DEP Contract Review Form

DEP Contract No.:	SP632	Original Contract:	X	Amendment No.:	
Prog Reference:	N/A	Change Order No:		Funding Increment Increase No.:	

CONTRACTOR INFORMATION	
Name (Primary):	Academy of Natural Sciences (ANSERC)
Mailing Address:	10545 Mackall Road
City/State/Zip	St. Leonard, Maryland 20685
Contact Person:	Dr. Cynthia C. Gilmour
Phone Number:	(410) 586-9713
	(410) 586-9705 fax
FEID No.:	23 - 1352000
Name (Secondary):	
Mailing Address:	
City/State/Zip	
Contact Person:	Dr. Ian Davison
Phone Number:	(410) 586-9700
FEID No.:	23 - 1352000

Type:	Services	X	Grant		Commodities		Concession		Other	

DMS Class/Group:	973-360	**Procurement Method:**	Sole source

Are Federal Funds Supporting this Contract?	no	If yes, specify federal grant and CFDA No. below.	
If the answer to the above was "No", are the State funds supporting this Contract being used as match to a federal grant?	no	If yes, specify the federal grant and CFDA below.	
Federal Grant:		CFDA:	
Are equipment purchases authorized under this Contract?	no	Will DEP retain ownership?	
Are land purchases authorized under this Contract?	no	Will DEP/BOT retain ownership?	

Minority Business Utilization Information for the Contractor:	Certified Minority Business?	N/A	Category:	
	Registered Minority Business?	N/A	Category:	

Contract Period:	Begin Date:	execution 11/14/03	End Date:	6/30/04

Subject/ Brief Description of Contract:

MESOCOSM STUDIES TO QUANTIFY HOW METHYLMERCURY IN THE EVERGLADES RESPONDS TO CHANGES IN MERCURY SULFUR, AND NUTRIENT LOADING

Funding Information:

Ceiling Amount:	$ 389,640.31	Current Funding Amt:	$ 124,083.12

Note: For projects containing an object code of 75XXXX, the CSFA must be completed. Rec Type to be completed by Procurement Section.

Specify County where work is being performed: Statewide

Journal Transfer Information (29 digit account code, if applicable):

Org Code	EO	Fund/FID	Category	YR	Obj Code	CSFA No.	Rec Type	Activ Code	Grant No.	Module	Project No.	Amount
37250201002	LV	050001	030000	03/04	132600	N/A	N/A	3200	N/A	8567	N/A	$ 124,083.12

Contract Management Information:						
Division/District:	Resource Assessment and Management	Bureau/Office:	Mercury and Applied Science		
Contract/Project Manager:	Donald M. Axelrad, Ph.D.	Telephone No. of Manager:	(850) 245-8306	MS#:	6540

Contract Review	Approved By - Signature	Date Approved
Contract Manager:	[signature]	11/13/03
Budget Representative:	[signature]	11-13-03
Bureau Chief:	[signature]	11-13-03
Div/District Director:	[signature]	11-13-03
Quality Assurance:	[signature] for Addy Tinkle	11-13-03
Contracts Administrator:	[signature] Ruth Heggen	11/12/03
General Counsel*:	[signature]	11/12/03
Division/District IRM:	N/A	
Department CIO:	N/A	

Identify Delegation of Authority for Person Executing Contract: DEP Directive 125

Reviewer Comments:

Vendor relationship, checklist in file. SK
MFMP Registered SK
DOS Registered. SK

RUSH

OCT - 7 2003

*Review/approval by the Office of General Counsel not required for state funded activities which utilize DEP 55-205 and are not in excess of Purchasing Category Three.

STATE OF FLORIDA
DEPARTMENT OF MANAGEMENT SERVICES

RECEIVED
DIVISION OF PURCHASING
2003 OCT 28 AM 9:17
FRONT DESK

STATE PURCHASING
Procurement and Contract Management
4050 Esplande Way
Tallahassee, Florida 32399-0950

EXCEPTIONAL PURCHASE REQUEST 33 DEP

BLOCK BELOW & JUSTIFICATION BLOCK FOR AGENCY USE

FROM: (Department, Division, Bureau: Mailing Address)

Department of Environmental Protection
Bureau of General Services/Procurement Section
3800 Commonwealth Blvd., MS #93, Room 235
Tallahassee, FL 32303-3123

Contact Person: Shelly Kelley Phone: 245-2351

Authorized Signature (Manual) Gwenn D. Godfrey

Authorized Signature (Typed) Gwenn D. Godfrey

Date: 10/27/03 Title: Procurement Administrator

Vendor: Academy of Natural Sciences, Estuarine Research Center

Class/Group no.: 973-360 Price: $400,000

BELOW FOR STATE PURCHASING USE ONLY

AUTHORITY:

APPROVED/DENIED BY: Authorized Signature

Subject to Approval by:

Purchases shall not be made before this date: 10/31/03

CC: Auditor General

CHECK FOR ADDITIONAL COPIES:

____ Communications ____ Comptroller's Office

____ Motor Pool ____

JUSTIFICATION (Use Space below. Cover letter not required.)

The Department of Environmental Protection (Department), Division of Resource Assessment and Management, Mercury and Applied Science Program, is requesting authority pursuant to Section 60A-1.010 F.A.C to enter into a single source contract with the Academy of Natural Sciences, Estuarine Research Center (ANSERC) to conduct mesocosm studies to quantify how methylmercury in the Everglades responds to changes. This is a three-year project with a total cost of $400,000.

The Department requires these services to fulfill its responsibilities under the Everglades Forever Act and the multi-agency Florida Mercury Science Program. The purpose of this project is to investigate the chemical factors that control the biotransformation of inorganic mercury species in Everglades sediments and waters into the toxic bioaccumulative form, methylmercury. The Academy, principally through the skills of Dr. Cynthia Gilmour, Assistant Curator, and her highly qualified and experienced staff, is uniquely qualified to provide these services. A thorough review of the international scientific literature demonstrates that no other research group other than Dr. Gilmour has the ability to perform the types of measurements and experiments needed, as described below:

1. Design, develop and emplace experimental treatment mesocosms in the Florida Everglades marshes and conduct controlled, replicated multi-factorial experiments using amendments of mercury, sulfur, phosphorus and nitrogen, and other cofactors as needed, often as stable isotopes, to ascertain their influence as controls on the in situ production of methylmercury.
2. Using high-resolution ICP-Mass Spectroscopy and other appropriate techniques, analyze appropriate Mesocosm constituents to determine the process pathways of microbial uptake and methylation of added inorganic mercury, and influences of ancillary chemical additions on the rates of conversion of inorganic mercury to methylmercury.

This single source request was advertised on the DMS Vendor Bid System (VBS) from October 13, 2003 at 10:30 a.m. to October 22, 2003 at 10:30 a.m. There were no other vendors who submitted information regarding their ability to provide the above services.

BELOW AND REVERSE SIDE FOR STATE PURCHASING USE ONLY

FAILURE TO FILE A PROTEST WITHIN THE TIME PRESCRIBED IN SECTION 120.53(7), FLORIDA STATUTES, SHALL CONSTITUTE A WAIVER OF PROCEEDINGS UNDER CHAPTER 120, FLORIDA STATUTES. ALL BIDS/PROPOSALS ACCEPTED BY THE STATE ARE SUBJECT TO THE STATE'S TERMS AND CONDITIONS AND ANY AND ALL ADDITIONAL TERMS ANDCONDITIONS SUBMITTED BY THE BIDDERS/PROPOSERS ARE REJECTED AND SHALL HAVE NO FORCE AND EFFECT. NOTICE OF BID/PROPOSALS PROTEST BONDING REQUIREMENT- ANY PERSON WHO FILES AN ACTION PROTESTING A DECISION OR INTENDED DECISION PERTAINING TO CONTRACTS ADMINISTERED BY THE DIVISION OR ASTATE AGENCY PURSUANT TO SECTION 120.53(7)(b), FLORIDA STATUTES, SHALL POST WITH THE DIVISION OR THE STATE AGENCY AT THE TIME OF FILING THE FORMALWRITTEN PROTEST, A BOND PAYABLE TO THE DIVISION OR STATE AGENCY IN AN AMOUNT EQUAL TO 1 PERCENT OF THE DIVISION'S OR STATE AGENCY'S ESTIMATE OF THETOTAL VOLUME OF THE CONTRACT OR $5,000, WHICHEVER IS LESS, WHICH BOND SHALL BE CONDITIONED UPON THE PAYMENT OF ALL COSTS WHICH MAY BE ADJUDGEDAGAINST HIM IN THE ADMINISTRATIVE HEARING IN WHICH THE ACTION IS BROUGHT AND IN ANY SUBSEQUENT APPELLATE COURT PROCEEDING. FOR PROTEST OF DECISIONSOR INTENDED DECISIONS OF THE DIVISION PERTAINING TO AGENCIES' REQUESTS FOR APPROVAL OF EXCEPTIONAL PURCHASES, THE BOND SHALL BE IN THE AMOUNT EQUALTO 1 PERCENT OF THE REQUESTING AGENCY'S ESTIMATE OF THE CONTRACT AMOUNT FOR THE EXCEPTIONAL PURCHASE REQUESTED OR $5,000, WHICHEVER IS LESS. IN LIEU OF A BOND, THE DIVISION OR STATE AGENCY MAY, IN EITHER CASE, ACCEPT A CASHIER'S CHECK OR MONEY ORDER IN THE AMOUNT OF THE BOND. FAILURE TO FILE THEPROPER BOND AT THE TIME OF FILING THE FORMAL PROTEST WILL RESULT IN A DENIAL OF THE PROTEST.

☐

RESPOND BY 11/6/03 THIS POSTING BEGINS: Monday, November 3, 2003 @ 9:30 a.m.

#1

ENDS: Thursday, November 6, 2003 @ 9:30 a.m.

DEP03/04 SSA006

THE POSTING INDICATES OUR INTENT

X APPROVE ____ DISAPPROVE ____ TAKE ACTION INDICATED

COPY FRONT & BACK
PUR 7006 (REV. 6-1-98)

AUTHORIZED SIGNATURE

EMERGENCY PURCHASE

_____ A notarized statement under oath, signed by the executive head of the agency or designee and copy of purchase order or contract attached and submitted within 30 days after purchase.

_____ Based on the information provided, does the purchase represent an emergency as defined by Statute. If not, prepare a draft requesting additional information.

CONTRACT EXCEPTION GREATER THAN THE CATEGORY AUTHORIZED

_____ Is the request to purchase from other than a contract source properly justified?

_____ *DOP Rule 60A-1.008(4)*

Is this request based on securing agency needs because of:

_____ specifications which differ from contract commodities or services

_____ product quality

_____ critical delivery schedule

_____ compatibility

_____ availability of service

_____ applications of unique technical requirements

_____ **SERVICES PROVIDED PRIOR TO SIGNING OF A CONTRACT DOP Rule 60A-1.016**

AGENCY DELEGATION TO ESTABLISH AN AGENCY TERM CONTRACT DOP Rule 60A-1.008(5)

_____ **SINGLE SOURCE (COMMODITIES/SERVICES)**

_____ To your knowledge, is this the only source of supply for the commodity?

_____ If not, is a list of prospective vendors being supplied to the agency with your letter of disapproval?

_____ DOP Rule 60A-1.010(1)

_____ Annual-DOP Rule 60A-1.010(2)

NO COMPETITIVE BID/PROPOSAL

_____ First Call, Single Source, DOP Rule 60A-1.002(6)

_____ Negotiation after seeking competitive Bids/Proposals Rule 60A-1.018(1)

Negotiations without seeking competitive Bids/Proposal Rule 60A-01.018(2)

COMMENTS/RECOMMENDATIONS:

Advertisement Detail

Department of Environmental Protection

Agency Decisions

Notice of Intended Award for DEP 03/04 SSA006

Advertisement Number: DEP 03/04 SSA006-AD

Version Number: 000

Advertisement Begin Date/Time: 11/03/2003 - 09:30 A.M.

