CONTRACT
With
GEORGIA TECH RESEARCH CORPORATION

THIS CONTRACT, entered into as of this _____ day of _May____, 2000, by and between the Environmental Protection Division, Department of Natural Resources, State of Georgia (hereinafter, "the Division" or "EPD") and the School of Earth and Atmospheric Sciences, Georgia Institute of Technology, d.b.a. the Georgia Tech Research Corporation (hereinafter, "the Contractor").

W-I-T-N-E-S-S-E-T-H

WHEREAS, the Division is acting pursuant to the Georgia Air Quality Act, O.C.G.A. 12-9-1, et seq.; and

WHEREAS, the Division desires to engage the Contractor to render certain technical professional services hereafter described.

NOW THEREFORE, the parties hereto do mutually agree as follows:

I. Organization.

A. The professional services rendered by the Contractor, staged over four phases or periods of work and termed the Fall Line Air Quality Study (hereinafter, "FAQS" or "the project"), shall constitute a three-year study of air quality in the three cities of Augusta, Columbus and Macon (hereinafter, "the three cities").

B. Oversight of the project shall be provided by a Coordinating Council consisting of representatives from the three cities, EPD, the Georgia Regional Transportation Authority, the Georgia Department of Transportation (hereinafter, "GDOT", the U.S. Environmental Protection Agency (hereinafter, "EPA")

Region IV, the Department of Defense and other stakeholders such as border states, representatives from business and industry, environmental advocacy groups, and concerned citizens, but only the Division " has the authority to direct the actions of the "Contractor.". The Coordinating Council shall seek advice from an independent Scientific Advisory Committee appointed by the Coordinating Council and consisting of university, government and industry scientists and engineers with expertise in monitoring, emission inventories and air quality modeling.

II. **Scope of Services.** The four phases of the project shall consist of the following periods of work: a) Period One - Preliminary Assessment and Pilot Field Study (extending from May 1, 2000 through December 31, 2000); b) Period Two - Emission Inventory Development & Inceptive Field Study (extending from January 1, 2001 through June 30, 2001); c) Period Three - Air Quality Modeling & Corroborative Field Study (extending from July 1, 2001 through June 30, 2002); and d) Period Four - Analysis, Recommendations and Technology Transfer (extending from July 1, 2002 through December 31, 2002).

A. For all four Periods of work, the Contractor shall do, perform, and carry out in a satisfactory manner, the following services, pertaining to enhanced air quality monitoring, emissions inventory development, scenario modeling, and analysis, assessment and recommendation of potential controls or reduction measures in and around the three cities:

1. Provide day-to-day management and administration support for the study.

2. Coordinate all meetings and activities relevant to the FAQS including field study deployment, stakeholder advisory meetings and workshops, meetings of the Coordinating Council, and meetings of the Science Advisory Committee.

3. Facilitate, primarily through an e-mail system called “listserv”, intercommunication between the Contractor and the stakeholders and between the stakeholders themselves.

4. Provide detailed progress reports at a schedule described in the following paragraphs.

5. Maintain detailed records of all accounts and expenditures adequate to ensure proper accounting of funds, handle all purchasing and invoicing for the FAQS, and continue to seek external continuation funding for the study. The records shall be made available to the Division upon request and shall be retained by the Contractor for three (3) years after expiration of this Contract, unless permission to destroy is granted by the Division.

6. Comply with the Georgia Open Records Act.

7. For services required under the Contract where the Contractor must follow a specified and stated protocol or guidance, that protocol or guidance shall be used to define the term 'satisfactory'. For services where a protocol or guidance is not specified nor stated and where the definition of 'satisfactory' is unclear to the Contractor from a reading of the Contract, the Contractor shall

request written instructions from the Division as to the definition of 'satisfactory' for that particular service. The Division shall then provide such written instruction.

8. Absent a more specific directive from the Division, follow United States Environmental Protection Agency (hereinafter, "EPA") and Division protocol on monitoring, quality assurance and auditing, specifically reference methods found in 40 CFR part 58 and Federal guidelines such as the "Red Book"; EPA's Quality Assurance Handbook for Air Pollution Measurement Systems, Volumes I, II, and IV (revised September 1994) and any subsequent revisions; and the Division's Standard Operating Procedures for both monitoring and quality assurance.

