subcontracting Plan (HSP), the Work Plan must confirm that all subcontractors to be used are listed on the HSP. If the Contractor intends to use other subcontractors, it must amend the HSP before beginning Work under the Work Order.

Article 4. Work Plan Review

1. TCEQ may review the Work Plan and either approve it or request changes. If TCEQ requests changes, Contractor shall re-submit the Work Plan to the TCEQ Project Manager within seven calendar days. TCEQ may specify a different deadline for Work Plan re-submission.
2. The Contractor agrees to continue and to complete work assigned under a Work Order within the original estimate or budget provided in the Contractor's Work Plan unless the TCEQ agrees to an adjustment. The TCEQ budgets for and encumbers funds only up to the not-to-exceed dollar amount contained in each Work Order and, therefore, materially relies on the Contractor's diligence in the preparation of estimates submitted for approval in the Work Plans. The essence of the reliance is that partially completed work products, which could be a consequence of inadequately prepared estimates, may be of little or no use to the TCEQ. The Contractor acknowledges and agrees that the TCEQ may materially rely on these Contractor-prepared estimates.

Article 5. Notice to Proceed

If TCEQ approves a Work Plan, TCEQ will issue a Notice to Proceed. The Notice to Proceed adopts the Work Plan, including the budget and timeline. A signed Notice to

Proceed authorizes Contractor to immediately begin the Work described in the Work Plan, unless the Work Plan states a later start date for all or part of the Work or it is a Limited Notice to Proceed that allows the Contractor to begin only a portion of the Work. Upon receipt of a Limited Notice to Proceed, Contractor shall begin the portion of the Work that has been approved. Time is of the essence, unless the Notice to Proceed states that time is not of the essence.

Article 6. Invoices

Contractor must submit a separate invoice for each Work Order. Each invoice must include the Work Order number, any Work Order title, and any PCR number for the Work Order. Work Order invoices must conform to the Contract. Unless an item is authorized as reimbursable, all charges under the Contract, including charges for subcontracting, must correspond to the line items (labor classifications) listed in the Price Form.

Article 7. Revising Work Orders and Work Plans

1. TCEQ may issue a Revised Work Order at any time during the term of a Work Order. A Revised Work Order shall identify the Work Order it is revising, and meet all requirements of a Work Order stated in Article 2. Upon receiving a Revised Work Order, Contractor shall continue Work under the previously approved Work Plan, unless TCEQ instructs the Contractor to stop all or part of the Work.
2. Contractor shall submit a Revised Work Plan within seven calendar days after TCEQ issues a Revised Work Order. A Revised Work Plan shall meet all requirements of a Work Plan stated in Article 3.
3. TCEQ may review the Revised Work Plan and either request changes or approve it by issuing a Revised Notice to Proceed. A Revised Notice to Proceed supersedes and replaces the original Notice to Proceed, and adopts the corresponding Revised Work Order and Revised Work Plan. A Revised Notice to Proceed shall meet all requirements of a Notice to Proceed described in Article 5.

Article 8. Cancellation

TCEQ may cancel a Work Order with a notice. Cancellation may be for cause, convenience, or force majeure. Contractor will stop Work as soon as practicable after cancellation. Upon cancellation, Contractor may request payment for completed and accepted Work. In case of cancellation for convenience or force majeure, Contractor may also request payment for partially performed Work, and for timely, reasonable expenses directly attributable to cancellation. In any event, TCEQ may offset its contract damages, if any, prior to making payment. Contractor shall not be paid for: activities not performed, loss of anticipated profits or revenue, consequential damages, or other economic loss arising out of or resulting from the cancellation.

INSURANCE SECTION

1. **COVERAGES REQUIRED.** Contractor shall obtain and maintain throughout the Contract term the insurance coverage's listed below:
 - 1.1 *Worker's Compensation and Employer's Liability Insurance:* Elective exemptions or coverages through an employee leasing arrangement will not satisfy this requirement.
 - Bodily Injury – by accident, \$500,000 per accident;
 - By Disease - \$500,000 per employee; and
 - A per policy aggregate of \$1,000,000.
 - 1.2 *Commercial Automobile Liability Insurance:* Coverage in the following minimum amounts for owned, hired, and non-owned vehicles for claims of automobile bodily injury and property damage which may arise in the performance of the Contract:
 - \$ 500,000 per person;
 - \$ 500,000 per occurrence for bodily injury; and
 - \$1,000,000 per occurrence for property damage; or
 - \$1,000,000 per occurrence if the policy is issued for bodily injury and property damage combined.
 - 1.3 *Commercial General Liability Insurance:* Coverage for claims of personal injury and bodily injury, including accidental death, and property damage which may arise from the performance of the Contract. The types of coverage required are: Blanket, Broad Form Property Damage, Premises and Operations Hazards, Products and Completed Operations Hazards, Independent Contractor's, and Contractual Liability in the minimum amounts of:
 - \$ 500,000 per occurrence for bodily injury; and
 - \$1,000,000 per occurrence for property damage; or
 - \$2,000,000 per occurrence if the policy is issued for bodily injury and property damage combined.
 - 1.4 *Excess Liability Insurance (Umbrella):* The Contractor and subcontractor must obtain and maintain umbrella liability insurance to provide additional coverage for all liability policies required for this Contract in an amount not less than \$2,000,000 in the aggregate.
 - 1.5 *Professional Liability Insurance:* The Contractor shall provide such coverage for financial loss resulting from errors, omissions and failure to properly coordinate the plans and specifications of the Work or Contract documents. Professional Liability Insurance shall contain a

minimum net coverage of \$1,000,000 plus deductible exclusion. The Contractor shall require any subcontractor named by TCEQ to provide Professional Liability Insurance sufficient for the protection, on the same basis as above, of the portion of the work the subcontractor performs. The compilation of the total insurance coverage required under this paragraph shall remain the responsibility of the Contractor.