Commodity Code(s):	Description(s):
973-360-000-0000	ENVIRONMENTAL STUDIES SERVICES & CONSULTING SERVICES

THIS IS NOT A SOLICITATION FOR BIDS OR PROPOSALS, IT IS A POSTING OF AN AGENCY DECISION. PLEASE DO NOT SUBMIT A BID OR A NO BID REPLY.

****POSTING IS VALID FOR 72 CONSECUTIVE HOURS, EXCLUDING SATURDAYS, SUNDAYS AND HOLIDAYS.

The Department of Environmental Protection (Department) advertised through the DMS Vendor Bid System (VBS) from October 13, 2003 to October 22, 2003, its desire to enter into a single source contract with the Academy of Natural Sciences, Estuarine Research Center (ANSERC) to conduct mesocosm studies to quantify how methylmercury in the Everglades responds to changes. Based on the advertising process, no vendors responded to the advertisement indicating the desire or ability to provide such research services. Therefore, the Department intents to award a single source contract to the Academy of Natural Sciences, Estuarine Research Center (ANSERC).

Pursuant to Chapter 120.57(3), Florida Statutes, the posting of this Notice of Intended Contract Award will commence on November 3, 2003 at 9:30 a.m. and continue for 72 hours excluding holidays and weekends until November 6, 2003 at 9:30 a.m.

Please click on the related documents link below to see the attached file for a copy of the posting document.

Agency Decisions will be available at:
3800 Commonwealth Blvd., MS 93
Carr Building, Room 235
Tallahassee, FL, 32399 -3000.

Please direct all questions to:
Shelly Kelley
Phone: (850) 245-2361
FAX: (850) 245-2411

Suncom Phone: 205-2361
Suncom FAX: 205-2411
Email: shelly.kelley@dep.state.fl.us

Click here to view Original Advertisement.

Click here to view more related documents.

VBS Helpdesk Password Change Logoff
Account Status

Advertisement Detail

Department of Environmental Protection

Single Source

Single Source with the Academy of Natural Sciences, Estuarine Research Center (ANSERC)

Advertisement Number: DEP 03/04 SSA006

Version Number: 000

Advertisement Begin Date/Time: 10/13/2003 - 10:30 A.M.

Commodity Code(s):	Description(s):
973-360-000-0000	ENVIRONMENTAL STUDIES SERVICES & CONSULTING SERVICES

The Department of Environmental Protection (Department), Division of Resource and Assessment Management, Mercury and Applied Science Program, is requesting authority pursuant to Section 60A-1.010 F.A.C to enter into a single source contract with the Academy of Natural Sciences, Estuarine Research Center (ANSERC) to conduct mesocosm studies to quantify how methylmercury in the Everglades responds to changes.

The Department requires these services to fulfill its responsibilities under the Everglades Forever Act and the multi-agency Florida Mercury Science Program. The purpose of this project is to investigate the chemical factors that control the biotransformation of inorganic mercury species in Everglades sediments and waters into the toxic bioaccumulative form, methylmercury. The Academy, principally through the skills of Dr. Cynthia Gilmour, Assistant Curator, and her highly qualified and experienced staff, is uniquely qualified to provide these services. A thorough review of the international scientific literature demonstrates that no other research group other than Dr. Gilmour has the ability to perform the types of measurements and experiments needed, as described below:

1. Design, develop and emplace experimental treatment mesocosms in the Florida Everglades marshes and conduct controlled, replicated multi-factorial experiments using amendments of mercury, sulfur, phosphorus and nitrogen, and other cofactors as needed, often as stable isotopes, to ascertain their influence as controls on the in situ production of methylmercury.

2. Using high-resolution ICP-Mass Spectroscopy and other appropriate techniques, analyze appropriate Mesocosm constituents to determine the process pathways of microbial uptake and methylation of added inorganic mercury, and influences of ancillary chemical additions on the rates of conversion of inorganic mercury to methylmercury.

Prospective vendors who believe they are able to supply the contractual services described herein, shall provide relevant information to the contact person listed below no later than October 22, 2003 at 10:30 a.m.

If it is determined in writing by the Department, after reviewing any information received from prospective vendors, that the contractual services are available only from a single source, the Department will post on the Vendor Bid System, notice of intended decision, pursuant to Section 120.57

(3), Florida Statutes to enter into a single source contract.

This posting is effective October 13, 2003 at 10:30 a.m. to October 22, 2003 at 10:30 a.m.

NOTE: There are no information packages available for this single source procurement.

Single Source will be available at:
3800 Commonwealth Blvd., MS 93
Carr Building, Room 235
Tallahassee, FL, 32399 -3000.

Please direct all questions to:
Shelly Kelley
Phone: (850) 245-2361
FAX: (850) 245-2411
Suncom Phone: 205-2361
Suncom FAX: 205-2411
Email: shelly.kelley@dep.state.fl.us

Any person with a qualified disability requiring special accommodations at the pre-bid conference and/or bid/proposal opening shall contact purchasing at the phone number above at least five (5) working days prior to the event. If you are hearing or speech impaired, please contact this office by using the Florida Relay Services which can be reached at 1 (800) 955-8771 (TDD).

The Department reserves the right to reject any and all bids or accept minor irregularities in the best interest of the State of Florida.

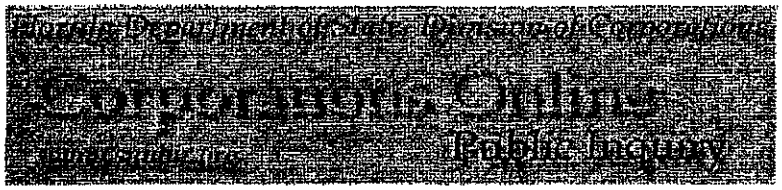
Minority Business Enterprises are encouraged to participate in the bidding process.

Click here to view more related documents.

VBS Helpdesk

Vendor Information

THE ACADEMY OF NATURAL SCIENCE ACADEMY OF NATURAL SCIENCES	
Address	10545 MACKALL ROAD ST. LEONARD MD 20685
County	00
Status Code	DMS REGISTERED
Minority Code	A
Business Designation	2
Contact Name	ROBERT GALLAGHER
Phone Number to Contact	(215)299-1037
Active/Inactive Code	ACTIVE IN SPURS & SAMAS
Bids State Flag	X
Bids North Flag	
Bids West Flag	
Bids Central Flag	
Bids South Flag	
Input Type Description	MFMP



Foreign Non Profit

THE ACADEMY OF NATURAL SCIENCES OF PHILADELPHIA, INC.

PRINCIPAL ADDRESS
1900 BENJAMIN FRANKLIN PARKWAY
PHILADELPHIA PA 19103

MAILING ADDRESS
1900 BENJAMIN FRANKLIN PARKWAY
PHILADELPHIA PA 19103

Document Number	FEI Number	Date Filed
F97000005576	231352000	10/20/1997
State	**Status**	**Effective Date**
PA	ACTIVE	NONE

Registered Agent

Name & Address
CORPORATION SERVICE COMPANY 1201 HAYS STREET TALLAHASSEE FL 32301-2525

Officer/Director Detail

Name & Address	Title
MONTGOMERY, JR., EDWARD A 7 BENJAMIN FRANKLIN PARKWAY PHILADELPHIA PA 19103	C
BAKER, JAMES DR 1900 BENJAMIN FRANKLIN PARKWAY PHILADELPHIA PA 19103	P
SOLTZ, JUDITH S 1650 MARKET STREET, 55TH FLOOR PHILADELPHIA PA 19192	S
RUSENKO, DAVID 1900 BENJAMIN FRANKLIN PARKWAY PHILADELPHIA PA 19103	V
ASHER, JOHN L JR. 1603 CLAIR MARTIN PLACE AMBLER PA 19002	T

Annual Reports

Report Year	Filed Date

2001	05/03/2001
2002	05/07/2002
2003	05/27/2003

Previous Filing | Return to List | Next Filing

No Events
No Name History Information

Document Images

Listed below are the images available for this filing.

05/27/2003 -- ANN REP/UNIFORM BUS REP
05/07/2002 -- COR - ANN REP/UNIFORM BUS REP
05/03/2001 -- ANN REP/UNIFORM BUS REP
04/12/2000 -- ANN REP/UNIFORM BUS REP
05/05/1999 -- ANNUAL REPORT
05/01/1998 -- ANNUAL REPORT

THIS IS NOT OFFICIAL RECORD; SEE DOCUMENTS IF QUESTION OR CONFLICT

Corporations Inquiry | Corporations Help

SSA0006

EMERGENCY/SINGLE SOURCE/CONTRACT EXCEPTION PROCUREMENT

Division: Resource Assessment & Management
Bureau: Mercury and Applied Science
Section:
Contact Person: Don Axelrad, Ph.D.
Telephone No.: 850 245-8306

Select One
☐ Emergency
☒ Single Source
☐ Contract Exception (includes after-the fact certifications)

Proposed Vendor/Contractor: Academy of Natural Sciences, Estuarine Research Center
Total Cost of Purchase: $389,640
Proposed Contract Term: 36 months
(specify in months)

DETAILED PROCUREMENT JUSTIFICATION: (Review instructions on reverse side before completing. Use space below. Continue on additional sheets, if necessary. Cover letter not required.)

This request is for single source procurement of contractual services from the Academy of Natural Sciences, Estuarine Research Center, St. Leonard, Maryland for a 36 month project to investigate the chemical factors that control the biotransformation of inorganic mercury species in Everglades sediments and waters into the toxic, bioaccumulative form, methylmercury. The Department requires these services to fulfill its responsibilities under the Everglades Forever Act and the multi-agency Florida Mercury Science Program. The Academy; principally through the skills of Dr. Cynthia Gilmour, Assistant Curator; and her highly qualified and experienced staff, is uniquely qualified to provide these services. Thorough review of the international scientific literature demonstrates that no other research group than Dr. Gilmour has the ability to perform the types of measurements and experiments needed, as below:

1. **Design, develop and emplace experimental treatment mesocosms in the Florida Everglades marshes; and conduct controlled, replicated multi-factorial experiments using amendments of mercury, sulfur, phosphorus and nitrogen, and other cofactors as needed, often as stable isotopes, to ascertain their influence as controls on the *in situ* production of methylmercury.**
2. **Using high-resolution ICP-Mass Spectroscopy and other appropriate techniques, analyze appropriate Mesocosm constituents to determine the process pathways of microbial uptake and methylation of added inorganic mercury, and influences of ancillary chemical additions on the rates of conversion of inorganic mercury to methylmercury.**

The undersigned individual(s) hereby attest(s) that he/she/they took part in the procurement represented and that he/she/they is (are) independent of, and have no conflict of interest, in the entity evaluated and selected.

Signature: [signature] Date: 10/3/03
Signature: Thomas D. Atkeson Date: 10-3-03
Signature: Date:
Signature: Date:
Signature: Date:
Signature: Date:

NOTE: INSTRUCTIONS FOR COMPLETING FORM ARE ON PAGE TWO..

IMPORTANT!!! IMPORTANT!!! IMPORTANT!!!

