ORDER FOR SUPPLIES OR SERVICES

IMPORTANT: Mark all packages and papers with contract and/or order numbers.

1. DATE OF ORDER: 09/14/2017

2. CONTRACT NO. (If any): EP-W-17-006

3. ORDER NO.: 0007

4. REQUISITION/REFERENCE NO.: PR-OCSPP-17-00313

5. ISSUING OFFICE (Address correspondence to):
HPOD
US Environmental Protection Agency
William Jefferson Clinton Building
1200 Pennsylvania Avenue, N. W.
Mail Code: 3803R
Washington DC 20460

6. SHIP TO:
a. NAME OF CONSIGNEE: Wen-Hsiung Lee
b. STREET ADDRESS:
US Environmental Protection Agency
William Jefferson Clinton Building
e-mail:Lee.Wen-Hsiung@epa.gov
phone:202-564-8544
c. CITY: Washington,
d. STATE: Dc
e. ZIP CODE:

7. TO: VANESSA DOWNES
a. NAME OF CONTRACTOR: VERSAR, INC.
b. COMPANY NAME:
c. STREET ADDRESS: 6850 VERSAR CTR STE 201
d. CITY: SPRINGFIELD
e. STATE: VA
f. ZIP CODE: 22151

f. SHIP VIA:

8. TYPE OF ORDER
☐ a. PURCHASE
REFERENCE YOUR:
Please furnish the following on the terms and conditions specified on both sides of this order and on the attached sheet, if any, including delivery as indicated.
☒ b. DELIVERY
Except for billing instructions on the reverse, this delivery order is subject to instructions contained on this side only of this form and is issued subject to the terms and conditions of the above-numbered contract.

9. ACCOUNTING AND APPROPRIATION DATA: See Schedule

10. REQUISITIONING OFFICE: OCSPP/OPPT/RAD

11. BUSINESS CLASSIFICATION (Check appropriate box(es))
☐ a. SMALL ☐ b. OTHER THAN SMALL ☐ c. DISADVANTAGED ☐ d. WOMEN-OWNED ☐ e. HUBZone
☐ f. SERVICE-DISABLED VETERAN-OWNED ☐ g. WOMEN-OWNED SMALL BUSINESS (WOSB) ELIGIBLE UNDER THE WOSB PROGRAM ☐ h. EDWOSB

12. F.O.B. POINT: Destination

13. PLACE OF
a. INSPECTION: Destination
b. ACCEPTANCE: Destination

14. GOVERNMENT B/L NO.:

15. DELIVER TO F.O.B. POINT ON OR BEFORE (Date): Multiple

16. DISCOUNT TERMS:

17. SCHEDULE (See reverse for Rejections)

ITEM NO. (a)	SUPPLIES OR SERVICES (b)	QUANTITY ORDERED (c)	UNIT (d)	UNIT PRICE (e)	AMOUNT (f)	QUANTITY ACCEPTED (g)
	DUNS Number: 066764747 Task Order Number: 0007 Development and Deployment of Reaschscan Module in IGEMS ---------- COR: Wen-Hsiung Lee Continued ...					

18. SHIPPING POINT:

19. GROSS SHIPPING WEIGHT:

20. INVOICE NO.:

17(h) TOTAL (Cont. pages): $144,672.26

21. MAIL INVOICE TO:
a. NAME: RTP Finance Center
b. STREET ADDRESS (or P.O. Box):
US Environmental Protection Agency
RTP-Finance Center (AA216-01)
109 TW Alexander Drive
www2.epa.gov/financial/contracts
c. CITY: Durham
d. STATE: NC
e. ZIP CODE: 27711

SEE BILLING INSTRUCTIONS ON REVERSE

17(i) GRAND TOTAL: $235,890.86

22. UNITED STATES OF AMERICA BY (Signature): 09/14/2017 Jessica V. Wilson ELECTRONIC SIGNATURE

23. NAME (Typed): Jessica Wilson
TITLE: CONTRACTING/ORDERING OFFICER

IMPORTANT: Mark all packages and papers with contract and/or order numbers.

