

AIR QUALITY RESEARCH PROGRAM

**Texas Commission on Environmental Quality
Contract Number 582-10-94300
Awarded to The University of Texas at Austin**

Quarterly Report

September 1, 2012 through November 30, 2012

Submitted to

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December 4, 2012

Texas Air Quality Research Program

Quarterly Progress Report

December 4, 2012

Overview

The goals of the State of Texas Air Quality Research Program (AQRP) are:

- (i) to support scientific research related to Texas air quality, in the areas of emissions inventory development, atmospheric chemistry, meteorology and air quality modeling,
- (ii) to integrate AQRP research with the work of other organizations, and
- (iii) to communicate the results of AQRP research to air quality decision-makers and stakeholders.

On April 30, 2010, the Texas Commission on Environmental Quality (TCEQ) contracted with the University of Texas at Austin to administer the AQRP. For the 2010-2011 biennium, the AQRP had approximately \$4.9 million in funding available. Following discussions with the TCEQ and an Independent Technical Advisory Committee (ITAC) concerning research priorities, the AQRP released its first request for proposals in May, 2010. Forty-five proposals, requesting \$12.9 million in research funding were received. These proposals were reviewed by the ITAC for technical merit, and by the TCEQ for relevancy to the State's air quality research needs. The results of these reviews were forwarded to the AQRP's Advisory Council, which made final funding decisions in late August, 2010. As of November 30, 2011, all projects have been completed. Final reports on all but one project have been posted to the AQRP website.

In June 2011, the TCEQ renewed the AQRP for the 2012-2013 biennium. Funding of \$1,000,000 for the FY 2012 period was awarded in February 2012. An additional \$1,000,000 for the FY 2013 period was awarded in June 2012. At the same time an additional \$160,000 was awarded for FY 2012, to support funding for additional air quality projects recommended by the TCEQ. A call for proposals was released in May 2012. Thirty-two proposals, requesting \$5 million in research funding were received. The proposals were reviewed by the ITAC and the TCEQ. The Advisory Council selected 14 projects for funding. Contracts have been signed with all but one organization. Work Plans are under development and review, and one project has been fully approved with the Task Order in route for signature.

BACKGROUND

Section 387.010 of HB 1796 (81st Legislative Session), directs the Texas Commission on Environmental Quality (TCEQ, Commission) to establish the Texas Air Quality Research Program (AQRP).

Sec. 387.010. AIR QUALITY RESEARCH. (a) The commission shall contract with a nonprofit organization or institution of higher education to establish and administer a program to support research related to air quality.

(b) The board of directors of a nonprofit organization establishing and administering the research program related to air quality under this section may not have more than 11 members, must include two persons with relevant scientific expertise to be nominated by the commission, and may not include more than four county judges selected from counties in the Houston-Galveston-Brazoria and Dallas-Fort Worth nonattainment areas. The two persons with relevant scientific expertise to be nominated by the commission may be employees or officers of the commission, provided that they do not participate in funding decisions affecting the granting of funds by the commission to a nonprofit organization on whose board they serve.

(c) The commission shall provide oversight as appropriate for grants provided under the program established under this section.

(d) A nonprofit organization or institution of higher education shall submit to the commission for approval a budget for the disposition of funds granted under the program established under this section.

(e) A nonprofit organization or institution of higher education shall be reimbursed for costs incurred in establishing and administering the research program related to air quality under this section. Reimbursable administrative costs of a nonprofit organization or institution of higher education may not exceed 10 percent of the program budget.

(f) A nonprofit organization that receives grants from the commission under this section is subject to Chapters 551 and 552, Government Code.

The University of Texas at Austin was selected by the TCEQ to administer the program. A contract for the administration of the AQRP was established between the TCEQ and the University of Texas at Austin on April 30, 2010 for the 2010-2011 biennium, and was renewed in June 2011 for the 2012-2013 biennium. Consistent with the provisions in HB 1796, up to 10% of the available funding is to be used for program administration; the remainder (90%) of the available funding is to be used for research projects, individual project management activities, and meeting expenses associated with an Independent Technical Advisory Committee (ITAC).

RESEARCH PROJECT CYCLE

The Research Program is being implemented through a 9 step cycle. The steps in the cycle are described from project concept generation to final project evaluation for a single project cycle.

- 1.) The project cycle is initiated by developing (in year 1) or updating (in subsequent years) the strategic research priorities. The AQRP Director, in consultation with the ITAC, and the TCEQ develop research priorities; the research priorities are released along with a Request for Proposals.
- 2.) Project proposals relevant to the research priorities are solicited. The Request for Proposals can be found at <http://aqrp.ceer.utexas.edu/>.
- 3.) The Independent Technical Advisory Committee (ITAC) performs a scientific and technical evaluation of the proposals.
- 4.) The project proposals and ITAC recommendations are forwarded to the TCEQ. The TCEQ evaluates the project recommendations from the ITAC and comments on the relevancy of the projects to the State's air quality research needs.
- 5.) The recommendations from the ITAC and the TCEQ are presented to the Council and the Council selects the proposals to be funded. The Council also provides comments on the strategic research priorities.
- 6.) All Investigators are notified of the status of their proposals, either funded, not funded, or not funded at this time, but being held for possible reconsideration if funding becomes available.
- 7.) Funded projects are assigned a Project Manager at UT-Austin and a Project Liaison at TCEQ. The project manager at UT-Austin is responsible for ensuring that project objectives are achieved in a timely manner and that effective communication is maintained among investigators involved in multi-institution projects. The Project Manager has responsibility for documenting progress toward project measures of success for each project. The Project Manager works with the researchers, and the TCEQ to create an approved work plan for the project. The Project Manager also works with the researchers, TCEQ and the Program's Quality Assurance officer to develop an approved QAPP for each project. The Project Manager reviews monthly, annual and final reports from the researchers and works with the researchers to address deficiencies.
- 8.) The AQRP Director and the Project Manager for each project describe progress on the project in the ITAC and Council meetings dedicated to on-going project review.
- 9.) The project findings are communicated through multiple mechanisms. Final reports are posted to the Program web site; research briefings are developed for the public and air quality decision makers; and a bi-annual research conference/data workshop is held.

