ORDER FOR SUPPLIES OR SERVICES

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

1. DATE OF ORDER: 08/25/2011

2. CONTRACT NO. (If any): GS00Q09BGD0022

3. ORDER NO.: EP-G11H-00154

4. REQUISITION/REFERENCE NO.: PR-OEI-11-00908

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

6. SHIP TO:
a. NAME OF CONSIGNEE: Multiple Destinations
b. STREET ADDRESS:
c. CITY:
d. STATE:
e. ZIP CODE:

7. TO:
a. NAME OF CONTRACTOR: CGI FEDERAL INC.
b. COMPANY NAME:
c. STREET ADDRESS: 12601 FAIR LAKES CIRCLE
GWAC SOLUTIONS CENTER
d. CITY: FAIRFAX
e. STATE: VA
f. ZIP CODE: 220334902

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: OEI Office of Info. Collection

11. BUSINESS CLASSIFICATION (Check appropriate box(es))
☐ a. SMALL ☒ b. OTHER THAN SMALL ☐ c. DISADVANTAGED ☐ g. SERVICE-DISABLED VETERAN-OWNED
☐ d. WOMEN-OWNED ☐ e. HUBZone ☐ f. EMERGING SMALL BUSINESS

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):

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: 145969783+4797 Confirming Order Placed With: STEVE WINTERS, Do Not Duplicate Central Data Exchange (CDX) Support Services TOPO: Michael Hart Max Expire Date: 01/01/2017 Continued ...					

18. SHIPPING POINT:

19. GROSS SHIPPING WEIGHT:

20. INVOICE NO.:

17(h) TOTAL (Cont. pages): $107,163,227.00

21. MAIL INVOICE TO:
a. NAME: RTP Finance Center
b. STREET ADDRESS (or P.O. Box): US Environmental Protection Agency
RTP-Finance Center (D143-02)
109 TW Alexander Drive
c. CITY: Durham
d. STATE: NC
e. ZIP CODE: 27711

SEE BILLING INSTRUCTIONS ON REVERSE

17(i) GRAND TOTAL: $107,867,227.00

22. UNITED STATES OF AMERICA BY (Signature):

23. NAME (Typed): Deborah Darry
TITLE: CONTRACTING/ORDERING OFFICER

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1. Background

The United States Environmental Protection Agency (EPA) is charged with protecting human health and the environment. Since 1970, EPA has been working for a cleaner, healthier environment for the American people.

EPA employs 17,000 people across the country, including our headquarters offices in Washington, DC, ten regional offices, and more than a dozen labs. EPA staff is highly educated and technically trained; more than half are engineers, scientists, and policy analysts. In addition, a large number of employees are legal, public affairs, financial, information management and computer specialists. EPA is led by the Administrator, who is appointed by the President of the United States. The following are the primary work areas in which EPA has been tasked:

- Develop and enforce regulations: EPA works to develop and enforce regulations that implement environmental laws enacted by Congress. EPA is responsible for researching and setting national standards for a variety of environmental programs, and delegates to states and tribes the responsibility for issuing permits and for monitoring and enforcing compliance. Where national standards are not met, EPA can issue sanctions and take other steps to assist the states and tribes in reaching the desired levels of environmental quality.

- Offer financial assistance: In recent years, between 40 and 50 percent of EPA's enacted budgets have provided direct support through grants to State environmental programs. EPA grants to States, non-profits and educational institutions support high-quality research that will improve the scientific basis for decisions on national environmental issues and help EPA achieve its goals.

- Perform environmental research: At laboratories located throughout the nation, the Agency works to assess environmental conditions and identify, understand, and solve current and future environmental problems; integrate the work of scientific partners such as nations, private sector organizations, academia and other agencies; and provide leadership in addressing emerging environmental issues and in advancing the science and technology of risk assessment and risk management.

- Sponsor voluntary partnerships and programs: The Agency works through its headquarters and regional offices with over 10,000 industries, businesses, non-profit organizations, and state and local governments, on over 40 voluntary pollution prevention programs and energy conservation efforts. Partners set voluntary pollution-management goals; examples include conserving water and energy, minimizing greenhouse gases, slashing toxic emissions, re-using solid waste, controlling indoor air pollution, and getting a handle on pesticide risks. In return, EPA provides incentives like vital public recognition and access to emerging information.

- Further environmental education: EPA advances educational efforts to develop an environmentally conscious and responsible public, and to inspire personal responsibility in caring for the environment.

More information about EPA's mission and strategy can be found at www.epa.gov.

The Office of Environmental Information (OEI), headed by the Chief Information Officer, manages the life cycle of information to support EPA's goal of protecting human health and the environment. The OEI Office of Information Collection (OIC) collects, manages, provides and safeguards environmental information.

As a result of increasing demand for electronic reporting and data exchange among trading partners and the regulated community, in 1999 EPA established the Central Data Exchange (CDX). CDX is the designated gateway where environmental data is received from the regulated community and processed for delivery to program offices in the Agency. CDX also serves as the point of presence on the National Environmental Information Exchange Network where State and Tribes routinely conduct data transactions with EPA.

1.1 CDX Stakeholders

The CDX Program has many stakeholders. Listed below are descriptions of some of the various stakeholders to which the contractor shall interact with:

- ***EPA Program Offices and EPA Regional Offices*** – Develops environmental rules that require submission of environmental data to EPA. Provide funding for CDX projects to the OEI CDX Program Team and develop business and technical requirements for submission of environmental data to EPA. These are the traditional CDX customers.
- ***State, Local and Tribal Partners*** – Typically wish to develop a presence on the Environmental Information Exchange Network. Most state, local and tribal partners receive grant money from EPA to help fund projects for the Exchange Network.
- ***CDX Users*** – Environmental rules developed by EPA Program Offices require CDX users to submit environmental data to EPA. CDX users do not typically provide funding for CDX services.
- ***OEI CDX Program Team*** – Works directly with the contractor to develop and deliver CDX services while ensuring project quality, scope, cost and schedule are maintained. Integrates new technologies into CDX services and leads governance of the CDX Program.

1.2 Mission, Vision and Strategy of CDX Branch

The branch that manages the CDX Program for EPA is the Information Exchange Technology Branch (IETB) and it is within EPA's Office of Information Collection (OIC). Listed below are the IETB Vision, IETB Mission and IETB Strategies.

1.2.1 IETB Vision

- To serve as EPA's center of excellence for electronic reporting and exchange of environmental data through the Central Data Exchange (CDX).

1.2.2 IETB Mission

- Support protection of human health and the environment by leading the Agency in electronic data exchange.
- Provide EPA Programs, States, Tribes, and Industry data exchange options to meet their business needs through CDX.
- Create CDX solutions and implement a Service Oriented Architecture in alignment with the Agency's architecture.
- Maintain support services to internal and external customers that are comparable to the best in the business.
- Assist EPA Programs to comply with their federal technical and policy requirements.

1.2.3 IETB Strategies

- Provide technical, contractual, financial, and project management expertise to assist exchange partners in developing data exchanges.
- Work collaboratively with OEI and Program Offices on a consultation basis to support the development and maintenance of data exchanges that meet EPA and federal policies, standards, and regulations.
- Provide expertise to Programs, States, Tribes, and Industry on regulatory programs to assist in dataflow design.
- Serve as a focal point in the Agency for Web services and Service Oriented Architecture activities.
- Communicate CDX support services in a transparent way.
- Keep abreast of federal requirements and guidelines involving project management, security, and investments.

- Implement and maintain security standards, investment, and contractual requirements as specified by federal, EPA, and program requirements.
- Develop and support options for exchange partner registration and authentication alternatives to meet program and regulatory requirements.
- Provide messaging options to assist in informing customers on status of reporting and publishing requests.
- Provide and implement options for complying with the Cross-Media Electronic Reporting Regulation (CROMERR) for all applicable partners.

1.3 CDX Program Initiatives

CDX is currently supporting the flow of data of 60 programs in the Agency. OIC is in the process of expanding CDX and the Exchange Network to support data exchanges with other Federal Agencies and international organizations, as well as provide the infrastructure and expertise for assisting more EPA programs in an evolving electronic age.

1.4 CDX Program as a Solutions Provider

From a business operations perspective, the CDX Program has matured to a point where business processes and procedures are evolving to become more efficient and effective overall. At the center of this evolution is a focus to improve on the operational excellence that CDX Customers are accustomed to receiving from the CDX Program Team.

The CDX Program is the data exchange solutions provider to the EPA and other CDX Program stakeholders. The structure of this task order is meant to facilitate successful management and delivery of CDX services and solutions to CDX customers.

1.5 CDX Development Services Description

CDX provides lifecycle development services to EPA program offices and regions, States, tribal and other trading partners, regulated entities who report and exchange data with EPA, and other stakeholders. “Dataflows” are the applications that effectively establish a new data exchange between, and are developed collaboratively with, EPA OEI, Program Offices, States and other trading partners. Program offices work with OEI and the contractor to define dataflow requirements to develop and maintain dataflows. OEI works with the program office to identify and document the activities, deliverables, and acceptance criteria in developing a dataflow. OEI’s goal is that new dataflow projects integrate and utilize existing CDX “core” services and software components, —leveraging service oriented architecture consistent with the EPA’s Enterprise Architecture and in accordance with the CDX Life Cycle Management Guide. Many dataflows consist of interconnectivity between a trading partner external to EPA (state, Tribal or local agency or reporting industry), EPA’s CDX, and a program application/database located in EPA’s National Computer Center where coordination is performed through Application Deployment Checklist procedures.

1.6 Cross Media Electronic Reporting Rule (CROMERR)

The Cross-Media Electronic Reporting Rule (CROMERR) provides the legal framework for electronic reporting (ER) under all of the Environmental Protection Agency's (EPA) environmental regulations. CROMERR applies to: (a) regulated entities that submit reports and other documents to EPA under Title 40 of the Code of Federal Regulations, and (b) states, tribes, and local governments that are authorized to administer EPA programs under Title 40. §3.2000(b) of CROMERR sets standards for electronic report receiving systems operated by states, tribes, and local governments under their authorized programs. These standards cover a variety of system functions, such as electronic signature validation. The standards are designed to provide electronic submittals with the same level of legal dependability as the corresponding paper submittals.

For reports submitted electronically to EPA, CROMERR requires the reports be submitted to the Central Data Exchange (CDX), or to a system designated by the Administrator for the receipt of those reports. On October 13, 2005, EPA published a Federal Register Notice (70 FR 59748) designating as acceptable all EPA systems that were

receiving electronic reports as of that date to continue receiving those reports until October 13, 2007. To receive electronic reports after October 13, 2007, systems other than CDX must be re-designated by the Administrator. Although CROMERR does not subject EPA systems to the standards, EPA has decided that all of its systems will conform to the standards when they operate to receive electronic submittals that are covered by the regulation. In the Preamble to the regulation, EPA commits to meeting the §3.2000(b) standards for its own electronic report receiving systems. CROMERR also requires that states, tribes, and local governments that wish to continue or begin using ER for their authorized programs must revise or modify those programs to incorporate ER. CROMERR details the process to obtain EPA approval of ER-related revisions or modifications to an authorized program. See http://www.epa.gov/cromerr/.

2 CDX Operations and Maintenance (O&M) Tasks

2.1 O&M Services

The Contractor shall be responsible for overall operations and maintenance (O&M) of the environments for CDX development, integration test, pre-production, and the contractor shall provide partial O&M support for the CDX production and research and development environments in accordance with Agency and Federal Information Processing Standards (FIPS). The CDX program is researching ways to, among other things, integrate cloud computing concepts and strategies into the CDX Program in order to gain operational efficiencies, reduce costs and increase agility. The contractor shall integrate cloud computing concepts and strategies into their approach on managing the CDX Program, the various CDX system environments and its related systems and applications. Additionally, the contractor shall integrate IT Service Management best practices and strategies into their task management approach with the goal of improving CDX Program service quality, increasing strategic collaboration among CDX teams and increasing operational efficiencies. The contractor shall also include in their approach how the contractor would "Operatate the CDX Program like a Business". Running EPA IT programs like a business is one of the priorities of EPA's Chief Information Officer.

CDX O&M is documented in Change Control Board (CCB) meetings and regular operations meetings. The contractor shall maintain CDX O&M procedures that are in accordance with the technical and security procedures, CDX O&M Guide, and CDX Contingency Plan. The contractor shall track hardware and software purchases in order to provide status to EPA OEI upon request. The contractor shall provide the following O&M support:

- Procurement and management of hardware, software, and telecommunications resources shall be performed according to FAR and documented.

- Systems integration and implementation of hardware, software, and telecommunications shall be performed according to monthly milestone schedules and project plans for significant activities. Changes to CDX architecture shall be coordinated with the CDX Engineering Board (EB) as outlined in the EB Charter.

- Anti-Virus Scanning and Patchlink Operating System updates shall be managed in coordination with EPA's National Computer Center schedules and promotion schedules.

- Infrastructure monitoring, repair and maintenance shall be performed according to the CDX O&M Guide, CDX Contingency Plan, and performed to CDX Service Level Agreement (SLA) Matrix requirements.

- System performance monitoring shall be consistent with CDX O&M procedures.

- Change control / configuration management shall be performed according to the CDX Configuration Management Plan.

- Tier three help desk support shall be provided on escalated tier one or tier two CDX help desk issues.

- Contingency planning shall be documented and routine testing shall be documented according to the CDX Contingency Plan.

- Database administration shall be performed to ensure the support for CDX and program systems for all database environments as documented in the CDX O&M Guide.

- Regular coordination meetings shall be held between the Contractor with the National Computer Center Networking and Operations to ensure Development and Production environments are maintained in a timely and in a consistent manner.

- CDX Application O&M and Infrastructure O&M support, separation of duties as described in Separation of Duties Guide.

- The Contractor shall provide systems performance monitoring and reporting services for CDX customers. This applies specifically to customers who desire performance reporting that is above the reporting that is normally provided as a part of the standard CDX O&M support.

2.1.1Standard O&M Service Levels

(1) As identified in the Contractor's Communications Plan, the Contractor shall notify EPA within thirty (30) calendar days before the expiration of any renewals on software/hardware licenses.
(2) The Contractor shall act on purchase requests within five (5) business days of receipt of approval on purchase requests from EPA. Contractor shall provide confirmation of purchase to EPA within one (1) business day of purchase.
(3) As identified in the Contractor's Communications Plan, the Contractor shall notify EPA OEI within one hour of any system downtimes / outages that would impact OEI or any stakeholder end user. If directed by EPA OEI, the contractor shall notify effected stakeholders directly.

2.1.2 Node O&M

The Contractor shall support O&M activities for the CDX Node and Exchange Network (EN) dataflows that includes but is not limited to:

- Deploying new CDX Node releases (e.g., server setup and configuration, node setup, unit testing, rolling between DEVTEST PROD environments, quality of service (QOS) monitoring.)
- Supporting versions for Node 1.1.
- Communicating/releasing new versions of NGN software for trading partners,
- Providing periodic testing.
- Identifying, testing interoperability and deploying new versions of supported software to remain current and to ensure adequate support.

2.1.3 Exchange Network Discovery Service (ENDS)

The Contractor shall support O&M activities for the CDX ENDS.

ENDS is a set of web services compliant with the Exchange Network Functional Specification that support the discovery of services and related metadata necessary for node clients and applications to easily provide user friendly query builders against published Network data. Some of the primary Meta data types included is Node, service request, parameters, style sheets available, and costing information. Metadata can be collected directly from the Network nodes and loaded into ENDS automatically via the GetServices query in the Node 2.0 Specification. The ENDS is a network-wide service repository which contains service descriptions for all nodes. ENDS not only offers a set of service publishing services, but also provide service management capabilities.

2.1.4 Data/Document Archiving and Tape Back Up Services

The Contractor shall ensure that all data/documents in CDX and the Data Processing Center (DPC)/Reporting Centers (RC) are archived and/or periodically backed up on tape. Examples of services the Contractor shall provide include the following:

- The Contractor shall provide both on-site and off-site storage for data, files, electronic equipment, and supplies.
- The Contractor shall provide digital scanning and electronic archiving if requested by EPA.
- The Contractor shall backup DPC/RC related systems data files, and any other operating system, application program, and data files critical to the operations of the centers. Timeframe of backups and procedures will be specified by EPA.

The Contractor shall have an offsite storage facility where the Contractor shall maintain the archived monthly backup tapes. The Contractor shall maintain a hard copy log of the Contractor's backup activities and securely store this information. The Contractor shall keep a copy of the log, preferably in a secure offsite location.

2.1.5 Government Owned Property

The Contractor shall maintain a detailed inventory accounting system for Government Furnished Equipment/Material (GFE/M) or Contractor-Acquired-Government Owned Property (CAP). The inventory accounting system must specify, as a minimum: product description (make, model), Government tag number, date of receipt, name of recipient, location of receipt, current location, purchase cost (if CAP), and contract/order number under which the equipment is being used. The Contractor shall either: a) attach an update inventory report to each monthly report, or b) certify that the inventory has been updated and is available for Government review. In either case the Contractor's inventory listing must be available for Government review within one business day of Contracting Officer request.

2.2 CDX Information Assurance and Registration

2.2.1 Information Assurance

The Contractor shall ensure the continued security of the CDX system and development environments. The Contractor shall be responsible for maintaining security of all CDX supported systems in accordance with laws, regulations, policies and procedures.

For new dataflow requirements, the Contractor shall assess the impact of a customer's security requirements on the CDX infrastructure. The assessment could include:

- Type of data
- System sensitivity
- System structure
- Data transmission

The Contractor shall remain cognizant of new directions in Federal/EPA security guidance and CDX technologies; and shall ensure that the detection of new threats and vulnerabilities to CDX are addressed and escalated according to the EPA Security Escalation Procedures and Computer Security Incident Response Capability (CSIRC) procedures.

The Contractor shall keep all security procedure and planning documents that are necessary to maintain the certification and accreditation of the CDX system and development environments current and accurate. The Contractor shall fill out Firewall Rule Change Requests (FRR) and submit them to the EPA. The Contractor shall create and update Security Addendums (SA) to the CDX system security plan. The Contractor shall update the EPA ASSERT system as necessary. Example – When security vulnerability is found in CDX, the CDX Program staff creates an entry in the EPA ASSERT system and the Contractor updates the entry into the EPA ASSERT system.

Security includes but is not limited to:

- Intrusion detection & protection systems
- Firewalls

- Hardware security
- Router
- Bridge
- Switches.

The Contractor shall assess design and development, and implementation of new and existing applications for CROMERR, and recommend and provide procedures, software, and documentation necessary for CDX electronic reporting to be CROMERR compliant. The Contractor shall support the CDX Program's efforts to implement CROMERR in CDX system components and CDX services for CDX customers.