DATE OF ORDER	CONTRACT NO.	ORDER NO.
09/14/2017	EP-W-17-006	0007

ITEM NO. (a)	SUPPLIES/SERVICES (b)	QUANTITY ORDERED (c)	UNIT (d)	UNIT PRICE (e)	AMOUNT (f)	QUANTITY ACCEPTED (g)
	e-mail:Lee.Wen-Hsiung@epa.gov ALT. COR: Neriha Orentas e-mail: Orentas.Nerija@epa.gov Task Order Type: (Hybrid)-Fixed Price & LOE Task Order Not to Exceed $235,084.12 for the entire (1)Base year and (2) 1-Year Option Periods for a total of (36-months) Base Period:(FIXED PRICE)$144,672.26 1,368hrs. Option Period I:(TIME & MATERIAL)$44,743.72 402hrs. Option Period II:(TIME & MATERIAL)$46,474.88 402hrs. TOCOR: Wen -Hsiung Lee Max Expire Date: 09/13/2020 Admin Office: HPOD US Environmental Protection Agency William Jefferson Clinton Building 1200 Pennsylvania Avenue, N. W. Mail Code: 3803R Washington DC 20460 Period of Performance: 09/14/2017 to 09/13/2020					
0001	Base Period POP: 9/14/17-9/13/18 (Fixed Price)$144,672.26 not to exceed 1,368 hrs. is hereby fully funded. Development and Deployment of Reaschscan Module in IGEMS Delivery: 09/13/2018 Accounting Info: 17-18-B-69A-401CD6-2505-TCXTQZZ-1769AC7033-002 BFY: 17 EFY: 18 Fund: B Budget Org: 69A Program (PRC): 401CD6 Budget (BOC): 2505 Cost: TCXTQZZ DCN - Line ID: 1769AC7033-002 Funding Flag: Partial Funded: $144,671.26 Accounting Info: 17-18-B-69A-401CD6-2505-1769AC7033-001 Continued ...				144,672.26	

TOTAL CARRIED FORWARD TO 1ST PAGE (ITEM 17(H)) $144,672.26

IMPORTANT: Mark all packages and papers with contract and/or order numbers.

DATE OF ORDER	CONTRACT NO.	ORDER NO.
09/14/2017	EP-W-17-006	0007

ITEM NO. (a)	SUPPLIES/SERVICES (b)	QUANTITY ORDERED (c)	UNIT (d)	UNIT PRICE (e)	AMOUNT (f)	QUANTITY ACCEPTED (g)
	BFY: 17 EFY: 18 Fund: B Budget Org: 69A Program (PRC): 401CD6 Budget (BOC): 2505 DCN - Line ID: 1769AC7033-001 Funding Flag: Partial Funded: $1.00					
0002	Option Period I POP: 9/14/18-9/13/19 (Time & Material)$44,743.72 not to exceed 402hrs. Development and Deployment of Reaschscan Module in IGEMS (Option Line Item) 09/13/2018 Delivery: 09/13/2019					
0003	Option Period II POP: 9/14/19-9/13/20 (Time & Material)not to exceed $46,474.88 402hrs. Development and Deployment of Reaschscan Module in IGEMS (Option Line Item) 09/13/2019 Delivery: 09/13/2020					
	The obligated amount of award: $144,672.26. The total for this award is shown in box 17(i).					

TOTAL CARRIED FORWARD TO 1ST PAGE (ITEM 17(H)) $0.00

RISK ASSESSMENT DIVISION (RAD)

REQUEST FOR TASK ORDER PROPOSAL(RTOP) Number: 007
Versar/EP-W-17-006

PROJECT TITLE:

Development and deployment of Reaschscan Module in IGEMS

A. STATEMENT OF WORK (SOW) A1. Background and Purpose

Background

The Office of Pollution Prevention and Toxics (OPPT) of the Environmental Protection Agency (EPA) is responsible for work under a number of statutes including, principally, the Toxic Substances Control Act (TSCA), the Chemical Safety in the 21st Century Act, and Pollution Prevention Act of 1990 (PPA). The mission of the office is to assure that industrial chemicals are designed, manufactured, processed and used in ways that maximize their benefits to society and minimize their impacts on human health and the environment; encourage the replacement of older, more hazardous chemicals and technologies with new, safer alternatives; and work to harness the use of pollution prevention technologies, whenever feasible.