- 1.6 ***Aircraft Liability Insurance:*** If the Contractor is issued a work order and it will use aircraft to perform the work, the Contractor must ensure that the aircraft is covered by aircraft liability insurance providing coverage of at least two million dollars (\$2,000,000) per occurrence for each aircraft operated under the terms of this Contract, or the level of liability insurance required by Federal Aviation Administration (FAA) or other entity having jurisdiction, whichever is higher.
2. **MINIMUM INSURER RATING.** The Contractor shall use insurers licensed, eligible or registered under Texas law with a rating of A- or better in a financial size category of IV or higher according to A.M. Best Company.
3. **NOTICES OF CHANGE.** The Contractor's insurance policies must require the insurer or the insurer's authorized agent to notify TCEQ of any cancellation, or material change, other than for non-payment, at least 30 days in advance. The Contractor's insurance policy must require the insurer or the insurer's authorized agent to notify TCEQ of any cancellation or material change due to non-payment at least 10 days in advance. These notices of changes must reference the TCEQ contract number and be made in writing by certified mail to the TCEQ Contract Manager at the address shown in the Contract Documents and to the Contractor.
4. **INSURANCE CERTIFICATE.** Contractor shall provide TCEQ with evidence of the insurance coverage required under this Contract. The evidence of the coverage shall be a certificate of insurance on a form approved by the Texas Department of Insurance. Contractor will submit the certificate to the TCEQ Contract Manager no later than ten days after award of the Contract, or as directed by the Special Terms and Conditions. Certificates must bear the contract number of this Contract. If Contractor changes insurers, Contractor shall give TCEQ a new certificate of insurance within ten days. The certificate of insurance shall set out any deductible or self-insured retention amounts for each coverage required.
5. **REQUIRED ADDITIONAL PROVISIONS.** All policies of insurance shall include the following provisions:
 - 5.1 TCEQ and its officers and employees are named additional insureds to all policies of insurance required under this Contract, except to the Worker's Compensation and Employer's Liability Insurance and the Professional Liability Insurance;

- 5.2 Waiver of subrogation in favor of TCEQ, its officers and employees for bodily injury (including death), property damage or any other loss arising from this Contract; and
- 5.3 The Contractor's insurance is primary insurance with respect to the TCEQ and its officers and employees.

NOTICES, REPRESENTATIVES, AND RECORDS LOCATIONContract Number: 582-15-50022Contract Name: AMEIOTS

1. **Representatives.** The individual(s) named below are the representatives of TCEQ and Contractor. They are authorized to give and receive communications and directions on behalf of the TCEQ and Contractor as indicated below. All communications including official contract notices must be addressed to the appropriate representative or his or her designee.

2. **Changes in Representatives.** Either party may change its representatives by unilateral amendment.

3. **TCEQ Representatives.**

**TCEQ CONTRACT MANAGER
(for Contractual Matters)**Krista KroppContract Specialist
(Title) (Mail Code)

Texas Commission on Environmental Quality
P.O. Box 13087
Austin, Texas 78711-3087
Telephone No.: (512)239-1010
Facsimile No.: (512)239-6868

**TCEQ PROJECT MANAGER
(for Technical Matters)**Erik GribbinSenior Project Manager
(Title) (Mail Code)

Texas Commission on Environmental Quality
P.O. Box 13087
Austin, Texas 78711-3087
Telephone No.: (512)239-2590
Facsimile No.: (512)239-6868

4. **Contractor Representatives.**

For Contractual Matters:TBD
(Name)
(Title)
(Mailing Address) (City) (State) (Zip Code)Telephone No.: () - Facsimile No.: () - **For Technical Matters:**TBD
(Name)
(Title)
(Mailing Address) (City) (State) (Zip Code)Telephone No.: () - Facsimile No.: () -

5. **Invoice Submittal.** Invoices must be submitted to the TCEQ Contract Manager.

6. **Designated Location for Records Access and Review.** Contractor designates the physical location indicated below for record access and review pursuant to any applicable provision of this contract:

(Physical Location Address Line 1)
(Physical Location Address Line 2)
(City),(State),(Zip Code)

Attachment A:
Release of Claims

(Must be returned per Special Terms and Conditions Section 9.5)

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY**Release of Claims**

_____ (“Contractor”) releases the Texas Commission on Environmental Quality (TCEQ), its officers, agents, and employees from all claims arising out of or relating to TCEQ Contract Number _____ (the “Contract”), except for Contractor’s final invoice in the amount of \$_____ and retainage withheld by TCEQ in the amount of \$_____. Contractor releases any and all liens related to the Contract, and relinquishes any right it may have to place liens related to the Contract. Contractor warrants that it has completed all work described in the Contract.

Executed on this _____ day of _____, 20_____.

By: _____
(signature)

(name)

(title)

SECTION 4:
RESPONSE DOCUMENTS
SUBMIT WITH RESPONSE

RESPONDER'S SIGNATURE AND INFORMATION**(Failure to sign below will disqualify your Response.)**

Registered Name of Responder: _____

D/B/A _____

Company Address: _____

Vendor ID Number: _____

The ID number is the payee identification number assigned and used by the Comptroller of Public Accounts of Texas to process payment for goods/services.