9. Absent a more specific directive from the Division, follow EPA protocol on episode selection, specifically, "Draft Guidance on the Use of Models and Other Analyses in Attainment Demonstrations for the 8-Hour Ozone NAAQS", EPA-454/R-99-004, May 1999".

10. Absent a more specific directive from the Division, follow EPA protocol on modeling, specifically "Use of Models and Other Analyses In Attainment Demonstration for the 8-Hour Ozone NAAQS, EPA-454/R-99-004 (1999)."

11. Absent a more specific directive from the Division, follow EPA protocol on inventory development, specifically "Emissions Inventory Guidance for Implementation of Ozone and Particulate

Matter National Ambient Air Quality Standards (NAAQS) and Regional Haze Regulations," (EPA-454/R-99-006, 1999).

B. Specifically, for Period One, the Contractor shall do, perform, and carry out in a satisfactory manner, the following services, pertaining to enhanced air quality monitoring, emissions inventory development, scenario modeling and analysis, assessment and recommendation of potential controls or reduction measures in and around the three cities:

1. Develop Preliminary Assessment.

a) Analyze data from the available ozone monitors near the three cities areas coupled with regional meteorological and chemical information from Division and the National Weather Service (NWS) monitoring networks, to identify the local and regional meteorological conditions that are conducive to high ozone concentrations in each of the three cities. The Contractor shall also assess the extent and severity under which ozone concentrations in the three cities exceed existing or revised air quality standards.

b) Analyze the aforementioned data with respect to ozone information from other monitors in the Southeast to better understand the relationships between regional ozone episodes and local ozone episodes.

c) Perform a directional or trajectory type analysis to make a preliminary assessment about the potential role of long

range transport in the FAQS areas.

d) Using the directions of winds and corresponding ozone peaks, identify the prevailing regions upwind and downwind of the metropolitan areas that will be targeted for study during the enhanced monitoring initiatives.

e) Review the regional emission inventories and modeling results from the other relevant studies that encompass the FAQS areas (e.g. OTAG [Ozone Transport Assessment Group] and SAMI [Southern Appalachian Mountains Initiative]) to determine if findings from these studies are pertinent to the FAQS, to avoid duplication with these studies, and to salvage any relevant data or datasets for use in the FAQS.

f) Determine appropriate study domain (area of impact).

g) Submit the findings based on the aforementioned analyses in the form of a Preliminary Assessment to the Division and the Coordinating Council no later than August 31, 2000.

2. Prepare Pilot Field Study Design.

a) Design a pilot field study that serves the following goals for the three cities: 1) Determine, to the extent possible, the relative contributions of local sources to ambient ozone concentrations compared to the contributions beyond the

metropolitan areas; 2) Determine, to the extent possible, the chemical stoichiometry of the local atmosphere (i.e. whether the three cities are NOx or VOC limited), and 3) Determine, to the extent possible, the quality of the air with respect to fine particulate matter.

b) Devise aforementioned pilot field study based around the Southern Center for the Integrated Study of Secondary Air Pollutants (hereinafter, "SCISSAP") mobile air quality laboratory. The study design shall emphasize a configuration of these additional monitors that complements the existing statewide Division monitoring network.

c) In accordance with EPA protocol, develop a Quality Assurance / Quality Control plan for each measurement that will be collected during the field study.

d) Inspect potential monitoring sites that meet EPA and EPD criteria for suitability.

e) Prepare the mobile laboratory for deployment.

1. Install existing equipment shown in Attachment A in the laboratory.
2. Purchase and install the following additional equipment or upgrades:

(a) Upgrade to NO/NOy system

(b) NO/NO2 inlet system

(c) NOy/NOy-HNO3 system

(d) DAQ system upgrade

(e) Trailer rack

(f) Cell phone for field deployment

3. Initiate, Conduct and Complete Pilot Field Study. Over the course of ten continuous days in each of the metro areas of the three cities, the Contractor shall provide enhanced (relative to the existing Division monitoring network in these regions) hydrocarbon, nitrogen oxide, ozone, particulate, carbon monoxide, sulfur dioxide and meteorological monitoring.