OPPT's Risk Assessment Division (RAD) is responsible for health and environmental hazard and risk evaluations of chemicals regulated under the Frank R. Lautenberg Chemical Safety for the 21st Century Act. The Frank L. Lautenberg Chemicals Safety for the 21st Century Act (new TSCA) amends the Toxic Substance Control Act (TSCA). EPA Exposure Technical Team members conduct new and existing chemicals risk assessments, improve exposure methodologies for risk assessments, identify trends in developing exposure methodologies, assist in policies and rulemaking for TSCA, and provide outreach to regulated community and general public in support of the Frank L. Lautenberg Chemicals Safety for the 21st Century Act.

Among other things, the new TSCA requires EPA to conduct risk evaluations to determine whether a chemical substance presents an unreasonable risk of injury to health or the environment, without consideration of costs or other non-risk factors, including an unreasonable risk to a potentially exposed or susceptible subpopulation identified as relevant to the risk evaluation under the conditions of use. Furthermore, the new TSCA legislation requires that EPA adhere to specific provisions regarding Scientific Standards, Weight of Evidence and Availability of Information as articulated in Sections 26 (h), (i) and (j), respectively (https://www.epa.gov/assessing-and-managing-chemicals-under-tsca/frank-r-lautenberg-chemical-safety-21stcentury-act).

Purpose

The purpose of this statement of work (SOW) is to update the facility and streamflow database used in surface water applications for OPPT.

A2. Scope of Work

The contractor shall supply the necessary resources required for the performance of this contract. The scientific quality of reviews, assessments, reports, model tools, statistical programs and software, and their timely preparation in accordance with negotiated schedules, are of paramount importance in the performance of this contract.

The contractor shall have the necessary technical and scientific expertise, knowledge and experience to successfully perform all of the tasks identified below. In addition, the contractor shall have a quality assurance/quality control program that maintains the quality of products, as well as an ongoing training program. This is intended to ensure that the contract staff produces quality products and feedback from OPPT on needed improvements is communicated to the contractor's staff. The contractor shall maintain and make available upon request complete documentation of QA/QC practices and procedures.
Performance of work under this contract shall be initiated by competitive task orders issued by the Contracting Officer, and will encompass tasks in following areas discussed below in Section B (TASKS).

B. TASKS

The contractor at no time shall take any technical direction from anyone other than the EPA TOCOR or the Alternate TOCOR in the EPA TOCOR's absence.

TASK 1: PROJECT MANAGEMENT

The Contractor shall provide a Project Manager. The Contractor Project Manager shall report on all aspects of the objectives and progress of this contract to the designated EPA Contracting Officer (CO) and Task Order Contracting Officer Representative (TOCOR) via email, through monthly reports. The Contractor Project Manager also plans, conducts and supervises Task Order (TO) projects, necessitating advanced knowledge and the ability to originate and apply new and unique methods and procedures. The Contractor Project Manager provides advice and counsel to other professionals. The Contractor Project Manager shall notify via email to the TOCOR and/or Alternate TOCOR of any significant difficulties in accomplishing the task listed in the TOs.

In cases where performance objectives and minimum Acceptable Quality Levels (AQLs) are not being met, the Contractor Project Manager will make every effort to immediately correct the problems to ensure customer satisfaction. If the problem persists, the Project Manager will submit a plan of corrective action to the TOCOR and the Contract Level COR. The Contractor Project Manager shall ensure that the approved Quality Assurance (QA)/Quality Control (QC) process is followed to ensure the quality of its products.

The contractor shall schedule a kick-off call with the EPA to review overall goals of the project and details regarding implementation of the TO. Roles and responsibilities for completing the tasks below will be discussed. The kick-off call shall be scheduled within 3 working days of award at a mutually agreed upon time. During the kickoff call the contractor, the EPA TOCOR will agree to a regular schedule for monthly work group conference calls to discuss the technical details, coordinating activities to complete tasks, questions and comments on interim report progress throughout the period of performance. The monthly calls shall be scheduled at a mutually agreed upon day and time each month for the duration of the period of performance. The contractor shall provide meeting notes/meeting minutes for each monthly conference call in electronic mail format to conference call participants and the EPA TOCOR to review for completeness and correctness.