Separation of Duties Notice

DEP Contract No: SP632 Amendment No. N/A
DEP Contract Manager: Don Axelrad

The attached contract/contract amendment is being routed for review and execution by the Department. Adequate separation of duty is required in the procurement of goods and services by the Department. Please be advised that the subject contract/contract amendment must be executed by a reviewing authority for the DEP Contract Manager who is authorized to execute contracts on behalf of the Department. If the DEP Contract Manager happens to have the delegated authority to execute contracts on behalf of the Department, the DEP Contract Manager *must not execute* the attached contract/contract amendment.

Separation of duties, which is also referred to as segregation of duties, "involves ensuring that individuals do not perform incompatible duties. Duties are considered incompatible from a control standpoint when it is possible for an individual to commit an error or irregularity and then be in a position to conceal it in the normal course of his or her duties."[1]

---

[1]Boynton, William C. and Kell, Walter G., *Modern Auditing*, 6th ed., New York: John Wiley & Sons, Inc.,

If you have any questions regarding this notice, please contact the Contracts Office representative identified below for assistance.

Contracts Office Rep: Shelly Kelley	Phone: 850/245-2351
Date: October 27, 2003	SunCom: 205-2351

NOTE: This Notice is to be maintained in DEP Contract Manager's file.

CONTRACT

THIS CONTRACT is entered into between the STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION, whose address is 2600 Blair Stone Road, Tallahassee, Florida 32399-2400 (hereinafter referred to as the "Department") and THE ACADEMY OF NATURAL SCIENCES OF PHILADELPHIA, INC. whose address is 10545 Mackall Road, St. Leonard, Maryland 20685 (hereinafter referred to as the "Contractor"), a Pennsylvania non-profit corporation authorized to transact business in the State of Florida, to provide research services relating to the biogeochemical controls on methylmercury production in the Florida Everglades.

In consideration of the mutual benefits to be derived herefrom, the Department and Contractor do hereby agree as follows:

1. The Department does hereby retain the Contractor to provide research services relating to the biogeochemical controls on methylmercury production in the Florida Everglades as defined herein and the Contractor does hereby agree to perform such services upon the terms and conditions set forth in this Contract, Attachment A (Scope of Work), and all attachments and exhibits named herein which are attached hereto and incorporated by reference.

2. The Contractor shall perform the services in a proper and satisfactory manner as determined by the Department. Any and all equipment, products or materials necessary to perform this Contract shall be supplied by the Contractor, unless otherwise specified herein

3. The Contractor shall perform as an independent contractor and not as an agent, representative, or employee of the Department.

4. As consideration for the services rendered by the Contractor under the terms of this Contract, the Department shall pay the Contractor on a fixed price basis in the amount of $389,640.31. An initial funding increment in the amount of $124,083.12 is herein provided to fund the period of service commencing with execution of this Contract through June 30, 2004. Based upon continued satisfactory performance and annual appropriations by the Legislature, the Department reserves the right to provide increments of funding on an "as needed" basis up to $389,640.31. The Contractor shall be notified, by certified letter from the Director, Division of Resource Assessment and Management, of additional funding increments. In no event shall the Contractor continue to perform services once the authorized funding increment under this Contract is reached; nor shall the Contractor commence work on any part of the project that will exceed the balance of the current funding level until notice is received by the Contractor of an increase in funding. It is the Contractor's responsibility to know when the authorized funding increment is reached.

   The Contractor shall submit quarterly invoices in conjunction with progress reports as required herein. The invoices shall be based on the percentage of overall project completion. The Contractor shall submit a final invoice to the Department no later than thirty (30) days after the completion date of the Contract. All bills for amounts due under this Contract shall be submitted in detail sufficient for a proper pre-audit and post-audit thereof. All travel and incidental expenses are included in the fixed price amount of this Contract.

   The Contractor shall submit quarterly progress reports in conjunction with invoices which indicate the work performed during the reporting period, work scheduled for the next reporting period, problems encountered and resolutions of the problems, and any schedule updates, along with a summary of all

expenditures which shall include details of the current quarter expenditures. A detailed final report is due no later than thirty (30) days prior to the completion date of the Contract.

5. This Contract shall begin upon execution by both parties and remain in effect until June 30, 2006, inclusive. In accordance with Section 287.058(2), Florida Statutes, the Contractor shall not be eligible for reimbursement for services rendered prior to the execution date of this Contract. This Contract may not be renewed.

6. The State of Florida's performance and obligation to pay under this Contract is contingent upon an annual appropriation by the Legislature.

7. Pursuant to Section 215.422, Florida Statutes, the Department's Contract Manager shall have five (5) working days, unless otherwise specified herein, to inspect and approve the services for payment; the Department must submit a request for payment to the Florida Department of Financial Services within twenty (20) days; and the Department of Financial Services is given ten (10) days to issue a warrant. Days are calculated from the latter date the invoice is received or services received, inspected, and approved. Invoice payment requirements do not start until a proper and correct invoice has been received. Invoices which have to be returned to a contractor for correction(s) will result in a delay in the payment. A Vendor Ombudsman has been established within the Florida Department of Financial Services who may be contacted if a contractor is experiencing problems in obtaining timely payment(s) from a State of Florida agency. The Vendor Ombudsman may be contacted at 850/410-9724 or 1-800-848-3792.

8. In accordance with Section 215.422, Florida Statutes, the Department shall pay the Contractor, interest at a rate as established by Section 55.03(1), Florida Statutes on the unpaid balance, if a warrant in payment of an invoice is not issued within forty (40) days after receipt of a correct invoice and receipt, inspection, and approval of the goods and services. Interest payments of less than $1 will not be enforced unless a contractor requests payment. The interest rate established pursuant to Section 55.03(1), Florida Statutes may be obtained by calling the Department of Financial Services, Vendor Ombudsman at the telephone number provided above or the Department's Procurement Section at 850/922-5942.

9. The Contractor shall save and hold harmless and indemnify the State of Florida and the Department against any and all liability, claims, judgments or costs of whatsoever kind and nature for injury to, or death of any person or persons and for the loss or damage to any property resulting from the use, service, operation or performance of work under the terms of this Contract, resulting from any negligent act or failure to act by the Contractor, his subcontractor, or any of the employees, agents or representatives of the Contractor or subcontractor to the extent allowed by law.

10. The Department may terminate this Contract at any time in the event of the failure of the Contractor to fulfill any of its obligations under this Contract. Prior to termination, the Department shall provide ten (10) calendar days written notice of its intent to terminate and shall provide the Contractor an opportunity to consult with the Department regarding the reason(s) for termination.

    The Department may terminate this Contract without cause and for its convenience by giving thirty (30) calendar days written notice to the Contractor. In this event, the Contractor shall be reimbursed for satisfactory work performed up through the date of said termination.

    Notice shall be sufficient if delivered personally or by certified mail to the address set forth in paragraph 11.

11. Any and all notices shall be delivered to the parties at the following addresses:

Contractor	Department
The Academy of Natural Sciences of Philadelphia, Inc.	Florida Department of Environmental Protection
Estuarine Research Center	Mercury and Applied Science Program
Attn: Robert P. Gallagher	Attn: Mr. Don Axelrad, Ph.D.
10545 Mackall Road	2600 Blair Stone Road, MS#6540
St. Leonard, Maryland 20685	Tallahassee, Florida 32399-2400

12. This Contract may be unilaterally canceled by the Department for refusal by the Contractor to allow public access to all documents, papers, letters, or other material made or received by the Contractor in conjunction with this Contract, unless the records are exempt from Section 24(a) of Article I of the State constitution and Section 119.07(1), Florida Statutes.

13. The Contractor shall maintain books, records and documents directly pertinent to performance under this Contract in accordance with generally accepted accounting principles consistently applied. The Department, the State, or their authorized representatives shall have access to such records for audit purposes during the term of this Contract and for five years following Contract completion. In the event any work is subcontracted, the Contractor shall similarly require each subcontractor to maintain and allow access to such records for audit purposes.

14. The Department's Contract Manager is Dr. Don Axelrad, Telephone Number (850) 245-8306. The Contractor's Contract Manager for administrative matters is Mr. Robert P. Gallagher, Telephone Number (410) 586-9700. The Contractor's Contract Manager for technical matters is Dr. Cynthia Gilmour, Telephone Number (410) 586-9713. All matters shall be directed to the Contract Managers for appropriate action or disposition.

15. The Contractor covenants that it presently has no interest and shall not acquire any interest which would conflict in any manner or degree with the performance of services required.

16. This Contract has been delivered in the State of Florida and shall be construed in accordance with the laws of Florida. Wherever possible, each provision of this Contract shall be interpreted in such manner as to be effective and valid under applicable law, but if any provision of this Contract shall be prohibited or invalid under applicable law, such provision shall be ineffective to the extent of such prohibition or invalidity, without invalidating the remainder of such provision or the remaining provisions of this Contract. Any action hereon or in connection herewith shall be brought in Leon County, Florida.

17. No delay or failure to exercise any right, power or remedy accruing to either party upon breach or default by either party under this Contract, shall impair any such right, power or remedy of either party; nor shall such delay or failure be construed as a waiver of any such breach or default, or any similar breach or default thereafter.

18. The Contractor recognizes that the State of Florida, by virtue of its sovereignty, is not required to pay any taxes on the services or goods purchased under the terms of this Contract.

19. This Contract is neither intended nor shall it be construed to grant any rights, privileges or interest in any third party without the mutual written agreement of the parties hereto.

20. A. No person, on the grounds of race, creed, color, national origin, age, sex, or disability, shall be excluded from participation in; be denied the proceeds or benefits of; or be otherwise subjected to discrimination in performance of this Contract.

B. An entity or affiliate who has been placed on the discriminatory vendor list may not submit a bid on a contract to provide goods or services to a public entity, may not submit a bid on a contract with a public entity for the construction or repair of a public building or public work, may not submit bids on leases of real property to a public entity, may not award or perform work as a contractor, supplier, subcontractor, or consultant under contract with any public entity, and may not transact business with any public entity. The Florida Department of Management Services is responsible for maintaining the discriminatory vendor list and intends to post the list on its website. Questions regarding the discriminatory vendor list may be directed to the Florida Department of Management Services, Office of Supplier Diversity at 850/487-0915.

21. This Contract is an exclusive contract for services and may not be assigned in whole or in part without the written approval of the Department.

22. A. The Contractor shall not subcontract, assign, or transfer any work under this Contract without the prior written consent of the Department's Contract Manager. The Contractor agrees to be responsible for the fulfillment of all work elements included in any subcontract consented to by the Department and agrees to be responsible for the payment of all monies due under any subcontract. It is understood and agreed by the Contractor that the Department shall not be liable to any subcontractor for any expenses or liabilities incurred under the subcontract and that the Contractor shall be solely liable to the subcontractor for all expenses and liabilities incurred under the subcontract.

B. The Department of Environmental Protection supports diversity in its procurement program and requests that all subcontracting opportunities afforded by this Contract embrace diversity enthusiastically. The award of subcontracts should reflect the full diversity of the citizens of the State of Florida. The Department will be glad to furnish a list of minority owned businesses for consideration in subcontracting opportunities.

23. It is expressly understood and agreed that any articles which are the subject of, or required to carry out, this Contract shall be purchased from the corporation identified under Chapter 946, F.S., if available, in the same manner and under the same procedures set forth in Section 946.515(2), and (4), F.S.; and for purposes of this Contract the person, firm or other business entity carrying out the provisions of this Contract shall be deemed to be substituted for this agency insofar as dealings with such corporation are concerned.