A. Adhere to all relevant standard operating procedures identified in the aforementioned QA / QC plan.

B. Transport to each of the three cities and make ready for monitoring operations the mobile air quality laboratory for measuring VOCs, NOx, ozone, meteorology, and other pollution-related variables owned by SCISSAP.

C. Deploy the SCISSAP mobile air quality laboratory in each of the three cities for a continuous ten day measurement period sometime between June 1 and July 31, 2000. The mobile laboratory shall be used to collect continuous ambient nitrogen oxide (NO and NO_y), ozone (O_3), particulate ($PM_{2.5}$), carbon monoxide (CO), sulfur dioxide (SO_2) and

meteorological (Air T / ΔT, RH, WS, WD, Global Rad., UV Radiation, P, and Rain) data. Not less than four can samples per day shall be analyzed for hydrocarbons.

4. Perform Post-Field Study Analysis. Upon completion of the pilot field study, the Contractor shall assess the newly acquired data for quality according to the QA/QC plan created prior to the study. The Contractor shall analyze the data using statistical inference techniques and advanced observation based models in an attempt to answer the immediate concerns of the Coordinating Council and the stakeholders (i.e. local contribution vs. regional contribution, VOC vs. NOx limitation, and particulate air quality).

5. Submit First Six-month Progress Report. In regards to the goals specified in paragraph II.B.2(a), the Contractor shall provide analysis of data collected during the pilot to supplement the initial assessment provided by the review of existing data and ulterior air quality studies. Such report shall be submitted to the Division and the Coordinating Council no later than November 15, 2000. This report shall summarize major activities of the Contractor in completion of the tasks specified by the Contract. The report shall assess the progress made in view of the timetable for task completion and bring any problems that might affect that timetable to the attention of the Division.

6. Begin Development of Base Year Emission Inventories.

a) Initiate creation of a database of spatial and temporal information relevant to the study areas in general and the emission inventories in particular. The database shall house information of land use, demographics, vehicle travel, and industrial activity. Absent a more specific directive from the Division, the Contractor shall use a baseline year of 1999 to develop the emission inventories.

b) Consult with the Division and other stakeholders to decide on the specifications for the FAQS emission inventories.

c) Create jointly, with the Division and in accordance with EPA inventory development protocol, an emission survey and distribute it to selected operators of major point and area sources of VOCs and NOx in each of the three metropolitan and surrounding areas to collect detailed process information about the activities that contribute to the point and area emission inventories.

d) Work with GDOT to acquire the necessary roadway and vehicle activity information needed to begin creating, in accordance with EPA protocol, a base-year mobile source emission inventory.

e) Work with EPA to acquire the necessary off-road activity information needed to begin creating, in accordance with EPA protocol, a base-year nonroad mobile source emission

inventory.

f) Assemble the information and models needed to begin creating, in accordance with EPA protocol, a base-year biogenic source emission inventory.

g) Begin work on creating, in accordance with EPA protocol, the other meteorological and land use datasets that are required for the air quality modeling that will be performed in Phase III of the FAQS.

7. Commence Training and Other Technology Transfer for the benefit of the study as well as the local communities or study partners. Depending on need, training shall be provided in any of the technical areas related to the field study, emissions inventory development, or air quality modeling.

8. Perform Outreach and Education. . The Contractor shall work with all stakeholders and provide outreach and education covering the scientific issues and regulatory implications of the study and findings.

a) As requests are made, meet with any citizen group, business organization, local agency, or political representative for the purpose of providing outreach and education about the science of air quality in general, and the local FAQS environment in particular.

b) To distribute information more efficiently, maintain an email listserv (tricity@list.gatech.edu) to facilitate direct and timely

communication to all interested stakeholders, and create a FAQS website for the duration of the study to distribute more general information.

c) In conjunction with the pilot field study, plan and host a town hall style meeting in each metropolitan area during the ten-day monitoring period to provide an opportunity for members from each community to directly interact with the FAQS science team and other stakeholders.

d) Create a draft plan for a more comprehensive outreach and education program that targets selected key decision-makers in each of the communities.

e) In the fall of 2000, host a one-day workshop for all FAQS stakeholders to review findings from the preliminary assessment, the review of the ulterior air quality studies, the pilot field study, and the emission inventory activities.