Deliverable: Meeting notes/meeting minutes

TASK 2: REPORTING REQUIREMENTS

The contractor shall write and submit monthly progress reports to the EPA TOCOR. Progress reports shall describe completed work during the invoice period and should link to charges described in invoice documentation.

Routine progress reports shall include a written monthly technical progress report that includes the following in the case of each project that the contractor is involved in during the month: (a) an overview of work accomplished since project inception to to-date (b) a description of work accomplished during the month, (c) a summary of QA/QC activities since project inception including a summary of corrective action taken (d) a brief summary of anticipated work during the following month, (e) a summary and details of the LOE and costs incurred for each task during the month and cumulatively , and (f) total remaining LOE and budget. This report shall also be issued to the Contract Level COR. Routine progress reports shall be delivered electronically; paper copies are not needed.

The Contractor shall notify the TOCOR and CO when 75, 90, and 100% of approved hours have been expended. No work on the conduct of environmental data operations can begin until EPA approval of the QAPP is obtained. Work not related to environmental data operations such as scoping how environmental data may be searched for or summarized once available including refinement of keywords, criteria, or report templates may begin prior to QAPP approval. See Sections J and L for additional invoice reporting instructions.

Failure to submit monthly progress reports with the information required will result in the suspension of the invoice until such supporting documentation is provided. Any deviations from the project such as work schedules, impediments encountered, and budget require approval from the EPA TOCOR. The EPA TOCOR may also initiate verbal communications with the contractor on an as needed basis to determine project status.

Deliverable: Monthly Progress Reports shall be submitted to the EPA TOCOR within three (3) calendar days of invoice submission to EPA. Minimal level of effort required for this deliverable.

TASK 3: QUALITY ASSURANCE PROJECT PLAN DEVELOPMENT (QAPP)

3.1 Draft Project Quality Assurance Project Plan (QAPP)

Within 10 business days after award of this Task Order, the Contractor shall prepare and submit a draft project QAPP. The QAPP must address the collection of new data (if necessary), use of secondary data, and other available information, including any modeling and data analysis efforts. An acceptable QAPP shall address the requirements from Attachment 1 ("QAPP Requirements") of this SOW.

3.2 Final Project Quality Assurance Project Plan (QAPP)

Within 5 business days of receiving EPA comments on the Draft QAPP, the Contractor shall submit the Final QAPP to the EPA TOCOR. An acceptable Final QAPP shall address/include the information specified in Task 2.1, and incorporate EPA comments. The Contractor must also initiate the sign-off process for the QAPP.

The OPPT QA Manager reviews and approves the QAPP designating official EPA approval. Under no circumstances shall work that involves the generation, collection, evaluation, analysis, or use of environmental

data be performed by the contractor until the contractor receives written notification from the EPA TOCOR that EPA has approved the contractor's QAPP. In situations where only non-critical deficiencies in a QAPP have not been resolved (such as a final organizational chart or a data analysis procedure that will not be followed for weeks), conditional approval may be given to allow the project to start while these deficiencies are being resolved.

Additional Quality Assurance (QA) Documentation Required Upon Task Order Award:

In addition to the quality standard (QS) requirements described above, all major deliverables (*e.g.*, Technical Support Documents, Study Reports, Study Plans, etc.) produced by the Contractor under this Task Order shall include a discussion of the quality assurance/quality control (QA/QC) activities that were or will be performed to support the deliverable.

The contractor shall immediately notify the EPA TOCOR of any QA problems encountered that may impact the performance of this Task Order, with recommendations for corrective action.

The contractor also shall provide EPA with monthly reports of QA-related activities performed during implementation of this Task Order. These monthly QA reports shall identify QA activities performed to support implementation of this task order, problems encountered, deviations from the QAPP, and corrective actions taken. The contractor shall include this as a part of the contract-required monthly financial/technical progress report. The contractor shall notify the EPA TOCOR at any time during the task order if changes to the QAPP are warranted (*e.g.*, due to organizational changes, revised technical approaches).

TASK 4: Migration of Facility and Streamflow data

Load the database from the deliverables of the Facility and Streamflow Database task into IGEMS' Oracle database and need to be in compliance with EPA NCC's requirements for database (migrate database into Oracle) and make necessary changes (such as rewrite certain part of code or insert certain NCC recommended software to enhance security) after NCC's database security scanning, the formats of each data field and the relationship for each table need to be recreated in Oracle.