The "Corporation identified" is PRISON REHABILITATIVE INDUSTRIES AND DIVERSIFIED ENTERPRISES, INC. (P.R.I.D.E.) which may be contacted at:

P.R.I.D.E.
12425 28th Street, North
St. Petersburg, FL 33716-1826
Toll Free: 1-800-643-8459
Website: www.pridefl.com

24. It is expressly understood and agreed that any articles that are the subject of, or required to carry out, this Contract shall be purchased from a nonprofit agency for the blind or for the severely handicapped that is qualified pursuant to Chapter 413, Florida Statutes, in the same manner and under the same procedures set forth in Section 413.036(1) and (2), Florida Statutes; and for purposes of this Contract the person, firm, or other business entity carrying out the provisions of this Contract shall be deemed to be substituted for the state agency insofar as dealing with such qualified nonprofit agency are concerned.

The "nonprofit agency" identified is RESPECT of Florida which may be contacted at:

RESPECT of Florida.
2475 Apalachee Parkway, Suite 205
Tallahassee, Florida 32301-4946
(850) 487-1471
Website: www.respectofflorida.org

25. To the extent required by law, the Contractor will be self-insured against, or will secure and maintain during the life of this Contract, Workers' Compensation Insurance for all of his employees connected with the work of this project and, in case any work is subcontracted, the Contractor shall require the subcontractor similarly to provide Workers' Compensation Insurance for all of the latter's employees unless such employees are covered by the protection afforded by the Contractor. Such self-insurance program or insurance coverage shall comply fully with the Florida Workers' Compensation law. In case any class of employees engaged in hazardous work under this Contract is not protected under Workers' Compensation statutes, the Contractor shall provide, and cause each subcontractor to provide, adequate insurance satisfactory to the Department, for the protection of his employees not otherwise protected.

26. The Contractor shall secure and maintain comprehensive general liability coverage with limits of not less than $1,000,000 per occurrence and $5,000,000 annual aggregate for bodily injury and property damage; and comprehensive automobile liability coverage with limits of not less than $1,000,000 combined single limit. The Contractor shall also maintain, during the life of the Contract, comprehensive watercraft liability coverage with limits of not less than $5,000,000 combined single limit. The Contractor's current certificate of insurance shall contain a provision that the insurance will not be canceled for any reason except after thirty (30) days written notice to the Department's Contracts Administrator.

27. All sampling and analyses performed under this Agreement must conform with the requirements set forth in Chapter 62,160, Florida Administrative Code and the Quality Assurance Requirements for Department Agreements, attached hereto and made a part hereof as Attachment B.

28. The purchase of non-expendable personal property or equipment costing $1,000 or more is not authorized under the terms of this Contract.

29. The Department may at any time, by written order designated to be a change order, make any change in the work within the general scope of this Contract (e.g., specifications, time, method or manner of performance, requirements, etc.). All change orders are subject to the mutual agreement of both parties as evidenced in writing. Any change order which causes an increase or decrease in the Contractor's cost or time shall require formal amendment to this Contract.

30. The employment of unauthorized aliens by any contractor/vendor is considered a violation of Section 274A(e) of the Immigration and Nationality Act. If the Contractor/vendor knowingly employs unauthorized aliens, such violation shall be cause for unilateral cancellation of this Contract. The Contractor shall be responsible for including this provision in all subcontracts with private organizations issued as a result of this Contract.

31. A person or affiliate who has been placed on the convicted vendor list following a conviction for a public entity crime may not perform work as a grantee, contractor, supplier, subcontractor, or consultant under a contract with any public entity, and may not transact business with any public entity in excess of the threshold amount provided in Section 287.017, F.S., for Category Two, for a period of 36 months from the date of being placed on the convicted vendor list.

32. The Contractor shall comply with all applicable federal, state and local rules and regulations in providing services to the Department under this Contract. The Contractor acknowledges that this requirement includes compliance with all applicable federal, state and local health and safety rules and regulations. The Contractor further agrees to include this provision in all subcontracts issued as a result of this Contract.

33. The State of Florida, through the Department of Management Services, has instituted MyFloridaMarketPlace, a statewide e-procurement system. Pursuant to Section 287.057(23), Florida Statutes (2002), all payments shall be assessed a Transaction Fee of one percent (1%), which the Contractor shall pay the State.

For payments within the State accounting system (FLAIR or its successor), the Transaction Fee shall, when possible, be automatically deducted from payments to the Contractor. If automatic deduction is not possible, the Contractor shall pay the Transaction Fee pursuant to Rule 60A-1.031(2), F.A.C. By submission of these reports and corresponding payments, the Contractor certifies their correctness. All such reports and payments shall be subject to audit by the State or its designee.

The Contractor shall receive a credit for any Transaction Fee paid by the vendor for the purchase of any item(s) if such item(s) are returned to the vendor through no fault, act, or omission of the Contractor. Notwithstanding the foregoing, a Transaction Fee is non -refundable when an item is rejected, returned, or declined, due to the Contractor's failure to perform or comply with specifications or requirements of the agreement.

Failure to comply with these requirements shall constitute grounds for declaring the Contractor in default and recovering reprocurement costs from the vendor in addition to all outstanding fees. CONTRACTORS DELINQUENT IN PAYING TRANSACTION FEES MAY BE EXCLUDED FROM CONDUCTING FUTURE BUSINESS WITH THE STATE.

34. This Contract represents the entire agreement of the parties. Any alterations, variations, changes, modifications or waivers of provisions of this Contract shall only be valid when they have been reduced to writing, duly signed by each of the parties hereto, and attached to the original of this Contract, unless otherwise provided herein.

REMAINDER OF PAGE INTENTIONALLY LEFT BLANK

IN WITNESS WHEREOF, the parties have caused this Contract to be duly executed, the day and year last written below.

THE ACADEMY OF NATURAL SCIENCES
OF PHILADELPHIA, INC.

By: _____
Title: VP FINANCE & ADMIN.

Date: 11/14/03

FEID No. 23-1352000

STATE OF FLORIDA DEPARTMENT OF
ENVIRONMENTAL PROTECTION

By: _____
Director, Division of Resource Assessment
and Management or designee

Date: 11-13-03

_____ for
Don Axelrad, DEP Contract Manager

_____
DEP Contracts Administrator

Approved as to form and legality:

_____
DEP Attorney

List of attachments/exhibits included as part of this Contract:

Type	Letter/Number	Description (include number of pages)
Attachment	A	Scope of Work (9 Pages)
Attachment	B	Quality Assurance Requirements for Department Contracts (4 Pages)

REMAINDER OF PAGE INTENTIONALLY LEFT BLANK

ATTACHMENT A

SCOPE OF WORK

Aquatic Cycling of Mercury in the Everglades: Linking Everglades Restoration, Land and Air Management

Overview

The Aquatic Cycling of Mercury in the Everglades (ACME) project team, consisting of researchers from the US Geological Survey and the Academy of Natural Sciences, has been investigating the factors leading to the formation of methylmercury (MeHg) and high levels of mercury in biota since 1995. In this next phase of this research, the ACME team will investigate specific linkages between current and forecasted changes to the physical, hydrologic and chemical aspects of the Everglades and mercury (Hg) contamination, including the studies of the impact of the Stormwater Treatment Area (STA) siting and operations on MeHg production and bioaccumulation.

The work plan for 2003/04-2005/06 has two separate, but linked components. In the first component, mesocosms studies will be used to address two objectives. First, the proposed mesocosm experiments will provide a more precise estimate of the "effect levels" and timing of sulfate and dissolved organic carbon (DOC) on methylmercury production by sulfate reducing bacteria (SRB). Second, the Contractor will evaluate a new hypothesis that external sulfate loading (and subsequent accumulation of sulfide in porewater) leads to toxicological impacts on indigenous emergent plants, which may be in part responsible for the proliferation of cattail.

The second component of this work plan is the development of a predictive model for MeHg production in the Stormwater Treatment Areas. This model should be applicable to the larger Everglades ecosystem. To develop a predictive methylmercury model, the Contractor proposes four areas of work: (1) additional synoptic field data in the STAs; (2) follow up examination of soil geochemistry, Hg and MeHg at ACME Everglades sites; (3) the creation of a numerical diagenetic model that links mercury-sulfur-carbon and can be used as a predictive tool for MeHg formation; and, (4) laboratory experiments to further refine understanding of the fundamental factors that lead to high levels of MeHg formation following drying and rewetting experiments.

This Scope of Work (SOW) outlines the work plan for ANSERC's portion of 2004-2006 ACME studies. This work is dependant on continued funding of and collaboration with the USGS members of the team. Background information on the ACME project to date, and a full description of the FY 2004-2006 research can be found in the full proposal for this work Held by the Contractor.

Research tasks under this Contract will address the factors affecting the production of methylmercury, and will:

1. Determine quantitatively the effects (individual and synergistic) of mercury, sulfate and dissolved organic carbon loading on MeHg production for site 3A-15.
2. Determine the critical range of sulfate concentrations between sulfate stimulation of SRB activity, and sulfide diminution of SRB-bioavailable Hg, providing information on the magnitude of MeHg production response, the timing and duration of the response, the linearity of response through time and with sulfate load for site 3A-15.
3. Determine for STA-2 Cell 1, the relationship between sulfate load and time for sulfide to accumulate to sedimentary pore water levels inhibitory to Hg methylation; or more generally, determine the relationship between sulfate load and time to inhibition of Hg methylation rate (the "sulfide brake"); determine the relationship between sulfide concentration and MeHg production for STA-2 Cell 1 sediments.
4. Determine the methylation efficiency for newly deposited ("new") vs. "old" mercury for site 3A-15. (Note 1)
5. Predict MeHg concentrations for STA and Water Conservation Area (WCA) soils under changing sulfide and sulfate concentrations. (Note 2)

6. Determine, with data input from the South Florida Water Management District (SFWMD), if Hg methylated in STA 2 Cell 1 is predominantly derived from recently deposited Hg or from existing pools in sediments
7. Determine the effect of drying and rewetting on STA 2 Cell 1 sediments, and the relationship between the amount of time that sediments are dry, and reduced sulfur oxidation, sulfate production and MeHg production.
8. Examine the effect of iron (Fe^{+2}) concentration on MeHg production in STA 2 Cell 1 sediments.
9. Examine changes in MeHg production since 1995 from follow-up examination of soil geochemistry, Hg and MeHg concentrations at ACME Everglades and STA 2 Cell 1 sites in 2003
10. Determine how soil chemistry and sulfate input affects MeHg production across the STAs, in order to provide input to a predictive model for methylation in existing and future STAs.
11. Develop reliable predictive tools with which to evaluate the efficacy of strategies to prevent anomalously high MeHg concentrations from building up within STA-2 Cell 1: specifically, construct a diagenetic transport-reaction model, using ACME and SFWMD data, that is capable of predicting the depth distribution of Hg methylation for the Everglades and Stormwater Treatment Areas at different surface water sulfate concentrations; adapt the model to describe drying and rewetting cycles; and, with Tetra Tech Inc, work to build the biogeochemical transport-reaction model into the Everglades Mercury Cycling Model.

Note 1: A characterization of the complexation of Hg in rain and dry deposition has not been conducted, but it is hypothesized that a) Hg in rain is mainly complexed to simple inorganic ligands and organic carboxyl ligands, and b) isotopic Hg additions behave more like the Hg in atmospheric deposition than Hg that has undergone transport and diagenesis in aquatic ecosystems.

Note 2: The ACME model should predict MeHg production across a range of S concentrations for a number of soil types in the STAs and in the WCAs. However, it does not address how rapidly S concentrations and chemistry would change in soils if S inputs decreased. The pool of reduced S (mainly organic) in northern Everglades soils is very large, and would feed the microbial S cycle for quite a while, especially if drying occurs.)

In addition, the research will determine if sulfide in sediments resulting from sulfate inputs to the EPA, is affecting emergent Everglades plants.