2.2.2 Network Authentication Authorization Service (NAAS)

The Contractor shall support O&M activities for the CDX NAAS.

NAAS is a set of security web services that the Central Data Exchange (CDX) centrally manages. It supports remote administration by the State and EPA Node Administrators. The NAAS provides extensive security services for identity management, user authentication, user authorization, and access control policy management. These services support security for every message on the CDX and the Exchange Network and as such their availability and performance are critical to successful operations.

2.2.3 Cross Media Electronic Reporting Rule (CROMERR) Support

The Contractor shall periodically review current CROMERR solutions and investigate whether advances in technology may be utilized to more efficiently meet the provisions of CROMERR.

The Contractor shall support customers that have dataflows which require CROMERR compliance. That support shall include assisting CDX customers' efforts to complete relevant CROMERR compliance checklists.

The Contractor shall maintain and update documentation, including design documentation, as it relates to CDX-CROMERR solutions. The Contractor shall maintain and ensure the adherence of all established standard operating procedures including, but not limited to, help desk procedures and maintenance of a copy of record of the submission.

2.2.4 CDX Registration

CDX provides a multitude of application registration services that support registration work flow procedures, and integration of identity management, credential management, certificate management, electronic sponsorship management, and access rights management through Web forms and Web Services.

The Contractor shall coordinate all CDX registration components with other CDX services and provide development, integration, and O&M support consistent with CROMERR, CDX Life Cycle Management and CDX O&M.

The key electronic registration components supported by CDX are comprised of:

- Exchange Network Registration –web forms allowing Exchange Network Node owners to remotely administer credentials, access rights, and passwords to the Network Authentication &Authorization Service (NAAS).
- CDX Open Registration –web forms allowing users to identify themselves, request credentials and authorization, and obtain sponsorship forms electronically for applications designated as "Open".
- CDX Pre-Registration –allowing application owners to identify and pre-populate user identities, credentials, and access authorization to applications designated as "Open" or "Closed" and then allow users to validate pre-populated information through Open Registration.
- CDX Closed Registration –allows application owners to restrict users requests for access, openly, and utilize CDX Pre-Registration exclusively for applications designated as "closed".

- CDX Dynamic Registration –a dynamic workflow component enabling owners to specify table-driven criteria necessary to authorize "Open" registration users.
- CDX Registration Maintenance –a web based access rights management tool allowing for remote administration of access rights to role-based applications managed by CDX.
- CDX Exchange Network Integration for Identity Management and Reduced Sign On.
- CDX Digital Certificate Management and Local Registration Authority support for Certificate Authorities.

The Contractor shall provide technical support, coordination, documentation, record keeping, and management for CDX Registration and Exchange Network Registration procedures, as well as, provide PKI Local Registration Authority procedures and management for electronic and paper registration materials and records received. These procedures and materials shall be managed consistent with all applicable laws, Federal standards, Agency policies, and the CROMERR.

2.2.5 Exchange Network Quality Assurance Services

In addition to the Quality Control Plan as outlined under Task Management, the Contractor shall support the Exchange Network Quality Assurance Services. These services are a set of XML web services for validating XML documents against the associated schemas and extended business rules. It consists of two major services:

- Schema Validator: This service verifies the structure of XML documents using definitions in one or more schema files. Basic content constraints are also checked.
- Schematron Validator: This is an optional extension of the Schema service that further validates XML documents using custom business rules, look-up tables, and regular expressions that are not possible with the basic schema validation service.

The purpose of these services is to support data stewards data checking prior to submission to CDX. Because these are Exchange Network SOAP services, they can be easily invoked from applications that are web service ready, and be integrated into automated data submission or processing systems. The services can also be accessed using a web browser. Users can send documents from their desktop and get results either synchronously or asynchronously[1].

2.3 Technical Facilitation and Consulting

The CDX Program leads and participates in various technical meetings on a routine and as needed basis. The Contractor shall provide technical facilitation support to the CDX Program and to CDX customers.

2.4 Elevated O&M Support Services

Some CDX customers require elevated levels of O&M support. That can be caused by a dataflow being categorized as a "critical" system or for other reasons.

The Contractor shall provide elevated service levels to CDX systems. Examples of elevated service levels include but are not limited to:

- 24x7 technical support
- Disaster recovery support

2.5 System Performance Monitoring and Reporting

The performance monitoring that comes with the standard CDX O&M service is defined by the support levels in the CDX O&M Service Level Agreement (SLA). Some CDX customers require additional system performance

[1]For additional information refer to: http://www.exchangenetwork.net/exchanges/air/nei_xml_val.pdf http://tools.epacdxnode.net/

monitoring and some CDX customers also request additional reporting on their systems performance.

The Contractor shall provide systems performance monitoring and reporting services for CDX customers. This applies specifically to customers that desired performance reporting that is above the reporting that is normally provided as a part of the standard CDX O&M service.

3 CDX Development Lifecycle Tasks

OEI works with multiple EPA Program Offices to develop dataflow requirements. Dataflow requirements are sent by the contracting officer to the Contractor and the Contractor then submits a project proposal for that dataflow. After the Contractor's project proposal is accepted by EPA, a Technical Direction Document (TDD) is issued which begins the project. Example – TDD 09.02 Program Management. The contractor's proposal time/costs in response to these dataflow TDD requests are not billable hereunder.

The life cycle for dataflow development for CDX Web and the Exchange Network includes a set of activities that need to be completed to take a flow from conception with a program office to a fully deployed flow in production. This process is referred to as the Data Standard Life Cycle Process (Figure 1).

As part of a continual process improvement, the Contractor shall streamline and reduce costs for the lifecycle for dataflow development. Including but not limited to:

- Simplified documentation. Use generic documentation templates for each flow,
- Standard Services. Generalize common dataflow patterns are generalized such that they can be readily reused on the development of new dataflows.
- Reuse Standard Services. Orchestrate existing standardized services/software components that enable rapid/low cost deployment of standard dataflows that do not require a significant amount of customization).

The goal for using these standardized services and generic documentation is to minimize development costs for individual dataflows.

The Contractor shall adhere to the Data Standard Life Cycle Process for design, development, test, and implementation of CDX dataflow projects. The Contractor shall ensure that all development efforts be compliant with the EPA's Enterprise Architecture. Documentation deliverables shall be provided at each milestone in the process. These activities include but are not limited to the following:

3.1 Document System Requirements

The Contractor shall hold teleconferences and other follow-up communications with the OEI project lead and the program office representative to document the system requirements in a Systems Requirements Specification (SRS).

3.2 Integrated Project Team participation

The Contractor shall coordinate actively and responsively with the Government and other Government designated contractors participating in the design, development, test, implementation, deployment, and operation of CDX. Failure or refusal to coordinate and cooperate with the IPT or IPT member contractors precludes effective performance of this agreement.

The Contractor shall participate on the IPT throughout the entire project lifecycle to ensure efficient and quality development is delivered.

3.3 Establish Cost & Schedule

Based on the requirements and approved SRS the contractor shall prepare a cost and schedule proposal and submit it to the OEI. If the Government agrees to proceed with the development, a Fixed Price or T&M type effort will be

identified and the Government and the Contractor will agree on an approved cost and schedule. EPA recognizes that Fixed Price offerings are traditionally the lowest risk contract type for government projects, hence EPA encourages the Contractor to propose innovative fixed price offerings for CDX projects because historically, most CDX projects have been either T&M or cost-plus contract type.

3.4 Develop System Design

The Contractor shall develop the system design document (SDD) for the transmission of the dataflow through CDX. The contractor shall leverage as much as possible generic documentation that could be utilized for this flow (for Web / Node flows). The design shall utilize existing services and reusable CDX components where possible (including Network Node Services, CDX Lite, etc.), follow CDX and Exchange Network standards, guidance, business practices, and architecture, focus on maximum efficiency and cost effectiveness, and include features needed to ensure adequate system security. Typically, a system architect and an engineering board provide final review of the design.

3.5 Security Planning and Documentation

The Contractor shall work with the OEI project lead and CDX security staff to ensure adequate security planning and documentation. See Section 2.2.1.

3.6 Design Readiness Review

The Contractor shall conduct a readiness review after the design of the dataflow has been completed to ensure that it leverages core services and meets the requirements as described in the SRS. The contractor shall develop the functionality listed in the SRS and the SDD and modify existing code or deploy new code as required. The Contractor shall conduct and present the results of developer testing to the government and turn the developed functionality over to the testing team for formal unit/integration testing.

For any fixed price dataflow effort developed by the Contractor, the costs of any software fixes required after formal unit/integration testing has begun shall be included in the fixed price. For any time and materials dataflow software development effort, the costs of any software fixes required after formal unit/integration testing has begun shall be billable to the Government up to an amount not to exceed 5% of the overall development costs (costs incurred from the acceptance of the SRS through release to the testing team for formal unit/integration testing). Fixes in excess of the 5% maximum cost shall be completed at no additional cost to the Government.

3.7 Unit/Integration Testing

After the dataflow development is completed, the Contractor shall conduct unit and end-to-end integration testing of the different components of the system in CDX. The Contractor shall use test files of actual data that the program office will provide to the contractor.

3.8 Test Readiness Review

A test readiness review is conducted once the application has been developed to ensure the dataflow is ready for testing in CDX preproduction.

3.9 Prepare a Test Plan and Prepare a Test Report

The Contractor shall prepare a test plan to test the requirements identified for the specific dataflow. The contractor shall prepare a test report that identifies what system changes the contractor completed during dataflow testing.

3.10 User Acceptance Testing

The Contractor shall provide support to user groups during testing. The Contractor's support shall include ensuring the specific dataflow and system is fully operational in the CDX preproduction environment and shall monitor the system during this testing period.

3.11 Configuration Management

In moving from development to test to production the Contractor shall use the configuration processes and procedures described in Configuration Management and Change Control and utilize CM implementation processes and procedures for deployment.

3.12 Production Readiness Review

At the conclusion of system testing and the Contractor has made any required changes to the system that were identified during testing, the Contractor shall conduct another readiness review to ensure the system is ready for deployment to production. The Contractor shall complete all readiness checklists during the readiness review and resolve any outstanding issues identified during the readiness review.

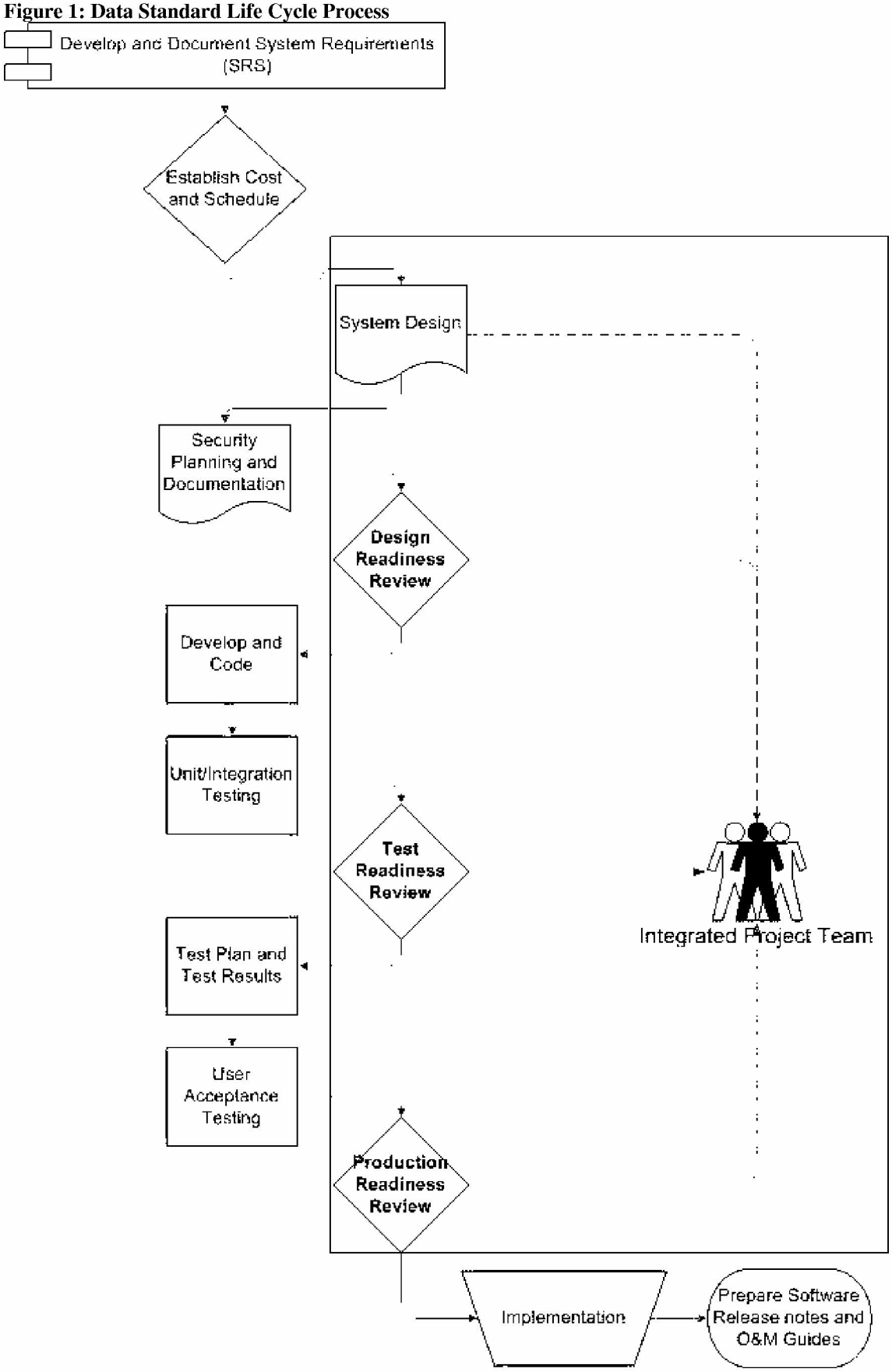
3.13 Successful Implementation

Ensure the successful implementation of the software without impacting other parts of CDX. The Contractor shall update and revise software release notes one time for any contractor developed software. The contractor’s notes shall reflect the final version of the software that is moved out of the development and preproduction environments and deployed to the production environment.

3.14 Prepare Draft O&M Guide

The Contractor shall prepare a draft dataflow O&M Guide. The Contractor shall ensure that the operation staff provides input during the readiness review.

Figure 1: Data Standard Life Cycle Process



The Contractor shall serve as a knowledge base for CDX customers by providing procedural and technical guidance on standards previously approved by the CDX Engineering Board.

4 CDX Development Services

In accordance with the Data Standard Lifecycle Process and in compliance with the EPA Enterprise Architecture, the Contractor shall provide the following development services:

4.1 Node Development and Deployment Assistance

The Contractor shall continue the development of the network nodes and node clients and assist EPA program offices and trading partners in deploying nodes.

EPA's CDX, a cornerstone of the Agency's Enterprise Architecture, and the Exchange Network (EN), are built on the use of Web Services and Service Oriented Architecture (SOA). Many key CDX SOA infrastructure components are currently in place or under development including:

- Universal Description Discovery and Integration services
- XML Gateway
- Web Service orchestration using the Business Process Execution Language (BPEL)

These common SOA components are leveraged to provide services for the CDX web site, CDX node, and Exchange Network shared security and quality assurance support. This architecture is being used to support and integrate CDX with Agency SOA initiatives as well such as the Identity and Access Management (IAM) services. Information sharing and data publishing via Network services is a primary goal of the Network and the Office of Environmental Information's Information Access Initiative.

CDX and the EN dataflows utilize many of these services to exchange data and messages among Network trading partners that are based on a common specification for reusable software components known as Network Nodes. Network Nodes are developed as both open source and proprietary software deployed by trading partners on the Network. The behavior of Network Nodes is defined in the Network Node Functional Specification. The EN trading partners are upgrading their nodes from supporting the initial Node 1.1 to the recently published Node 2.0 Specifications. CDX currently supports both version of the node in order to support state and internal EPA office nodes transition efforts.

CDX maintains nodes running on BEA WebLogic (Node1.1), JBOSS (Node 2.0), and SQLDATA Soap server (Node 1.1/2.0 - Network Authentication and Authorization Services and Quality Assurance services). In addition, a .NET /Windows Workflow Foundation based node is being evaluated for use on the Network.

Listed below are the main types of nodes provided to trading partners:

- Full Nodes can both request data from the Network, as well as publish data to the Network in response to requests (e.g., a query or solicit) from other Network Nodes. Full nodes can potentially leverage the full capabilities of the Network for machine-to-machine interaction by sending requests for data, and publishing data for use by other Network partners.
- Node/Network clients or "Network Desktops" can submit, request, and receive results from a request to a full node, but they cannot listen for/respond to queries from other nodes and as such cannot publish data on the Network. These clients are primarily for human-to-machine interaction and are normally used by trading partners that do not publish to the network.
- Demonstrated Node Configurations are essentially the messaging layer of a node that has been tested for each major platform and made available for developers to build interoperable Nodes around.

- Software Developer Kits are also available to integrate Network services into applications. It simplifies Network access down to a few lines of script that can be inserted into any application.[2]

The Next Generation Node (NGN)[3] is a full node implementation in JAVA that contains all of the software components that are required to host an Exchange Network node from messaging to transaction management and auditing. EPA provides open source Nodes, both Java and .Net Versions, to trading partners. The JAVA version called the NGN is supported for a variety of application server platforms including JBoss, Oracle, Websphere, Tomcat and BEA Weblogic. EPA's Network Nodes allow integration of a variety of other services and applications. For example, the current NGN includes integration of an open source Velocity mapper that can be used by trading partners to map to their database to create XML files for exchanges or as publishing services. EPA assists trading partners and EPA Program Offices in deploying these nodes. Support for these applications is handled through the node and CDX help desks. Third tier help desk support for the node help desk and CDX help desk shall be provided by the Contractor.

4.1.1 Node Development

The Contractor shall support development activities to support the CDX Node and EN dataflows that includes but is not limited to:

- Provide standard development and lifecycle management of each CDX and EN dataflow.
- Improve existing NGN functionality by leveraging services and other reusable components (e.g., NAAS, IAM, QA, Standard Audit, Logging, and Workflow monitoring).
- Facilitate more rapid and lower cost node deployment through the use of configuration driven service development and the use of streamlined development tools and procedures (e.g., BPEL orchestration, generalized common dataflow patterns).
- Port the NGN Node as necessary for other State platforms.
- Evaluate and develop new methods, tools and procedures to simplify dataflow creation, new services and data publishing to reduce cost and time to market.
- Port dataflows from node 1.1 to node 2.0 in support of partner upgrades.
- Integrate with other Agency SOA components.