C. Specifically, for Period Two, the Contractor shall do, perform, and carry out in a satisfactory manner, the following services, pertaining to enhanced air quality monitoring, emissions inventory development, scenario modeling and analysis, assessment and recommendation of potential controls or reduction measures in and around the three cities:

1. <u>Design Inceptive Field Study</u>.

a) Design an inceptive intensive field study that serves the following goals of the three cities: 1) Corroborates and

extends findings from the pilot field study; 2) Identifies the specific chemical compounds in the ambient air that contribute to air pollution in each of the three cities and can be used to attribute these chemical compounds to their source; 3) Can be used to validate the relative mix of hydrocarbon reactivity and nitrogen oxides in emission inventories; 4) Provide strategic and comprehensive data for validating baseline meteorological and air quality modeling episodes; and 5) Investigates the chemical and physical relationships between ozone, ozone precursors, fine particulate matter, and fine particulate matter precursors, including the chemical composition of the fine particulate matter.

b) In addition to the existing Division monitoring network, provide at least one additional ozone monitor and at least one additional mass particulate monitor (TEOM) to be deployed in each of the three cities for the entire period between May 1 and September 30, 2001. The inceptive field study design shall make extensive use of the SCISSAP mobile air quality laboratory to supplement the existing statewide Division monitoring network and the inceptive field study monitoring network. If resources are available, the Contractor shall also provide for enhanced "PAMS"

type measurements in each of the three cities to further complement those provided by the SCISSAP mobile air quality laboratory and the statewide Division monitoring network.

c) In accordance with EPA protocol, develop a Quality Assurance / Quality Control plan for each measurement that will be collected during the field study.

d) Inspect potential monitoring sites that meet EPA and EPD criteria for suitability.

e) Prepare the mobile laboratory for deployment.

2. Initiate, Conduct and Complete Inceptive Field Study.

a) Over continuous period between May 1 and September 30 in the metro areas of the three cities, provide enhanced (relative to the existing Division monitoring network in these regions) hydrocarbon, nitrogen oxide, ozone, particulate, carbon monoxide, sulfur dioxide and meteorological monitoring.

b) Adhere to all relevant standard operating procedures identified in the aforementioned QA / QC plan.

c) Prepare and make operational all static ambient air quality and meteorological monitoring stations defined in the inceptive field study design. The Contractor shall transport to each of the three cities and make ready for monitoring

operations the mobile air quality laboratory for measuring VOCs, NOx, ozone, meteorology, and other pollution-related variables owned by SCISSAP.

d) Deploy the SCISSAP mobile air quality laboratory in each of the three cities for a continuous thirty day measurement period sometime between May 1 and September 30, 2001. The mobile laboratory shall be used to collect continuous ambient nitrogen oxide (NO and NOy), ozone (O3), particulate (PM2.5), carbon monoxide (CO), sulfur dioxide (SO2) and meteorological (Air T / ΔT, RH, WS, WD, Global Rad., UV Radiation, P, and Rain) data. Not less than four can samples per day shall be analyzed for hydrocarbons.

3. Commence Meteorological Modeling to recreate, in a computational framework, weather conditions that occur during these episodes.

a) Input emissions and meteorology into an advanced, three-dimensional photochemical transport air quality model to emulate the chemical conditions that were observed during the inceptive field study. NOx, VOC, and ozone data collected during the initial field study shall be used to validate or otherwise ensure that the model is performing satisfactorily, as determined by EPA guidance for model

performance. These simulations shall be used to identify key local and distant contributors to local and regional air quality.

b) Complete baseline modeling and validation.

c) Develop and perform diagnostic and sensitivity analyses.

d) Make available for the Division's participation any training the Contractor receives on meteorological modeling.