Steps 1 – 9 have all been completed for the initial (2010-2011) biennium. Steps 1 – 6 have been completed for the 2012 – 2013 biennium. A summary of the 2012-2013 activities is described below.

In the prior reporting period activities focused on the receipt and review of the proposals submitted in response to the RFP. Activities during the current reporting period include contracting with the Institutions where the research project will be performed and working with the investigators to develop the project Work Plans.

Several of the proposals that were selected for funding came from institutions that had received AQRP funding in the prior biennium. Because Master Agreements were already in place with these organizations, the AQRP was able to issue amendments, decreasing the amount of time spent on contract negotiations. For those organizations that were new to the AQRP, new Master Agreements were negotiated. All but one of these organizations (the home institution for 3 of the research projects) have completed the Master Agreement contracting process.

All but 3 of the projects have submitted Work Plans for review. (The Work Plan consists of the Project Plan, Budget and Justification, and Quality Assurance Project Plan (QAPP).) Most of these are in the final stages of QAPP review and are expected to be approved in early December. One project has reached full approval and the Task Order for that project has been routed for signature.

RESEARCH PROJECTS

Research Projects for FY 2010-2011 are now completed. All projects have submitted final invoices and those invoices have been paid. The Final Report for each project, with the exception of one, is posted on the AQRP website at <http://aqrp.ceer.utexas.edu/projects.cfm>.

A summary of the projects approved for funding for FY 2012-2013 follows.

Project 1X-004	STATUS: Work Plan under Development
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DISCOVER-AQ Ground Sites Infrastructure Support

University of Texas at Austin – Vincent Torres AQRP Project Manager – Dave Sullivan
TCEQ Project Liaison – Erik Gribbon

Funding Limited to: \$289,200

Additional Information:

This Work Plan will be reviewed after all Discover-AQ projects are active.

Project 1X-005	STATUS: Work Plan Under Review
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Quantification of industrial emissions of VOCs, NO₂ and SO₂ by SOF and mobile DOAS during DISCOVER AQ

Chalmers University – Johan Mellqvist AQRP Project Manager – Dave Sullivan
University of Houston – Barry Lefer TCEQ Project Liaison – John Jolly

Funding Limited to: \$177,560
(\$ Chalmers, \$ UH)

Additional Information:

Fully executed contracts are in place with both Chalmers University and the University of Houston. The project Work Plan was submitted on October 31, 2012, and is in the process of being reviewed.

Project 1X-006**STATUS: Work Plan Under Development**

Environmental chamber experiments and CMAQ modeling to improve mechanisms to model ozone formation from HRVOCs

University of California - Riverside – Gookyoung Heo
Texas A&M University – Qi Ying

AQRP Project Manager – Elena McDonald- Buller
TCEQ Project Liaison – Ron Thomas

Funding Limited to: \$146,259
(\$ UC-R, \$ TAMU)

Additional Information:

As of November 30, 2012, fully executed contracts are in place with both The University of California – Riverside and Texas A&M University. The Work Plan is under development.

Project 1X-011**STATUS: Work Plan Under Review**

Investigation of Global Modeling and Lightning NOx Emissions as Sources of Regional Background Ozone in Texas

ENVIRON International – Chris Emery

AQRP Project Manager – Elena McDonald- Buller
TCEQ Project Liaison – Jim Smith

Funding Limited to: \$69,454

Additional Information:

The contract with Environ is fully executed. They will be issuing a Purchase Order (PO) to Princeton for the AM3 data processing and simulation part of the project. The Work Plan was received on September 28, 2012 and is currently under review.

Project 1X-012**STATUS: Work Plan Under Review**

Interactions Between Organic Aerosol and Noy: Influence on Oxidant ProductionUniversity of Texas at Austin – Lea Hildebrandt
ENVIRON International – Greg YarwoodAQRP Project Manager – Dave Sullivan
TCEQ Project Liaison – Mark Estes**Funding Limited to:** \$148,838
(\$ UT Austin, \$ Environ)**Additional Information:**

The contract with Environ is fully executed. The Work Plan was received on September 25, 2012, and is currently under review.

Project 1X-013**STATUS: Work Plan Under Review**

Development of Transformation Rate of SO₂ to Sulfate for the Houston Ship Channel using the TexAQS 2006 Field Study Data

ENVIRON International – Ralph Morris

AQRP Project Manager – Elena McDonald - Buller
TCEQ Project Liaison – Jim Price**Funding Limited to:** \$59,974**Additional Information:**

The contract with Environ is fully executed. The Work Plan was received on October 3, 2012, and is currently under review.

Project 13-016**STATUS: Task Order Pending**

Ozonesonde launches from the University of Houston and Smith Point, Texas in Support of DISCOVER AQValparaiso University – Gary Morris
University of Houston – Barry LeferAQRP Project Manager – Gary McGaughey
TCEQ Project Liaison – Dave Westenbarger**Funding Limited to:** \$86,667
(\$66,821 Valparaiso, \$19,846 UH)**Additional Information:**

The contracts with Valparaiso University and the University of Houston are fully executed. The Work Plan was approved on November 19, 2012. The Task Order is currently being routed for signature.