In order to reduce costs for future NGN dataflows, the Contractor shall standardize common dataflow patterns such that they can be readily reused on the development of subsequent NGN dataflows. The types of reusable actions / workflow activities include (e.g., integrate Solicit into generic NGN dataflow to provide application support for launching publishing services (i.e., Velocity Mapper), transforming results, and providing results to the service requester).

4.1.2 Node Deployment Assistance

The types of node flow configurations deployed for a particular dataflow vary, but (depending on the complexity of the business process, timeframe, and funding) reflect one or many of the following:

- Trading Partner Full Node ↔CDX Node ↔ Program Full Node
- Trading Partner Node Client ↔ Full CDX Node ↔ Program Full Node
- Trading Partner Node Client ↔ Full CDX Node ↔ Program Node Client

The Contractor shall assist EPA and other trading partners as requested in installing, configuring, and using Nodes for their data exchanges including:

- Meeting with program office support teams to provide current information on the Exchange Network, Agency SOA initiatives, CDX standard services and processes, and consult on requirements, architecture, and design in support of the other support team's dataflow.

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[2] For more information on Nodes and Node Clients see http://exchangenetwork.net/node/index.htm.
[3] The NGN distribution information, design, and tools can be found at https://test.epacdxnode.net/ngn.

- Reviewing available documentation, (e.g., process/architecture diagrams, requirements, design) to ensure that the solutions proposed by the internal developers/operations teams are consistent with CDX's and EN business practices and architecture. The contractor's input and comments shall recommend making best use of reusable CDX components; identify specific CDX and EN standards and guidance items that are not, (but should be), used in these documents; and identify requirements and design features needed to ensure adequate system security.
- Performing analysis of key infrastructure components (e.g., Universal Description Discovery and Integration services, the XML Gateway and web service orchestration using BPEL) to optimize and integrate these services whenever possible.
- Assisting the State or EPA office in installing and demonstrating potential software solutions for Network dataflows that may include coordination with other support teams by providing code, installing and running these potential solutions in the dataflow environment(s).
- Coordinate across internal development teams to ensure all teams are kept up to date on changes in software, procedures, environments, and services.

The Contractor shall review existing CDX Node and EN Node implementations in order to identify critical issues. Contractor shall also identify and review relevant emerging and new technologies in Web Services, SOA and business process management. As agreed upon by the Government, the Contractor shall prototype and evaluate new products, and make recommendations for improving the overall efficiency and maintainability of CDX and the EN.

4.2 Data Publishing

CDX defines Data Publishing as a framework of web services that make data available for consumption by end users from EPA data stores through the Exchange Network. Network partners are encouraged to publish data to make it more widely available. EPA and CDX are making a concerted effort to make data available through data publishing services. Two systems, the TRI State Data Exchange and the Air Quality System (AQS) have publishing services available through the EPA node.

The Contractor shall develop and maintain web services that operate through the CDX node and make data available to end users and consumers. Publishing services shall include those that operate on a push model, such as in the TRI state data exchange, and a pull model, such as Facility Registry System (FRS). Push model services include web services such as submit. Examples of pull model services include query and solicit. Services shall be fully compliant with the exchange network specifications and protocols. The Contractor shall develop monitoring capabilities that will allow EPA to track data publishing transactions, including the success or failure of that transaction. The contractor shall develop, maintain, and update, as necessary, all documentation detailing publishing services.

4.3 Web Development Services

In 2009 CDX supported more than 130,000 submissions and more than 2 million transactions with external parties that conduct business with the Agency in over 40 Programs. OEI provides a web interface that supports a significant portion of these user submissions and other data exchanges with EPA and external entities.

The Contractor shall support development and operations activities to support the web-based components of CDX. This may include the following:

- Conducting functional, technical, and user requirements.
- Designing and developing web-based dataflows in accordance with all applicable federal and EPA laws, regulations, policies and procedures.
- Conducting multiple levels of testing and assisting EPA program offices in the testing process.
- Conducting production readiness reviews.
- Deploying web dataflows.

The Contractor shall also provide consulting services to programs that elect to build themselves components of a web-based dataflow that will be hosted on CDX. The Contractor shall serve as a knowledgebase for program

customers and their contractors to provide procedural and technical guidance and standards previously approved by the CDX Engineering Board.

4.3.1 Web Application Development

CDX-Web hosts approximately 30 web applications on a variety of platforms that interface with web forms and other systems and services. The purpose of these applications is to support the submission and exchange of data with EPA and external parties.

The Contractor shall support web application development activities that interact with CDX forms and services according to Development Life Cycle procedures. This may include conducting functional, technical, and user requirements specifications; designing and developing applications in accordance with all applicable federal and EPA laws, regulations, policies and procedures; conducting multiple levels of testing and assisting EPA program offices in the testing process; conducting production readiness reviews and deploying applications; and making post-production enhancements/bug fixes as part of a dataflow or related project.

The Contractor shall also provide consulting services to programs that elect to build themselves components of a web-based dataflow application that will be hosted on CDX. The contractor shall serve as a knowledgebase for program customers and their contractors to provide procedural and technical guidance and standards previously approved by the CDX Engineering Board.

Development technologies include: J2EE, ASP.NET, Oracle, Lotus Notes, and Cold Fusion with a focus on JCE cryptography.

4.3.2 Web Form Development

CDX contains multiple web interfaces for users to submit and exchange data with EPA, many of which are web forms. As of March 2010, CDX supported web forms for about 40 different EPA programs. In the past, OEI had an average increase of five to 15 new programs a year. Based on new requirements and additional programs serviced by EPA, these web forms require changes or new forms are built to support additional programs. In addition, the core CDX infrastructure includes forms associated with user registration, administration and provisioning.

The Contractor shall support web form development activities that interact with CDX services. This may include conducting functional, technical, and user requirements; designing and developing web forms in accordance with all applicable federal and EPA laws, regulations, policies and procedures; conducting multiple levels of testing and assisting EPA program offices in the testing process; conducting production readiness reviews and deploying forms; and making post-production enhancements/bug fixes as part of a dataflow or related project.

4.3.3 CDX Lite

CDX Web is comprised of several web based services which have been consolidated to provide a complete table-based, custom, electronic reporting solution. CDX Lite is comprised of the following:

- Client-based Designer Tool
- CDX Web based Design Submission
- CDX Web design review and approval application
- CDX Lite Registration Provisioning tool

The CDX Lite components allow customers to design and submit requirements to be published as meta-data into CDX and incorporate:

- Screen wording
- Submission and connection criteria
- Web services
- Functions to fully implement CDX Web dataflows

The Contractor shall provide technical support to develop and integrate new CDX Services into CDX Lite.

The Contractor shall provide support for CDX customers that want to establish a CDX Lite dataflow. CDX Lite electronic data exchange support shall include the following:

- Design
- Submission
- Review
- Test
- Publication
- Operational maintenance (Refer to CDX O&M Services)

The Contractor shall ensure CDX Lite dataflows are designed, developed and maintained in accordance with:

- CDX Development Life Cycle procedures
- CDX O&M procedures
- Cross Media Electronic Reporting Rule if applicable to that specific dataflow

4.3.4 Shared Services

The Contractor shall support Shared Services and assist Shared Service developers in deploying enhanced services as necessary.

The Contractor shall support O&M activities for the Shared Services that includes but is not limited to:

- Deploying new service releases (e.g., server setup and configuration, node setup, unit testing, rolling between DEVTEST PROD environments, quality of service (QOS) monitoring
- Communicating/releasing new versions of shared service software
- Periodic Testing
- Identify, test interoperability and deploy new versions of supported software to remain current and to ensure adequate support. Routine maintenance activities are described under O&M services task.

The Contractor shall provide last tier operational support for the Shared Services including: the Universal Description and Discovery Integration Services (UDDI), Client Central Services, the Exchange Network Discovery Services, the Network Desktop tool, the Network Authentication / Authorization Services (NAAS), and the Quality Assurance Services (QA) as required. Support issues associated with other application integration, schema and Schematron deployments as they are necessary. Assist in the redeployment of these services in the various CDX and NCC environments based on the ongoing hardware refresh activities.

The XML Gateway is a message filtering appliance that is deployed in front of CDX application servers to block invalid messages routed to CDX, selected states, and Exchange Network Services. Valid Network message structures and schemas are loaded into the gateway and used to parse the incoming messages. It will serve as a gateway router for State Nodes that are only accessible by CDX.

The Contractor shall develop, maintain, and update, as necessary, all documentation detailing EN shared services.

4.4 Reporting Centers (RC)/Data Processing Centers (DPC)

RC/DPCs receive, process, record, store and distribute print and other electronic media.

4.4.1 Reporting Centers (RC)/Data Processing Centers (DPC) Support

The Contractor shall be responsible for configuring, installing, and maintaining data entry and processing systems and all of associated modules and equipment in optimal working condition. The contractor shall follow hardware and system operations procedure guidelines as stated in various EPA documents. The Contractor shall maintain any DPC/RC related systems at an optimal working condition during normal business hours (8:00 a.m. - 5:00 p.m. Eastern Standard Time) on all normal business days unless otherwise directed by EPA. The Government considers optimal working conditions as ones that do not impede or stop data entry or production processing during 99 percent of normal business hours. The Contractor shall exclude downtime resulting from specific technical directions from the EPA for the halting of data processing and data management activities.

The Contractor shall receive the current documentation from EPA on the required Standard Operating Procedures (SOPs) for each of the programs that operate a DPC/RC and shall follow those procedures as directed. The Contractor shall suggest enhancements to the procedures but shall not implement unless at the direction of EPA. The Contractor shall be responsible for maintaining and updating all procedure documentation upon receipt, as required.

The Contractor shall provide comprehensive systems life cycle services for all software application systems in the DPC/RC and shall ensure that all system-related products produced under this order have adequate documentation. The Contractor shall refer to the Data System Development and System Life Cycle Maintenance section of this SOW for information regarding the regarding EPA system life cycle requirements. The Contractor shall ensure that the Contractor maintains a high degree of interaction between the Contractor's technical staff and the Contractor's project managers while performing these services.

The Contractor shall provide design recommendations as well as ideas for the development and implementation of major enhancements. The Contractor shall include suggestions for where existing development, systems or processes can be leveraged or adapted to maximize cost savings, where feasible, to the Government.

The Contractor shall identify innovative technologies that exploit web capabilities to streamline the collection and dissemination of environmental information to stakeholders. Contractor shall identify mechanisms to publish data in appropriate formats to address the analysis in response to stakeholder queries.

The Contractor shall inventory, manage and maintain all property required for the operations of the DPC/RC including items such as computers, furniture, office supplies, etc.

4.4.2 Submission Receipt and Identification

The Contractor shall:

- Receive, identify, process, and track all submissions to the DPC/RC. The contractor shall receive submissions via a Post Office Box, as regular mail, or commercial express mail, and fax transmissions.
- Receive and process (e.g., date stamp and identify document type) all mail addressed to the DPC/RC.
- Pick-up and deliver documents to EPA.
- Open, date stamp (with the date of receipt at the EPA RC) and process all “official” incoming mail.
- Maintain processing procedures that include document identification, document labeling (i.e., bar coding), placing materials (whether forms, disks, or other communications) in folders, recording postmark and received dates per received package, and entering the information into the Records Management System.
- Assist EPA, as required, in the distribution of EPA mailings through the DPC/RC.
- Assist with electronic a print correspondence with end users, including e-mailing responses to requests.
- Perform the entry of data from paper/magnetic/optical media into repository databases.
- Support Data capture, identification, verification, reconciliation and validation.
- Maintain responsibility for handling and acknowledging Claims of Trade Secrecy (Trade Secret documents) under EPCRA Section 313.

4.4.3 End User Support and Troubleshooting

The Contractor shall:

- Provide user and technical support services as defined and prioritized by the EPA to the user community by answering questions, responding to requests for documentation, and providing required help.
- Respond to requests for assistance directly from users, or EPA may refer them to the contractor.
- Respond to all inquiries within one (1) business day. The contractor shall notify users who leave messages that it is EPA's goal to respond to their inquiry within one (1) business day.
- Develop standard form answers for hotline and e-mail questions.

4.5 Systems Development Lifecycle (SDLC) Advocate

The Contractor shall provide an O&M team member to act as the SDLC Advocate and be involved with all development efforts, from the beginning, to ensure that all efforts in CDX are following proper development guidelines. Once the development effort is ready to launch into the production environment, the Advocate will inspect the dataflow to ensure the code is acceptable and maintainable with minimal effort. Tasks of the Advocate shall include the following:

- IPT participation.
- Evaluate cost and schedule estimates to ensure they are fair and reasonable for the size and complexity of project. The Advocate shall make recommendations to proceed at a Fixed Price or as a T&M effort.
- All documentation including test scripts and design documents are complete and acceptable.
- Code has been tested and results documented.
- EA compliance.
- Maintenance documentation is complete and usable.
- Ensure transition from the development team is satisfactory and all members of the O&M team are trained including help desk and infrastructure support.

4.6 Dedicated Hardware and Software

CDX stakeholders may require specialized hardware and software be supported due to unique needs or to reduce risk in the primary CDX system environment. This is an exception to the normal practice. Based on the requirements of CDX stakeholders' dataflows, the contractor shall analyze the various facets of a dedicated environment construct.

The Contractor shall analyze the impact of supporting a dedicated environment for a specific customer which could include custom or dedicated:

- Hardware
- Operating system
- Custom application
- Physical environment

The Contractor shall clearly delineate CDX infrastructure from the program specific dedicated environment and document these components. The Contractor shall build out these environments as directed by EPA. Additionally, the contractor shall maintain these environments under Task 2.0 in accordance with EPA and program established practices and documented policies.

4.7 Systems Engineering

CDX System Engineering support includes activities related to the growth, interoperability, and extension of the CDX service oriented architecture. It revolves around research and development of new engineering approaches.

These consulting services are coordinated through the CDX Engineering Board (EB) and all activities are approved and managed by the chair of the engineering board. Current areas of CDX research include SOA technologies and new web 2.0 technologies.

The Contractor shall provide systems engineering support including, but not limited to the following activities:

- Attendance and general support for the weekly EB activities and the monthly Web Services Community of Interest.
- Identification/tracking of high-level dataflow development project milestones.
- Support consistent application of CDX engineering standards across CDX.

Work products in this area could include generating best practice guidelines and engineering-related reviews.

The Contractor shall support CDX research activities. The contractor shall support efforts to look at emerging technologies in order to determine suitability for future use on CDX. This research will generally involve special investigations and presentations to the CDX EB.

5 CDX Development Integration Testing

The Contractor shall provide the following testing services:

Unit/Integration Testing.

After the dataflow development is completed, the contractor shall conduct unit and end-to-end integration testing of the different components of the system in CDX. The Contractor shall use test files of actual data that the program office will provide to the Contractor.

Test Readiness Review.

A test readiness review is conducted once the application has been developed to ensure the dataflow is ready for testing in CDX preproduction.

Prepare a Test Plan and Prepare a Test Report.

The Contractor shall prepare a test plan to test the requirements identified for the specific dataflow. The Contractor shall prepare a test report that identifies what system changes the contractor completed during dataflow testing.

6 Additional Tasks

6.1 Routine Data Exchange Upgrades

On a regular basis, individual dataflows within CDX require routine upgrades to enhance the functionality of the dataflow. These upgrades are usually made on an annual basis and are typically in response to one of several things:

- Changes in information collection requests (ICR).
- New regulations that must be implemented within existing systems.
- Changes determined necessary by the sponsoring program as a result of user comment.
- Changes in technology that would result in an improved operation of an existing dataflow.

Examples of changes could include things such as adding an additional field to a web form, additional data quality checks, or new security features.

The Contractor shall develop capabilities or modify existing systems to accommodate changes to data exchanges. These changes are expected to add new functionality or technology to the existing system and are not considered to be a complete redevelopment of the system.

The Contractor shall use coding practices that limit the amount of re-coding necessary when additional functionality is added as a result of a routine data exchange upgrade. The contractor shall update existing system documentation to reflect any changes as a result of routine data exchange upgrades.

6.2 Training for CDX Users

The Contractor shall provide instructional guidance for end-users of CDX dataflows.

Types of training provided could be, but are not limited to:

- Print products/manuals
- Online text tutorials
- Online video tutorials
- Live web conference training sessions
- In-person, on-site training sessions

The Contractor shall conduct post-training surveys/assessments and provide results to the CDX Team.

6.3 Shared Services O&M and Deployment Assistance

The Contractor shall continue the O&M of the Shared Service and assist Shared service developers in deploying enhanced services as necessary.

The Contractor shall support O&M activities for the Shared Services that includes but is not limited to:

- Deploying new service releases (e.g., server setup and configuration, node setup, unit testing, rolling between DEVTEST PROD environments, quality of service (QOS) monitoring.
- Communicating/releasing new versions of shared service software.
- Periodic Testing.
- Identify, test interoperability and deploy new versions of supported software to remain current and to ensure adequate support.
- Routine maintenance activities.

The Contractor shall provide last tier operational support for the Shared Services including: the Universal Description and Discovery Integration Services (UDDI), Client Central Services, the Exchange Network Discovery Services, the Network Desktop tool, the Network Authentication / Authorization Services (NAAS), and the Quality Assurance Services (QA) as required. Support issues associated with other application integration, schema and Schematron deployments as they are necessary. Assist in the redeployment of these services in the various CDX and NCC environments based on the ongoing hardware refresh activities.

6.4 Database Management Services

Typically CDX customers' dataflow databases and data tables are hosted and maintained outside of the CDX environment. A few customers choose to have their systems hosted and maintained within the CDX environment.

The Contractor shall provide database management services to those customers that choose to keep their database and/or data tables within the CDX environment. All processes, procedures and service levels associated with standard CDX O&M service offering still apply.

Under Database Management Services the Contractor shall:

- Provide assistance in the querying of the databases for the purposes of returning information requested by EPA.

- Conduct an active system maintenance program for the DPC/RC databases and related applications.
- Perform regular database verification and validation routines and procedures to ensure the integrity of tables, files, and related systems.
- Administer and perform diagnostic testing to identify problems within the databases and related applications.
- Maintain responsibility for reliable, available and effective database management of the databases and related applications and shall ensure a secure platform that delivers optimal performance.