Provide one of the following:

- Federal Employers Identification Number (EIN):
- Social Security number behind Tab 6.

Every vendor MUST provide an EIN or Social Security number prior to receiving payment under an awarded contract. If you provide a Social Security number, include it behind Tab 6. For information on obtaining your EIN, you may call the IRS at 800-829-4933 or visit [Electronic Filing PIN Request](http://www.irs.gov/Individual/Electronic-Filing-PIN-Request) (www.irs.gov/Individual/Electronic-Filing-PIN-Request)

Printed Name and Title of individual authorized to bind Responder to this Response: _____

Authorized Signature: _____

Your signature binds you to everything in the Solicitation and your Response, including the Certifications and your completed HUB Subcontracting Plan. By signing, you also affirm that everything in your Response is complete, true and accurate.

Date of Signature: _____

Name of Responder Representative to contact regarding this response: _____

Title of Representative: _____

Telephone Number: _____

Email Address: _____

Pursuant to Texas Family Code § 231.006(c), regarding child support, Responses must include names and Social Security Numbers of the individual or sole proprietor and each partner, shareholder, or owner with an ownership interest of at least 25 percent of the business entity submitting the Response. See Certifications for additional information. Check one of the following:

- ☐ This provision applies, and the required information is submitted behind Tab 6 in the Response.
- ☐ This provision does not apply to the Responder.

RESPONSE CONTENTS

Response must be organized with the designated index tabs and in the designated order. If the item for a tab is not applicable to the Response, insert a page marked “Not Applicable” behind the tab.

- ☒ **TAB 1** Authorized Signature and Information
 - ☒ Responder’s Signature and Information
 - ☒ Signed Cover Page of Addenda
 - ☒ Checklist for Areas of Work

- ☒ **TAB 2A** Statement of Qualifications: Responder's Company Qualifications: Company Qualification Statement includes Company Organization, Ability to Perform, Past Performance and References.
- ☒ **TAB 2B** Statement of Qualifications: Responder's Key Personnel: Qualifications & Experience Statement

- ☒ **TAB 3** Technical Approach: Includes a) a General Technical Work Plan for Performing the Work in the Scope of Work, and b) Sample Work Plan(s) for performing the Work in the Sample Work Order(s)

- ☒ **TAB 4** Price Form (completed)

- ☒ **TAB 5** Additional Response Forms
 - ☒ Federal Forms (if applicable)
 - ☒ Certification Regarding Lobbying, EPA Form 6600-06
 - ☒ Disclosure of Lobbying Activities (if applicable)
 - ☒ Disadvantaged Business Enterprise (DBE)Forms (if applicable)
 - ☐ Cost or Price Summary Format for Subagreements under U.S. EPA Assistance (if applicable)
 - ☒ HUB Subcontracting Plan Forms (if applicable)
 - ☒ Preferences

- ☒ **TAB 6** **Social Security Numbers** (if applicable)

- ☒ **TAB 7** **Reference Notification Letters and Other** (May be used to include additional information that does not fall under another designated Tab, to explain a Certification you cannot make, or disclose a conflict of interest.)

CHECKLIST FOR SUBMITTED PROPOSALS

Instructions: Please mark the items to indicate which areas of the Scope of Work and sample Work Orders you are submitting.

For each submission for an area of the Scope of Work, include the technical approach in your General Technical Work Plan.

Your General Technical Work Plan will include each Scope of Work area on which you are submitting a Proposal.

- ☐ Air Quality Modeling Services: Photochemical Modeling Services
Sample Work Orders 6 and 12 required
- ☐ Air Quality Modeling Services: Meteorological Modeling Services
Sample Work Order 7 required
- ☐ Air Quality Modeling Support Services: Atmospheric Chemistry Research and Analysis
Sample Work Orders 12 and 13 required
- ☐ Air Quality Modeling Support Services: Meteorological and Atmospheric Research and Analysis
Sample Work Order 14 required
- ☐ Air Quality Modeling Support Services: Technical Analysis of Air Quality Related Issues
Sample Work Orders 5 and 11 required
- ☐ Emissions Inventory Services: Area
Sample Work Order 10 required
- ☐ Emissions Inventory Services: On Road Mobile
Sample Work Order 4 required
- ☐ Emissions Inventory Services: Non-Road Mobile
Sample Work Order 2 required
- ☐ Emissions Inventory Services: Point Source
Sample Work Orders 8 and 9 required
- ☐ Program Technical Support Services
Sample Work Orders 1 and 3 are required

- ☐ Mobile Technical Support Services
Sample Work Orders 1 and 4 required

RESPONDER'S CERTIFICATIONS

By signing and submitting its Response, Responder certifies each of the numbered statements below, unless the Response prominently and explicitly states that Responder cannot certify a particular statement and describes the facts and circumstances which prevent it from making the certification. If you cannot make any of the certifications, provide this information in **Tab 7**. Unless disclaimed, these certifications are part of the Response and any resulting Contract. False certifications may lead to disqualification of the response or to contract remedies such as termination/cancellation for cause, administrative actions such as removal from the Centralized Master Bidders List, and criminal penalties. References to “vendor” in these affirmations are required by statute, and in this context indicate the Responder. References to “Government Code” and “Family Code” are to Texas statutes.