Project 1X-018**STATUS: Work Plan Under Review**

The Effects of Uncertainties in Fire Emissions Estimates on Predictions of Texas Air QualityUniversity of Texas at Austin – Elena McDonald-Buller
ENVIRON International – Chris EmeryAQRP Project Manager – Dave Sullivan
TCEQ Project Liaison – Clint Harper**Funding Limited to:** \$112,864
(\$ UT Austin, \$ Environ)**Additional Information:**

The contract with Environ is fully executed. The Work Plan was received on September 19, 2012, and is currently under review.

Project 1X-022**STATUS: Work Plan Under Review**

Surface Measurements of PM, VOCs, and Photochemically Relevant Gases in Support of DISCOVER-AQRice University – Robert Griffin
University of Houston – Barry LeferAQRP Project Manager – Dave Sullivan
TCEQ Project Liaison – Jocelyn Mellberg**Funding Limited to:** \$206,815
(\$ Rice, \$ UH)**Additional Information:**

Fully executed contracts are in place with both Rice University and the University of Houston. The project Work Plan was submitted on October 24, 2012, and is in the process of being reviewed.

Project 1X-024**STATUS: Contract Under Negotiation**

Surface Measurement of Trace Gases in Support of DISCOVER-AQ in Houston in Summer 2013

University of Maryland – Xinrong Ren

AQRP Project Manager – Dave Sullivan
TCEQ Project Liaison – Erik Gribbon**Funding Limited to:** \$90,444**Additional Information:**

The contract with the University of Maryland is being negotiated. The PI submitted a Work Plan for review on August 28, 2012. It is being reviewed while contract negotiations continue.

Project 10-028**STATUS: Work Plan Under Review**

Implementation and evaluation of new HONO mechanisms in a 3-D Chemical Transport Model for Spring 2009 in Houston

University of Houston – Barry Lefer
UCLA – Jochen Stutz
Environ – Greg Yarwood
UNC at Chapel Hill – Will Vizuette

AQRP Project Manager – Elena McDonald-Buller
TCEQ Project Liaison – Doug Boyer

Funding Limited to: \$117,269
(\$ UH, \$ UCLA, \$ Environ, \$ UNC)

Additional Information:

The contract with each university is fully negotiated. The project Work Plan was submitted on November 27, 2012. It is in the process of being reviewed.

Project 10-032**STATUS: Work Plan Under Review**

Collect, Analyze, and Archive Filters at two DISCOVER-AQ Houston Focus Areas: Initial Characterization of PM Formation and Emission Environmental Chamber Experiments to Evaluate NOx Sinks and Recycling in Atmospheric Chemical Mechanisms

Baylor University – Rebecca Sheesley

AQRP Project Manager – Dave Sullivan
TCEQ Project Liaison – Fernando Mercado

Funding Limited to: \$45,972

Additional Information:

The contract with the Baylor University is fully negotiated. The project Work Plan was submitted on November 27, 2012. It is in the process of being reviewed.

Project 10-TN1**STATUS: Contract Under Negotiation**

Investigation of surface layer parameterization of the WRF model and its impact on the observed nocturnal wind speed bias

University of Maryland – HyunCheol Kim

AQRP Project Manager – Gary McGaughey
TCEQ Project Liaison – Bright Dornblaser**Funding Limited to:** \$65,000**Additional Information:**

The contract with the University of Maryland is being negotiated.

Project 10-TN2**STATUS: Contract Under Negotiation**

Development of IDL-based geospatial data processing framework for meteorology and air quality modeling

University of Maryland – HyunCheol Kim

AQRP Project Manager – Gary McGaughey
TCEQ Project Liaison – Bright Dornblaser**Funding Limited to:** \$70,000**Additional Information:**

The contract with the University of Maryland is being negotiated.

FINANCIAL STATUS REPORT

Initial funding for fiscal year 2010 was established at \$2,732,071.00. In late May 2010 an amendment was issued increasing the budget by \$40,000. Funding for fiscal year 2011 was established at \$2,106,071, for a total award of \$4,878,142 for the FY 2010/2011 biennium. As of November 30, 2012, approximately \$36,925 remains unspent (less November fringe benefit and overhead expenses that have not posted as of the writing of this report). These funds will be used in conjunction with the FY 2012 and 2013 funds and will be fully expended by March 2013.

In February 2012, funding of \$1,000,000 was awarded for FY 2012. In June 2012, an additional \$160,000 was awarded in FY 2012 funds and \$1,000,000 was awarded in FY 2013 funds, for a total of \$2,160,000 in funding for the FY 2012/2013 biennium.

All of these funds were distributed across several different reporting categories as required under the contract with TCEQ. The reporting categories are:

Program Administration – limited to 10% of the overall funding (per Fiscal Year)

This category includes all staffing, materials and supplies, and equipment needed to administer the overall AQRP. It also includes the costs for the Council meetings.

ITAC

These funds are to cover the costs, largely travel expenses, for the ITAC meetings.

Project Management – limited to 8.5% of the funds allocated for Research Projects

Each research project will be assigned a Project Manager to ensure that project objectives are achieved in a timely manner and that effective communication is maintained among investigators in multi-institution projects. These funds are to support the staffing and performance of project management.

Research Projects / Contractual

These are the funds available to support the research projects that are selected for funding.