The Contractor shall ensure the appropriate implementation and execution of the following database administration functions:

- Installing and upgrading the database software and options.
- Creating tables and indexes.
- Creating and managing table spaces.
- Managing control files, online redo logs, archived redo logs, job queues, and server processes.
- Creating, monitoring, and tuning data loading procedures.
- Adding users and groups, and implementing security procedures.
- Implementing security, backup, and recovery plans.
- Monitoring database performance and exceptions.
- Reorganizing and tuning the database.
- Troubleshooting database problems.
- Coordinating with appropriate vendor customer support services.
- Upgrading and migrating database software to current and supportable releases and versions.
- Performing regularly scheduled system and database backups.

6.5 Outreach, Communication and Governance Support

The CDX Team requires outreach and communications support to the CDX stakeholder community. The Contractor shall prepare materials for internal and public consumption and those materials could be in the form of paper, web-based or other form. The Contractor shall also provide support to CDX governing bodies that address CDX related issues. Examples of governance support include preparing agendas, meetings notes, and action items.

6.6 Enhanced Financial Reporting

Enhanced financial reporting is defined as reporting that is above the standard reports provided to customers by the CDX Program. The CDX Program offers enhanced financial reporting to customers as requested. The enhanced reports are custom for each customer and will vary. Examples of enhanced financial reporting typically requested by customers include:

- Traditional or modified Earned Value Management (EVM)
- Weekly or Monthly Financial Reporting of CDX Services
- Return on Investment Reports
- Data calls for Capital Planning and Investment Control input
- Data calls for OMB Reports

As directed by EPA, the Contractor shall provide enhanced financial reporting services. Reporting services provided to EPA will depend on CDX customer financial reporting requirements.

6.6.1 Earned Value Management System

An example of enhanced financial reporting is earned value management support. If requested by the CDX customer, the Contractor shall use traditional EVMS to manage a specific dataflow effort. EVMS is recommended for development efforts exceeding five hundred thousand dollars.

"EVMS", as used in this statement of work, means a project management system used by the contractor that effectively integrates the project technical scope of work with schedule and cost elements to improve project planning and control. The contractor's EVMS must conform to the characteristics described in American National Standards Institute (ANSI)/Electronic Industries Alliance (EIA) Standard-748-A -1998, Earned Value Management Systems. A copy of the standard is available from American National Standards Institute (http://webstore.ansi.org and 1-212-642-4900).

Earned value is best measured using discrete measures of progress. There are a relatively small number of industry-accepted methods of measuring earned value. Most are alternatives for use in measuring the earned value for discretely measurable work packages. Other methods of earning value, such as the so-called "level of effort" and "apportioned" measures are used where there are no clear, objective, discrete measures available. The use of these measures is discouraged by industry best practice, but, at the same time, unavoidable for certain classes of work. Specifically, those tasks which resist discrete measures of earned value are tasks where broadly defined technical support services and rapid responses to dynamically defined specific requirements are acquired. The contractor shall use discrete measures of earned value whenever it is reasonable to do so.

For certain activities (work packages), prospective contractors may not have appropriate metrics at hand in order to make accurate estimates and to be in a position to use discrete measures of performance necessary to manage using a robust EVM plan. For these reasons, EPA will allow more subjective measures of earned value to be used in some work packages under this SOW during the base year period of performance. If so, during the base year period, the contractor is required to develop the metrics that will allow the majority of the activity under the SOW during any option year periods to be planned in work packages for which objective, discrete measures of earned value can be used. The contractor shall consult and collaborate with EPA in developing the metrics during the base year that are intended to support option year discrete measures of earned value and report monthly on the values of metrics collected.

The Contractor shall use an EVMS to provide the following project status data on a monthly basis as part of the monthly status report (all metrics are project-to-date cumulative values unless otherwise stated):

- **Measurement Data**

  BCWS – The budgeted cost of work scheduled (planned value)
  $BCWS_{curr}$ – The BCWS for the most recent month
  BCWP – The earned value of the work actually performed (earned value), the physical (measurable amount (in dollars)) of work completed
  $BCWP_{curr}$ – The BCWP for the most recent month
  ACWP – The actual cost of the work performed (actual cost of work)
  $ACWP_{curr}$ – The ACWP for the most recent month

  Cost/Curve Graph – A graph plotting BCWS, BCWP, and ACWP on a monthly basis from inception of the contract through the month just ended, and plotting the BCWS curve to the budget at completion (BAC) value

- **Variance Data**

  Cost Variance (CV) – The between earned value and actual cost of work performed [CV = (BCWP-ACWP)]
  Schedule Variance (SV) – The difference between the earned value and the planned value [SV= (BCWP-BCWS)]

- **Performance Index Data**

  Cost Performance Index (CPI) – The ratio of the earned value to the actual cost [CPI = (BCWP/ACWP)].
  Schedule Performance Index (SPI) – The ratio of the earned value to the planned value [SPI = (BCWP/BCWS)]

- **Variance Percentage Indicators**

Cost Variance % (CV%) – The Cost Variance (CV) expressed as a percentage of the earned value [CV% = (CV/BCWP)*100]
Schedule Variance % (SV%) – The Schedule Variance (SV) expressed as a percentage of the planned value [SV% = (SV/BCWS)*100]

- **Estimates At Completion and Completion Variances**

  $\mathbf{EAC_1}$ = ACWP + (BAC – BCWP) / CPI
  $\mathbf{EAC_2}$ = ACWP + (BAC – BCWP) / (CPI*SPI)
  $\mathbf{EAC_{PM}}$ = ACWP + Contractor's current estimate to complete (ETC) the project
  $\mathbf{VAC_1}$ = BAC – EAC_1
  $\mathbf{VAC_2}$ = BAC – EAC_2

The Contractor shall report the above EVM metrics in a table containing a column for each of the six most recent months' values and one row per metric.

The Contractor shall include an analysis of significant EVM variances on a monthly basis as part of the monthly status report as requested.

The Contractor shall support and participate in integrated baseline reviews and reviews of all relevant EVM data as requested by EPA customers.

6.7 Systems of Registries Development Support

The purpose of this task is to develop and integrate software for the System of Registries and the Data Standards (DSB) web site on both the Internet and EPA Extranet that enhances and expands DSB services. Solutions will continue to enable stewardship of individual registry contents by program offices and EPA partners. Work will support collaboration by communities of interest in order to develop registry contents and data standards. It will elevate the visibility and access of EPA data standards and associated processes to the EPA community and its developers. It will allow DSB customers to clearly understand and access DSB services. It will support the EPA enterprise architecture by providing tools for enterprise and system architects performing Service Oriented Architecture (SOA), data architecture, applications architecture, and data standards integration. Most importantly it will allow EPA program offices, regions, and partners to integrate their systems and services with the metadata contained in the registries in an automated way. This will allow EPA's registries to remain current. Users of EPA systems will have direct access to metadata which will assist them in determining the appropriateness and quality of data they may wish to use. Use of metadata managed in the registries will facilitate the general understanding of the meaning of environmental data, both structured and unstructured.

The Contractor shall design, develop, test (unit, integration, and user acceptance testing), and deploy system and capabilities in accordance with EPA policies, guidelines, and standards. The Contractor shall provide documentation as appropriate according to best practices and the deliverable list. The Contractor and EPA will jointly review the deliverables, in working sessions, prior to final submission to the Government. When applicable, systems and databases shall be compliant with the ISO 11179 standard.

One goal of the System of Registries is to make the creation, delivery, and use of metadata and terminology transparent to the end user of environmental information. Source information, definitions and meanings may appear to the user as needed. In some cases systems and registries may be updated and kept current without human intervention. The end user may be a user of the EPA Internet or Extranet, a user of an EPA system or document repository, or in some cases the user of partner or Federal system. The Contractor shall also design, create, test, document and register (in the Reusable Component Services) metadata and terminology web services in support of EPA, its partners, and the public as they retrieve, translate, validate, use, or present environmental information. On occasion, work shall include upgrades to COTS software, bulk loads for TSCA substance inventory, registry contents management, architecture support and outreach support.

The services and systems to be developed are expected to include:

- Code translation services as data is moved across the Exchange Network

- Code (including substance) validation services as data is imported into Federal, EPA or partner systems
- Reference (active metadata) services (including substance metadata) for users of Federal, EPA, and partner systems (available within the customer systems)
- Code (including substance) notification and/or update services (push from the registries to EPA and partner systems that use data registry contents including items such as standards, data dictionaries, and code sets)
- Keyword update services for the EPA Enterprise Content Management System (ECMS) and other EPA and partner systems
- Classification scheme and taxonomy and other terminology update services for EPA and partner systems
- Search and retrieval services based on concept and meaning for document (unstructured data) systems
- Search and retrieval services based on concept and meaning for structured database systems
- Presentation services for code sets (including substances), dictionaries, vocabularies and other metadata and terminology (to allow visibility from within web sites or systems)
- Tool Evaluation and Design for Reusable Component Services
- Design, Development, Testing, and Integration of Data Set and Models Registration and Inventory Services
- Integration of Geospatial Tools, Technologies, and Resources with the System of Registries.

6.8 Geospatial Services

Geospatial data are those data that are placed based- including locational, geographical and associated place-based attributes that facilitate the use of these data in a geographic context. Typically they are described as points, lines, polygon "vectors" or digital images known as "rasters". These data are exchanged through widely used proprietary formats and services or increasingly through the use of Geographic Markup Language (GML) and Geospatial Really Simple Stuff (GeoRSS). Geospatial data tend to be complex, and because of this, they are typically accessed, analyzed and managed through Geographic Information Systems (GIS) technologies for mapping, modeling or routing purposes. Geospatial Services include the functions and associated technologies associated with the storage, search, discovery, access and exchange of geospatial data.

Over the last decade, there has been a virtual explosion in the interest and capabilities to integrate environmental data to a spatial context. Whereas CDX was never considered a "geospatial system", aspects of CDX support to the states, regulated entities and the public have inevitably led CDX to incorporate limited geospatial tasking into their overall services. Some examples of past support include:

Facility Registry System Update Service (FRS US)

In this service, FRS data are presented to a regulated entity or other register users through a web-based visualization/mapping service (currently it is Google Earth) and the user is allowed to submit edits to that location using the mapping interface. By offering this service, EPA is able to collect more accurate locational data simply and effectively on facilities.

GeoFinder Exchange Network Project

Geospatial analysis depends on rapidly gathering and integrating widely disparate information on places and presenting this on a map. One of the major obstacles to the geospatial community has been the shortcoming of existing search engines to crawl for geospatial data and metadata. The GeoFinder project leverages CDX security (NAAS) to search geospatial metadata catalogues across agencies.

Heartland Emergency Response Exchange Geospatial Services

These services are critical during emergency responses, where responders need rapid access to widely-diverse state, local and federal data to make "on the ground" decisions. CDX has helped support an Exchange Network project to tie Exchange Network dataflows to visualization capabilities like Google Earth.

With rare exception, EPA's programs, regions and research operations use geospatial data, but geospatial technologies for analyzing these data aren't used widely. Over the next decade this is going to change, to the point that geospatial data services could become a central focus of CDX.

For the purposes of this contract, geospatial data should be considered another type of "Dataflow" that could take advantage of the full range of CDX services. These services include:

- Business Support Services
- Primary and Additional Development Services
- Primary and Additional Operations and Maintenance Services

In the development of geospatial dataflows, the Contractor shall take advantage of the use of Open Geospatial Information System Consortium (OGC) standards (http://www.opengeospatial.org/) for search, exchange and publishing of geospatial data. The Contractor shall also take full advantage of existing Federal (http://gos2.geodata.gov/wps/portal/gos) and EPA (http://www.epa.gov/geospatial/data.html) infrastructure, policies and standards for geospatial data and metadata.

7 Task Management

The Contractor shall designate a single Program Manager (PM) to serve as the Contractor's primary point of contact for all CDX activities and issues. The Contractor shall ensure that its PM provides sufficient management of this task order to ensure that tasks are performed efficiently, accurately, on time, and in compliance with the requirements. The Contractor PM shall coordinate as necessary with Government representatives to ensure that the task is managed consistently with overall contract requirements. The Contractor PM shall ensure timely and accurate submission of deliverables and invoices. Contractor shall identify opportunities to streamline and minimize costs where possible, while improving services (e.g., for processes, procedures, services, system architecture and dataflow, design, testing, and implementation).

Supporting services to the Contractor's business including but not limited to accounting, clerical, executive management, and business development are not chargeable to the Government as they are included in the contractor's fully burdened rates. Management activities specific to a dataflow development effort shall be recorded and charged specifically to that effort. Additionally, the contractor shall integrate IT Service Management best practices and strategies into their task management approach with the goal of improving CDX Program service quality, increasing strategic collaboration among CDX teams and increasing operational efficiencies. The contractor shall also include in their approach how the contractor would "Operatate the CDX Program like a Business". Running EPA IT programs like a business is one of the priorities of EPA's Chief Information Officer.

7.1 Reporting

7.1.1 Monthly Progress Report (MPR)

The Contractor shall ensure that a MPR is submitted outlining the progress, status, and any problems/issues encountered in the performance of this task order. The Contractor shall require all sub-Contractors to provide input to the MPR where there are critical or significant tasks related to the prime order. Critical or significant tasks shall be defined by mutual agreement between the Government and Contractor.

7.1.2 Monthly Financial Report (MFR)

The Contractor shall provide a MFR detailing expenditures and billings on a monthly basis. Format for the report includes a single, consolidated report detailing expenditures and hours by task, sub-task, and dataflow and labor category.

7.1.3 Ad-hoc Reports

The Contractor shall provide additional reports or data as requested by the Government. Reports and data calls may include but are not limited to metrics, performance measures, strategic plans, guidance documents etc.

7.2 Resource Plan

The Contractor shall provide a Resource Plan that outlines staffing and physical assets management, including the Contractor's plan to retain adequate, qualified staffing for EPA, processes for resolution of priority and resource conflicts, the approach to collaboration, flexibility, creativeness, responsiveness, willingness to change, and innovative solutions. The Plan shall also include a transition plan for key personnel in the case of changes to the personnel during the contract performance. A draft Plan shall be delivered with the contractor's proposal submission and the final draft of the Resource Plan shall be due ten business days after award. The Plan shall be reviewed annually and updated as necessary.

7.3 Communications Plan

The Contractor shall provide a Communications Plan that provides the guidelines for communication between Contractor and EPA. The Communications Plan shall include, but not be limited to, escalation procedures, notification guidelines, communication channels, and risk management procedures. A draft Plan shall be delivered with the contractor's proposal submission and the final draft of the communications plan shall be due thirty calendar days after award. The contract shall review the Plan jointly with EPA annually and update as necessary.

7.4 Transition Support

7.4.1 Incoming Transition

In accordance with this task order, the Contractor shall provide a draft plan five business days after contract award for incoming transition. The Contractor shall coordinate with the Government in planning and implementing a complete transition to the Contractor's support model. The Contractor shall collaborate with the Government to develop and deliver an Incoming Transition Plan. The Government designates a transition period of six months for the incoming Contractor to coordinate and work with the incumbent Contractor. This transition plan shall include, but is not limited to:

- Availability of Key Resources.
- Timelines/Milestones.
- Coordination with Government representatives.
- Review, evaluation and transition of current support services.
- Transition of historic data to new Contractor system.
- Government-approved training and certification process.
- Transfer of hardware warranties and software licenses (if applicable).
- Transfer of all necessary business and/or technical documentation.
- Transfer of compiled and uncompiled source code, to include all versions, maintenance updates and patches (if applicable).
- Orientation phase and program to introduce Government personnel, programs, and users to the Contractor's team, tools, methodologies, and business processes.
- Distribution of Contractor purchased Government owned assets, including facilities, equipment, furniture, phone lines, computer equipment, etc.
- Transfer of Government Furnished Equipment (GFE) and Government Furnished Information (GFI).
- Documentation and Inventory.
- Applicable EPA briefing and personnel in-processing procedures.
- Comprehensive Security Plan.
- CBI and Chain of Custody Issues.

7.4.2 Outgoing Transition

In accordance with this task order, the Contractor shall provide a plan for 120 calendar days of outgoing transition for transitioning work from an active task order to a follow-on contract/order or Government entity. This transition may be to a Government entity, another Contractor or to the incumbent Contractor under a new contract/order. In accordance with the Government-approved plan, the Contractor shall assist the Government in planning and implementing a complete transition from this order to a successor provider. This shall include formal coordination with Government staff and successor staff and management. It shall also include delivery of copies of existing policies and procedures, and delivery of required metrics and statistics. This transition plan shall include, but is not limited to:

- Coordination with Government representatives.
- Review, evaluation and transition of current support services.
- Transition of historic data to new Contractor system.
- Government-approved training and certification process.
- Transfer of hardware warranties and software licenses (if applicable).
- Transfer of all necessary business and/or technical documentation.
- Transfer of compiled and uncompiled source code, to include all versions, maintenance updates and patches (if applicable).
- Orientation phase and program to introduce Government personnel, programs, and users to the Contractor's team, tools, methodologies, and business processes.
- Disposition of Contractor purchased Government owned assets, including facilities, equipment, furniture, phone lines, computer equipment, etc.
- Transfer of Government Furnished Equipment (GFE) and Government Furnished Information (GFI), and GFE inventory management assistance.
- Applicable EPA debriefing and personnel out-processing procedures.
- Turn-in of all government keys, ID/access cards, and security codes.

7.4.3 Documentation Analysis and Creation

The Contractor shall analyze documentation for existing dataflows and provide a gap analysis report. The report shall make recommendations for which dataflows require documentation to be created to ensure a successful transition. Once the gap analysis report is accepted by EPA, the contractor shall create documentation for the requested dataflows and include such documentation as system design documents.

7.5 Program Management Plan

The Contractor shall develop a Program Management Plan that requires Government approval. The Program Management Plan shall consist of control policies and procedures in accordance with standard industry practices for project administration, execution and tracking. The contractor shall review the Plan annually and update as necessary. The Program Management Plan shall be due five (5) calendar days after the award of the order and shall be updated when new development efforts are authorized.

The Program Management Plan shall include the following:

7.5.1 Identification of Milestones

The PMP shall detail when Government information, activity, equipment, material, facilities, etc. is required and timeline dependencies or prerequisites for subsequent Contractor activities.

7.5.2 Work Breakdown Structure (WBS)

The Contractor shall provide a WBS for development tasks over one hundred thousand dollars.

7.5.3 Video Conferencing

This will detail the capabilities that are compatible with EPA video conferencing services to ensure support of video media capabilities. The EPA currently utilizes Tandberg technology for video conferencing.

7.5.4 Risk Management Plan (RMP)

The Contractor shall supply a RMP that describes the Contractors management procedures for risk identification, tracking, and resolution.

7.5.5 Issue Escalation Plan

The Contractor shall outline procedures and policies regarding escalation of issues surrounding the management of the contract. This plan will encompass both Contractor and Government procedures.