1. Responder has not given or offered, and does not intend to give or offer, any economic opportunity, future employment, gift, loan, gratuity, special discount, trip, favor, service or other thing of value to a public servant in connection with its Response.
2. The Response does not include financial participation by any individual or entity that was compensated for preparation of the specifications or request for proposal. Under Section 2155.004, Government Code, the vendor certifies that the individual or business entity named in this bid or contract is not ineligible to receive the specified contract and acknowledges that this contract may be terminated and payment withheld if this certification is inaccurate.
3. Neither the Responder nor the firm, corporation, partnership, or institution, represented by the Responder, or anyone acting for such a firm, corporation or institution has violated the antitrust laws of this state (Texas Business & Commerce Code Chapter 15) or federal antitrust law. Responder has not communicated its Response, directly or indirectly, to any competitor or any other person engaged in the same line of business. Responder has not received information about any other response to this Solicitation.
4. No individual who is a sole proprietor, partner, shareholder, or owner with an ownership interest of at least 25 percent of Responder is a child support obligor who is more than 30 days delinquent in paying child support. Under Section 231.006, Family Code, the vendor or applicant certifies that the individual or business entity named in this contract, bid, or application is not ineligible to receive the specified grant, loan, or payment and acknowledges that this contract [if any] may be terminated and payment may be withheld if this certification is inaccurate.
5. During the four years ending on the date of the Response, Responder has not been the executive head of TCEQ. Responder does not employ a current executive head

of TCEQ or any other state agency or a former executive head of TCEQ or any other state agency that was the executive head during the four years ending on the date of the Response.

6. Neither Responder nor any of its officers, directors, owners, partners, or primary managers or supervisors is subject to suspension, debarment, or similar ineligibility determined by any federal, state or local government entity.

7. The Response does not include proposed financial participation by any person who, during the five-year period preceding the date of the Response submittal (and/or Contract award – explain under Tab 7), has been convicted of violating a federal law or assessed a penalty in a federal civil or administrative enforcement action in connection with a contract awarded by the federal government for relief, recovery, or reconstruction efforts as a result of any disaster occurring on or after September 24, 2005, including Hurricane Rita and Hurricane Katrina. Under Section 2155.006, Government Code, the Responder certifies that the individual or business entity named in this bid or contract is not ineligible to receive the specified contract and acknowledges that this contract [if any] may be terminated and payment withheld if this certification is inaccurate.

8. The Responder has not been an employee of TCEQ within the preceding 12 months. Also, if the Responder employs a person that worked for TCEQ within the preceding 12 months, the person will not perform services on projects for the Responder that the employee worked on while employed by TCEQ.

9. The Responder has not been adjudicated during the preceding three-year period to have committed substantive, non-clerical violations resulting in an actual release of hazardous waste that presented an imminent and substantial danger to the public health and safety or the environment.

10. Responder, nor any of its officers, has been adjudicated by a court of law to have violated the Texas Deceptive Trade Practices Act.

11. If Responder gives a Texas address for itself, that address is Responder's legal business address, and Responder is either incorporated in Texas, has its principal place of business in Texas, or has an established physical presence in Texas.

12. If any of these certifications change between submittal of the Response and award of a contract or cancellation of the Solicitation, Responder will promptly notify TCEQ.

PREFERENCES

Identify the preferences for which Responder qualifies.

Not all preferences apply to all procurements. Preferences may not apply to procurements of scientific and technical services. Texas Water Code § 5.2291. Texas bidder preferences may not apply to contracts with financial support from federal agencies. *See* 40 C.F.R. 31.36(c)(2) (EPA codification of federal grant requirements). For more information about preferences, see the State of Texas Procurement Manual.

Tie bid preferences (Tex. Gov. Code 2155.444):

- ☐ Goods or services produced or offered by a Texas bidder that is owned by a Texas resident service-disabled veteran
- ☐ Texas vegetation native to the region, for landscaping
- ☐ Agricultural products grown in Texas
- ☐ Agricultural products offered by a Texas bidder
- ☐ Non-agricultural goods produced in Texas or offered by a Texas bidder that is not owned by a Texas resident service-disabled veteran
- ☐ Services offered by a Texas bidder that is not owned by a Texas resident service-disabled veteran
- ☐ USA-produced supplies, materials or equipment

Specification preferences:

- ☐ Products made of recycled, remanufactured, or environmentally sensitive materials (Tex. Gov. Code 2155.445)
- ☐ Energy-efficient products (Tex. Gov. Code 2155.442)
- ☐ Rubberized asphalt paving material (Tex. Gov. Code 2155.443)
- ☐ Recycled motor oil and lubricants (Tex. Gov. Code 2155.447)
- ☐ Recycled paper products (Tex. Gov. Code 2155.448(a))
- ☐ Foods of higher nutritional value, for public cafeterias (Tex. Gov. Code 2155.452)
- ☐ Manufacturers that recycle or reuse computer equipment made by other manufacturers (Tex. Health and Safety Code 361.965(d))

Source preferences:

- ☐ Products produced at facilities located on formerly contaminated property (Tex. Gov. Code 2155.450)
- ☐ Products and services from economically depressed or blighted areas (Tex. Gov. Code 2155.449, 2306.004)
- ☐ Vendors that meet or exceed air quality standards (Tex. Gov. Code 2155.451)
- ☐ Products made by persons with disabilities (Tex. Gov. Code 2155.441)
- ☐ Products made by Texas Correctional Industries (Tex. Gov. Code Ch. 497)

STATEMENT OF QUALIFICATIONS

Responder must submit the following **behind Tab 2A**, using the outline and format prescribed in Submittal and Evaluation of Statement of Qualifications, Technical Approach, and Price:

Statement of Qualifications: Responder's Company Qualifications: Company Qualification Statement includes Company Organization, Ability to Perform, Past Performance and References. Include Reference Notification Letters **behind Tab 7**.