I. Mesocosm Experiments

A. Methylation and Bioaccumulation Response to Mercury, Sulfate and Carbon Dosing

The major purpose of these mesocosm studies is to examine the effects (individual and synergistic) of mercury, sulfate and carbon loading on MeHg production in the Everglades. Mesocosms studies to be conducted in the fall of 2003 will specifically examine the interactions between sulfate and dissolved organic carbon, and the relative effect of SO4 and DOC on newly deposited Hg compared to Hg already buried in soils. ACME mesocosm studies in winter 2001-2002 identified DOC as a strong stimulant of methylation, and showed that both sulfate and DOC have stronger impacts on the methylation of newly deposited Hg than of older pools of Hg. In the 2003 mesocosms, the interactions between DOC and sulfate will be evaluated for the first time, and the response to sulfate alone will be evaluated in more detail, and during a different season (summer). Five separate levels of sulfate dosing will be used, each in duplicate. Target sulfate concentrations in the mesocosms will encompass a range of sulfate concentrations from those found in central WCA 3A up to the low end of the range that is expected to inhibit methylation via sulfide production. This study will target the critical range of sulfate concentrations between stimulation and inhibition, providing information on the magnitude of response, the timing of the response and the linearity of the response through time and with sulfate load.

The 2003-2004 mesocosm experiments will be conducted at the 3A-15 site in the central Everglades, between June and November 2003. Mesocosms used in the experiment are newly purchased or previously used mesocosms that have never had mercury isotopes added. All previously-used mesocosms were relocated at the 3A-15 site for this experiment. Installation of the new mesocosms and relocation of existing mesocosms (some moved from other sites in the Everglades) took place during mid-April 2003 to allow time for re-equilibration prior to initiating the experiment in June. For fall 2003, there are 20 available, adjacent mesocosms in the slough habitat at 3A15.

The top panel in Fig 1 shows the design for the 2003 mesocosm study. Ten mesocosms will be used for sulfate plus mercury additions. There will be five different dosing levels, each in duplicate, and all with a single mercury level of 1X ambient atmospheric (22 $\mu g/m^2$; or 14.3 μg Hg). The sulfate dosing levels are anticipated to be 4, 8, 12, 16, and 20 mg/l, based on the results of our 2002 mesocosms. Each dosing level is has a duplicate mesocosm for quantifying natural variability in the response, which is especially high for sediment-based measurements. Six mesocosms (duplicates at each of 3 dosing levels) will be used to examine the effects of DOC, again all with a 22 $\mu g/m^2$ Hg dose. DOC isolated from eutrophied sites near canal discharge in Water Conservation Area 2A will be isolated by Dr. George Aiken at USGS Boulder, and used for the experimental dosing. Target addition levels for DOC will about 30, 40 and 50 mg/l. Finally, two mesocosms will have DOC, sulfate, and mercury isotope added, at the middle dose levels for DOC and sulfate. Two mesocosms will be used as unamended controls, and two areas outside the mesocosms will serve as unenclosed control areas.

Mesocosm dosing was done in June. Mesocosms were/will be sampled in June, August and November of 2003 (the latter sampling under this contract). This will allow ACME to examine a longer time frame for response to sulfate than has been examined in past mesocosm studies, that focused more intensely on the first few days to weeks after addition. USGS Reston will arrange for biweekly sulfate dosing of the mesocosms between June and November. ANSERC will sample sediments inside the mesocosms, and at the outside control sites, initially in June, and after 2 and 4 months. For the outside control sites, ANSERC will characterize Hg and MeHg concentrations in surficial soils and periphyton, Hg methylation rates in surficial soils using stable isotope techniques, and other biogeochemical characteristics of surficial soils (including dissolved sulfide, Fe, pH, and solid-phase Fe(II)/Fe(III), acid-volatile sulfides, and chromium reducible sulfides). USGS Reston will provide information on anions and nutrients in pore waters and surface waters, as total reduced sulfur in soils. USGS Middleton, WI, will provide surface water and pore water Hg and MeHg analyses. USGS Boulder will provide DOC and cation measurements. ANSERC and USGS Reston will collaborate on basic measurements (pH, DO, temperature, depth, etc) in the mesocosms. Inside the mesocosms, ANSERC sampled triplicate cores for Hg and MeHg in surficial soils in June and August, and will again in November. Cores from each mesocosm will be composited for analysis.

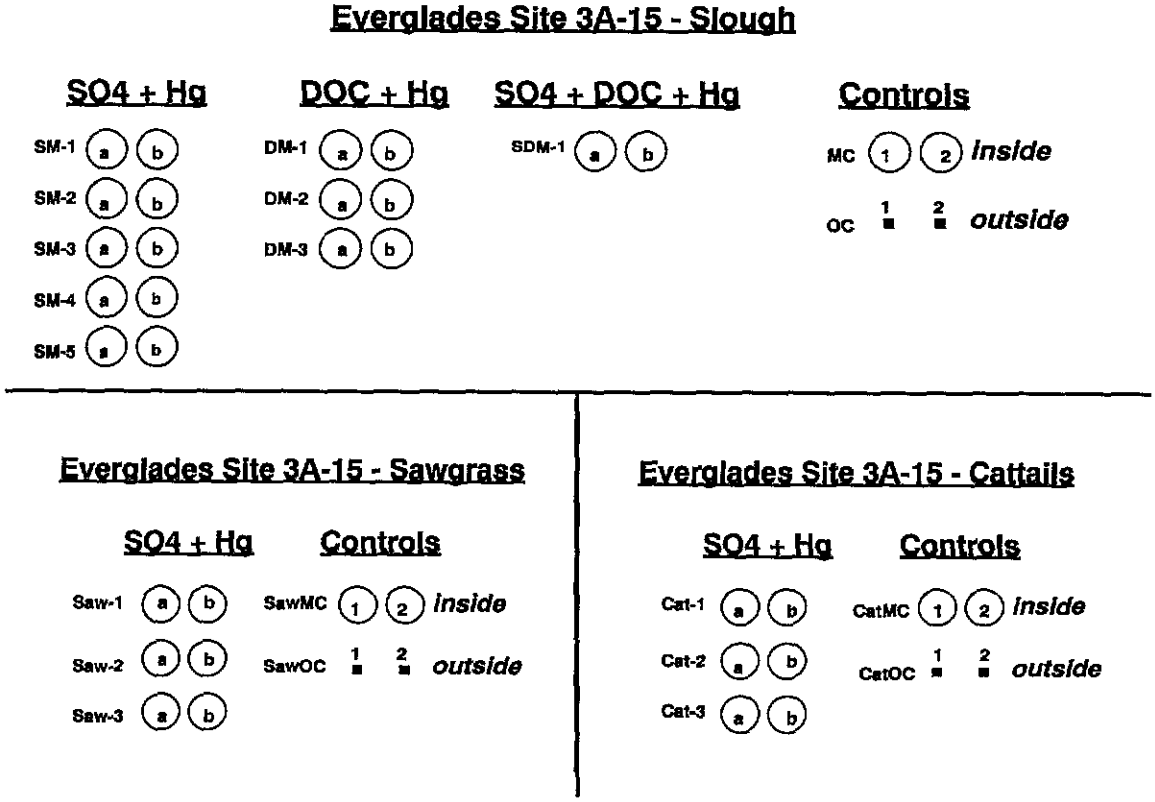
Changes in Hg bioavailability in response to changing sulfate, sulfide and DOC in sediments will be and modeled, based on these key parameters and the ancillary measurements noted above (e.g. Fe, pH, Ca, etc.).

This task work will be accomplished during State fiscal years 03/04, 04/05, and 05/06. Field work will be done during FY 03/04 and FY 04/05. Analysis of samples and data will begin as soon as samples are collected and will be completed in FY 05/06. Final reporting will occur in FY 05/06. The table below identifies the schedule for the work under this task.

B. Sulfur Toxicity Mesocosm Study

Conventional wisdom holds that changes in macrophyte distributions (cattail replacing sawgrass) has resulted from excess phosphorus entering the ecosystem. However, areas of the ecosystem where these changes have occurred are also heavily contaminated with sulfur. The Contractor hypothesizes that sulfide resulting from microbial sulfate reduction in soils has a negative impact on oxygen uptake by plants that are not evolved to be sulfide resistant. Sawgrass, and much of the vegetation in tree islands may be sensitive to sulfide. Cattails, with their ability to "pump" air through their root systems, may be more sulfide resistant that sawgrass. High sulfate and hence sulfide levels may have played an important, yet previously recognized, importance in the proliferation of cattail in sulfate and phosphate affected areas of the Everglades.

REMAINDER OF PAGE INTENTIONALLY LEFT BLANK



The Contractor will employ mesocosms and sulfate dosing in sawgrass and cattail dominated sites within WCA3A to test this hypothesis. Mesocosms were installed in April and June of 2003, near 3A15. Cattail areas were found downstream from tree islands. The cattail and sawgrass mesocosms for this experiment are within 100 yards of each other. At least 6, and probably 9 mesocosms will be used in each type of vegetation. Additional replication may be needed because of the high spatial variability in initial plant type and cover between mesocosms. The minimal experimental design for this field exercise is illustrated in the bottom panel of Figure 1.

The experiment will involve addition of sulfate at three levels: 70 mg/l, 30 mg/l, and 10 mg/l; each level run at least in duplicate. These levels are higher than the levels used in the MeHg production mesocosm study above, as sulfide toxicity is expected to occur at higher sulfate levels than those required to stimulate Hg methylation. A pair of control mesocosms will be used in each vegetation type, as well as a pair of external control sites.

These experiments are scheduled to begin in November 2003. Sulfate additions will go on for about 18 months, in order to examine sulfate effects during the entire annual growth cycle of the plants. However, the Contractor will be flexible with the timing of this experiment based on ongoing finding. USGS Reston will be responsible for sulfate dosing, and sulfur chemistry as described above for the 2003 Hg, SO4 and DOC dosed mesocosms. USGS Middleton will examine Hg and MeHg in surface water. ANSERC will characterize Hg and MeHg, and some aspects of S chemistry (as in other mesocosm experiments) both in sediments, both in outside control sites initially, and on approximately 6-month intervals during the study, as described above. Soils sampling within the mesocosms will be limited, in order to minimize damage to plants. Soils within the mesocosms will be sampled once during the study, and again at the end of the study. The number of cores used in composite samples from each mesocosm will be determined once sampling begins. All coring sites within the mesocosms will be marked with small PVC tubing. In addition to providing information on sulfide toxicity to sawgrass and cattails, this longer mesocosm study will provide information on the buildup of sulfide in Everglades sediments over long time frames, and the resultant response in MeHg. Sulfur loads in this experiment will be similar to those in the STAs.

This task work will be accomplished during State fiscal years 03/04, 04/05, and 05/06. Field work will be done during FY 03/04 and FY 04/05. Analysis of samples and data will begin as soon as samples are collected and will be completed in FY 05/06. Final reporting will occur in FY 05/06. The table below identifies the schedule for the work under this task.

II. Developing a predictive model for methylmercury production in the Everglades and Stormwater Treatment Areas

STAs have been and continue to be constructed across the northern Everglades, primarily for the removal of nutrients from runoff waters that in part discharge to the Everglades. The full utilization of these STAs is important aspect of the overall Everglades restoration plan, and achieving its goals. However, production of methylmercury (MeHg) within certain STAs, particularly STA-2 Cell 1, have prevented full utilization of these wetlands for their intended use and bring into question their net overall benefit. The SFWMD and the State of Florida seek information that would allow management of STAs to reduce or eliminate excess MeHg production events. Studies conducted by the ACME project over the past few years have shown the importance of sediment geochemistry to methylmercury production, including the impacts of sulfate, sulfide and dissolved organic carbon on MeHg production during wet conditions, and the importance of drying and rewetting cycles on sulfur chemistry.