Program Administration

Program Administration includes salaries and fringe benefits for those overseeing the program as a whole, as well as, materials and supplies, travel, equipment, and other expenses. This category allows indirect costs in the amount of 10% of salaries and wages.

During the reporting period six staff members were involved, part time, in the administration of the AQRP. Dr. David Allen, Principal Investigator and AQRP Director, is responsible for the overall administration of the AQRP. James Thomas, AQRP Manager, is responsible for assisting Dr. Allen in the program administration. Maria Stanzione, AQRP Grant Manager, with assistance from Rachael Bushn and Melanie Allbritton assisted with program organization and financial management. This included assisting with the contracting process, invoice review and payment, and other invoicing functions. Denzil Smith is responsible for the AQRP Web Page development and for data management.

Table 2: AQRP Administration Budget

**Administration Budget (includes Council Expenses)
FY 2010/2011**

Budget Category	FY10 Budget	FY11 Budget	Total	Expenses	Pending Expenses	Remaining Balance
Personnel/Salary	\$202,816.67	\$163,120.24	\$365,936.91	\$365,936.91	\$0	\$0
Fringe Benefits	\$38,665.65	\$31,173.03	\$69,838.68	\$69,838.68	\$0	\$0
Travel	\$346.85	\$0	\$346.85	\$346.85		\$0
Supplies	\$15,096.14	\$4.51	\$15,100.65	\$15,096.14		\$4.51
Equipment	\$0	\$0	\$0			\$0
Total Direct Costs	\$256,925.31	\$194,297.78	\$451,223.09	\$451,218.58	\$0	\$4.51
Authorized Indirect Costs	\$20,281.69	\$16,310.22	\$36,591.91	\$36,591.91		\$0
10% of Salaries and Wages						
Total Costs	\$277,207	\$210,608	\$487,815	\$487,810.49	\$0	\$4.51
Fringe Rate	22%	22%		19%		

**Administration Budget (includes Council Expenses)
FY 2012/2013**

Budget Category	FY12 Budget	FY13 Budget	Total	Expenses	Pending Expenses	Remaining Balance
Personnel/Salary	\$80,440	\$70,040	\$150,480	\$37,731.81	\$8,934.26	\$103,813.93
Fringe Benefits	\$14,666	\$12,606	\$27,272	\$8,746.36	\$2,553.29	\$15,972.35
Travel	\$350	\$350	\$700	\$0		\$700.00
Supplies	\$10,000	\$10,000	\$20,000	\$1,370.51		\$18,629.49
Equipment	\$0	\$0	\$0			\$0
Total Direct Costs	\$105,456	\$92,996	\$198,452	\$47,848.68	\$11,487.55	\$139,115.77
Authorized Indirect Costs	\$8,044	\$7,004	\$15,048	\$3,773.18		\$11,274.82
10% of Salaries and Wages						
Total Costs	\$113,500	\$100,000	\$213,500	\$51,621.86	\$11,487.55	\$150,390.59
Fringe Rate	22%	22%		17%		

Fringe benefits for the administration of the AQRP were initially budgeted to be 22% of salaries and wages across the term of the project. It should be noted that this was an estimate, and actual fringe benefit expenses have been reported for each month. The fringe benefit amount and percentage fluctuate each month depending on the individuals being paid from the account, their salary, their FTE percentage, the selected benefit package, and other variables. For example, the amount of fringe benefits are greater for a person with family medical insurance versus a person with individual medical insurance. At the end of the project, the overall total of fringe benefit expensed is expected to be at or below 22% of the total salaries and wages. Actual fringe benefit expenses for the months of September and October are included in the spreadsheets above. The amount for November is estimated.

Actual indirect costs for the months of September and October are included in Table 2. The amount for November is estimated. The accounting records for the month of November do not close until after the due date of this report, thereby requiring the estimate.

As discussed in previous Quarterly Reports, the AQRP Administration requested and received permission to utilize funds in future fiscal years. This is for all classes of funds including Administration, ITAC, Project Management, and Contractual. As of the writing of this report, the FY 10 funds have been fully expended. The intent is to fully expend the FY 11 funds, by March 2013. This same procedure will be followed for the FY 12 funds.

In June 2011, UT-Austin received a Contract Extension for the AQRP. This extension will continue the program through the end of the 2012/2013 biennium.

ITAC

The ITAC met in Austin, Texas, on June 29, 2012, to complete their review and ranking of the proposals. ITAC expenses posted during this reporting period were for ITAC member travel expenses that were not paid in the previous quarter.

Table 3: ITAC Budget

ITAC Budget FY 2010/2011

Budget Category	FY10 Budget	FY11 Budget	Total Budget	Expenses	Pending Expenses	Remaining Balance
Personnel/Salary						
Fringe Benefits						
Travel	\$16,378.86	\$16,714.53	\$33,093.39	\$22,671.83	\$0.00	\$10,421.56
Supplies	\$1,039.95	\$4,130.66	\$5,170.61	\$1,324.62	\$0.00	\$3,845.99
Total Direct Costs	\$17,418.81	\$20,845.19	\$38,264	\$23,996.45	\$0.00	\$14,267.55
Authorized Indirect Costs						
10% of Salaries and Wages						
Total Costs	\$17,418.81	\$20,845.19	\$38,264	\$23,996.45	\$0.00	\$14,267.55

ITAC Budget FY 2012/2013

Budget Category	FY12 Budget	FY13 Budget	Total Budget	Expenses	Pending Expenses	Remaining Balance
Personnel/Salary						
Fringe Benefits						
Travel	\$10,000	\$0	\$10,000	\$0	\$0	\$10,000
Supplies	\$500	\$0	\$500	\$0		\$500
Total Direct Costs	\$10,500	\$0	\$10,500	\$0	\$0	\$10,500
Authorized Indirect Costs						
10% of Salaries and Wages						
Total Costs	\$10,500	\$0	\$10,500	\$0	\$0	\$10,500

Project Management

In August 2012, Project Managers were assigned to the FY 2012-2013 Research Projects. In September work began on contacting Investigators and working with them to develop the Project Work Plans (Scope of Work, Budget, and QAPP).