Responder must submit the following **behind Tab 2B**, using the outline and format prescribed in Submittal and Evaluation of Statement of Qualifications, Technical Approach, and Price:

Statement of Qualifications: Responder's Key Personnel: Qualifications & Experience Statement

TECHNICAL APPROACH

Responder must submit its Technical Approach behind **Tab 3**. Use the outline and format prescribed in Submittal and Evaluation of Statement of Qualifications, Technical Approach, and Price. The Technical Approach must include a) a General Technical Work Plan for Performing the Work in the Scope of Work, and b) Sample Work Plan(s) for performing the Work in the Sample Work Order(s).

PRICE FORM

These hourly rates (prices) will be used for the entire term of the Contract, including all renewal periods, without escalation.

The quantities shown below are multipliers (weighting factors) used solely for evaluation of pricing.

(A) TCEQ Labor Classifications	(B) Responder's Job Titles	(C) Weight Factor	(D) Fully Loaded Price (Hourly Rate)	(E) Extended Amount (Weight Factor x Fully Loaded Price)
Level 4: Project Manager		3		
Level 3: Group Manager; Senior Scientist		3		
Level 2: Scientific/Technical Analyst, Data Analyst, Modeling Specialist		4		
Level 1: Technician		3		
Word Processor, Secretary, Administrative Assistant		1		
			Total =	

Reimbursables: In general, all costs must be borne by Contractor and will be deemed to be included in the loaded hourly rates specified in this Price Form. However, TCEQ will reimburse the actual direct cost of extraordinary items or travel, when those items or travel are authorized by a Notice to Proceed approving a Work Plan budget that lists the reimbursable items. No mark-up, profit, or indirect cost will be allowed. Any such reimbursement is subject to all the requirements of the Contract regarding reimbursement. In addition, TCEQ may require Contractor to obtain competitive bids for a reimbursable cost item in order for the cost to be allowable. (Any such requirement will be included in the Work Order).

Specific reimbursable items include: data collection and laboratory analysis. The items must be authorized by a Notice to Proceed approving a Work Plan budget.

EPA Project Control Number

CERTIFICATION REGARDING LOBBYING

CERTIFICATION FOR CONTRACTS, GRANTS, LOANS AND COOPERATIVE AGREEMENTS

The undersigned certifies, to the best of his or her knowledge and belief, that:

- (1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
- (2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure of Lobbying Activities," in accordance with its instructions.
- (3) The undersigned shall require that the language of this certification be included in the award documents for all sub-awards at all tiers (including sub-contracts, sub-grants, and contracts under grants, loans, and cooperative agreements) and that all sub-recipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31 U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

APPLICANT'S ORGANIZATION

Typed Name of Authorized Representative

Title of Authorized Representative

Signature of Authorized Representative

Date of Signature

DISCLOSURE OF LOBBYING ACTIVITIES

Approved by OMB
0348-0046

Complete this form to disclose lobbying activities pursuant to 31 U.S.C. 1352
(See reverse for public burden disclosure.)

1. Type of Federal Action: <input type="checkbox"/> a. contract <input type="checkbox"/> b. grant <input type="checkbox"/> c. cooperative agreement <input type="checkbox"/> d. loan <input type="checkbox"/> e. loan guarantee <input type="checkbox"/> f. loan insurance	2. Status of Federal Action: <input type="checkbox"/> a. bid/offer/application <input type="checkbox"/> b. initial award <input type="checkbox"/> c. post-award	3. Report Type: <input type="checkbox"/> a. initial filing <input type="checkbox"/> b. material change For Material Change Only: year _____ quarter _____ date of last report _____
4. Name and Address of Reporting Entity: <div style="display: flex; justify-content: space-between;"> <div> <input type="checkbox"/> Prime </div> <div> <input type="checkbox"/> Subawardee Tier _____, if known: </div> </div> Congressional District, if known: _____		5. If Reporting Entity in No. 4 is a Subawardee, Enter Name and Address of Prime: Congressional District, if known: _____
6. Federal Department/Agency: 	7. Federal Program Name/Description: CFDA Number, if applicable: _____	
8. Federal Action Number, if known: 	9. Award Amount, if known: \$ _____	
10. a. Name and Address of Lobbying Registrant <i>(If individual, last name, first name, MI):</i> 	b. Individuals Performing Services <i>(including address if different from No. 10a)</i> <i>(last name, first name, MI):</i> 	
11. Information requested through this form is authorized by title 31 U.S.C. section 1352. This disclosure of lobbying activities is a material representation of fact upon which reliance was placed by the tier above when this transaction was made or entered into. This disclosure is required pursuant to 31 U.S.C. 1352. This information will be reported to the Congress semi-annually and will be available for public inspection. Any person who fails to file the required disclosure shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.	Signature: _____ <div style="display: flex; justify-content: space-between;"> Print _____ Name: _____ </div> Title: _____ Telephone No.: _____ Date: _____	
Federal Use Only:		Authorized for Local Reproduction Standard Form LLL (Rev. 4/2012)

INSTRUCTIONS FOR COMPLETION OF SF-LLL, DISCLOSURE OF LOBBYING ACTIVITIES

This disclosure form shall be completed by the reporting entity, whether subawardee or prime Federal recipient, at the initiation or receipt of a covered Federal action, or a material change to a previous filing, pursuant to title 31 U.S.C. section 1352. The filing of a form is required for each payment or agreement to make payment to any lobbying entity for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with a covered Federal action. Complete all items that apply for both the initial filing and material change report. Refer to the implementing guidance published by the Office of Management and Budget for additional information.