The Contractor's studies suggest that there are three main, manageable, controls on MeHg production in the STAs: antecedent soil chemistry, inflowing water chemistry, and interior water level maintenance. Over the next three years, the Contractor will conduct a suite of studies that are designed to provide more information on each of these controls, and to produce a predictive model for MeHg production in the STAs.

The proposed study has four linked components: (1) survey of soil geochemistry, Hg and MeHg in STA soils; (2) follow up examination of soil geochemistry, Hg and MeHg at ACME Everglades sites; (3) diagenetic model for MeHg; and (4) examination of the influence of drying and wetting cycles across a wider range of soil types. Each of these components is discussed in detail below.

A. Survey of soil geochemistry, Hg and MeHg in STA soils.

The first component is an examination of STA soil geochemistry, especially sulfur, organic matter and iron content, relative to Hg/MeHg content. This component consists primarily of a field survey of soil geochemistry across the STAs. The objective of this survey is to test the Contractor's Everglades-based understanding of MeHg production in the STAs. Currently operating STAs, and STAs under construction and planned for construction, will be examined during Florida FY 2004 and 2005. Site-selection criteria will include examination of a wide variety of soil and land-use types, and the management needs of the agencies responsible for Everglades restoration planning and operation. Specific objectives of this component are to provide baseline data for geochemistry and Hg/MeHg content of STA soils, and to evaluate the ACME conceptual model for control of MeHg production in Everglades soils for STA soils.

Six sites within the STAs will be examined in FY 03/04 and six more in FY 04/05. Site access will be via helicopter, through the SFWMD. Site characterization will be similar to ACME site characterization during 1995-1998. Mercury and MeHg will be measured in surface soils, interstitial waters, surface waters, periphyton and Gambusia if available. Other standard ACME analytes to be measured include for bulk sediment: total sulfur, acid volatile sulfide, chromium reducible sulfur, organic sulfur, organic carbon, bulk density, and moisture content. Surface waters and pore waters will be analyzed for sulfate, partially reduced sulfate species, sulfide, total iron, total manganese, pH, and dissolved organic carbon. Analytes in bold will be measured by ANSERC.

Field sampling and sample analysis for this task will be evenly divided between State fiscal years 03/04 and 04/05. The table below identifies the schedule for the work under this task.

B. Follow up examination of soil geochemistry, Hg and MeHg at ACME Everglades sites.

The ACME project examined eight discrete Everglades sites (ENR 103, F1, U3, 2BS, 3A15, 3A33, TS7, and TS9) in detail, 2-3 times per year from 1995 through 1998. Resampling of the ACME sites will provide information on changing Hg accumulation, MeHg production and bioaccumulation relative to changes in flow patterns and decreases in MeHg in biota since 1998. Six to eight ACME sites will be revisited in the fall of 2003 by ANSERC and USGS personnel. Sites will include ENR103, F1, U3, 2BS, 3A33, 3A15, TS7 and TS9. Site access will be via helicopter. Parameters for analysis and analytes measured by ANSERC are the same listed in part A above. This task will be completed in during State fiscal year 03/04. The table below identifies the schedule for the work under this task.

C. Diagenetic model for MeHg production

The third component is the construction of a diagenetic model for Hg methylation. This model will specifically code the dependence of methylation on microbial activity and soil geochemistry, and will run in parallel with the larger-scale modeling efforts (EMCM) being developed under another contract. The

Contractor will couple the developing of models for Hg concentration and complexation in sediment pore waters with a diagenetic model of the biogeochemical activity of microbial processes in sediments, to create a predictive model for MeHg production in Everglades and STA soils. The biogeochemical model will be adapted from a model for the simulation of organic matter decomposition and Fe redox cycling in freshwater wetland sediments (Roden in prep.). Dr. Eric Roden will take the lead on numerical development of the model. Work on this model will progress throughout the two-year study. Initial model development will take place using existing data from the ACME sites. The model will be adapted for STA soils as data are collected. The Contractor will also try to model drying and rewetting cycles, by adapting the diagenetic model for oxidizing conditions.

Specific objectives of this component are: (1) construct a diagenetic transport-reaction model that is capable of predicting the depth distribution of Hg methylation as a function of sediment biogeochemical zonation and the relative abundance and physiological-biochemical properties of different functional groups of microorganisms; (2) test the model first against the ACME biogeochemical field data, then adapt the model as needed for use in STA soils; (3) Adapt the model as needed to describe drying and rewetting cycles; and, (4) work with Reed Harris to build a simplified version of the biogeochemical transport-reaction model into the Everglades Mercury Cycling Model. The model will be created collaboratively between Dr. Gilmour at ANSERC and Dr. Roden at the University of Alabama. The deliverable for this task will be the model itself, and its application to the prediction of MeHg concentration in the STAs. Initial model construction will occur in State fiscal year 03/04. Testing and adaptation of the model for use in the STAs will occur during State fiscal years 04/05 and 05/06. Integration with the E-MCM model will be an ongoing process over the three year project, but will depend on continued funding for E-MCM model development.

III. Examination of the influence of drying and wetting cycles across a wider range of soil types

The last component is continued experimental examination of the effect of drying and rewetting on soils in the STAs. Previous studies examined the effect of drying and rewetting on STA2 Cell 1 soils, and found substantial MeHg production upon rewetting of these soils after drying. Longer drying increased MeHg production upon rewetting. MeHg production after a drying and rewetting cycle in STA soils exceeds MeHg production after the same drying and rewetting of Everglades 3A15 soils. The objective of this component is to assess the amount of MeHg production in the different soil types found across the STAs, in order to 1) provide information to managers how flow strategies will affect MeHg production, and 2) provide quantitative date on the geochemistry of drying and rewetting across soil types for development of the diagenetic model.

Drying and rewetting experiments will be conducted on soils collected from 4 sites within the STAs. Sites will be chosen to represent a range of soil geochemistries, based on information collected in part II. A. above. Experimental studies of the influence of soil drying and rewetting on MeHg production will be done using the same design and facilities used in for spring 2003 experiments. Cores will be collected in Florida and driven to ANSERC, where they will be dried in a temperature and light-controlled environment. The amount of drying time will be determined based on discussion of STA operations with the SFWMD. Replicate soils cores (~20) will be collected intact from each of chosen sites. In addition to cores collected for drying and rewetting experiments, additional samples will be taken to assess mercury and sulfur biogeochemistry *in situ* at the time of collection. Cores will be collected in 7 cm PVC barrels. After drying, cores will be rewetted with water from the appropriate inflow canal, and dosed with a stable mercury isotope. The soil and surface water from triplicate rewetted cores will be sampled at 3 time points after rewetting, to be chosen based on experiments to date, and flow conditions in the STAs. Solid phase samples and pore water samples will be taken by sacrificing whole cores.

The Contractor will set and run these experiments. Analysis of samples will be split as described above between ANSERC and the USGS labs. The soil will be analyzed for total and methyl-mercury using ICP-quadrupole mass spectrometry by ANSERC. Digestion or distillation of samples for total and methylmercury analysis will be as previously described by ACME. Other soil measurements will include total sulfur, acid volatile sulfide, chromium reducible sulfur, organic sulfur, organic carbon, bulk density, and moisture content using standard wet and instrumental analytical methods. All of the solid phase measurements except total S and organic carbon content will be performed by ANSERC. Surface waters will be analyzed for filtered total mercury and MeHg by USGS Middleton. USGS Reston will analyze anions, and partially reduced sulfate species in surface water; ANSERC will analyze sulfide and iron, temperature and DO; USGS Boulder will analyze dissolved organic carbon.

This task shall be completed during State fiscal year 05/06. The table below identifies the schedule for the work under this task.

Target activities for quarterly budget periods, by task

I. Mesocosm Experiments

Budget Year	Quarterly Report Date	Target activities		% completion of annual task budget
Year 1, FY 03/04	Jan 15, 2004	Major field sampling, Nov	Complete 20% of overall sample analysis	50%
	Mar 15, 2004	Major field sampling, Feb	Complete 10% of overall sample analysis	25%
	Jun 1, 2004 FY final report	Major field sampling, May FY final report	Complete 10% of overall sample analysis	25%
Year 2, FY 04/05	Oct. 1, 2004	Major field sampling, Aug	Complete 10% of overall sample analysis	25%
	Jan 1, 2005	Major field sampling, Nov	Complete 10% of overall sample analysis	25%
	Apr 1, 2005	Major field sampling, Feb	Complete 10% of overall sample analysis	25%
	Jun 1, 2005 FY final report	Major field sampling, May FY final report	Complete 10% of overall sample analysis	25%
Year 3, FY 05/06	Oct. 1, 2005	Major field sampling, Aug	Complete 10% of overall sample analysis	25%
	Jan 1, 2006	Major field sampling, Nov	Complete 10% of overall sample analysis	25%
	Apr 1, 2006	Final report preparation	Data compilation	25%
	Jun 1, 2006	Submit final data report	Complete data compilation	25%

Annual Budgets for Mesocosm Experiments

FY 2003/2004	$ 62,889.37
FY 2004/2005	$ 76,301.22
FY 2005/2006	$ 38,172.83
Total	$177,363.42

II. Developing a predictive model for methylmercury production in the Everglades and Stormwater Treatment Areas

Budget Year	Quarterly Report Date	Target activities				% completion of annual task budget
		Field sampling	Sample analyses		Model development	
Year 1, FY 03/04	Jan 15, 2004	Field survey of ACME sites (June)	Analysis of 33% ACME site samples		Construction of initial diagenetic model	30%
	Mar 15, 2004	STA field survey, Feb	Analysis of 33% ACME site samples		Construction of initial diagenetic model	35%
	Jun 1, 2004 FY final report	STA field survey, May	Complete analysis of ACME site samples	Analysis of 15 % STA site samples	Test diagenetic model against ACME data set	35%
Year 2, FY 04/05	Oct 1, 2004		Data report, ACME site samples	Analysis of 15 % STA site samples	Test diagenetic model against ACME data set	25%
	Jan 1, 2005			Analysis of 15 % STA site samples	Adapt diagenetic model for use in STAs	25%
	Apr 1, 2005	STA field survey, Feb		Analysis of 15 % STA site samples	Adapt diagenetic model for use in STAs	25%
	Jun 1, 2005 FY final report	STA field survey, May		Analysis of 15 % STA site samples	Adapt diagenetic model for use in STAs	25%
Year 3, FY 05/06	Oct. 1, 2005			Analysis of 15 % STA site samples	Adapt diagenetic model for dry/rewet cycles	25%
	Jan 1, 2006			Complete analysis of STA site samples	Adapt diagenetic model for dry/rewet cycles	25%
	Apr 1, 2006	Final report preparation		Data compilation	Final report preparation	25%
	Jun 1, 2006	Submit final data report		Complete data compilation	Submit final model report	25%

Annual Budgets for Predictive Model Development

FY 2003/2004	$ 61,193.75
FY 2004/2005	$ 67,571.54
FY 2005/2006	$ 24,974.00
Total	$153,739.29

III. **Dry/Rewet Experiments**

Budget Year	Quarterly Report Date	Target activities		% completion of annual task budget
Year 3, FY 05/06	Oct. 1, 2005	Soil collection from STAs	Complete 10% of overall sample analysis	25%
	Jan 1, 2006	Dry/rewet experiments at ANSERC	Complete 40% of overall sample analysis	25%
	Apr 1, 2006	Dry/rewet experiments at ANSERC	Complete 40% of overall sample analysis	25%
	Jun 1, 2006	Submit final data report	Complete data compilation	25%

TOTAL ANNUAL BUDGET FOR DRY/REWET EXPERIMENTS $58,537.60

REMAINDER OF PAGE INTENTIONALLY LEFT BLANK

ATTACHMENT B
Quality Assurance Requirements for Department Contracts

1 All sampling and analyses performed under this Contract must conform to the requirements set forth in Chapter 62-160, Florida Administrative Code (F.A.C.) and the document "Requirements for Field and Analytical Work performed for the Department of Environmental Protection under Contract" (DEP-QA-002/02), February 2002.