7.6 Quality Control Plan

The Contractor shall provide a Quality Control Plan (QCP) that illustrates the methods it shall use to maintain quality, timeliness, responsiveness, customer satisfaction. The contractor's QCP shall define and identify, at a minimum, the following:

- **Roles and Responsibilities** – Outlines the roles and responsibilities for both EPA and the contractor needed to perform quality assessments.
- **Performance Strategy** – Provides the overall strategy for assessing quality, including measurement metrics & methods of surveillance
- **Reporting Mechanisms** – Outlines the reporting process used to track and report the overall quality of the program.
- **Performance Metrics** – Provides definition of the metrics for all work performed

A draft plan shall be delivered with the contractor's proposal submission and the final draft of the Quality Control Plan shall be due ten business days after award. The Plan shall be reviewed every six months and updated as necessary.

7.7 Key Personnel

The Contractor shall furnish Key Personnel for performance of tasks in accordance with task order clause H.23.

7.8 CDX Performance Metrics

Minimum performance metrics are outlined below. Contractor shall propose additional metrics in the QCP (Task 7.6). Any weights applied to these metrics shall be defined after the QCP has been approved and additional Contractor metrics have been incorporated. Surveillance documents are defined in the Quality Assurance Surveillance Plan. The Government may waive a Milestone Review under Tasks Three and Four if warranted by the short term or small dollar amount of a dataflow development effort.

	Performance Metric Name	TDD	Performance Metric Definition	Work Products	Service Levels	Primary Monitoring Methods	Financial Impact
1	Schedule Accuracy	All	This metric will evaluate the timeliness of the delivery of project management and technical material deliverables. Determined by the comparison of scheduled to actual delivery date based on business days.	All contractual deliverables outlined in the TDD response.	75% of deliverables submitted to EPA on the due date and accepted. If rejected, the resubmission date of the deliverable that is eventually accepted is what shall be recorded as the deliverable submission date for this metric.	Track deliverable due dates and actual deliverable submission dates in CDX Metrics Workbook section of the Task Order or dashboard developed by the contractor.	If the Service Level threshold is not met, the CO will evaluate the deficient performance and request a remedial plan from the contractor, in accordance with 4.1.2 of the QASP
2	Quality of Documentation Deliverables	All	This metric will measure the number of iterations required for deliverable final acceptance by EPA	All contractual deliverables and any additional deliverables outlined in the TDD response including System Requirement Specifications System Design Documents Design Readiness Review Materials Production Readiness Review Materials CROMERR Flow Checklist	90% of documents have no more than 1 iteration after initial deliverable submission to EPA for acceptance.	Track the deliverable iterations using the version numbers for each deliverable submission to EPA in the CDX Metrics Workbook or dashboard developed by the contractor.	If the Service Level threshold is not met, the CO will evaluate the deficient performance and request a remedial plan from the contractor, in accordance with 4.1.2 of the QASP
3	Quality of Software Test Deliverables	All	Government acceptance of final test results based on User Acceptance Testing Phase for the contractor developed code. Classification of issues is determined by both EPA and the contractor in joint review sessions.	Completed UAT Test Report	All critical or high issues are fixed within one business day of issue identification.	Review of UAT Test Report.	If the Service Level threshold is not met, the CO will evaluate the deficient performance and request a remedial plan from the contractor, in accordance with 4.1.2 of the QASP

	Performance Metric Name	TDD	Performance Metric Definition	Work Products	Service Levels	Primary Monitoring Methods	Financial Impact
4	Quality of Software into Production		Government acceptance of software into CDX production environment and new issues do not arise because of new software	Software developed by the contractor	Minmal new issues (no more than 3) arise as a result of implementing new software developed by the contractor into the CDX production environment	Review of Production Issues for period following installation	If the Service Level threshold is not met, the CO will evaluate the deficient performance and request a remedial plan from the contractor, in accordance with 4.1.2 of the QASP
5	TDD Cost Estimate Accuracy	All	This metric will measure the accuracy of the cost estimate in the contractor's TDD response. The EPA approved cost estimate shall be compared with the actual cost of the TDD.	TDD Response documents with initial cost estimate	Actual TDD costs are not more than 10% of the estimated costs. A documented innovative solution that wasn't originally in the contractor's TDD response, and that is acceptable to the government, shall require the contractor to send a revised TDD response with a revised cost estimate and technical approach.	Monthly Financial Reports Report containing TDD cost estimates vs. TDD cost actual.	If the Service Level threshold is not met, the CO will evaluate the deficient performance and request a remedial plan from the contractor, in accordance with 4.1.2 of the QASP
6	Shareholder Support	All	Shareholder satisfaction with contractor support provided	Random customer survey distributed to the CDX stakeholder managing each TDD Quality Deficiency Report	A random average survey score of 3 out of 5 for the TDD. Additionally zero Quality Deficiency Reports submitted for the TDD.	Survey results delivered to EPA and recorded in CDX Metrics Workbook or dashboard developed by the contractor	If the Service Level threshold is not met, the CO will evaluate the deficient performance and request a remedial plan from the contractor, in accordance with 4.1.2 of the QASP

	Performance Metric Name	TDD	Performance Metric Definition	Work Products	Service Levels	Primary Monitoring Methods	Financial Impact
7	Security Information Assurance	9.14	Applicable vulnerability alerts, bulletins and technical advisories implemented within 30 calendar days of issue date	Vulnerability alerts Bulletins Technical Advisories Weekly NCC Meetings and CCB meetings CSIRC Report as they come out	100% of Notices implemented by due date specified in the TDD	Contractor shall maintain a log of alerts, bulletins and technical advisories, the implementation/ action due dates, and the date the contractor completed implementation. The log results summarized in the CDX Metrics Workbook or dashboard developed by the contractor	If the Service Level threshold is not met, the CO will evaluate the deficient performance and request a remedial plan from the contractor, in accordance with 4.1.2 of the QASP
8	Tier III Support	All	Length of time to respond to a CDX help desk ticket. A contractor's response includes the problem or issue, the probable cause of the problem/issue , a proposed resolution and approach for correction and a category of severity assigned (if applicable). **Critical issues** – Production environment only; issue that prohibits a user from meeting a reporting deadline and typically impacts multiple users. **High Issues** – Production or Test environment, but not development; issue may contain a workaround and issue affects one or small subset of users and is not critical for immediate reporting deadline.	N/A	90% of all Critical or High Production Issues have a probable cause , proposed resolution, and approach identified and communicated to EPA within 24 hours of issue identification. 90% of all High Non-Production Issues have a probable cause, proposed resolution, and approach identified and communicated to EPA by the end of the next business day of issue identification.	Individual Review of Tickets from the contractor's work request management system. Contractor records summary of results in CDX Metrics Workbook or dashboard developed by the contractor.	If the Service Level threshold is not met, the CO will evaluate the deficient performance and request a remedial plan from the contractor, in accordance with 4.1.2 of the QASP

	Performance Metric Name	TDD	Performance Metric Definition	Work Products	Service Levels	Primary Monitoring Methods	Financial Impact
9	Product Monitoring	All	Product monitoring of software and hardware licenses including anti-virus scanning and Patchlink OS updates This metric will measure the contractor's ability to update products and registrations, including licenses before they expire and become unsupported by the corresponding software or hardware vendor.	CDX / IETB Asset and Purchase Tracking Spreadsheet Purchase Request (PR) Tracker	No (0%) products (software or hardware) go unsupported. The contractor shall submit a recommendation for an appropriate upgrade point/date at least 30 calendar days prior to license or product expiration. If the recommendation is submitted 29 days prior to expiration and the product ends up going unsupported, then the contractor did not meet this service level.	Un-supportability dates are identified and tracked by the contractor and summarized in the CDX Metrics Workbook or dashboard developed by the contractor	If the Service Level threshold is not met, the CO will evaluate the deficient performance and request a remedial plan from the contractor, in accordance with 4.1.2 of the QASP

References

Listed below are the Federal regulations, guidelines and procedures related to the requirements in this statement of work.

Reference Name	Reference Location
Federal Information (FIPS)	http://www.itl.nist.gov/fipspubs
NIST Special Publication	http://csrc.nist.gov/publications/PubsSPs.html
EPA Directive 2100, Information Resources Management Policy Manual	Provided by the contracting officer
EPA Information Security Manual	Provided by the contracting officer
OMB Circular A-130	http://www.whitehouse.gov/omb/circulars_a130_a130trans4
ANSI/EIA-748 "Earned Value Management System Guidelines."	http://webstore.ansi.org/RecordDetail.aspx?sku=ANSI%2FEIA-748-B
EPA Security Escalation Procedures and Computer Security Incident Response Capability (CSIRC) procedures	Provided by the contracting officer
CDX O&M Guide	Provided by the contracting officer
CDX Contingency Plan	Provided by the contracting officer
CDX Separation of Duties Guide	Provided by the contracting officer
CDX Getting Started Guide	http://www.epa.gov/cdx/getstart/index.htm
CDX Application Management Portfolio	Provided by the contracting officer
CROMERR	http://www.epa.gov/CROMERR/
CDX Readiness Checklists	Provided by the contracting officer
CDX Configuration Management Plan	Provided by the contracting officer
CDX Service Level Agreement (SLA) Matrix Requirements	Provided by the contracting officer
Engineering Board Charter	Provided by the contracting officer
CDX Registration and Exchange Network Registration Procedures	http://cdx.epa.gov/FAQ.asp
EPA National Computing Center Application Deployment Checklist Procedures	Provided by the contracting officer
Exchange Network Functional Specification	http://exchangenetwork.net/index.htm

CDX Glossary

Central Data Exchange (CDX)
EPA's CDX is the point of entry to the National Environmental Information Exchange Network (Exchange Network) for environmental data exchanges to the Agency. CDX provides the capability for submitters to access their data through the use of Web Services. CDX enables EPA and participating Program Offices to work with stakeholders - including state, tribal and local governments and regulated industries - to enable streamlined, electronic submission of data via the Internet.

Communities of Interest
A community of interest is a group of Exchange Network stakeholders who share an interest in the exchange of a specific set of environmental data.

Construction
Construction is the erection, building, alteration, remodeling, improvement, or extension of buildings, structures or other property.
Construction also includes remedial actions in response to a release, or a threat of a release, of a hazardous substance into the environment as determined by the CERCLA of 1980.

Data Standard
A data standard depicts the required content and format in which particular types of data are to be presented and exchanged. Exchange Network partners must use data standards that have been approved by the Exchange Network Leadership Council (ENLC). The ENLC has subsumed the activities of the Environmental Data Standards Council (EDSC). A list of ENLC/EDSC-approved data standards is shown in Appendix C. Also see information at http://www.envdatastandards.net.

Data Element
A data element is the smallest unit of information stored in and exchanged among Exchange Network partners' information systems.
Examples of data elements are the facility name, DUNS number, and inspection date.

Data Exchange Template (DET)
A data exchange template is a standardized format that identifies the types of information required/allowed in a particular document or data exchange. Data exchange templates contain no data, but they define the format for exchange according to data standards and trading partner agreements. A standard template for DET's is available on the Exchange Network Website (http://www.exchangenetwork.net).

Demonstrated Node Configurations (DNCs)
Demonstrated Node Configurations are the messaging layer for Web Services that interacts with the Exchange Network. It is based on the Network WSDL which defines the Web Services.

Environmental Information Exchange Network (Exchange Network)
The Exchange Network is an Internet and standards-based information network among EPA and its partners in states, tribes, and territories. It is designed to help integrate information, provide secure real-time access to environmental information, and support the electronic collection and exchange of high-quality data and information. The Exchange Network provides a more efficient way of exchanging environmental information at all levels of government. It significantly improves the way EPA and its state, tribal, and territorial partners send and receive information.

Extensible Markup Language (XML)
Extensible Markup Language is a flexible language for creating common information formats and sharing both the format and content of data over the Internet and elsewhere. XML, a formatting language recommended by the World Wide Web Consortium (W3C). For guidance on the development of XML schema for the Exchange Network or related activities of the Network Technical Group, see the Exchange Network Web site at http://www.exchangenetwork.net.

Flow Configuration Documents (FCD's)
FCD's are the principle document that captures the detailed data exchange processing design and roles governing the data exchange using narrative text, diagrams and examples.
A standard template for FCD's is available on the Exchange Network Website http://www.exchangenetwork.net).
For more information, refer to the Flow Configuration Checklist v1.1 at:
http://www.exchangenetwork.net/dev_schema/FlowDocChecklist_v1.1pdf.

Geographic Information Systems
Geographic Information Systems (GIS) include software and hardware systems that relate and display collected data in terms of geographic or spatial location. GIS allow users to collect, manage, and analyze large volumes of geospatial data and metadata. EPA and its partners use GIS systems to conduct complex environmental analyses.

Geospatial Data
Geospatial data are data that identify, depict, or describe the geographic locations, boundaries, or characteristics of the Earth's inhabitants or its natural or human-constructed features. Geospatial data include geographic coordinates (e.g., latitude and longitude) that identify a specific location on the Earth; data that are linked to geographic locations or have a geospatial component (e.g., socio-economic data, land use records and analyses, land surveys, homeland security information, and environmental analyses). Geospatial data may be obtained using a variety of approaches and technologies, including things such as surveys, satellite remote sensing, Global Position System (GPS) hand-held devices, and airborne imagery and detection devices.

Geospatial Technologies
Geospatial technologies include the computer hardware and software that are commonly used to collect, import, store, manipulate, analyze, and display digital geospatial data. These technologies include GIS, global positioning systems (GPS), remote sensing, and visualization systems.

Integrated Project Team
A group of individuals comprised of partner and EPA staff, support contractors and technology vendors organized to design and implement a specific exchange.

Metadata
Metadata are data or information that describes other data. Examples include data that describe how or where the data were collected, whether or not the data comply with agreed-upon data standards, or how the data will be used.

National System Flows
Ten National System Flows identified by the Exchange Network Leadership Council in the Exchange Network Strategic Plan (http://www.exchangenetwork.net). The flows are: Air Facility System (AFS); Air Quality System (AQS); Beach Notification; Facility ID; Integrated Compliance Information System – National Pollutant Discharge Elimination System (ICIS-NPDES); National Emissions Inventory (NEI); Resource Conservation and Recovery Act Information System (RCRAInfo); Safe Drinking Water Identification System (SDWIS); Toxics Release Inventory System (TRIS); and Water Quality Exchange.

SOLICITATION/CONTRACT/ORDER FOR COMMERCIAL ITEMS
OFFEROR TO COMPLETE BLOCKS 12, 17, 23, 24, & 30

1. REQUISITION NUMBER: PR-OARM-15-00198

2. CONTRACT NO.: GS00Q09BGD0048

3. AWARD/ EFFECTIVE DATE:

4. ORDER NUMBER: EP-G15H-01127

5. SOLICITATION NUMBER:

6. SOLICITATION ISSUE DATE:

7. FOR SOLICITATION INFORMATION CALL:
a. NAME: Brent Maravilla
b. TELEPHONE NUMBER (No collect calls): 202-564-2184

8. OFFER DUE DATE/LOCAL TIME:

9. ISSUED BY CODE: HPOD

HPOD
US Environmental Protection Agency
William Jefferson Clinton Building
1200 Pennsylvania Avenue, N. W.
Mail Code: 3803R
Washington DC 20460

10. THIS ACQUISITION IS ☒ UNRESTRICTED OR ☐ SET ASIDE: % FOR:

☐ SMALL BUSINESS
☐ HUBZONE SMALL BUSINESS
☐ SERVICE-DISABLED VETERAN-OWNED SMALL BUSINESS
☐ WOMEN-OWNED SMALL BUSINESS (WOSB) ELIGIBLE UNDER THE WOMEN-OWNED SMALL BUSINESS PROGRAM
☐ EDWOSB
☐ 8(A)

NAICS: 541512

SIZE STANDARD: $25.5

11. DELIVERY FOR FOB DESTINATION UNLESS BLOCK IS MARKED
☐ SEE SCHEDULE

12. DISCOUNT TERMS

☐ 13a. THIS CONTRACT IS A RATED ORDER UNDER DPAS (15 CFR 700)

13b. RATING

14. METHOD OF SOLICITATION
☐ RFQ ☐ IFB ☐ RFP

15. DELIVER TO CODE: HPOD

HPOD
US Environmental Protection Agency
William Jefferson Clinton Building
1200 Pennsylvania Avenue, N. W.
Mail Code: 3803R
Washington DC 20460

16. ADMINISTERED BY CODE: HPOD

HPOD
US Environmental Protection Agency
William Jefferson Clinton Building
1200 Pennsylvania Avenue, N. W.
Mail Code: 3803R
Washington DC 20460

17a. CONTRACTOR/ OFFEROR CODE: 078883327 FACILITY CODE:

SCIENCE APPLICATIONS INTERNATIONAL CORPORATION
Attn: BRITTANY SKAFF
1710 SAIC DR
McLean VA 22102-3702

TELEPHONE NO. 703-676-5681

☐ 17b. CHECK IF REMITTANCE IS DIFFERENT AND PUT SUCH ADDRESS IN OFFER

18a. PAYMENT WILL BE MADE BY CODE: RTP

RTP Finance Center
US Environmental Protection Agency
RTP-Finance Center (AA216-01)
109 TW Alexander Drive
www2.epa.gov/financial/contracts
Durham NC 27711

18b. SUBMIT INVOICES TO ADDRESS SHOWN IN BLOCK 18a UNLESS BLOCK BELOW IS CHECKED ☐ SEE ADDENDUM

19. ITEM NO.	20. SCHEDULE OF SUPPLIES/SERVICES	21. QUANTITY	22. UNIT	23. UNIT PRICE	24. AMOUNT
	DUNS Number: 078883327 Acceptance of GSA eBuy Quote RFQ947507-XXA in response to GSA eBuy RFQ ID RFQ947507. This time and materials task order is for the support of Integrated Grants Management System, as more fully described in the Statement of Work (see attachment 1). The Period of Performance is 06/20/2015 - 06/19/2019 if all option periods are exercised. The vendor quote dated 01/12/2015 is hereby incorporated by reference. The following are also incorporated by reference: Quality *(Use Reverse and/or Attach Additional Sheets as Necessary)*				

25. ACCOUNTING AND APPROPRIATION DATA
See Schedule

26. TOTAL AWARD AMOUNT *(For Govt. Use Only)*
$7,344,674.85

☐ 27a. SOLICITATION INCORPORATES BY REFERENCE FAR 52.212-1, 52.212-4. FAR 52.212-3 AND 52.212-5 ARE ATTACHED. ADDENDA ☐ ARE ☐ ARE NOT ATTACHED.
☐ 27b. CONTRACT/PURCHASE ORDER INCORPORATES BY REFERENCE FAR 52.212-4. FAR 52.212-5 IS ATTACHED. ADDENDA ☐ ARE ☐ ARE NOT ATTACHED.