4. Complete Development of Baseline Emission Inventories and Submit Baseline Inventory to the Division and the Coordinating Council no later than August 15, 2001.

5. Submit Second Six-month Progress Report. In regards to the goals specified in paragraph II.B.2.a., the Contractor shall complete analysis of data collected during the pilot to supplement the initial assessment provided by the review of existing data and ulterior air quality studies. Such report shall be submitted to the Division and the Coordinating Council no later than April 15, 2001. This report shall summarize major activities of the Contractor in completion of the tasks specified by the Contract. The report shall assess the progress made in view of the timetable for task completion and bring any problems that might affect that timetable to the attention of the Division.

6. Perform Post-Field Study Analysis. Upon completion of the inceptive field study, the Contractor shall assess the newly acquired data for

quality according to the QA/QC plan created prior to the study. The Contractor shall analyze the data using statistical inference techniques and advanced observation based models in an attempt to answer the immediate concerns of the Coordinating Council and the stakeholders.

D. Specifically, for Period Three, the Contractor shall do, perform, and carry out in a satisfactory manner, the following services, pertaining to enhanced air quality monitoring, emissions inventory development, scenario modeling and analysis, assessment and recommendation of potential controls or reduction measures in and around the three cities:

1. Develop and Evaluate Different Future Year Scenarios to identify the optimal or least-cost strategy to meet or maintain the air quality standards. Absent a more specific directive from the Division, the future year used for control scenario assessment shall be 2007. Results shall be used in Period IV to develop recommendations for the three cities. The Contractor shall make available for the Division's participation any training the Contractor receives on meteorological modeling. The Division will reimburse the Contractor for any such meteorological modeling the Division receives, up to $15,000 and provided the Contractor notifies the Division beforehand of the cost.

2. Design, Initiate, Conduct, and Complete a Corroborative Field Study.

a) Design, initiate, conduct, and complete a corroborative

intensive field study that serves the following goals of the three cities: 1) Corroborates and extends findings from the pilot field study and inceptive field study; and 2) Provides understanding of the inter-annual variability in air quality and the factors contributing to air quality such that robust strategies may be developed that are effective and efficient irrespective of the variation in biogenic and anthropogenic conditions. The corroborative field study shall replicate in design and implementation, to the extent possible, the inceptive field study in order to provide a consistent platform for assessing inter-annual variability.

b) The Corroborative Field Study shall begin no later than May 1, 2001 and end no sooner than September 30, 2001.

3. Establish Permanent Stations for Monitoring Long-Term Trends in N0x, VOCs, and ozone concentrations. The Contractor shall transfer all capital and operations related to these permanent stations to local partners or to the Division at the conclusion of the study.

4. Submit Third and Fourth Six-month Progress Reports Such reports shall be submitted to the Division no later than October 15, 2001 and April 15, 2002, respectively. These reports shall summarize major activities of the Contractor in completion of the tasks specified by the Contract. The reports shall assess the

progress made in view of the timetable for task completion and bring any problems that might affect that timetable to the attention of the Division.

E. Specifically, for Period Four, the Contractor shall do, perform, and carry out in a satisfactory manner, the following services, pertaining to enhanced air quality monitoring, emissions inventory development, scenario modeling and analysis, assessment and recommendation of potential controls or reduction measures in and around the three cities:

1. Complete Corroborative Field Study as described above.

2. Develop Final Recommendations, including the feasibility, effectiveness, the combined cost effectiveness of ozone precursor and particulate controls, and efficiency of any potential controls or reduction methods, for meeting or maintaining air quality standards in the three cities and which are unique to each aforementioned location. Recommendations , which shall be based on all three field studies, shall be presented to each city for possible implementation. These recommendations shall be submitted to the Division no later than December 15, 2002 in the form of a Final Report.

3. Transfer All Emission Inventories and Models to the Division by December 31, 2002.

III. **Compensation**. The Contract Cost Limitation for the performance of this Contract shall not exceed $3,015,000 without the mutual written consent of both parties. The contract

shall be incrementally funded by the Division for each specific Period. The Contractor shall not initiate or proceed with any work under any specific Period until it has received written authorization and notification of funding adequacy from the Division. Execution of this Contract by the Division will constitute such authorization and notification for Period One only.