TASK 5: Compete the development of Reachscan

Transfer the E-FAST code related to surface water modeling for probabilistic dilution modeling in ecological assessments, and drinking water and fish ingestion doses using estimated surface water concentrations to Java programming language. Evaluate the code to ensure that model outputs match existing E-FAST results. complete code development of chemical concentration calculation and PDM

To complete the development of Reachscan. the contractor shall integrate the facility and flow data, chemical concentration calculation algorithm, PDM and develop Reachscan GUI for users to conduct chemical release calculation. The input/out put GUI of Reachscan shall be developed, according to Task Manager's technical direction, to push/pull data from EPA CIS/EMS. Each facility and flow shall be geocoded for GIS display. The search functions shall include: facility search, Reach code search, and chemical search, PMN number search. **The contractor shall create a model user guide that documents equations, defaults, and data sources used in REACHSCAN.**

TASK 6: First year system maintenance, update, and security patching upon requests of NCC TASK 7: Second year system maintenance, update, and security patching upon requests of NCC

C. SCHEDULE OF BENCHMARKS & DELIVERABLES:

Task #	BENCHMARK, DELIVERABLE or MILESTONE	SCHEDULE
1	Project Management: Contractor participates in Monthly Work Group Conference Calls and provides meeting notes for each monthly conference call.	Monthly Work Group calls shall begin the first month after the kickoff call and occur at a minimum of once a month and provide monthly meeting notes after each call.
2	Reporting Requirements	Within 10 business days of the Task Order award. Monthly progress reports shall be submitted to EPA TOCOR within three (3) calendar days of invoice submission to EPA.
3.1	Draft QAPP: Contractor develops **Draft QAPP** and furnishes to EPA TOCOR for review and comment.	Within 10 business days after start date of the period of performance, or an alternate date as agreed upon by EPA.
3.2	Final QAPP: Contractor develops **Final QAPP** for submission after receiving written comments from EPA TOCOR.	Within 5 business days after receipt of comments from EPA.
4	Migrate Facility and Streamflow Database received from TOCOR into IGEMS Oracle relational database and develop Reachscan GUI to query Facility and Streamflow data and furnishes to EPA TOCOR for testing and comment.	Within 60 calendar days after receiving Facility and Database CD from TOCOR or on an alternate date as agreed upon by EPA.
5.1	Integrate all components of Reachscan including complete database on flow and facility and PDM module on OPPT CBI server for EPA to test. Demonstration of the completed Reachscan with at least three sets of EPA supplied cases and compare to	Within 60 calendar days after receiving Facility and Database CD from TOCOR or on an alternate date as agreed upon by EPA.
5.2	Deployment of Reachscan with IGEMS on EPA's public server	Within 30 days after the notification from EPA that it can be deployed onto EPA's public server
5.3	Deliver a draft Reachscan model user guide that documents equations, defaults, and data sources used in REACHSCAN for EPA to review and comment.	Within 30 days after the successful deployment of Reachscan on EPA's public server

5.4	Finalize Reachscan model user guide	Within 15 days after receiving EPA's comments on the draft Reachscan model user guide.
6.1	First year system maintenance, update, and security patching upon requests of NCC	One-year duration after the base year of the contract
7.1	Second year system maintenance, update, and security patching upon requests of NCC	One-year duration after the first option year of the contract
	EPA TOCOR, in coordination with the Contracting Officer, provides written technical direction concerning use of the remaining funding to prepare and furnish to the EPA TOCOR: draft deliverables, interim work products, and any necessary working files in an electronic format which is supported by EPA.	Within ten (10) business days of receipt of written notification from contractor of notice of inability to complete task order benchmarks, milestones or deliverables.

The work to be performed by the Contractor under this SOW involves such activities; therefore, in order to comply with this requirement:

- Within 10 business days after start date of the period of performance, the contractor shall prepare and submit a draft QAPP to the EPA TOCOR for review and comment.

- Within 5 business days after receipt of comments from EPA, the contractor shall prepare and submit a final QAPP to the EPA TOCOR.