1. Identify the type of covered Federal action for which lobbying activity is and/or has been secured to influence the outcome of a covered Federal action.
2. Identify the status of the covered Federal action.
3. Identify the appropriate classification of this report. If this is a follow up report caused by a material change to the information previously reported, enter the year and quarter in which the change occurred. Enter the date of the last previously submitted report by this reporting entity for this covered Federal action.
4. Enter the full name, address, city, State and zip code of the reporting entity. Include Congressional District, if known. Check the appropriate classification of the reporting entity that designates if it is, or expects to be, a prime or subaward recipient. Identify the tier of the subawardee, e.g., the first subawardee of the prime is the 1st tier. Subawards include but are not limited to subcontracts, subgrants and contract awards under grants.
5. If the organization filing the report in item 4 checks "Subawardee," then enter the full name, address, city, State and zip code of the prime Federal recipient. Include Congressional District, if known.
6. Enter the name of the Federal agency making the award or loan commitment. Include at least one organizational level below agency name, if known. For example, Department of Transportation, United States Coast Guard.
7. Enter the Federal program name or description for the covered Federal action (item 1). If known, enter the full Catalog of Federal Domestic Assistance (CFDA) number for grants, cooperative agreements, loans, and loan commitments.
8. Enter the most appropriate Federal identifying number available for the Federal action identified in item 1 (e.g., Request for Proposal (RFP) number; Invitation for Bid (IFB) number; grant announcement number; the contract, grant, or loan award number; the application/proposal control number assigned by the Federal agency). Include prefixes, e.g., "RFP-DE-90-001."
9. For a covered Federal action where there has been an award or loan commitment by the Federal agency, enter the Federal amount of the award/loan commitment for the prime entity identified in item 4 or 5.
10. (a) Enter the full name, address, city, State and zip code of the lobbying registrant under the Lobbying Disclosure Act of 1995 engaged by the reporting entity identified in item 4 to influence the covered Federal action.
(b) Enter the full names of the individual(s) performing services, and include full address if different from 10 (a). Enter Last Name, First Name, and Middle Initial (MI).
11. The certifying official shall sign and date the form, print his/her name, title, and telephone number.

According to the Paperwork Reduction Act, as amended, no persons are required to respond to a collection of information unless it displays a valid OMB Control number. The valid OMB control number for this information collection is OMB No. 0348-0046. Public reporting burden for this collection of information is estimated to average 10 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Office of Management and Budget, Paperwork Reduction Project (0348-0046), Washington, DC 20503.

Disadvantaged Business Enterprise (DBE) Program DBE Subcontractor Utilization Form

This form is intended to capture the prime contractor's actual and/or anticipated use of identified certified DBE¹ subcontractors² and the estimated dollar amount of each subcontract. An EPA Financial Assistance Agreement Recipient must require its prime contractors to complete this form and include it in the bid or proposal package. Prime contractors should also maintain a copy of this form on file.

Prime Contractor Name		Project Name	
Bid/ Proposal No.	Assistance Agreement ID No. (if known)	Point of Contact	
Address			
Telephone No.		Email Address	
Issuing/Funding Entity:			

I have identified potential DBE certified subcontractors	___ YES	___ NO	
If yes, please complete the table below. If no, please explain:			
Subcontractor Name/ Company Name	Company Address/ Phone/ Email	Est. Dollar Amt	Currently DBE Certified?

Continue on back if needed

¹ A DBE is a Disadvantaged, Minority, or Woman Business Enterprise that has been certified by an entity from which EPA accepts certifications as described in 40 CFR 33.204-33.205 or certified by EPA. EPA accepts certifications from entities that meet or exceed EPA certification standards as described in 40 CFR 33.202.

² Subcontractor is defined as a company, firm, joint venture, or individual who enters into an agreement with a contractor to provide services pursuant to an EPA award of financial assistance.

**Disadvantaged Business Enterprise (DBE) Program
DBE Subcontractor Utilization Form**

I certify under penalty of perjury that the forgoing statements are true and correct. Signing this form does not signify a commitment to utilize the subcontractors above. I am aware of that in the event of a replacement of a subcontractor, I will adhere to the replacement requirements set forth in 40 CFR Part 33 Section 33.302 (c).

Prime Contractor Signature	Print Name
Title	Date

The public reporting and recordkeeping burden for this collection of information is estimated to average three (3) hours per response. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including through the use of automated collection techniques to the Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822T), 1200 Pennsylvania Ave., NW, Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed form to this address.

Disadvantaged Business Enterprise (DBE) Program DBE Subcontractor Performance Form

This form is intended to capture the DBE¹ subcontractor's² description of work to be performed and the price of the work submitted to the prime contractor. An EPA Financial Assistance Agreement Recipient must require its prime contractor to have its DBE subcontractors complete this form and include all completed forms in the prime contractors bid or proposal package.

Subcontractor Name		Project Name	
Bid/ Proposal No.	Assistance Agreement ID No. (if known)	Point of Contact	
Address			
Telephone No.		Email Address	
Prime Contractor Name		Issuing/Funding Entity:	

Contract Item Number	Description of Work Submitted to the Prime Contractor Involving Construction, Services , Equipment or Supplies	Price of Work Submitted to the Prime Contractor
DBE Certified By: <input type="checkbox"/> DOT <input type="checkbox"/> SBA <input type="checkbox"/> Other: _____		Meets/ exceeds EPA certification standards? <input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> Unknown

¹ A DBE is a Disadvantaged, Minority, or Woman Business Enterprise that has been certified by an entity from which EPA accepts certifications as described in 40 CFR 33.204-33.205 or certified by EPA. EPA accepts certifications from entities that meet or exceed EPA certification standards as described in 40 CFR 33.202.