A. For the services rendered during Period One (May 1, 2000 – December 31, 2000), the Division shall pay to the Contractor a sum not to exceed a total of $375,000 (Three Hundred Seventy-Five Thousand Dollars).

B. For the services rendered during Period Two (January 1, 2001 – June 30, 2001), the Division shall pay to the Contractor a sum not to exceed a total of $1,125,000 (One Million, One Hundred Twenty-five Thousand Dollars)

C. For the services rendered during Period Three (July 1, 2001 – June 30, 2002), the Division shall pay to the Contractor a sum not to exceed a total of $1,015,000 (One Million Dollars).

D. For the services rendered during Period Four (July 1, 2002 – December 31, 2002), the Division shall pay to the Contractor a sum not to exceed a total of $500,000 (Five Hundred Thousand Dollars).

Method of Payment. Payment to the Contractor shall be provided in accordance with the following terms. For compensation for performance of the described Scope of Services, the Contractor shall submit to the Division Requests for Payment for satisfactory completion of tasks associated with such Services. Requests for Payment are to be submitted no more frequently than monthly. Upon satisfactory development of the services listed below, the Contractor may invoice the Division for up to 35% of the contract project category value of the

period per month. The Division will retain 5% of the total value of each period until all services have been satisfactorily rendered. Full payment shall be made upon successful completion of these individual services.

Project Category	Contract Cost
Period One	
Preliminary Assessment	$25,000 (Twenty-five Thousand)
Preliminary Inventory Development	$100,000 (One Hundred Thousand)
Pilot Field Study	$200,000 (Two Hundred Thousand)
Training and Outreach	$25,000 (Twenty-five Thousand)
Program Administration	$25,000 (Twenty-five Thousand)
Total	$375,000 (Three Hundred, Seventy-five Thousand)
Period Two	
Air Quality Model Setup	$100,000 (One Hundred Thousand)
Model Development and Validation	$250,000 (Two Hundred, Fifty Thousand)
Inceptive Field Study	$500,000 (Five Hundred Thousand)
Completion of Emissions Inventory	$200,000 (Two Hundred Thousand)
Training and Outreach	$40,000 (Forty Thousand)
Program Administration	$35,000 (Thirty-five Thousand)
Total	$1,125,000 (One Million, One Hundred Twenty-five Thousand)
Period Three	
Scenario Development and Simulation	$300,000 (Three Hundred Thousand)
Permanent Monitoring Network , Training and Outreach	$200,000 (Two Hundred Thousand) $30,000 (Fifteen Thousand)
Corroborative Field Study	$250,000 (Two Hundred Fifty Thousand)
Analysis	$200,000 (Two Hundred Thousand)
Program Administration	$35,000 (Thirty-five Thousand)
Total	$1,015,000 (One Million, Fifteen Thousand)
Period Four	
Technology Transfer	$150,000 (One Hundred Fifty Thousand)
Recommendations and Action Plan Development	$325,000(Three Hundered Twenty-five Thousand)
Final Report	$25,000 (Twenty-five Thousand)
Total	$500,000 (Five Hundred Thousand)

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If the Division rejects any Request for Payment for cause in whole or in part, it shall transmit to the Contractor a statement of its rejection and the reasons therefore.

A. The Division shall pay the Contractor upon receipt and acceptance of a monthly invoice. No initial pre-payments shall be made upon execution of this Contract.

B. Final invoice is due within 60 days of completion of the Scope of Services; and

C. Within 30 days of satisfactory completion of the Scope of Services, and submittal of a final invoice, the Division shall pay the final payment.

V. **Additional Terms and Conditions.** Additional terms and conditions governing this Contract are listed below. Waiver of any of these conditions must be upon the express written approval of the Division and such waiver shall be made part of this Contract.

A. Term of the Contract. The Contractor shall complete performance of all services named in this Contract to the satisfaction of the Division no later than December 31, 2002, at which time this contract shall expire unless extended by mutual consent of both partis..