Table 4: Project Management Budget

Project Management Budget FY 2010/2011

Budget Category	FY10 Budget	FY11 Budget	Total Budget	Expenses	Pending Expenses	Remaining Balance
Personnel/Salary	\$145,337.70	\$106,907.22	\$252,244.92	\$250,223.44	\$1,109.00	\$912.48
Fringe Benefits	\$28,967.49	\$22,142.56	\$51,110.05	\$47,688.81	\$996.23	\$2,425.01
Travel	\$0	\$0	\$0	\$0		\$0
Supplies	\$778.30	\$260.00	\$1,038.30	\$911.98		\$126.32
Total Direct Costs	\$175,083.49	\$129,309.78	\$304,393.27	\$298,824.23	\$2,105.23	\$3,463.81
Authorized Indirect Costs	\$14,533.77	\$10,690.22	\$25,223.99	\$24,381.00		\$842.99
10% of Salaries and Wages						
Total Costs	\$189,617.26	\$140,000.00	\$329,617.26	\$323,205.23	\$2,105.23	\$4,306.80

Project Management Budget FY 2012/2013

Budget Category	FY12 Budget	FY13 Budget	Total Budget	Expenses	Pending Expenses	Remaining Balance
Personnel/Salary	\$60,700	\$46,000	\$106,700	\$849.00		\$105,851.00
Fringe Benefits	\$11,230	\$8,400	\$19,630	\$120.20		\$19,509.80
Travel	\$500	\$0	\$500	\$0		\$500
Supplies	\$7,500	\$6,000	\$13,500	\$0.03		\$13,499.97
Total Direct Costs	\$79,930	\$60,400	\$140,330	\$969.23	\$0	\$139,360.77
Authorized Indirect Costs	\$6,070	\$4,600	\$10,670	\$84.90		\$10,585.10
10% of Salaries and Wages						
Total Costs	\$86,000	\$65,000	\$151,000	\$1054.13	\$0	\$149,945.87

Research Projects

Table 5 on the following 2 pages illustrates the 2010-2011 Research Projects, including the funding awarded to each project and the total expenses reported on each project as of November 30, 2012.

As of the end of November there was \$18,346.09 of FY 2011 funding available in Research Projects. The FY 10 Research/Contractual budget was originally funded at \$2,286,000. After all transfers, it has been increased by \$1,827.93. The FY 11 Research/Contractual budget was originally funded at \$1,736,063. After all transfers, it has been decreased by \$1,445,19 (the amount transferred to ITAC). This is an overall net increase of \$382.74 to the Research/Contractual funds (and net reduction in Project Management funds).

The remaining FY 2011 Research/Contractual funds will be awarded to one of the 2012-2013 Research Projects, and will be fully expended by March 2013.

A spreadsheet is not included in this report for FY 2012 and 2013 funds, as no expenditures have yet occurred. FY 2012 funds in the amount of \$950,000 and FY 2013 funds in the amount of \$835,000 are budgeted for Research Projects.

Table 5: Contractual Expenses

Contractual Expenses				
FY 10 Contractual Funding		\$2,286,000		
FY 10 Contractual Funding Transfers		\$1,827.93		
FY 10 Total Contractual Funding		\$2,287,827.93		
Project Number		Amount Awarded (Budget)	Cumulative Expenditures	Remaining Balance
10-008	Rice University	\$128,851	\$126,622.32	\$2,228.68
10-008	Environ International	\$49,945	\$49,944.78	\$0.22
10-009	UT-Austin	\$591,332	\$591,306.66	\$25.34
10-021	UT-Austin	\$248,786	\$248,786.41	-\$0.41
10-022	Lamar University	\$150,000	\$132,790.80	\$17,209.20
10-032	University of Houston	\$176,314	\$176,314	\$0
10-032	University of New Hampshire	\$23,054	\$18,850.65	\$4,203.35
10-032	UCLA	\$49,284	\$47,171.32	\$2,112.68
10-034	University of Houston	\$195,054	\$186,657.54	\$8,396.46
10-042	Environ International	\$237,481	\$237,479.31	\$1.69
10-045	UCLA	\$149,773	\$142,930.28	\$6,842.72
10-045	UNC - Chapel Hill	\$33,281	\$33,281	\$0
10-045	Aerodyne Research Inc.	\$164,988	\$164,988.10	-\$0.10
10-045	Washington State University	\$50,000	\$50,000	\$0
10-DFW	UT-Austin	\$37,857	\$37,689.42	\$167.58
FY 10 Total Contractual Funding Awarded		\$2,286,000		
FY 10 Contractual Funding Expended (Init. Projects)			\$2,244,812.59	
FY 10 Contractual Funds Remaining Unspent after Project Completion				\$41,187.41
FY 10 Additional Projects				
	Data Storage	\$7,015.34	\$7,015.34	\$0
10-SOS	State of the Science	\$36,000.00	\$36,000.00	\$0
FY 10 Contractual Funds Expended to Date*			\$2,287,827.93	
FY 10 Contractual Funds Remaining to be Spent				\$0