² Subcontractor is defined as a company, firm, joint venture, or individual who enters into an agreement with a contractor to provide services pursuant to an EPA award of financial assistance.

**Disadvantaged Business Enterprise (DBE) Program
DBE Subcontractor Performance Form**

I certify under penalty of perjury that the forgoing statements are true and correct. Signing this form does not signify a commitment to utilize the subcontractors above. I am aware of that in the event of a replacement of a subcontractor, I will adhere to the replacement requirements set forth in 40 CFR Part 33 Section 33.302 (c).

Prime Contractor Signature	Print Name
Title	Date

Subcontractor Signature	Print Name
Title	Date

The public reporting and recordkeeping burden for this collection of information is estimated to average three (3) hours per response. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including through the use of automated collection techniques to the Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822T), 1200 Pennsylvania Ave., NW, Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed form to this address.



**The Texas Commission on Environmental Quality
EPA Disadvantaged Business Enterprise (DBE) Program Self-Certification Form**

Solicitation # (if applicable)		Fed. Tax or Vendor ID	
Company Name:			
Address:			
City, State, Zip:			
Phone #:		Fax #:	
Email Address:			

To qualify for EPA DBE Status all of the following must apply:

√	Certifying Eligibility Criteria:	Indicate Certifying Entity :
<input type="checkbox"/>	Texas Certified Historically Underutilized Business (HUB)	Texas Comptroller of Public Accounts (CPA-TPASS)
<input type="checkbox"/>	*Personal Net Worth less than \$750,000 for each individual claiming disadvantage status (Excludes equity of primary residence and individual's ownership interest in company). These individuals must own at least 51% of the company and have a managing control in the daily operations. See 40 CFR 33.201. Personal Net Worth is determined as per 13 CFR 124.104(2) and 124.105(c)(2).	

Or (at least one below must apply)

√	Certifying Eligibility Criteria:	Indicate Certifying Entity :
<input type="checkbox"/>	Minority-Owned Business	
<input type="checkbox"/>	Woman-Owned Business	
<input type="checkbox"/>	Disabled-American Business	
<input type="checkbox"/>	Native-American Small Business	
<input type="checkbox"/>	**HUBZone Empowerment Contracting Program	Small Business Administration
<input type="checkbox"/>	**Small Business – Meets Small Business Administration (SBA) size standards for a small business. SBA size standards are located at http://www.sba.gov/idc/groups/public/documents/sba_homepage/serv_sstd_tablepdf.pdf . Please note, if your firm qualifies as a Small Business, you may self-certify your company with SBA. You can not claim Small Business status unless you are SBA certified. More information on Small Disadvantage Business certification is available at http://www.sba.gov/aboutsba/sbaprograms/sdb/index.html .	
<input type="checkbox"/>	Historically Black College/University (HBCU) or Minority Institution (MI). The Secretary of Education must designate HBCUs/MIs, see list at http://www.ed.gov/about/offices/lists/ocr/edlite-minority_inst.html	

**Certification must be currently listed in the federal database - Central Contractor Register (CCR) www.CCR.gov

And (all below must apply)

√	Certifying Eligibility Criteria:
<input type="checkbox"/>	United States Citizen
<input type="checkbox"/>	*Personal Net Worth less than \$750,000 for each individual claiming disadvantage status (Excludes equity of primary residence and individual's ownership interest in company). These individuals must own at least 51% of the company and have a managing control in the daily operations. See 40 CFR 33.201. Personal Net Worth is determined as per 13 CFR 124.104(2) and 124.105(c)(2).
<input type="checkbox"/>	Company meets other certifying criteria listed in Section 8(a)(5) and (6) of SBA Act, 15 USC 631 et seq. See Website for eligibility: http://www.arnet.gov/far/current/html/Subpart%2019_7.html

Please Note, it is your responsibility to notify TCEO if your size, ownership status, net worth or certification status changes

By execution of this form, you attest the information provided is accurate and true.

_____ Print Name	_____ Title
_____ Signature	_____ Date

*Important - Under 15 USC 645(d), any person who misrepresents its size or net worth status shall (1) be punished by a fine, imprisonment or both; (2) be subject to administrative remedies; and (3) be ineligible for participation in programs conducted under the authority of the Small Business Act.

Please note, EPA DBE Program authority is stated in 40 CFR 30, 31, 33, 35 and 40 and is **NOT** the Department of Transportation (DOT) DBE program that is under the authority of 49 CFR 26, however, most DOT DBEs are recognized as eligible EPA DBE participants.

HUB SUBCONTRACTING PLAN



HUB SUBCONTRACTING PLAN (HSP)

In accordance with Texas Gov't Code §2161.252, the contracting agency has determined that subcontracting opportunities are probable under this contract. Therefore, all respondents, including State of Texas certified Historically Underutilized Businesses (HUBs) must complete and submit this State of Texas HUB Subcontracting Plan (HSP) with their response to the bid requisition (solicitation).

NOTE: Responses that do not include a completed HSP shall be rejected pursuant to Texas Gov't Code §2161.252(b).