☒ 28. CONTRACTOR IS REQUIRED TO SIGN THIS DOCUMENT AND RETURN 1 COPIES TO ISSUING OFFICE. CONTRACTOR AGREES TO FURNISH AND DELIVER ALL ITEMS SET FORTH OR OTHERWISE IDENTIFIED ABOVE AND ON ANY ADDITIONAL SHEETS SUBJECT TO THE TERMS AND CONDITIONS SPECIFIED.

☐ 29. AWARD OF CONTRACT: REF. _____ OFFER DATED _____. YOUR OFFER ON SOLICITATION (BLOCK 5), INCLUDING ANY ADDITIONS OR CHANGES WHICH ARE SET FORTH HEREIN, IS ACCEPTED AS TO ITEMS:

30a. SIGNATURE OF OFFEROR/CONTRACTOR

31a. UNITED STATES OF AMERICA *(SIGNATURE OF CONTRACTING OFFICER)*
ELECTRONIC SIGNATURE

30b. NAME AND TITLE OF SIGNER *(Type or print)*

30c. DATE SIGNED

31b. NAME OF CONTRACTING OFFICER *(Type or print)*
Brent Maravilla

31c. DATE SIGNED
05/15/2015

Attachment 1 – Statement of Work (SOW)
Information Technology Services for the Office of Grants and Debarment

1. Title: Information Technology Services for the Office of Grants and Debarment Program (OGD)

2. Key EPA Personnel:

Contracting Officer (CO):

Brent Maravilla
U.S. EPA Headquarters
1200 Pennsylvania Avenue, NW
Mailcode: 3803R
Washington, DC 20460
Telephone: (202) 564-2184
Email: maravilla.brent@epa.gov

Contracting Officer Representative (COR):

Brian Colbert
U.S EPA Headquarters
1200 Pennsylvania Avenue, NW
Mailcode: 3903R
Washington, DC 20460
Telephone: (202) 564-4872
Email: colbert.brian@epa.gov

Alternate Contracting Officer Representatives (ACOR):

William Etheredge
U.S. EPA Headquarters
1200 Pennsylvania Avenue, NW
Mailcode: 3903R
Washington, DC 20460
Telephone: (202) 564-5353
Email: etheredge.william@epa.gov

4. Background:

The mission of the Environmental Protection Agency (EPA) is to protect public health and the environment. To accomplish this mission, the Agency awards approximately $4 billion in assistance agreements, annually (almost half of the

Agency's budget). The Office of Grants and Debarment (OGD), under the supervision of the Director of OGD, is charged with administering the assistance agreements that move the Agency's mission forward, which includes grants, fellowships, and Interagency Agreements (IA). In addition, EPA's Suspension and Debarment Program (SDP), also under OGD, is responsible for developing suspension and debarment cases involving issues of waste, fraud, abuse, and poor performance of recipients receiving Federal funds.

EPA supports a wide range of direct and pass-through environmental grants including discretionary/competitive, earmarks, formula, and mandatory grants. These grants support research used as the basis for air, water, pesticides and other media, as well as the development of innovative methodologies for environmental activities such as waste cleanup, pollutant modeling, methods for quantifying benefits and analytical test methods. Grants support our environmental partners, states, tribes and local communities, by investing in the development of environmental infrastructure, building local environmental capacity, and providing environmental program management and enforcement resources. Agency mission accomplishment in these areas is dependent on the efficient award and management of assistance agreements.

The Office of Grants and Debarment has several systems and applications to support its grants, interagency agreements and debarment program. OGD developed the Integrated Grants Management System (IGMS Legacy) and its replacement system the Next Generation Grants System (IGMS/NGGS) to address short comings in the Agency's pre-award, post award and closeout activities identified in the General Accounting Office (GAO) and Office of Inspector General (OIG) findings. This system was designed to automate the grant process from the initial negotiation of the grant work plan through application and award, to the closeout of the grant. Similarly, IGMS Legacy includes the development and management of Interagency Agreement documents. IGMS Legacy and IGMS/NGGS provide grantees, IA partners and EPA staff the ability to develop, review, approve and share documents and to manage activities in an electronic environment. However IGMS Legacy is built in outdated Lotus Notes technology. The system scope has been massively expanded over the years to address emerging policy issues and is experiencing capacity, technical and other operational issues and limitations. OGD's Suspension and debarment cases are documented and tracked in OGD's Case Management System (CMS), which also resides on a Lotus Notes platform. In FY14, OGD migrated away primary usage of CMS to a new system called the Case Application for Debarment and Suspension (CADS). While active and historical cases are maintained in CMS, CADS will capture new cases. Overtime, CMS activity will lessen and eventually be a historical reference. CADS will be utilizing Microsoft Sharepoint technology on premise. Lastly, OGD supports a repository on the Agency's Documentum Enterprise Content Management System (ECMS) for electronic grant (EGRS) and IA (ERIA) records, eliminating the need for paper records.

In order to continue operations in a tightening Federal budget environment, OGD is interested in streamlining and standardizing the Agency's grants management process, while modernizing its management and support systems. One of the goals in the EPA Grants Management Plan (2009-2013) is to standardize and streamline the business processes for assistance agreements, while maintaining the gains already achieved over the years in compliance, results, and quality. OGD's Grants Transformation Initiative seeks ways to reduce the administrative burden on staff through the transformation of these business processes. In addition, EPA also embraces OMB's IT Shared Service Strategy for identifying potential opportunities for systems consolidation to a shared service provider. In order to achieve these objectives, software engineering expertise and support is required, as directed by OGD, in a full range of activities including, providing project and configuration management, analyzing requirements and systems, designing, developing, testing, implementing, and sustaining new and existing website(s), application(s), database(s), and systems interface(s) and developing system life cycle and/or application documentation. The approach chosen for these system engineering requirements shall be appropriate to the complexity, size and duration of the effort and shall be conducted in accordance with the appropriate Capability Maturity Model (CMM) requirements depending on the nature of the application.

5. Purpose:

The purpose of this Task Order (TO) is to procure a broad range of technical services to support the Office of Grants and Debarment (OGD) with its software engineering requirements throughout all phases of the system lifecycle. In addition to maintaining the operations of OGD's existing grants, interagency agreements and debarment systems, this TO also includes software engineering activities to support OGD's Grants Business Transformation Initiative to further the Next Generation Grants System to replace IGMS Legacy, which seeks to gain efficiencies through process improvement and to align its business systems with the Office of Management and Budget's (OMB) IT Shared Service Strategy. In order to accomplish these objectives, the contractor shall provide expert technical support in project management, quality assurance, systems analysis and retirement, as well as software development, testing, integration, implementation, sustainment. EPA has developed an Enterprise Architecture (EA) program using the Federal Enterprise Architecture reference models to standardize and improve IT management processes across the EPA. During the transformation activities, the contractor shall be compliant with all Federal and EPA grants management and Enterprise Architecture (EA) policies, procedures, standards, and guidance.

The objective of this task order is to:

- Modernize OGD's grants management tools and systems in order to reduce the administrative burden of grants and IA management for EPA staff.
- Enhance, maintain, operate and provide user support to the Integrated Grants Management Systems (both IGMS Legacy & IGMS/NGGS). This may also include, but not limited to, vital secondary systems like, Electronic Grants Records System (EGRS) and Electronic Records for Interagency Agreements (ERIA) and the State Grant IT Application (SGITA).
- Provide data cleanup and error correction of IGMS Legacy, IGMS/NGGS, the Grants Data Mart and the Electronic Grants Records System (EGRS) and Electronic Records for Interagency Agreements (ERIA)
- Apply proven software engineering principles in the management, design, deployment and maintenance of IGMS/NGGS
- Enhance, maintain, operate and provide user support to the Case Management System (CMS) and the new Case Application for Debarment and Suspension (CADS) application.
- Support OGD in aligning with the OMB's IT Shared Services Strategy in order to maximize the return on IT investments government wide
- Develop training, as needed, to familiarize EPA on the user operation of OGD Systems.
- Migrate applicable records and materials stored in OGD's existing IGMS Legacy system to the IGMS/NGGS. This may also include the migration of Suspension and Debarment Program records from CMS to CADS.
- Ensure compliance with Federal and EPA regulations, policies, and procedures (ex. 508 Compliance and Security requirements and regulations)

6. Reporting Requirements:

6.1 The contractor shall produce a monthly standard financial report, to be submitted within eight (8) working days after the close of the contractor monthly invoice cycle. This report shall include the following:

6.1.1 For the current reporting period, display the amount claimed.

6.1.2 For the cumulative period and the cumulative task order life display: the amount shown on the approved work plan or the latest task order amendment amount (whichever is later); the amount obligated, the amount currently claimed (including any fees); amount paid; amount suspended; amount disallowed; and remaining approved amount. The remaining approved amount is defined as the work plan approved amount or the latest task order amendment amount (whichever is later), less the total amount originally invoiced, plus total amount disallowed.

6.1.3 Labor hours.

6.1.3.1 For the current reporting period, display the expended direct labor hours and costs broken out by task order labor hour category for the prime contractor and each subcontractor and consultant.

6.1.3.2 For the cumulative task order period and the cumulative task order life display: the negotiated, expended and remaining direct labor hours and costs broken out by the task order labor hour categories for the prime contractor, and each subcontractor and consultant.

6.1.3.3 Display the estimates of remaining direct labor hours and costs required to complete the task order.

6.1.3.4 Display the report period and cumulative fees and awards costs

6.1.4 Display the current dollar ceilings in the task order, net amount invoiced, and remaining amounts for the following categories: Direct labor hours, program management, and Other Direct Costs (ODCs).

6.1.5 Unbilled allowable costs. Display the total costs incurred but unbilled for the current reporting period and cumulative for the task order.

6.2 It is also necessary for the contractor to provide a breakdown of costs associated with specific tasks or subtasks. This is necessary because funding will be from several different sources.

7. Clearance Required:

7.1 The information for this project includes some information protected by the Privacy Act. A basic National Agency Check with Law and Credit (NACLC) security clearance is required.

8. Scope of Work

8.1 The proposed SOW will encompass the ongoing development and support for the Grants and Debarment program systems of the Agency. Details for specific work are listed in the task description sections below.

8.2 The contractor will manage and coordinate their activities in Tasks 1 through 12. The contractor shall be responsible for staffing, providing quality products and deliverables, and administrative reporting. The contractor will ensure the project activities follow a minimum of Software Engineering Institute (SEI) Capability Maturity Model (CMM) Level II certification policies and practices, or some equivalent.

9. Task Descriptions

9.0 Following each listed task below, there is a table outlining deliverables of the work task. These work items will be delivered in electronic form. Unless otherwise specified, all electronic versions of documentation shall be created in Microsoft Office (Word, PowerPoint, or Excel) format. In addition to deliverables, the contractor may provide work products to EPA. A work product is an intermediate or 'work-in-progress' product which may be provided to EPA in order to give early visibility into the final product or to solicit comments from EPA. A work product does not undergo the formal product delivery processes, i.e., technical editing, quality assurance review and delivery to the COR, or the designated ACOR in the COR's absence. All work products are described in the appropriate task descriptions of this SOW and belong solely to EPA.

Task 1: Project Management:

9.1.1 The contractor shall be responsible for managing costs within the budget parameters established by the approved TCPP. The contractor's project manager, identified as the individual responsible for ensuring that the required quality levels and schedules in the approved TCPP are maintained and schedule dates are met, shall be responsible for notifying the contractor's Program Manager, as soon as any real or potential problems are apparent or suspected.

9.1.2 The contractor shall participate in meetings when the COR provides the contractor with a written request. The COR will consult with the contractor; however, the COR will be the individual who schedules and conducts the meetings. In addition, the contractor shall be available to answer questions via e-mail, by telephone and during meetings when the COR provides the contractor with a written request. The COR and/or the ACOR may require knowledgeable members of the contractor's project team to attend meetings to respond to questions as well. For all meetings between the contractor and EPA on this SOW, the Project Manager, and the manager for any of the contractor's subcontractors that are working on any part of this SOW, shall first ask the COR whether the meeting will take place as a conference call or in person prior to any contractor or subcontractor personnel incurring any local travel expense.

9.1.3 The contractor shall develop and maintain a project plan that details the sequencing of the SOW tasks as well as expected delivery dates for key products and services. The contractor shall continue to maintain the plan's currency as priorities change and other factors influence the delivery of effort for the SOW's tasks. The contractor shall be prepared to discuss the project plan's management processes, expenditure tracking, issues, any schedule delays and architecture at these meetings if the COR provides the contractor with a written request prior to any meeting. The contractor's expenditure tracking shall include current staffing as well as other significant expenditures that the COR requests. The contractor

shall provide a project plan that details the sequencing of the many SOW tasks as well as expected delivery dates for key products and services. The contractor shall continue to maintain the plan's currency.

9.1.4 The contractor shall immediately notify the COR, ACOR and CO of all actual or potential problems that are or could potentially be encountered and/or scheduled delivery dates cannot be met. The contractor shall notify the CO, COR and ACOR, via e-mail, when the contractor's estimated costs are expected to fall outside the range of plus or minus 10% of the contractor's proposed or approved budget. The contractor's notification regarding actual or potential problems shall be by 1) telephone and Problem Notification Reports (PNRs), or 2) e-mail and PNRs. The contractor shall raise any issues of concern or questions related to the activities in this SOW to the COR, COR and CO.

9.1.5 The contractor's management reporting shall consist of preparing the content included in the Monthly Program Management Reviews (PMRs) and the Monthly Financial Status Reports (MFSRs). The contractor's Project Manager shall also produce content for all Monthly Status Reports (MSRs) by 5th day of each calendar month.

9.1.6 The Contractor shall meet with the COR and/or ACOR and other appropriate EPA personnel on a monthly basis to review key activities and milestones, and to plan for upcoming activities

9.1.7 The Contractor shall support, as directed by OGD, in maintaining Earned Value Management (EVM) reporting, including actual expenditures and milestones data, as well as provide EVM calculations and analyses. This includes supporting OGD in decomposing tasks into control accounts and work packages, monitoring progress and expenditures, monthly reporting of progress and expenditures, and mitigation of variance.

9.1.8 The COR and/or ACOR must be present at meetings attended by other EPA personnel. Only contractor personnel necessary for each meeting should attend. The meetings may occur, in person, at EPA, at the contractor's site or via conference call. If the contractor has any agenda items for the meetings, the contractor shall provide an electronic copy of proposed agendas via email 2 working days before scheduled meetings. The contractor shall produce Technical/Status Meeting (TSM) reports within 5 working days after meeting.

9.1.9 The contractor shall help facilitate and assist in the change control management/processes of OGD systems, as directed by OGD. This could include but is not limited to:

9.1.9.1 Provide a method/system/process for gathering and review of incoming requirements

9.1.9.2 Provide analysis and feedback about feasibility of incoming requirements, as

needed by OGD.

9.1.9.3 Provide line of sight tracking of approved requirements to deliverables

Task 1 Deliverables

Name	**Due (if applicable)**	**Acceptance Criteria**
1. Monthly Status Reports (MSRs)	Due on the 5th day of each calendar month	Documents shall be written in clear, understandable English that is devoid of grammatical, spelling and cut & paste errors. Documents shall be delivered on time.
2. Monthly Financial Status Reports (MFSRs)	Due eight (8) working days of contractors monthly invoice end.	Documents shall be written in clear, understandable English that is devoid of grammatical, spelling and cut & paste errors. Documents shall be delivered on time.
3. Technical/Status Meeting Reports	Due within 5 workings days of meeting	Documents shall be written in clear, understandable English that is devoid of grammatical, spelling and cut & paste errors. Documents shall be delivered on time.
4. EVM Reports	Due on the 5th day of each calendar month (or as directed by EPA)	Documents shall be written in clear, understandable English that is devoid of grammatical, spelling and cut & paste errors.

		Documents shall be delivered on time.

Task 2: Contract / Project(s) Transition

9.2.1 OGD's systems (i.e. IGMS Legacy, IGMS/NGGS, CMS, CADS, EGRS, ERIA, and Grants Datamart) are ongoing efforts for EPA. This project transition shall be completed within 90 days from start of contract.

9.2.2 The contractor shall be responsible for the transition of the operations and maintenance (including but not limited to hotline support of OGD's systems from the contractor that is currently performing these duties). The contractor shall be able to perform maintenance and oversight of critical tasks no later than 45 days from the start of the contract.

9.2.3 The contractor shall be responsible for the transition of any development efforts currently underway for upkeep or replacement of OGD's systems from the contractor currently performing these duties.

9.2.4 The contractor shall develop and maintain a transition plan. The contractor shall be responsible for implementing the transition plan.

9.2.5 The contractor shall form a transition team which included the contractor's critical personnel, cognizant government personnel and the incumbent contractor's critical OGD systems support personnel. The contractor shall provide content for weekly status reports on the progress of the transition every Tuesday (weekly) by the end of business day, during the transition period.

9.2.6 The COR and/or ACOR must be present at meetings attended by other EPA personnel. Only transition team members necessary for each meeting should attend. The meetings may occur, in person, at EPA, at the contractor's site or via conference call. If the contractor has any agenda items for the meetings, the contractor shall provide an electronic copy of proposed agendas via email 2 working days before scheduled meetings. The contractor shall produce Technical/Status Meeting (TSM) reports within 2 working days after meeting.

Task 2 Deliverables and Due Dates

Name	**Due (if applicable)**	**Acceptance Criteria**
1. Transition Plan	Date to be determined	Documents shall be written in clear, understandable English that is devoid of

		grammatical, spelling and cut & paste errors. Documents shall be delivered on time
2. Weekly Status Report	By Close of Business (COB), Tuesday – Weekly. This should be done only during the determined transition period.	Documents shall be written in clear, understandable English that is devoid of grammatical, spelling and cut & paste errors. Documents shall be delivered on time
3. Technical/Status Meeting (TSM) Report(s)	Due within 2 workings days of meeting	Documents shall be written in clear, understandable English that is devoid of grammatical, spelling and cut & paste errors. Documents shall be delivered on time

Task 3: IGMS Legacy Operations and Maintenance Releases

9.3.1 EPA developed the Lotus Notes based Integrated Grants Management System (IGMS Legacy) to automate the grant process for all of EPA's grantees, support improved grant management, and reduce the Agency's cost to carry out its mission. The contractor shall provide day to day operational support to the following IGMS Legacy primary databases, including:

- **Work plans and Applications (W&As):** maintains Work plans, Certifications, and Applications – 3 Databases
- **Awards:** maintains Funding Recommendations, Commitment Notices, and Awards – 5 Databases
- **Post Awards:** provides for administrative and programmatic tracking of grant activities after award and before closeout – 2 Databases
- **Inter Agency Agreements (IAs):** maintains interagency agreements between Federal Agencies – 3 Databases
- **Fellowships:** maintains academic grants made to students – 3 Databases

- **Electronic Grant File (EGF):** a one stop reference database that documents all grant number families within IGMS Legacy.