 EPA TOCOR will review the contractor's preliminary, draft, and final Facility and Streamflow Databases and Reports and provide the contractor with written approval to move on to the next stage or written edits/comments that need to be addressed within 14 calendar days. The contractor shall submit a revised Facility and Streamflow Database and Report for EFAST and REACHSCAN within 14 calendar days of receipt of comments from EPA, unless otherwise instructed by the EPA TOCOR.

D. **REPORTING REQUIREMENTS**

a. The contractor shall provide monthly reports of data entry and database activities performed during implementation of this SOW (as specified above).

E. DELIVERABLES

E 1. For each deliverable submitted electronically, the contractor shall submit electronic copies to EPA in a format that EPA can support. Deliverables shall be submitted through electronic mail, or through another method determined mutually acceptable by the contractor and EPA.

E 2. At the completion of the period of performance, or as requested throughout, the contractor shall provide electronic copies of all project files to EPA in CD-ROM or flash drive format.

F. ACCEPTABLE QUALITY LEVEL FOR TASKS

See Attachment 2: Quality Assurance Surveillance Plan

Performance Criteria Analysis – TASKS		
Performance Indicator	**Standard**	**Acceptable Quality Level (AQL)**
Timely submission of report	Reports submitted within time frame pre-negotiated with Task Order COR	95%
Free of substantive technical, guideline, or format errors	Reports submitted with zero substantive errors including but not limited to discrepancies, omissions, inaccuracies, and/or inappropriate data evaluation	95%

F.1 Method of surveillance

Final deliverables prepared by the contractor undergo a secondary review process in OPPT. Each report has a designated EPA reviewer. The EPA reviewer conducts a review of the contractor's deliverable. The EPA reviewer will provide feedback to the TOCOR to send back to the contractor should revisions be needed. The TOCORs will compare agency due dates or approved revised due dates to completed date of reports, quarterly and calculate the percentage of late reports.

G. PERIOD OF PERFORMANCE:

The period of performance of this task order is: (3-Total Years) 1- 1-Year Base

2- 1 -Year Option Periods

One base year with Two-(1-year option years) (A total of 36-months)

G.1 TASK ORDER TYPE:

Firm-Fixed price& Time & Material

H. INSPECTION AND ACCEPTANCE

H.1 Quality Assurance Project Plan

The contractor shall submit the following quality system documentation to the TOCOR at the time frames identified below:

Documentation	Specifications	Due

Quality Assurance Project Plan for the Task Order	EPA Requirements for Quality Assurance Project Plans (QA/R-5) [dated 03/2001]	Within 28 business days after start date of the period of performance, or an alternate date as agreed upon by EPA

This documentation can be found on the following EPA website – https://www.epa.gov/quality/epa-qar-5-eparequirements-quality-assurance-project-plans

This documentation will be prepared in accordance with the specifications identified above or equivalent specifications defined by EPA.

The Government will review and return the quality documentation, with comments, and indicating approval or disapproval. If necessary, the contractor shall revise the documentation to address all comments and shall submit the revised documentation to the government for approval.

The contractor shall not commence work involving environmental data generation or use until the Government has approved the quality documentation.

I. TASK ORDER ADMINISTRATION DATA

I.1 Contract Administration Representatives

Contracting Officer & Contracting Specialist: Jessica Wilson, Wilson.Jessica@epa.gov
Contract Level Contracting Officer's Representative: Cynthia Bowie, bowie.cynthia@epa.gov

TASK ORDER CONTRACTING OFFICER REPRESENTATIVE (TOCOR):
Wen-Hsiung Lee
e-mail: lee.wen-hsiung@epa.gov

ALTERNATE TASK ORDER CONTRACTING OFFICER REPRESENTATIVE (ALT TOCOR):
Nerija Orentas
e-mail: orentas.nerija@epa.gov

KJ. TASK ORDER CLAUSES J.1 FAR 52.217-9 Option to Extend the Term of the Contract (March 2000)

(a) The Government may extend the term of this contract by written notice to the contractor within 5 calendar days before the expiration of this contract; provided that the Government gives the contractor a preliminary written notice of its intent to extend at least 30 days before the contract expires. The preliminary notice does not commit the Government to an extension.