B. Termination of Contract If through any cause, the Contractor shall fail to fulfill in timely and proper manner his obligations under this Contract, or if the Contractor shall violate any of the covenants, agreements, or stipulations of this Contract, the Division shall thereupon have the right to terminate this Contract by giving 15 days written notice to the Contractor of such termination and specifying the effective date thereof. If the Contractor is unable or unwilling to comply with any additional conditions as may be lawfully imposed by the Division on the funds under which the Division is performing the program to which these professional services are being rendered, the Contractor shall have the right to terminate the Contract by giving 15 days written notice to the Division, signifying the effective date thereof.

In the event of termination, all property and finished or unfinished documents, reports, and other work products purchased or prepared by the Contractor under this Contract shall, at the option of the Division, become its property and the Contractor shall be entitled to compensation for any unreimbursed expenses necessarily incurred

in satisfactory performance of this Contract. All non-expended funds allocated pursuant to the Agreement shall be returned to the Division upon termination of this Contract.

In the event of termination, all property and finished or unfinished documents, data records, and reports in process or prepared by the Contractor under this Contract shall, at the option of the Division, become the Division's property

C. Changes. The Division may, from time to time, request changes in the Scope of Services of the Contractor to be performed hereunder. Such changes, which are mutually agreed upon by and between the Division and the Contractor, must be incorporated in written amendments to this Contract.

D. Copyrights. Title to all Intellectual Property conceived in the course of performance of this contract shall reside in the Contractor. Contractor hereby assigns/grants title to all test results to the "EPD."

F. Conflict of Interest. It is agreed that for the purpose of this Contract, the Contractor shall be deemed to be an independent contractor and will not be under the day to day supervision of the Division, but shall be responsible for carrying our specific tasks outlined by the Division. The Contractor shall be responsible for the payment of all employees' salaries, and for all other expenses incurred in connection with the performance of the duties and responsibilities established hereunder, except as otherwise provided.

The parties hereto certify that the requirements contained in the Official Code of Georgia Annotated (O.C.G.A.) Sections 45-10-20 through 45-10-28, prohibiting full and part time appointive officials and employees of the State from engaging in

certain transactions affecting the State, have not and will not be violated in any respect with regard to this Contract.

G. Covenant Against Contingent Fees. The Contractor represents that no person or selling agency or other organization has been employed or retained to solicit or secure this Contract upon an agreement or understanding for a commission, percentage, brokerage, or contingent fee.

H. Discrimination in Employment Prohibited. The Contractor will not discriminate against any employee employed in the performance of this Contract, or against any applicant for employment in the performance of this Contract because of race, creed, color, sex, or national origin. The Contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, creed, color, sex, or national origin. This requirement shall apply to, but not be limited to, the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship.

I. Political Activity Prohibited. None of the funds, materials, property or services contributed by the Division or the Contractor under this Contract shall be used in performance of this Contract for any partisan political activity, or to further the election or defeat of any candidate for public office.

J. Compliance with State and Local Laws. The Contractor shall comply with all applicable laws, ordinances, and codes of the State of Georgia and those of local governments.

K. Reports and Inspections. The Contractor shall make financial, program progress, and other reports available, as requested by the Division. The contractor shall make all field monitoring sites available for inspection. In addition the monitoring equipment

at these monitoring sites shall be subject to operational audits by the EPD as specified in 40 CFR part 58 and Federal guidelines such as the "Red Book"; EPA's Quality Assurance Handbook for Air Pollution Measurement Systems, Volumes I, II, and IV (revised September 1994) and any subsequent revisions; and the Division's Standard Operating Procedures for both monitoring and quality assurance.

L. Drug-free Workplace. The Contractor will provide for a Drug-free Workplace, as required in O.C.G.A. Section 50-24-3.

IN WITNESS WHEREOF, the Division and the Contractor have executed this agreement to be given effect as of the date first written above.

ATTEST: DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION DIVISION

_____ BY:_____
Notary Public Harold F. Reheis

ATTEST: GEORGIA TECH RESEARCH CORPORATION

_____ BY:_____
Notary Public