9.3.2 To function properly, these modules rely on several support databases. The contractor shall provide day to day operational support to the following IGMS Legacy Support databases, which include:

- **Admin**: maintains IGMS Legacy lookup tables
- **Public Address Book (PAB)**: maintains information about the organizations and individuals that use and are referenced by IGMS Legacy
- **On-Line Help**: a centralized database containing detailed information on the use of each of the primary IGMS Legacy databases
- **Agent Log**: lists actions and errors recorded during the execution of scheduled agents, i.e., LotusScript programs
- **Feedback**: a discussion database forum that enables IGMS Legacy users, managers, and developers to report issues, ask questions, exchange ideas, and discuss any topic related to IGMS Legacy
- **Data Dictionary**: stores data element information from the primary IGMS Legacy modules. Each IGMS Legacy element may also contain a cross reference mapping to other systems, when applicable
- **Requirement Definition**: provides an electronic means for EPA users to develop and define requirements regarding IGMS Legacy and the grant award process
- **Requirement**: provides an electronic means for the team to define and store the requirements for the various tasks and get electronic approval from the EPA
- **Systems Engineering**: provides an electronic means for electronic delivery of the products
- **IGMS Fiscal Year Award Activity**: This is a generic database for capturing and analyzing grant award information using standard data forms and views based on IGMS Legacy components and data. These databases start with FY2001 through the current FY. A new database is added for each new fiscal year
- **Certified Project Officers database**: The Certified Project Officer Database (CPO DB) is a database containing information about EPA project officers and the status of their certification to function as project officers on EPA grants. It derives the basic employee information from the EPA Domino Directory. Additional information regarding certification status and training history are entered into the database as staff register for and complete their PO training. This database will be used by grants and program officer staff and managers to track the certification of project officers and to ensure that they are properly certified to administer EPA assistance agreements.
- **IGMS Grantee Compliance & Recipient Activity Summary**: a central repository for information related to EPA grant recipients, especially past performance data and active grants
- **Hotline**: provides an electronic means of recording hotline requests

- **Congressional Notification**: provides automated notification to members of Congress of grant awards that affect them. Notifications are generated via FAX. The database is used by the Congressional Liaison and is generated annually with each new FY
- **E-Apply**: a repository of EPA grant applications submitted through the government-wide Grants.gov portal
- **E-Apply -CDX Mail-in Database**: a database which receives raw input of Grants.gov applications prior to being parsed and transmitted to the EAPPLY database
- **IGMS Template Database**: contains templates of the various versions of all the databases
- **IGMS Web Address Book**: contains data on state users of the internet version of IGMS Legacy
- **Congressional Notification Database**: contains grants in the 5 day Congressional hold and provides data for Congressional notification
- **Synopsis Database**: allows program offices to post synopses of announcements to be posted on Grants.gov.

9.3.3 The contractor shall deliver releases in the following areas:

9.3.3.1 There will be an estimated ten (10) interim/emergency releases during this Period of Performance with bug fixes/minor releases not to exceed five (5).

9.3.3.2 As the grants and IA business process has evolved and matured, the OGD has begun a shift towards periodic operation and maintenance (O&M) releases for IGMS Legacy implemented through a series of software modifications to various parts of the overall system. During each Fiscal Year, if required, the OGD team defines a number of O&M releases for each applicable database dependent upon the Division's evolving priorities and resource constraints. The actual number the OGD requests of O&M releases is determined during each annual OGD IT planning process. The OGD team identifies and provides the contractor with approved requirements for each O&M release and the remaining work that the contractor shall perform for each applicable database. Based on an evaluation of the priorities and requirements a development and deployment schedule will be determined during periodic meetings with the IGMS team. The contractor shall develop enhancements for each release according to the approved requirements. Releases shall be consistent with EPA and government wide standards and policies. Furthermore, releases shall be tested for 508 compliance and reviewed for security concerns and impact to IGMS Legacy.

C. General Releases – this is defined as a release that may impact several modules to address multiple issues.

C1. Security Releases – EPA may also need to evaluate whether additional security enhancements will be required.

9.3.3.3 The contractor shall follow the standard EPA Systems Design and Development Guidance (issued by EPA's National Technology Services Division); and Applicable Federal Information Processing Standards (FIPS) standards.

Task 3 Deliverables and Due Dates

Name	**Due (if applicable)**	**Acceptance Criteria**
1. General Release Template	Due no later than (NTL) three (3) working days before release date.	All delivered functions shall meet requirements and be delivered three (3) working days before release. The contractor shall provide template(s) (loading the template(s) into the IGMS Template Database on the EPAP2000 server) for each release. If deliverable includes documents, such as user guides, manuals, deployment instructions, or other documentation, the contractor will follow a standard format and ensure high quality, organization, clarity, accuracy and completeness of the documents. Documentation will be provided as online help (software) and system documentation three

		(3) working days before release.
2. Security Release Template	Due no later than (NTL) three (3) working days before release date.	All delivered functions shall meet requirements and be delivered three (3) working days before release. The contractor shall provide template(s) (loading the template(s) into the IGMS Template Database on the EPAP2000 server) for each release. If deliverable includes documents, such as user guides, manuals, deployment instructions, or other documentation, the contractor will follow a standard format and ensure high quality, organization, clarity, accuracy and completeness of the documents. Documentation will be provided as online help (software) and system documentation three (3) working days before release

Task 4: IGMS Legacy and IGMS/NGGS User Support

9.4.1 Integral to the ongoing day to day operations of IGMS Legacy and IGMS/NGGS is the IGMS team's provision of user support through two formal avenues: 1) the IGMS Hotline (telephone), and 2) the IGMS Hotline database. User requests for assistance encompass a broad spectrum of support needs including: operational training, data correction, workflow changes, editorship and access modifications, and document deletion requests. The team uses the IGMS Hotline (telephone) to receive user support requests pertaining to IGMS Legacy and IGMS/NGGS. The Hotline is available 9:00 A.M. to 5:00 P.M. Eastern Standard Time (EST), Monday through Friday, 52 weeks per year with the exclusion of Federal Holidays. Each user request will be recorded in a Hotline database. Change and user support requests reports shall be provided on a monthly basis. User Support is provided by the IGMS team on a daily basis. The workload under this task is expected to be the same as fiscal year 2014.

9.4.2 The contractor shall operate the IGMS Hotline (telephone) for the standard hours of operation previously listed. The contractor shall be available for extended hours of operation for IGMS Hotline (telephone) support, if required by EPA. The contractor shall provide high-quality user support for calls & requests of the IGMS Hotline (telephone) & IGMS Hotline database. Quality characteristics include timeliness, accuracy and professional customer communication. Furthermore, the contractor shall document all requests to provide necessary data for reports.

9.4.3 The contractor shall perform maintenance and support for the IGMS Legacy Databases and several other support databases in order for IGMS Legacy to function properly. This IGMS Databases include:

<u>IGMS DATABASES</u>

- Workplans and Applications (W&As)
- Awards
- Post Awards
- Inter-Agency Agreements (IAs)
- Fellowships
- Electronic Grant File (EGF)

<u>IGMS SUPPORT DATABASES</u>

- Admin
- Public Address Book (PAB)
- On-line Help
- Agent Log
- Feedback
- Data Dictionary
- Requirement Definition
- Requirement
- Systems Engineering

- Hotline
- Congressional Notification
- E-Apply
- IGMS Grantee Compliance & Recipient Activity Summary
- IGMS Templates Database
- IGMS Web Address Book
- CDX Mail-in Database
- IGMS Funding Opportunity Database
- IGMS FY Award Activity
- Certified Project Officers database
- Synopses Database
- Congressional Notification

9.4.4 The contractor shall perform maintenance and support for the IGMS/NGGS and several other support databases in order for IGMS/NGGS to function properly.

Task 4 Deliverables and Due Dates

None

Task 5: Datamart Cleanup and Development (Optional Task)

9.5.1 The contractor shall design modifications to IGMS Legacy and IGMS/NGGS in support of data extractions activities as well as cleanup of existing data. The Government estimates that the contractor shall be required to do no more than four (4) small releases. The COR, or the ACOR in the COR's absence, will define any modifications required and will provide them to the contractor in written technical direction. The contractor shall provide data cleanup services for data in IGMS Legacy as required by EPA. The contractor shall also provide consultation services, as required by EPA, with respect to the movement of grants, fellowship and IA data into an ORACLE environment.

9.5.2 The contractor shall follow the standard EPA Systems Design and Development Guidance (issued by EPA's National Technology Services Division); and Applicable FIPS standards.

Task 5 Deliverables and Due Dates

Name	**Due (if applicable)**	**Acceptance Criteria**
1. Datamart Template	Due no later than (NTL) three (3) working days	All delivered functions shall meet

	before release date.	requirements and be delivered three (3) working days before release. For IGMS Legacy: The contractor shall provide template(s) (loading the template(s) into the IGMS Template Database on the EPAP2000 server) for each release. For IGMS/NGGS: The contractor shall provide the necessary software development, deployment files and instructions necessary for deployment. If deliverable includes documents, such as user guides, manuals, deployment instructions, or other documentation, the contractor will follow a standard format and ensure high quality, organization, clarity, accuracy and completeness of the documents. Documentation will be provided as online help (software) and system

		documentation three (3) working days before release.

Task 6: Electronic Grants Records System (EGRS) / Electronic Records of Interagency Agreements (ERIA) Support / Maintenance (OPTIONAL TASK)

9.6.1 EPA developed an electronic records management solution using Documentum technology in combination with a web front-end interface. This solution supports records management for both the grants (currently for HQ and some Regional grants administrative offices) and the interagency agreement (IA) records (for the IA Shared Service Center of HQ and Region 10). The EGRS/ERIA service interfaces with the Grants Datamart to query and produce records directly into the Documentum container. The contractor shall provide day to day operational support for this solution. This shall include, but not limited to, the following areas of support:

9.6.2 User Support:

9.6.2.1 Integral to the ongoing day to day operations of this project is the provision of user support thru two formal avenues: Hotline telephone support and/or Hotline Database.

9.6.3 Hotline Support:

9.6.3.1 User requests for assistance encompass a broad spectrum of support needs including: errors in processing of records, data correction, and user interface/website issues.

9.6.3.2 The customers engaging the Hotline (telephone) to receive user support requests pertaining to EGRS/ERIA. The Hotline is available 9:00 A.M. to 5:00 P.M. Eastern Standard Time (EST), Monday through Friday, 52 weeks per year with the exclusion of Federal Holidays. Each user request will be recorded in a Hotline database.

9.6.3.3 This method of support can be combined with in conjunction with provisioning the IGMS support line and can record user requests in the same ticket system as IGMS Hotline tickets.

9.6.4 Interface Support:

9.6.4.1 Customers utilize the two intranet (2) URLs (egrs.epa.gov or eria.epa.gov) for a consolidated website/user interface for the tool. This user interface is a

combination of technologies: Microsoft Sharepoint and Cold Fusion interacting with Documentum and ORACLE.

9.6.4.2 The contractor shall be responsible for day to day support and operations of the website while responding to customer issues. More specifically, the contractor shall assist in troubleshooting and fixing problems with the application, including, but not limited to troubleshooting user issues, identifying and resolving software defects, which is when the software is functioning, but does not work as specified, and assisting in identifying network or server outages. In addition, the contractor shall assist OGD in assisting in the consolidation and evaluation of requested changes to the application(s)

9.6.4.3 As the EGRS/ERIA product and business process evolves and matures, the OGD has begun a shift towards periodic operation and maintenance (O&M) schedule for implementing a series of software modifications to the interface. The contractor shall be responsible for development, testing and implementation of any approved modifications. The primary objective of this upkeep is to maintain proper sync of PDF records generated with the data provided from IGMS Legacy and IGMS/NGGS. From time to time data fields on forms in IGMS Legacy and IGMS/NGGS change, and the records generated capture any new data elements generated

9.6.4.4 The contractor shall also be responsible for providing documentation regarding the configuration of COTS software and configuration management of source code and build scripts for all developed software.

9.6.4.5 The contractor shall create test plans and scenarios, as well as conduct the various types of tests to ensure that the EGRS/ERIA products behaves as expected for any approved requirements and development. Defects discovered during these testing activities shall be fixed and retested by the contractor in order to prove that the issue(s) is resolved and no additional negative impact(s) to the EGRS/ERIA products are introduced.

9.6.5 <u>Data Support:</u>

9.6.5.1 To function properly, the EGRS/ERIA product relies on several ORACLE databases provided by the Grants Datamart. The contractor shall provide day to day operational support of the data transfer and processing of the data for EGRS/ERIA. This includes, but is not limited to:

9.6.5.1.1 The data flow from the Grants Datamart to EGRS Processing

9.6.5.1.2 The PDF forms generation of records

9.6.5.1.3 The processing of Attachments

Task 6 Deliverables and Due Dates

Name	**Due (if applicable)**	**Acceptance Criteria**
1. EGRS / ERIA Software Release	Due no later than (NTL) three (3) working days before release date.	All delivered functions shall meet requirements and be delivered three (3) working days before release. The contractor shall provide the necessary software development, deployment files and instructions necessary for deployment. The contractor shall provide template(s) (loading the template(s) into the IGMS Template Database on the EPAP2000 server) for each release. (if changes to IGMS are necessary) If deliverable includes documents, such as user guides, manuals, deployment instructions, or other documentation, the contractor will follow a standard format and ensure high quality, organization,

		clarity, accuracy and completeness of the documents. Documentation will be provided as online help (software) and system documentation three (3) working days before release.

Task 7: Case Management System (CMS) and Case and Debarment System (CADS) Support and Maintenance (Optional Task)

9.7.1 EPA developed a business process support tool to assist the Suspension and Debarment Program with management of their legal case load. The Case Management System (CMS) is a Lotus Notes based solution that is set for replacement in FY14 by the Case and Debarment System (CADS) a Microsoft Sharepoint application. The contractor shall provide day to day operational support for this solution. This shall include, but not limited to, the following areas of support:

9.7.2 User Support:

9.7.2.1 Integral to the ongoing day to day operations of this project is the provision of user support thru two formal avenues: Hotline telephone support and/or Hotline Database.

9.7.3 Hotline Support

9.7.3.1 User requests for assistance encompass a broad spectrum of support needs including: errors in processing of records, data correction, and user interface/website issues.

9.7.3.2 The customers engaging the Hotline (telephone) to receive user support requests pertaining to CMS or CADS. The Hotline is available 9:00 A.M. to 5:00 P.M. Eastern Standard Time (EST), Monday through Friday, 52 weeks per year with the exclusion of Federal Holidays. Each user request will be recorded in a Hotline database.

9.7.3.3 This method of support can be combined with in conjunction with provisioning the IGMS support line and can record user requests in the same ticket system as IGMS Hotline tickets.

9.7.4 Interface and Database/Software Support:

9.7.4.1 Customers utilize a single intranet URL (cads.epa.gov) to access a Microsoft Sharepoint on premise solution in conjunction with MS SQL databases and other supportive software (including 3rd party products).

9.7.4.2 The contractor shall be responsible for day to day support and operations of the website while responding to customer issue. More specifically, the contractor shall assist in troubleshooting and fixing problems with the application, including, but not limited to troubleshooting user issues, identifying and resolving software defects, which is when the software is functioning, but does not work as specified, and assisting in identifying network or server outages. In addition, the contractor shall assist OGD in assisting in the consolidation and evaluation of requested changes to the application(s)

9.7.4.3 The contractor shall also be responsible for providing documentation regarding the configuration of COTS software and configuration management of source code and build scripts for all developed software.

9.7.4.4 The contractor shall create test plans and scenarios, as well as conduct the various types of tests to ensure that the CMS/CADS products behaves as expected for any approved requirements and development. Defects discovered during these testing activities shall be fixed and retested by the contractor in order to prove that the issue(s) is resolved and no additional negative impact(s) to the CMS/CADS products are introduced.

9.7.4.5 As the CMS and CADs product and business process evolves and matures, the OGD will shift towards a periodic operation and maintenance (O&M) schedule for implementing a series of software modifications to the application and databases. The contractor shall be responsible for development, testing and implementation of any approved modifications.

Task 7 Deliverables and Due Dates

Name	**Due (if applicable)**	**Acceptance Criteria**
1. CMS / CADS Software Release	Due no later than (NTL) three (3) working days before release date.	All delivered functions shall meet requirements and be delivered three (3) working days before

		release. The contractor shall provide the necessary software development, deployment files and instructions necessary for deployment. The contractor shall provide template(s) (loading the template(s) into the IGMS Template Database on the EPAP2000 server) for each release. (if changes to IGMS are necessary) If deliverable includes documents, such as user guides, manuals, deployment instructions, or other documentation, the contractor will follow a standard format and ensure high quality, organization, clarity, accuracy and completeness of the documents. Documentation will be provided as online help (software) and system documentation three (3) working days before release.

Task 8: State Grants Information Technology Application (SGITA) Enhancement and Support (Optional Task)

The State Grants Information Technology Application (SGITA) launched in response to Grants Policy Issuance 11-03 and now serves as EPA's new central database for grants workplans and progress reports. The Grants Policy 11-03 requires workplans and associated progress reports to prominently display currently three essential elements: (1) the supporting EPA strategic plan goal; (2) the plan objective; and (3) the workplan commitments (plus time frame).

The Policy also instructs EPA Project Officers to upload workplans and progress reports for grant programs into SGITA. SGITA not only serves as the central repository for grants workplans, it also integrates with the OGD's IGMS Legacy to reduce data entry burden and minimize data duplication. Using SGITA, project officers need only attach the workplan and progress reports for applicable grants, all other data is readily available through IGMS Legacy. A quarterly email reminder is sent project officers alerting them of missing reports or required actions so data is current. States with grants have read-only access to their grant information in SGITA.

9.8.1 The contractor shall provide day to day operational support for this solution. This shall include, but not limited to, the following areas of support:

9.8.2 User Support:

9.8.2.1 Integral to the ongoing day to day operations of this project is the provision of user support thru two formal avenues: Hotline telephone support and/or Hotline Database.