Project Number		Amount Awarded (Budget)	Cumulative Expenditures	Remaining Balance
10-006	Chalmers University of Tech	\$262,179	\$262,179	\$0
10-006	University of Houston	\$222,483	\$217,949.11	\$4,533.89
10-015	Environ International	\$201,280	\$201,278.63	\$1.37
10-020	Environ International	\$202,498	\$202,493.48	\$4.52
10-024	Rice University	\$225,662	\$223,769.99	\$1,892.01
10-024	University of New Hampshire	\$70,747	\$70,719.78	\$27.22
10-024	University of Michigan	\$64,414	\$60,597.51	\$3,816.49
10-024	University of Houston	\$98,134	\$88,914.46	\$9,219.54
10-029	Texas A&M University	\$80,108	\$78,276.97	\$1,831.03
10-044	University of Houston	\$279,642	\$277,846.38	\$1,795.62
11-DFW	UT-Austin	\$50,952	\$29,261.75	\$21,690.25
FY 11 Total Contractual Funding Awarded		\$1,758,099		
FY 11 Contractual Funds Expended (Init. Projects)			\$1,713,287.06	
FY 11 Contractual Funds Remaining Unspent after Project Completion				\$44,811.94
FY 11 Additional Projects				
	Data Storage	\$2,984.66	\$2,984.66	\$0.00
FY 11 Contractual Funds Expended to Date*			\$1,716,271.72	
FY 11 Contractual Funds Remaining to be Spent				\$18,346.09
Total Contractual Funding		\$4,022,063.00		
Total Contractual Funding Transfers		\$382.74		
Total Contractual Funding Available		\$4,022,445.74		
Total Contractual Funds Expended to Date*			\$4,004,099.65	
Total Contractual Funds Remaining				\$18,346.09

*(Expenditures Reported as of November 30, 2012.)

Conclusion

The ITAC FY 2011 budget has \$14,267.55 remaining. As all known ITAC expenditures have posted, and no new ITAC expenditures are expected in the next quarter, these funds will be transferred to the Project Management and Research Project categories. The amount will be determined during the next quarter.

The Project Management FY 2011 budget will have approximately \$4,800 remaining after all November expenses are posted. These funds will be used to cover Project Management expenses until the funds are fully expended. Use of these funds may allow the release of FY 12 Project Management funds to be used for Research projects.

The Research/Contractual category has approximately \$18,346 remaining. These funds will be used to fund research projects in the FY 2012-13 biennium (though they will be fully expended by March 31, 2013.) It should be noted that all FY 10-11 Research funds were allocated to projects, and an additional \$22,036 was moved from Project Management to Research to cover additional expenses related to the DFW Field Study. Several projects returned funds to the AQRP when they concluded, thus the remaining balance. As these funds were committed to Research projects until the projects ended, the AQRP was unable to utilize the funds for any other purpose.

In summary, the remaining FY 2011 funds of approximately \$37,000 are expected to be fully expended by March 31, 2013.

Each 2012-2013 Research Project will be funded from a specific fiscal year. The assignments will be made during the next quarter. Once all budgets have been approved and assignments made the program managers will assess whether any Research Project funds remain available, and will contact the ITAC, TCEQ, and Council to determine how to proceed in the allocation of those funds.

Appendix A

Financial Reports by Fiscal Year

FY 10 and 11

(Expenditures reported as of November 30, 2012.)

Administration Budget (includes Council Expenses)

FY 2010

Budget Category	FY10 Budget	Cumulative Expenditures	Pending Expenditures	Remaining Balance
Personnel/Salary	\$202,816.67	\$202,816.67		\$0
Fringe Benefits	\$38,665.65	\$38,665.65		\$0
Travel	\$346.85	\$346.85		\$0
Supplies	\$15,096.14	\$15,096.14		\$0
Equipment	\$0			\$0
Other				
Contractual				
Total Direct Costs	\$256,925.31	\$256,925.31		\$0
Authorized Indirect Costs	\$20,281.69	\$20,281.69		\$0
10% of Salaries and Wages				
Total Costs	\$277,207	\$277,207.00	\$0	\$0

Administration Budget (includes Council Expenses)

FY 2011

Budget Category	FY11 Budget	Cumulative Expenditures	Pending Expenditures	Remaining Balance
Personnel/Salary	\$163,120.24	\$163,120.24	\$0	\$0
Fringe Benefits	\$31,173.03	\$31,173.03	\$0	\$0
Travel	\$0			\$0
Supplies	\$4.51			\$4.51
Equipment				
Other	\$0			\$0
Contractual				
Total Direct Costs	\$194,297.78	\$194,293.27	\$0	\$4.51
Authorized Indirect Costs	\$16,310.22	\$16,310.22		\$0
10% of Salaries and Wages				
Total Costs	\$210,608	\$210,603.49	\$0	\$4.51

**ITAC Budget
FY 2010**

Budget Category	FY10 Budget	Cumulative Expenditures	Pending Expenditures	Remaining Balance
Personnel/Salary				
Fringe Benefits				
Travel	\$16,378.86	\$16,378.86	\$0	\$0
Supplies	\$1,039.95	\$1,039.95		\$0
Equipment				
Other				
Total Direct Costs	\$17,418.81	\$17,418.81	\$0	\$0
Authorized Indirect Costs				
10% of Salaries and Wages				
Total Costs	\$17,418.81	\$17,418.81	\$0	\$0