2 LABORATORIES

a. The Department has determined that because of the nature of the analytical work, certification by the Department of Health Environmental Laboratory Certification Program is not necessary. However, all laboratory activities shall conform to the standards of the National Environmental Laboratory Accreditation Conference (NELAC).

b. The laboratory shall ensure that an initial demonstration of capability (IDOC) specified in Appendix C of Chapter 5 in the NELAC standards is performed for each proposed test method. The IDOC shall be performed before the test procedure is used to generate data for this contract. If requested by the Department, documentation that supports the IDOC shall be made available for review.

c. Performance test samples (where available) shall be successfully performed at least twice annually. Analysis of standard reference material (SRM), with test results within the acceptable range for the SRM may be used in lieu of performance test samples. The laboratory must provide documentation for each analytical test that, within the last 6 months, either performance test samples have been passed, or standard reference materials have been within the acceptance limits of the SRM.

d. All non-standard laboratory procedures (i.e. those that do not appear on the Department's list of recognized methods) shall be submitted for review and approval in accordance with DEP-QA-001/01, "New and Alternative Analytical Laboratory Methods", January 1, 2002. The method must be approved by the Department before use.

e. The CONTRACTOR shall ensure that the essential quality control measures, laboratory report content and documentation are consistent with Chapter 5 of the NELAC standards and DEP-QA-002/02. In addition,

i. The CONTRACTOR shall ensure that at least five percent of the field-collected environmental samples associated with this project are used to prepare matrix spikes, and laboratory duplicates or matrix spike duplicates. Spike levels must be at concentrations specified in item iii below.

ii. Laboratory Control Samples (also known as Laboratory Fortified Blanks) (LCS) must be evaluated with each analytical batch at the same concentration as the sample matrix spikes. The results must meet method-specified limits.

iii. The final concentration of any spike fortification must be at the laboratory's stated PQL or at the action level if it exceeds the PQL. If the measured sample background exceeds the specified spike level by more than a factor of two, then the spike level must be 2-5 times the measured background level in the sample that is selected for spiking. If a spiked sample is spiked at an incorrect level, then the entire batch of samples must be re-prepared, a new aliquot of the same sample must be re-spiked at the correct level for this batch, and the batch reanalyzed. The sample to be spiked should be randomly selected, and it must be reported which sample was spiked. All spike fortification must take place prior to any necessary preparation. The results must meet the established laboratory acceptance criteria for the specific matrix. If none have been developed, the laboratory shall use the criteria for LCS until such limits are established.

iv. Sample duplicates or matrix spike duplicates must be evaluated for precision.

v. Continuing Calibration Verifications (CCV's) must be analyzed at a minimum of 5% frequency, or one for every 20 samples. In order to accept the calibration run, all CCVs must meet the method specified acceptance criteria.

vi. When an initial instrument calibration is not performed, continuing calibration Verifications (CCV's) must be analyzed daily prior to analyzing samples. A CCV must also be analyzed at the end of the sampling day or every 12 hours whichever is less.

vii. No analyses may be performed using expired reagents, calibration solutions or check solutions

viii. The concentration of each calibration standard used to generate a nonlinear calibration curve must be calculated based on the curve. All calculated calibration concentrations must be within 85% - 115% of the known concentration for that standard.

ix. Linear instrument calibration curves must have a correlation coefficient of at least 0.995.

x. If a relative response factor is used to determine the sample concentration, the continuing calibration checks must meet the method stated acceptance criteria.

xi. Analytical sensitivity must be evaluated using a check standard prepared at the practical quantitation limit for each analytical run as described above for PQLs.

xii. The absolute value of the raw instrument value must be less than the MDL for all blanks.

xiii. If method control limits for any measurements are exceeded (including control limits for sample matrix spikes), then the analysis must be repeated if possible. All sample data that is associated with a failed quality control measure must be appropriately qualified as specified in Chapter 62-160, F.A.C. An explanatory comment must be attached to the final report for each result that has a qualifier code other than U, I, or A. Any additional qualifier codes used, but not explicitly provided for in Chapter 62-160, F.A.C., must be identified and defined in the report.

xiv. If a method blank or PQL check fails, the blank and associated sample results must be reported with the appropriate qualifier from Chapter 62-160, F.A.C., unless the affected results are at least 10 times the absolute value of the observed bias.

xv. The reported MDL and PQL for each sample must be adjusted for dilution factors, and any relevant preparation weights and volumes.

xvi. Field duplicates (not to be confused as laboratory duplicates) shall be collected and analyzed for at a frequency of 5% of each matrix/analyte combination.

xvii. All field duplicate results greater than the PQL should agree within 20% RPD for each measured analyte. In the event that field duplicate agreement is not observed, the laboratory must investigate sufficiently to determine that poor precision is not due to a laboratory error, and report the results with appropriate qualifiers and/or comments.

xviii. If a field blank, equipment blank or trip blank result is greater than the MDL, the result must be confirmed by reanalyzing a new aliquot of the sample. The laboratory must investigate sufficiently to determine that positive blank results are not due to a laboratory error, and report results with appropriate qualifiers and/or comments.

3. FIELD ACTIVITIES

a. All sample collection and field activities shall be performed in accordance with the Department's "Standard Operating Procedures for Field Activities" (DEP-SOP-001/01 dated January 1, 2002).

b. Any non-standard field procedure shall be submitted for review and approval in accordance with FA 2000 of the Department's Standard Operating Procedures. The procedure must be approved by the Department before use.

c. In addition:

i. The CONTRACTOR shall ensure that the laboratory is provided with sufficient sample volume to perform the matrix-related quality control indicators at a frequency of 5% per test and matrix.

ii. Field duplicates (not to be confused as laboratory duplicates) shall be collected and analyzed for at a frequency of 5% of each matrix/analyte combination.

4. REPORTING, DOCUMENTATION AND RECORDS RETENTION

   a. All laboratory and field records as specified in Chapter 62-160, F.A.C. shall be retained for a minimum of five years after the project completion.

   b. In addition to the NELAC-compliant laboratory report, the Contractor shall require that the laboratory provide additional information to satisfy the Tier 1 (basic reporting options) validation requirements as outlined in DEP-QA-002/02.

   c. The data for validation purposes shall be submitted in the electronic format specified in DEP-QA-002/002.

   d. All applicable data qualifier codes as mandated by Chapter 62-160, F.A.C. and included in DEP-QA-002/02 shall be used.

   e. The Contractor shall adhere to the documentation and records requirements for project data contained in DEP-QA-002/02.

   f. All field and laboratory records that are associated with work performed under this contract shall be organized so that any information can be quickly and easily retrieved.

5. AUDITS

   a. AUDITS BY THE DEPARTMENT – Pursuant to 62-160.650, F.A.C., the Department may conduct audits of field and/or laboratory activities. In addition to allowing Department representatives to conduct onsite audits, the Contractor, upon request, must provide the Department with the requested information, including the raw analytical data for all analyses of a sample (regardless of whether the data are reported). If an audit by the Department results in a determination that the data are not usable for the proposed purpose, the Department reserves the right to terminate the contract

   b. PLANNING REVIEW AUDITS –

      i. Initial: Within one month after the second sampling and analysis event has been completed (including all analyses), the Contractor and all associated subcontractors shall review the planning document (see 6 below) relative to the field and laboratory activities to determine if the data quality objectives are being met, identify any improvements to be made to the process, and refine the sampling design or schedule. A summary of the review, including any corrective action plans or amendments to the planning document shall be sent to the DEP Contract Manager within one month of the review, and a copy shall be maintained with the permanent project records.

      ii. Ongoing: Planning reviews as described in 1 above shall occur annually.

   c. QUALITY SYSTEMS AUDITS – The Contractor and all subcontractors shall ensure that the required laboratory and field quality system and management systems audits are performed, and documented in the organization's records.

   d. STATEMENTS OF USABILITY - As a part of the audit process and the final report, the Contractor shall provide statements about data usability relative to the Project Data Quality Objectives and Data Quality Indicators

6. PLANNING DOCUMENTS

   a. Within 30 days of contract execution, the Contractor shall submit a detailed project proposal or sampling and analysis plan that discusses the information contained in contained in the document "Requirements for Field and Analytical Work Performed for the Department of Environmental Protection Under Contract, DEP-QA-002/02" and the additional topics specified in 62-160.600, F.A.C.

   b. The Contractor and affected subcontractors have three (3) opportunities to submit an acceptable sampling and analysis plan to the Department. If any plan fails the approval process three (3) times, the Department may terminate the Contract in its entirety. Failure to provide acceptable Sampling and Analysis Plans as required will result in suspension or termination of this Contract.

c. The DEP Contract Number shall appear on the title page of the submitted document. Within forty-five (45) days of receipt of properly identified documents by the Department, the Department shall review and either approve the document, or provide comments to the Contractor and affected subcontractors as to why the Plan is not approved. If further revisions are needed, the Contractor shall then have fifteen (15) days from the receipt of such comments to respond. The Department shall respond to all revisions within 30 days of receipt.

d. If Plan review is delayed, through no fault of the Contractor, beyond sixty (60) days after the Plan is received by the Department, the Contractor shall have the option, after the Plan is approved, of requesting and receiving an extension in the term of the Contract for a time period not to exceed the period that review was delayed. This option must be exercised at least sixty (60) days prior to the current termination date of the Contract.

e. Sampling and analysis may not begin until the Plan been approved.

f. Once approved, the Contractor shall follow the protocols specified in the approved Plan including, but not limited to:

   i. Ensuring that all stated quality control measures are collected, analyzed and evaluated for acceptability;

   ii. Using only the protocols approved in the Plan; and

   iii. Using only the equipment approved in the Plan.

g. If any significant changes such as changes in procedures or test methods, changes in organizations, or changes in key personnel occur, the Contractor shall submit appropriate amendments to the Department Contract Manager for review and inclusion into the Sampling and Analysis Plan. Failure to submit the required amendments or to meet any of the above-stated conditions may result in the decision by the Department Contract Manager to suspend or terminate the Contract.

7. DELIVERABLES

a. The following outlines the expected schedule for the deliverables that are associated with the Quality Assurance requirements of this Contract:

   ii. Non-standard laboratory or field procedures - Prior written approval, or submission of the complete packet of information for review.

   iii. Planning review audits – As specified in 5.b.

   iv. Statement of Usability – As specified in 5.d.

   v. Planning Document - see 6.

   vi. Copies of Performance Test Results - As specified in 2.c. One set of acceptable test results shall be submitted before sampling and analysis begins.

Note: All documents referenced in the Attachment are available at the following website: http://www.dep.state.fl.us/labs

REMAINDER OF PAGE INTENTIONALLY LEFT BLANK

SUMMARY OF CONTRACTUAL SERVICES AGREEMENT/ PURCHASE ORDER

OLO/Department: **37- Department of Environmental Protection** Agency Contact: **Shelly Kelley**

Telephone #: **850-245-2351**

Total Contract Amount: **$124,083.12** Total Amount of Previous Payments: _____

Contract /P.O. #: **SP632**

Contractor/Vendor/Payee: **The Academy of Natual Sciences of Philadelphia, Inc. (ANSERC)**

Contract Start Date: _____ **(execution)** Contract End Date: _____ **(36 mo.)**

Contract Last Signed Date: _____

Type of Services: **Research Services**

Method of Payment:

X Fixed Rate _____ Lump Sum _____ Cost Reimbursement _____ Cost Plus (any combination of these) N Advance Funded

Deliverables Including Minimum Performance Standards	Payment Amount
See Attached pages from Scope of Work	

Method of Procurement: ITB _____ RFP _____ ITN _____ Reference # _____

Single/Sole Source **DEP 03/04 SSAOOR** Emergency Certification _____

Other (Specify) _____

Management Controls:

_____ (a) All the above information is true and correct; the undersigned management represents that controls are in place to insure that goods/services are received and payments are made in accordance with contract terms.