The HUB Program promotes equal business opportunities for economically disadvantaged persons to contract with the State of Texas in accordance with the goals specified in the 2009 State of Texas Disparity Study. The statewide HUB goals defined in 34 Texas Administrative Code (TAC) §20.13 are:

- 11.2 percent for heavy construction other than building contracts,
- 21.1 percent for all building construction, including general contractors and operative builders contracts,
- 32.7 percent for all special trade construction contracts,
- 23.6 percent for professional services contracts,
- 24.6 percent for all other services contracts, and
- 21 percent for commodities contracts.

-- Agency Special Instructions/Additional Requirements --

In accordance with 34 TAC §20.14(d)(1)(D)(iii), a respondent (prime contractor) may demonstrate good faith effort to utilize Texas certified HUBs for its subcontracting opportunities if the total value of the respondent's subcontracts with Texas certified HUBs meets or exceeds the statewide HUB goal or the agency specific HUB goal, whichever is higher. When a respondent uses this method to demonstrate good faith effort, the respondent must identify the HUBs with which it will subcontract. If using existing contracts with Texas certified HUBs to satisfy this requirement, only contracts that have been in place for five years or less shall qualify for meeting the HUB goal. This limitation is designed to encourage vendor rotation as recommended by the 2009 Texas Disparity Study.

In accordance with 34 TAC 20.13, the agency-specific Historically Underutilized Business Goal for this Other Services contract 24.6%.

Attention Responders: An electronic format of the HUB Subcontracting Plan (HSP) Form is available on the Texas Comptroller of Public Accounts website (<http://www.cpa.state.tx.us/procurement/prog/hub/hub-forms>). FAILURE TO SUBMIT A COMPLETED HSP WITH THIS SOLICITATION WILL DEEM YOUR PROPOSAL/BID NON-RESPONSIVE AND WILL NOT BE CONSIDERED FOR AN AWARD.

The TCEQ has identified possible HUB subcontracting opportunities related to the type of work being undertaken in this project. This listing is not an inclusive listing. Additional opportunities may be added at the respondent's option and can be referenced on the TPASS's Commodity Book, Listing by Class, located at: <http://www.window.state.tx.us/procurement/tools/comm-book/>

The following goods and/or services are possible HUB subcontracting opportunities:

Class Code	Item Code	Description
920	07	Applications Software for Microcomputer Systems
920	21	Data Entry Services
920	22	Data Preparation and Processing Services
920	40	Programming Services
920	95	Word Processing Software, Microcomputer
926	14	Air Pollution Control Services
926	15	Air Quality Monitoring Services
926	42	Environmental Services

926	43	Gas Analysis Services
961	48	Laboratory and Field Testing Services
962	58	Professional Services
989	24	Chemical Sampling and Preparation Services
918	43	Environmental Consulting
204	00	Computer Hardware and Peripherals for Microcomputers
207	00	Computer Accessories and Supplies
966	00	Printing and Related Services
915	58	Mailing Services

Finding HUBs on the Centralized Master Bidders List (CMBL) and HUB Directory:

1. Access the CMBL and HUB Directory at: <http://www2.cpa.state.tx.us/cmb/cmbhub.html>
 2. **CMBL** Page will default to certain fields already checked - ensure that **All Vendors** are searched.
 3. Enter Class Code and Item (leave Item blank to select any).
 4. Enter District Number to select specific geographic location (leave district blank to select all).
 5. Click the Submit Search button.
 6. **Detail List** page will default to certain fields already checked.
 7. Check Ethnicity, Gender fields, and Business Description as well as any other fields needed. Click go.
 8. Identify HUBs on the **Results For CMBL Plus HUBs Search** page (HUB category is on far right of page).
 9. Select HUB vendor and click on company name. Sometimes a vendor will have more than one listing - use the most current one.
 10. Confirm that **HUB Status** is "A" (Approved; Active) on the **Vendor Detail** page.
 11. If vendor appears to meet your needs, then solicit a bid or response of interest.
 12. Repeat this process until you have found a minimum of three (3) certified HUBs per subcontracting opportunity/area, either identified by the TCEQ or your company.
- TPASS Minority/Business Links (for accessing women and minority trade associations or development centers):
<http://www.cpa.state.tx.us/procurement/prog/hub/mwb-links-1/>

HUB SUBCONTRACTING PLAN FORMS

The HSP forms and additional information about the HUB program are found at:
[State of Texas HUB Subcontracting Plan](http://www.window.state.tx.us/procurement/prog/hub/hub-subcontracting-plan/)
(www.window.state.tx.us/procurement/prog/hub/hub-subcontracting-plan/)

REFERENCE NOTIFICATION LETTER FORM
(Client References for Business Entity)

[ADDRESS]

Dear (Client):

We, [Business Entity Name], are currently responding to the Texas Commission on Environmental Quality (TCEQ) Request for Proposal Number 582-14-50022 for the procurement of Air Quality Modeling, Emissions Assessment, and Other Technical Support. The TCEQ is placing emphasis in their acquisitions on past performance as a selection evaluation factor. The TCEQ requires Proposers to inform references identified in proposals that TCEQ may contact them about past performance information.

If you are contacted by TCEQ for information on work we have performed under [contract name/type/number] for your [company/agency/state or local government, etc.], you are hereby authorized to respond to TCEQ inquiries. Under the Public Information Act, Texas Government Code Chapter 552, your responses may be subject to public disclosure as records of the TCEQ. We agree to hold you harmless for any statement or opinion you express in response to these inquiries regarding our performance or qualifications.

Your cooperation is appreciated. Please direct any questions to [Business Entity contact's name for this RFP].

Sincerely,

[Signature, printed name of Business Entity contact, and contact information]