**ITAC Budget
FY 2011**

Budget Category	FY11 Budget	Cumulative Expenditures	Pending Expenditures	Remaining Balance
Personnel/Salary				
Fringe Benefits				
Travel	\$16,714.53	\$6,292.97	\$0.00	\$10,421.56
Supplies	\$4,130.66	\$284.67	\$0.00	\$3,845.99
Equipment				
Other				
Total Direct Costs	\$20,845.19	\$6,577.64	\$0.00	\$14,267.55
Authorized Indirect Costs				
10% of Salaries and Wages				
Total Costs	\$20,845.19	\$6,577.64	\$0.00	\$14,267.55

**Project Management Budget
FY 2010**

Budget Category	FY10 Budget	Cumulative Expenditures	Pending Expenditures	Remaining Balance
Personnel/Salary	\$145,337.70	\$145,337.70		\$0
Fringe Benefits	\$28,967.49	\$28,967.49		\$0
Travel	\$0	\$0		\$0
Supplies	\$778.30	\$778.30		\$0
Equipment				
Other				
Total Direct Costs	\$175,083.49	\$175,083.49	\$0	\$0
Authorized Indirect Costs	\$14,533.77	\$14,533.77		\$0
10% of Salaries and Wages				
Total Costs	\$189,617.26	\$189,617.26	\$0	\$0

**Project Management Budget
FY 2011**

Budget Category	FY11 Budget	Cumulative Expenditures	Pending Expenditures	Remaining Balance
Personnel/Salary	\$106,907.22	\$104,885.74	\$1,109.00	\$912.48
Fringe Benefits	\$22,142.56	\$18,721.32	\$996.23	\$2,425.01
Travel	\$0			\$0
Supplies	\$260.00	\$133.68		\$126.32
Equipment				
Other				
Total Direct Costs	\$129,309.78	\$123,740.74	\$2,105.23	\$3,463.81
Authorized Indirect Costs	\$10,690.22	\$9,847.23		\$842.99
10% of Salaries and Wages				
Total Costs	\$140,000.00	\$133,587.97	\$2,105.23	\$4,306.80

AQRP Budget

FY 2010

Budget Category	FY10 Budget	Cumulative Expenditures	Pending Expenditures	Remaining Balance
Personnel/Salary	\$202,816.67	\$202,816.67	\$0.00	\$0.00
Fringe Benefits	\$38,665.65	\$38,665.65	\$0.00	\$0.00
Travel	\$346.85	\$346.85	\$0.00	\$0.00
Supplies	\$15,096.14	\$15,096.14	\$0.00	\$0.00
Equipment	\$0	\$0.00	\$0.00	\$0.00
Other	\$0	\$0.00	\$0.00	\$0.00
Contractual	\$2,287,827.93	\$2,287,827.93	\$0.00	\$0.00
ITAC	\$17,418.81	\$17,418.81	\$0.00	\$0.00
Project Management	\$189,617.26	\$189,617.26	\$0.00	\$0.00
Total Direct Costs	\$2,751,789.31	\$2,751,789.31	\$0.00	\$0.00
Authorized Indirect Costs	\$20,281.69	\$20,281.69	\$0.00	\$0.00
10% of Salaries and Wages				
Total Costs	\$2,772,071.00	\$2,772,071.00	\$0.00	\$0.00

AQRP Budget

FY 2011

Budget Category	FY11 Budget	Cumulative Expenditures	Pending Expenditures	Remaining Balance
Personnel/Salary	\$163,120.24	\$163,120.24	\$0.00	\$0.00
Fringe Benefits	\$31,173.03	\$31,173.03	\$0.00	\$0.00
Travel	\$0	\$0.00	\$0.00	\$0.00
Supplies	\$4.51	\$0.00	\$0.00	\$4.51
Equipment	\$0	\$0.00	\$0.00	\$0.00
Other	\$0	\$0.00	\$0.00	\$0.00
Contractual	\$1,734,617.81	\$1,716,271.72	\$0.00	\$18,346.09
ITAC	\$20,845.19	\$6,577.64	\$0.00	\$14,267.55
Project Management	\$140,000.00	\$133,587.97	\$2,105.23	\$4,306.80
Total Direct Costs	\$2,089,760.78	\$2,050,730.60	\$2,105.23	\$36,924.95
Authorized Indirect Costs 10% of Salaries and Wages	\$16,310.22	\$16,310.22	\$0.00	\$0.00
Total Costs	\$2,106,071.00	\$2,067,040.82	\$2,105.23	\$36,924.95

Appendix B

Financial Reports by Fiscal Year

FY 12 and 13

(Expenditures reported as of November 30, 2012.)

Administration Budget (includes Council Expenses)

FY 2012

Budget Category	FY12 Budget	Cumulative Expenditures	Pending Expenditures	Remaining Balance
Personnel/Salary	\$80,440.00	\$37,731.81	\$8,934.26	\$33,773.93
Fringe Benefits	\$14,666.00	\$8,746.36	\$2,553.29	\$3,366.35
Travel	\$350.00	\$0.00		\$350.00
Supplies	\$10,000.00	\$1,294.18	\$0	\$8,705.82
Equipment	\$0.00			\$0.00
Other				
Contractual				
Total Direct Costs	\$105,456.00	\$47,772.35	\$11,487.55	\$46,196.10
Authorized Indirect Costs	\$8,044.00	\$3,773.18		\$4,270.82
10% of Salaries and Wages				
Total Costs	\$113,500.00	\$51,545.53	\$11,487.55	\$50,466.92

Administration Budget (includes Council Expenses)