_____ (b) All completed work will be verified in a certified statement signed by the contract manager or higher authority prior to payment. The undersigned understands that the office of the State Chief Financial Officer reserves the right to either appoint special contract monitors or to conduct periodic site post-audits of any contracts.

Management Name (please print) _____

Management Approval Signature _____

Management Approval Date _____

Revised 10/2003

CONTRACT PROVISIONS

☒ Written Document* (Contract or Purchase Order) [287.058(4)]
☒ Deliverables/Reports* [287.058 (1)(d)]
☒ Final Completion/Contract Term* [287.058 (1)(e)]
☒ Renewal Provision* [287.058 (1)(f)]
☒ Execution Date/Signature Page* [287.058(2)]

☒ Annual Appropriation* [287.0582]
☒ Pre & Post Audit/Submission of Invoice* [287.058(1)(a)]
☒ Prompt Payment/Vendor Ombudsman* [215.422(5)]

☒ Public Entity Crime* [287.133]

☐ Mental Health Only* [287.058(3)]

☒ Unilateral Cancellation - Ch 119* [287.058(1)(c)]

☒ Type of business entity

☐ 5% Overhead (universities, community college system & state agencies) 216.346, F. S.

☒ Travel* 287.058 (1)(b), F. S.
- ☒ Fixed Price
- ☐ No Travel Authorized
- ☐ 112.061, F. S.

☒ Indemnification
- ☒ Private or non-profit organizations
- ☐ State of Florida Governmental Agencies
- ☐ Federal Gov't/State Agencies outside Florida

☒ PRIDE Provision 946.515 (6) F. S. (non-profit & profit organizations)
☒ RESPECT Provision 413.036(3) F. S. (non-profit & profit organizations)
☐ Provision for Use of State Funds to Purchase or Improve Real Property 287.05805 F.S.

☒ Delivery of Notices

☒ Choice of Law/Forum

☒ Waiver of Rights

☒ Conflict of Interest

☒ Change Orders

☒ Audit Language

☒ Independent Contractor

☒ Sovereignty of the State (Exempt from Taxes)

☒ Third Party Rights

☒ Termination for failure to perform

☒ Discrimination* [287.134]
- ☒ General Provision
- ☒ Discriminatory Vendor List

☒ Identification of the Contract Manager, Title, Phone No.

☐ Contingency Fee 287.055 (6), F. S.

☒ Quality Assurance (when applicable, as required)

☒ Subcontracting
- ☒ Not authorized w/o DEP approval
- ☐ Authorized w/o DEP approval
- ☒ Contractor is responsible to pay all subcontractors

☐ Safety

☒ Alien Provision

☐ Year 2000

☒ Insurance Coverage
- ☒ Worker's Comp
- ☐ Private Companies coverage (in addition to Worker's Comp)
- ☐ Professional
- ☒ Other

☒ Equipment Purchases [Rule 60A-1.017]
- ☐ Equipment Purchases Authorized (Non-expendable over$1,000.00 and over.)
  - ☐ Property Reporting Form (Attachment _____)
- ☒ Equipment Purchases not authorized

☐ Audit Language for Grants and Aids 215.97, F. S.]
☐ Lobbying Language for Grant and Aids [216.347, F.S.]

☐ Truth in Negotiation 287.055 (5)(a)

☐ Non-current Wage Rate Clause (recover after audit)

☒ ENTIRE Agreement

☐ Lobbying Language (Federal Agreements may require 2 separate provisions)
- ☐ Agreements $100,000 and over (standard clause)
- ☐ Subcontracting (all federal contracts) Lobbying Disclosure Act of 1995

☐ MBE Language: ☐ State ☐ Federal (MBE/WBE)
☐ MBE Tracking: ☐ State ☐ Federal (MBE/WBE)

☐ Debarred Suspended Form ☐ Drug Free Workplace ☐ Hotel/Motel Facilities

***Required Provisions**

DEP Contracts Administrator Use Only

FLORIDA SINGLE AUDIT ACT CHECKLIST FOR NON-STATE ORGANIZATIONS - RECIPIENT/SUBRECIPIENT VS. VENDOR DETERMINATION

This checklist and the standard contract audit language may be obtained electronically from the Executive Office of the Governor's website (http://www.myflorida.com/myflorida/government/governorinitiatives/fsaa/index.html).

If a Florida Single Audit Act State Project Determination Checklist has not been previously completed, please complete it now. (Applies only to State agencies)

This checklist must be used by State agencies to evaluate the applicability of the Florida Single Audit Act (FSAA) to non-state organizations[1] after a state program has been determined (using the Florida Single Audit Act State Project Determination Checklist) to provide state financial assistance (i.e. is a State Project as defined in 215.97 (2)(r), F.S.). This checklist assists in determining if the non-state organization is a vendor, recipient/subrecipient, or an exempt organization.

[1] A non-state organization is defined as a nonprofit organization, for-profit organization (including sole proprietors), or Florida local government (excluding district school boards, charter schools and community colleges), which receives State resources.

Recipients and subrecipients of state financial assistance must also use this checklist to evaluate the applicability of the FSAA to non-state organizations to which they provide State resources to assist in carrying out a State Project.

Name of Non-state Organization: Academy of Natural Sciences (ANSERC)

Type of Non-state Organization: Non-profit

(i.e. nonprofit, for-profit, local government; if the non-state organization is a local government, please indicate the type of local government – municipality, county commission, constitutional officer, water management district, etc.)

Awarding Agency: Department of Environmental Protection

Title of State Project: Mesocosm studies to quantify how methylmercury in the Everglades responds to changes

Catalog of State Financial Assistance (CSFA) Number:

Contract/Grant/Agreement Number: ~~SP=~~ SP632

PART A

YES	NO		
___	X	1.	Is the non-state organization a district school board, charter school, community college, government/public university outside of Florida or a Federal agency?
___	X	2.	Is the relationship with the non-state organization **only** to procure commodities (as defined in 287.012(4) F.S.)?
___	X	3.	Does the relationship with the non-state organization consist of **only** Federal resources, State matching resources for Federal Programs or local matching resources for Federal Programs?
___	X	4.	Does the relationship with the non-state organization consist of **only** State maintenance of effort (MOE)[2] resources that meet **all** of the following criteria?
___	___		A. Do Federal Regulations specify the requirements for the use of the State MOE resources and are there no additional State requirements?
___	___		B. Do contracts contain sufficient language to identify the State MOE resources and the associated Federal Program?
___	___		C. Do A-133 audit requirements apply to the State MOE resources and do contracts stipulate that the State MOE resources should be tested in an A-133 audit in accordance with Federal Program requirements?

[2] MOE refers to the Federal maintenance of effort/level of effort requirements as defined by OMB Circular A-133 Compliance Requirement G (Matching, Level of Effort, Earmarking).

If **any** of 1-4 above is **yes**, the recipient/vendor relationship determination does not need to be completed because **the FSAA is not applicable to the non-state organization.**

Target activities for quarterly budget periods, by task

I. Mesocosm Experiments

Budget Year	Quarterly Report Date	Target activities		% completion of annual task budget
Year 1, FY 03/04	Jan 15, 2004	Major field sampling, Nov	Complete 20% of overall sample analysis	50%
	Mar 15, 2004	Major field sampling, Feb	Complete 10% of overall sample analysis	25%
	Jun 1, 2004 FY final report	Major field sampling, May FY final report	Complete 10% of overall sample analysis	25%
Year 2, FY 04/05	Oct. 1, 2004	Major field sampling, Aug	Complete 10% of overall sample analysis	25%
	Jan 1, 2005	Major field sampling, Nov	Complete 10% of overall sample analysis	25%
	Apr 1, 2005	Major field sampling, Feb	Complete 10% of overall sample analysis	25%
	Jun 1, 2005 FY final report	Major field sampling, May FY final report	Complete 10% of overall sample analysis	25%
Year 3, FY 05/06	Oct. 1, 2005	Major field sampling, Aug	Complete 10% of overall sample analysis	25%
	Jan 1, 2006	Major field sampling, Nov	Complete 10% of overall sample analysis	25%
	Apr 1, 2006	Final report preparation	Data compilation	25%
	Jun 1, 2006	Submit final data report	Complete data compilation	25%

Annual Budgets for Mesocosm Experiments

FY 2003/2004	$ 62,889.37
FY 2004/2005	$ 76,301.22
FY 2005/2006	$ 38,172.83
Total	$177,363.42

II. Developing a predictive model for methylmercury production in the Everglades and Stormwater Treatment Areas

Budget Year	Quarterly Report Date	Target activities				% completion of annual task budget
		Field sampling	Sample analyses		Model development	
Year 1, FY 03/04	Jan 15, 2004	Field survey of ACME sites (June)	Analysis of 33% ACME site samples		Construction of initial diagenetic model	30%
	Mar 15, 2004	STA field survey, Feb	Analysis of 33% ACME site samples		Construction of initial diagenetic model	35%
	Jun 1, 2004 FY final report	STA field survey, May	Complete analysis of ACME site samples	Analysis of 15 % STA site samples	Test diagenetic model against ACME data set	35%
Year 2, FY 04/05	Oct 1, 2004		Data report, ACME site samples	Analysis of 15 % STA site samples	Test diagenetic model against ACME data set	25%
	Jan 1, 2005			Analysis of 15 % STA site samples	Adapt diagenetic model for use in STAs	25%
	Apr 1, 2005	STA field survey, Feb		Analysis of 15 % STA site samples	Adapt diagenetic model for use in STAs	25%
	Jun 1, 2005 FY final report	STA field survey, May		Analysis of 15 % STA site samples	Adapt diagenetic model for use in STAs	25%
Year 3, FY 05/06	Oct. 1, 2005			Analysis of 15 % STA site samples	Adapt diagenetic model for dry/rewet cycles	25%
	Jan 1, 2006			Complete analysis of STA site samples	Adapt diagenetic model for dry/rewet cycles	25%
	Apr 1, 2006	Final report preparation		Data compilation	Final report preparation	25%
	Jun 1, 2006	Submit final data report		Complete data compilation	Submit final model report	25%

Annual Budgets for Predictive Model Development

FY 2003/2004	$ 61,193.75
FY 2004/2005	$ 67,571.54
FY 2005/2006	$ 24,974.00
Total	$153,739.29

III. Dry/Rewet Experiments

Budget Year	Quarterly Report Date	Target activities		% completion of annual task budget
Year 3, FY 05/06	Oct. 1, 2005	Soil collection from STAs	Complete 10% of overall sample analysis	25%
	Jan 1, 2006	Dry/rewet experiments at ANSERC	Complete 40% of overall sample analysis	25%
	Apr 1, 2006	Dry/rewet experiments at ANSERC	Complete 40% of overall sample analysis	25%
	Jun 1, 2006	Submit final data report	Complete data compilation	25%

TOTAL ANNUAL BUDGET FOR DRY/REWET EXPERIMENTS $58,537.60

REMAINDER OF PAGE INTENTIONALLY LEFT BLANK