(b) If the Government exercises this option, the extended contract shall be considered to include this option clause.

(c) The total duration of this contract, including the exercise of any options under this clause, shall not **exceed 36 months**.

J.2 EPAAR 1552.237-72 Key personnel (April 1984)

(a) The contractor shall assign to this contract the following key personnel:

1. Project Manager

The contractor shall identify a Project Manager to serve as USEPA's primary point-of-contact and to provide supervision and guidance for all contractor personnel assigned to the task order. The Project Manager is ultimately responsible for the quality and efficiency of the support effort, to include both technical issues and business processes. The Project Manager shall have knowledge in the technical areas described in the SOW. The Project Manager shall assign tasks to contractor personnel, supervise on-going technical efforts, and manage overall task order performance. The Project Manager plans, conducts and supervises projects of major significance, necessitating advanced knowledge and the ability to originate and apply new and unique methods and procedures. Schedules work to meet completion deadlines. The Project Manager shall possess demonstrated excellent written and oral communications skills.

The Project Manager shall have experience in managing projects of similar size and scope as demonstrated by appropriate combination of education and experience.

2. Quality Assurance Manager

The Quality Assurance (QA) Manager must have experience in exposure assessment with the ability to critically evaluate the type of data described in the SOW. The QA Manager shall have advanced knowledge and the ability to originate and apply new and unique methods and procedures. Provide technical advice and counsel to other professionals with special emphasis on procedures for execution of systematic review. Generally, operates with a wide latitude for non-reviewed actions or decisions. Schedules work to meet completion deadlines. Directs assistance, reviews progress and evaluates results; makes change in methods where necessary.

The QA Manager shall have experience in quality management, implementation of quality management plan, and ensuring quality of projects of similar size and scope as demonstrated by appropriate combination of education and experience.

3. Software Developer

The contractor shall identify a Software Developer to develop the databases described in the SOW. The Software Developer shall have knowledge in the technical areas described in the SOW and must have a strong background in computer programming. Expertise and experience in coding and Access with variety of database applications is required. Must have the ability to solve technical problems. Proficiency with MS Word, Excel, and Adobe Acrobat.

K. LIST OF ATTACHMENTS

ATTACHMENT 1: QAPP REQUIREMENTS

ATTACHMENT 2: QUALITY ASSURANCE SURVEILLANCE PLAN

Attachment 1

QUALITY ASSURANCE PROJECT PLAN (QAPP) REQUIREMENTS

PROJECT OBJECTIVES, ORGANIZATION, AND RESPONSIBILITIES

1. The purpose of study shall be clearly stated.

2. Project objectives shall be clearly stated.

3. The secondary data needed to satisfy the project objectives shall be identified. Requirements relating to the type of data, the age of data, geographical representation, temporal representation, and technological representation, as applicable, shall be specified.

4. The planned approach for evaluating project objectives (i.e., data analysis), including formulas, units, definitions of terms, and statistical analysis, if applicable.

5. Responsibilities of all project participants shall be identified, key personnel and their organizations should be identified, including who is responsible for planning, coordination, data gathering, data analysis, report preparation, and quality assurance.

SOURCES OF SECONDARY DATA

1. The source(s) of the secondary data must be described.

2. The rationale for selecting the source(s) identified must be discussed.

3. The sources of secondary data gathered will be identified in all project deliverables.

QUALITY OF SECONDARY DATA

1. Quality requirements of the secondary data must be specified. These requirements must be appropriate for their intended use. Accuracy, precision, representativeness, completeness, and comparability need to be addressed, if applicable.

2. The procedures for determining the quality of the secondary data shall be described.

3. If no quality requirements exist, this shall be stated in the QAPP. If no quality requirements exist or if the quality of the secondary data cannot be determined, the QAPP shall require that a disclaimer be added to any project deliverable to indicate that the quality of the secondary data is unknown. The wording for any future use of the disclaimer should be included.

DATA REDUCTION, DATA VALIDATION AND DATA REPORTING

1. Data reduction procedures specific to the project shall be described, including a summary of the equations or analytical procedures to be used.

2. The data validation procedures used should be described.

3. The expected product that will be prepared should be described (e.g., journal article, final report, maps, etc.).