FY 2013

Budget Category	FY13 Budget	Cumulative Expenditures	Pending Expenditures	Remaining Balance
Personnel/Salary	\$70,040.00	\$0.00		\$70,040.00
Fringe Benefits	\$12,606.00	\$0.00		\$12,606.00
Travel	\$350.00	\$0.00		\$350.00
Supplies	\$10,000.00	\$76.33		\$9,923.67
Equipment				
Other	\$0.00	\$0.00		\$0.00
Contractual				
Total Direct Costs	\$92,996.00	\$76.33	\$0.00	\$92,919.67
Authorized Indirect Costs	\$7,004.00	\$0.00		\$7,004.00
10% of Salaries and Wages				
Total Costs	\$100,000.00	\$76.33	\$0.00	\$99,923.67

ITAC Budget

FY 2012

Budget Category	FY12 Budget	Cumulative Expenditures	Pending Expenditures	Remaining Balance
Personnel/Salary				
Fringe Benefits				
Travel	\$10,000.00			\$10,000.00
Supplies	\$500.00			\$500.00
Equipment				
Other				
Contractual				
Total Direct Costs	\$10,500.00	\$0.00	\$0.00	\$10,500.00
Authorized Indirect Costs				
10% of Salaries and Wages				
Total Costs	\$10,500.00	0.00	\$0.00	\$10,500.00

ITAC Budget

FY 2013

Budget Category	FY13 Budget	Cumulative Expenditures	Pending Expenditures	Remaining Balance
Personnel/Salary				
Fringe Benefits				
Travel	\$0.00	\$0.00		\$0.00
Supplies	\$0.00	\$0.00		\$0.00
Equipment				
Other				
Contractual				
Total Direct Costs	\$0.00	\$0.00	\$0.00	\$0.00
Authorized Indirect Costs				
10% of Salaries and Wages				
Total Costs	\$0.00	\$0.00	\$0.00	\$0.00

Project Management Budget

FY 2012

Budget Category	FY12 Budget	Cumulative Expenditures	Pending Expenditures	Remaining Balance
Personnel/Salary	\$60,700.00	\$849.00		\$59,851.00
Fringe Benefits	\$11,230.00	\$120.20		\$11,109.80
Travel	\$500.00			\$500.00
Supplies	\$7,500.00	\$0.03		\$7,499.97
Equipment				
Other				
Contractual				
Total Direct Costs	\$79,930.00	\$969.23	\$0.00	\$78,960.77
Authorized Indirect Costs	\$6,070.00	\$84.90		\$5,985.10
10% of Salaries and Wages				
Total Costs	\$86,000.00	\$1054.13	\$0.00	\$84,945.87

Project Management Budget

FY 2013

Budget Category	FY13 Budget	Cumulative Expenditures	Pending Expenditures	Remaining Balance
Personnel/Salary	\$46,000.00			\$46,000.00
Fringe Benefits	\$8,400.00			\$8,400.00
Travel	\$0.00			\$0.00
Supplies	\$6,000.00			\$6,000.00
Equipment				
Other				
Contractual				
Total Direct Costs	\$60,400.00	\$0.00	\$0	\$60,400.00
Authorized Indirect Costs	\$4,600.00			\$4,600.00
10% of Salaries and Wages				
Total Costs	\$65,000.00	0.00	\$0.00	\$65,000.00

**AQRP Budget
FY 2012**

Budget Category		FY12 Budget	Cumulative Expenditures	Pending Expenditures	Remaining Balance
Personnel/Salary		\$80,440.00	\$37,731.81	\$8,934.26	\$33,773.93
Fringe Benefits		\$14,666.00	\$8,746.36	\$2,553.29	\$3,366.35
Travel		\$350.00	\$0.00	\$0.00	\$350.00
Supplies		\$10,000.00	\$1,294.18	\$0.00	\$8,705.82
Equipment		\$0.00	\$0.00	\$0.00	\$0.00
Other		\$0.00	\$0.00	\$0.00	\$0.00
Contractual		\$950,000.00	\$0.00	\$0.00	\$950,000.00
ITAC		\$10,500.00	\$0.00	\$0.00	\$10,500.00
Project Management		\$86,000.00	\$1,054.13	\$0.00	\$84,945.87
Total Direct Costs		\$1,151,956.00	\$48,826.48	\$11,487.55	\$1,091,641.97
Authorized Indirect Costs		\$8,044.00	\$3,773.18	\$0.00	\$4,270.82
10% of Salaries and Wages					
Total Costs		\$1,160,000.00	\$52,599.66	\$11,487.55	\$1,095,912.79

**AQRP Budget
FY 2013**

Budget Category		FY13 Budget	Cumulative Expenditures	Pending Expenditures	Remaining Balance
Personnel/Salary		\$70,040.00	\$0.00	\$0.00	\$70,040.00
Fringe Benefits		\$12,606.00	\$0.00	\$0.00	\$12,606.00
Travel		\$350.00	\$0.00	\$0.00	\$350.00
Supplies		\$10,000.00	\$76.33	\$0.00	\$9,923.67
Equipment		\$0.00	\$0.00	\$0.00	\$0.00
Other		\$0.00	\$0.00	\$0.00	\$0.00
Contractual		\$835,000.00	\$0.00	\$0.00	\$835,000.00
ITAC		\$0.00	\$0.00	\$0.00	\$0.00
Project Management		\$65,000.00	\$0.00	\$0.00	\$65,000.00
Total Direct Costs		\$992,996.00	\$76.33	\$0.00	\$992,919.67
Authorized Indirect Costs		\$7,004.00	\$0.00	\$0.00	\$7,004.00
10% of Salaries and Wages					
Total Costs		\$1,000,000.00	\$76.33	\$0.00	\$999,923.67