9.8.3 Hotline Support

9.8.3.1 User requests for assistance encompass a broad spectrum of support needs including: errors in processing of records, data correction, and user interface/website issues.

9.8.3.2 The customers engaging the Hotline (telephone) to receive user support requests pertaining to SGITA. The Hotline is available 9:00 A.M. to 5:00 P.M. Eastern Standard Time (EST), Monday through Friday, 52 weeks per year with the exclusion of Federal Holidays. Each user request will be recorded in a Hotline database.

9.8.3.3 This method of support can be combined with in conjunction with provisioning the IGMS support line and can record user requests in the same ticket system as IGMS Hotline tickets.

9.8.4 Interface and Database/Software Support:

9.8.4.1 Customers utilize a single intranet URL (https://ofmext.epa.gov/apex/sgita/f?p=SGITA:Home:) to access a hosted Cold Fusion web application. Furthermore the application utilizes data provided from IGMS Legacy and the Grants Datamart.

9.8.4.2 The contractor shall be responsible for day to day support and operations of the website while responding to customer issue. More specifically, the contractor shall assist in troubleshooting and fixing problems with the application, including, but not limited to troubleshooting user issues, identifying and resolving software defects, which is when the software is functioning, but does not work as specified, and assisting in identifying network or server outages. In addition, the contractor shall assist OGD in assisting in the consolidation and evaluation of requested changes to the application(s)

9.8.4.3 The contractor shall also be responsible for providing documentation regarding the configuration of COTS software and configuration management of source code and build scripts for all developed software.

9.8.4.4 The contractor shall create test plans and scenarios, as well as conduct the various types of tests to ensure that the SGITA products behaves as expected for any approved requirements and development. Defects discovered during these testing activities shall be fixed and retested by the contractor in order to prove that the issue(s) is resolved and no additional negative impact(s) to the SGITA products are introduced.

9.8.4.5 As the SGITA product and business process evolves and matures, the OGD will shift towards a periodic operation and maintenance (O&M) schedule for implementing a series of software modifications to the application and databases. The contractor shall be responsible for development, testing and implementation of any approved modifications.

Task 8 Deliverables and Due Dates

Name	Due (if applicable)	Acceptance Criteria
1. SGITA Upkeep Release	Due no later than (NTL) three (3) working days before release date.	All delivered functions shall meet requirements and be

		delivered three (3) working days before release. The contractor shall provide the necessary software development, deployment files and instructions necessary for deployment. The contractor shall provide template(s) (loading the template(s) into the version tracking database) for each release. If deliverable includes documents, such as user guides, manuals, deployment instructions, or other documentation, the contractor will follow a standard format and ensure high quality, organization, clarity, accuracy and completeness of the documents. Documentation will be provided as online help (software) and system documentation three (3) working days before release.

Task 9: Integrated Grants Management System / Next Generation Grants System Enhancement and Support (Optional Task)

In early FY13, EPA migrated away from Lotus Notes as the Agency mail system and has begun the process of disinvestment with Lotus Note based technology. IGMS Legacy is a Lotus Notes application and in response to this new technology direction, OGD has begun software development enhance and replace one module of IGMS Legacy (i.e. the Pre-Award module). Utilizing EPA supported technology standards (JBOSS / ORACLE / Activiti), OGD will launch, in Oct 2014, a web-based Pre-Award module for a new Next Generation Grants System (IGMS/NGGS).
The purpose of this task is to not only support this new module of IGMS, but expand usage of this supported technology standard and replace additional existing modules of the IGMS Legacy application with new modules in IGMS/NGGS.

The contractor shall provide day to day operational support for this. This shall include, but not limited to, the following areas of support:

9.9.1 User Support

9.9.1.1 Integral to the ongoing day to day operations of this project is the provision of user support thru two formal avenues: Hotline telephone support and/or Hotline Database.

9.9.2 Hotline Support

9.9.2.1 User requests for assistance encompass a broad spectrum of support needs including: errors in processing of records, data correction, and user interface/website issues.

9.9.2.2 The customers engaging the Hotline (telephone) to receive user support requests pertaining to IGMS/NGGS. The Hotline is available 9:00 A.M. to 5:00 P.M. Eastern Standard Time (EST), Monday through Friday, 52 weeks per year with the exclusion of Federal Holidays. Each user request will be recorded in a Hotline database.

9.9.2.3 This method of support can be combined with in conjunction with provisioning the IGMS support line and can record user requests in the same ticket system as IGMS Hotline tickets.

9.9.3 Interface and Database/Software Support:

9.9.3.1 Customers utilize a single intranet URL (igms.epa.gov) to access the IGMS/NGGS hosted application.

9.9.3.2 The contractor shall be responsible for day to day support and operations of the website while responding to customer issue. More specifically, the contractor shall assist in troubleshooting and fixing problems with the application, including, but not limited to troubleshooting user issues, identifying and resolving software defects, which is when the software is functioning, but does not work as specified, and assisting in identifying network or server outages. In addition, the contractor shall assist OGD in assisting in the consolidation and evaluation of requested changes to the application(s)

9.9.3.3 The contractor shall also be responsible for providing documentation regarding the configuration of application software and configuration management of source code and build scripts for all developed software.

9.9.3.4 The contractor shall create test plans and scenarios, as well as conduct the various types of tests to ensure that the IGMS/NGGS products behaves as expected for any approved requirements and development. Defects discovered during these testing activities shall be fixed and retested by the contractor in order to prove that the issue(s) is resolved and no additional negative impact(s) to the IGMS/NGGS products are introduced.

9.9.4 Software Engineering

9.9.4.1 As the IGMS/NGGS application and business process evolve and expand to include more of IGMS Legacy's function/duties, the OGD will shift towards a periodic schedule for implementing a series of software modifications to the application and databases. The contractor shall be responsible for development, testing and implementation of any OGD approved modifications, as directed by OGD.

9.9.4.2 During this task, the contractor shall develop/configure the software necessary to satisfy the OGD's approved requirements. In addition, the contractor shall develop any required external system interfaces to the IGMS/NGGS application/module(s).

9.9.4.3 The contractor, as directed by OGD, shall purchase software product(s) and deploy all developed/configured software required to run the application(s) on multiple environments, including, but not limited to, development, test, and production.

9.9.4.4 All source code developed to fulfill this requirement shall be the property of EPA.

Task 9 Deliverables and Due Dates

Name	Due (if applicable)	Acceptance Criteria
1. IGMS/NGGS Software Release	Due no later than (NTL) three (3) working days before release date.	All delivered functions shall meet requirements and be delivered three (3) working days before release. The contractor shall provide the necessary software development, deployment files and instructions necessary for deployment. The contractor shall provide template(s) (loading the template(s) into the IGMS Template Database on the EPAP2000 server) for each release. (if changes to IGMS are necessary) If deliverable includes documents, such as user guides, manuals, deployment instructions, or other documentation, the contractor will follow a standard format and ensure high quality, organization, clarity, accuracy and completeness of

		the documents. Documentation will be provided as online help (software) and system documentation three (3) working days before release.

Task 10: OGD Systems Training Support (Optional Task)

As OGD multiple systems (including but not limited to: IGMS Legacy, IGMS/NGGS, SGITA, EGRS/ERIA, and/or CADS) evolve and mature, training may need to be provided to users in order for them to best utilize any implemented system changes. This task is to acquire contractor support to provide both on-site and/or online training.

9.10.1 The contractor shall support, as directed by OGD, in establishing different learning paths for different users in order for these users to achieve specific learning objectives. This includes, but is not limited to, identifying training needs, conducting on-site training, and developing the appropriate curriculum, training materials, and online courseware for customers of OGD IT systems.

9.10.2 All courseware and delivery methods developed under this task shall be compliant with EPA training and security policies.

9.10.3 Online training is becoming the mainstay of the Agency's delivery of training. As part of this training task, as directed by OGD, the contractor shall be responsible for developing courseware for online training via standard EPA support methods and tools. EPA's currently provides online training tools, covering many topics, to all EPA employees 24 hours a day, 7 days a week. In order to maintain the quality of the training experience, this courseware shall include, but is not limited to, developing course content, graphical/interactive design, quizzes, and update to the materials as required.

9.10.4 The contractor, as directed by OGD, shall develop and maintain training materials and online/contextual help systems including, but not limited to, both user and system administration manuals that provide step by step instructions, quick start and reference guides for users, and Frequently Asked Questions (FAQ) documentation.

Task 10 Deliverables and Due Dates

Name	Due (if applicable)	Acceptance Criteria
1. Online Training Materials	Due as mutually negotiated with contractor	The contractor shall provide the necessary software development, deployment files and instructions necessary for deployment.
2. Training Materials	Due as mutually negotiated with contractor	If deliverable includes documents, such as user guides, manuals, deployment instructions, or other documentation, the contractor will follow a standard format and ensure high quality, organization, clarity, accuracy and completeness of the documents.

9.11 Task 11: Grants / IA Business Transformation and Alignment of Grants Systems to IT Shared Service Provider Support

In order for OGD to improve its business processes through standardizing and streamlining and to consolidate its IT infrastructure and management, software engineering expertise and services are needed to develop and maintain new website(s), application(s), database(s), and system interface(s) that are required to meet these objectives. The contractor shall use proven industry standards and best practices in its software engineering activities. During this task, the contractor is also required to comply with Section 508, as well as Federal government and EPA standards for software design and development. All deliverables produced by the contractor are subject to quality reviews or audits

either by EPA or by a contractor selected by EPA. The contractor shall be responsible for addressing assigned action items from quality findings within a timeframe agreed upon by both the contractor and OGD.

9.11.1 Software Analysis and Development Planning

9.11.1.1 The contractor shall assist, as determined by OGD, in evaluating technologies that offer potential benefits to the Grants and Debarment program and are compliant with EPA's Technical Reference Model. Upon request from OGD, the contractor shall provide comprehensive research and feasibility studies on promising technologies. This may require the contractor to perform, but not limited to, such activities as researching technology trends and forecasts, exploring beneficial areas where the technology could be integrated, developing best practices for the utilization of the technology, and demonstrating the capability of the technology to meet OGD requirements using prototypes and pilots.

9.11.1.2 OGD shall require the contractor to prepare a Software Development Plan (SwDP) for OGD's approval that presents the contractor's approach to fulfilling the requirements in this Task Order (TO). The SwDP shall encompass, but not limited to, the software development method/approach to be used, the recommended tools for software development, the process and tools for software configuration management, naming conventions and standards to be employed, initial architecture modeling, and the approach for software quality assurance. The contractor shall provide the SwDP to OGD for review and approval before proceeding with software development activities.

9.11.1.3 The contractor shall assist, as directed by OGD, in requirements planning and in an iterative process of analysis, design, and prototyping in order capture software requirements for the Agency's Grants and Debarment program. The contractor shall provide information about the optimal technical approach and viable alternatives, as well as costs and time estimates for developing any proposed releases/builds. This may require the contractor to assist in the development of proof-of-concept prototype(s) to evaluate the technical feasibility of the proposed solutions. The contractor shall also be involved in assisting OGD in managing changes to requirements, which **includes developing the framework and maintenance process to ensure that all requirements are being managed.** The contractor shall be responsible for capturing and documenting the minutes of each meeting in this analysis. Meeting agendas and materials are to be provided to the TOPO no later than 2 business days prior to the meeting, while meeting minutes are to be provided to the TOPO no later than 3 business days after the meeting.

9.11.1.4 Requirements tracking, which facilitates the backward and forward traceability of all requirements, shall be performed by the Contractor during this task. The Contractor shall use requirements traceability to confirm that all

requirements have been accounted for within the Software Development Life Cycle (SDLC). This will ensure that the software product delivered satisfies the agreement between the Contractor and EPA stakeholders.

9.11.1.5 Through an iterative process, the contractor shall update the Software Requirement Specifications (SRS) and develop a final SRS for OGD to review and approve. The contractor shall work with EPA representatives on evaluating the consistency of these requirements in order to prevent conflicting requirements from being incorporated, to ensure that each requirement cannot be interpreted in several ways, to determine if the requirements have the desired attributes, and to improve the accuracy in which the functionality to be built is described. OGD and the contractor shall work together on establishing the relative priority of each requirement in order to identify the most valuable functionality for the Agency. Requirements shall be evaluated in terms of their relationship to different requirements and their alignment to business objectives. This may require the contractor to assist in deploying various analytical techniques for requirements prioritization. After the final SRS is approved, it shall serve as a baseline of agreed upon requirements.

9.11.1.6 Since quality is a major factor of the grants business transformation and the IT systems consolidation initiative, the contractor shall be responsible for developing requirements that are complete, accurate, feasible, unambiguous, verifiable, and traceable.

Task 11 Deliverables and Due Dates

Name	**Due (if applicable)**	**Acceptance Criteria**
1. Draft SwDP	Due date to be determined jointly by OGD and contractor	Documents shall be written in clear, understandable English that is devoid of grammatical, spelling and cut & paste errors. Documents shall be delivered on time.
2. Final SwDP	Due date to be determined jointly by OGD and contractor	Documents shall be written in clear, understandable English that is devoid of grammatical, spelling and cut & paste errors.

		Documents shall be delivered on time.
1. Draft SRS(s)	Due dates to be determined jointly by OGD and contractor	Documents shall be written in clear, understandable English that is devoid of grammatical, spelling and cut & paste errors. Documents shall be delivered on time.
2. Final SRS(s) & Requirements	Due date 15 days after EPA's comments	Documents shall be written in clear, understandable English that is devoid of grammatical, spelling and cut & paste errors. Documents shall be delivered on time.

10.1 Methodology for Work Tasks

10.1.1 All work performed by the contractor must adhere to the policies and guidance in the following manuals:

- EPA EPAAG Manual.
- EPA Personal Computer Security Manual.
- EPA Information Resources Management Policies Manual.
- EPA Information Security Manual.
- EPA Operations and Maintenance Manual.
- EPA Systems Design & Development Guidance.
- NTSD Operational Policies Manual.
- Content Standard for Digital Geospatial Metadata Version 2 (FGDC, June 1998).
- A Strategy for the National Spatial Data Infrastructure (FGDC, April 1997).
- Geographic Information for the 21st Century: Building a Strategy for the Nation (National Academy of Public Administration, January 1996).
- EPA GIS Work Group Strategic Plan, (January 1996).
- Coordination of Surveying, Mapping, and Related Spatial Data Activities, (OMB Circular A16, October 1990).
- Management of Federal Information Resources, (OMB Circular A130).

- Guidelines for Implementing the National Geospatial Data Clearinghouse Version 1.0, ((FGDC, June 1994).
- EPA Locational Data Standard (EPA OEI).
- Executive Order 12906: Coordinating Geographic Data Acquisition and Access - The National Spatial Data Infrastructure (NSDI). (The White House, April 11, 1994).
- 24.104, 52.224-1 Privacy Act Notification and 52.224 Privacy Act.
- Section 508 of the Rehabilitation Act (29 U.S.C. § 794d)

10.1.2 These policies and guidance documents will be made available by the CO for Contractor review, upon request.

10.1.3 All work performed by the contractor shall be done at the contractor location with the exception of the following:

- Meetings scheduled at the EPA location
- Installation of test and final versions of the software
- Special request for a meeting at an off-site location

SOLICITATION/CONTRACT/ORDER FOR COMMERCIAL ITEMS

OFFEROR TO COMPLETE BLOCKS 12, 17, 23, 24, & 30

1. REQUISITION NUMBER: See Schedule

PAGE 1 OF 5

2. CONTRACT NO.: GS00Q09BGD0019

3. AWARD/ EFFECTIVE DATE:

4. ORDER NUMBER: EP-G16H-01289

5. SOLICITATION NUMBER:

6. SOLICITATION ISSUE DATE:

7. FOR SOLICITATION INFORMATION CALL:

a. NAME: Brent Maravilla

b. TELEPHONE NUMBER (No collect calls): 202-564-2184

8. OFFER DUE DATE/LOCAL TIME:

9. ISSUED BY CODE HPOD

HPOD
US Environmental Protection Agency
William Jefferson Clinton Building
1200 Pennsylvania Avenue, N. W.
Mail Code: 3803R
Washington DC 20460

10. THIS ACQUISITION IS ☒ UNRESTRICTED OR ☐ SET ASIDE: % FOR:

☐ SMALL BUSINESS
☐ HUBZONE SMALL BUSINESS
☐ SERVICE-DISABLED VETERAN-OWNED SMALL BUSINESS
☐ WOMEN-OWNED SMALL BUSINESS (WOSB) ELIGIBLE UNDER THE WOMEN-OWNED SMALL BUSINESS PROGRAM
☐ EDWOSB
☐ 8(A)

NAICS: 541512

SIZE STANDARD: $27.5

11. DELIVERY FOR FOB DESTINATION UNLESS BLOCK IS MARKED
☐ SEE SCHEDULE

12. DISCOUNT TERMS

☐ 13a. THIS CONTRACT IS A RATED ORDER UNDER DPAS (15 CFR 700)

13b. RATING

14. METHOD OF SOLICITATION
☐ RFQ ☐ IFB ☐ RFP

15. DELIVER TO CODE HPOD

HPOD
US Environmental Protection Agency
William Jefferson Clinton Building
1200 Pennsylvania Avenue, N. W.
Mail Code: 3803R
Washington DC 20460

16. ADMINISTERED BY CODE HPOD

HPOD
US Environmental Protection Agency
William Jefferson Clinton Building
1200 Pennsylvania Avenue, N. W.
Mail Code: 3803R
Washington DC 20460

17a. CONTRACTOR/ OFFEROR CODE 006928857 FACILITY CODE

Booz Allen Hamilton Inc.
Attn: BRYAN JONES
8283 GREENSBORO DR
MCLEAN VA 22102

TELEPHONE NO. 7033770195

☐ 17b. CHECK IF REMITTANCE IS DIFFERENT AND PUT SUCH ADDRESS IN OFFER

18a. PAYMENT WILL BE MADE BY CODE RTP FMC

RTP Finance Center
US Environmental Protection Agency
RTP-Finance Center (AA216-01)
109 TW Alexander Drive
www2.epa.gov/financial/contracts
Durham NC 27711

18b. SUBMIT INVOICES TO ADDRESS SHOWN IN BLOCK 18a UNLESS BLOCK BELOW IS CHECKED ☐ SEE ADDENDUM

19. ITEM NO.	20. SCHEDULE OF SUPPLIES/SERVICES	21. QUANTITY	22. UNIT	23. UNIT PRICE	24. AMOUNT
	DUNS Number: 006928857 This labor hours task order is for support of Integrated Compliance Information System support services, as more fully described in the Performance Work Statement (see attachment 1). The Period of Performance is 04/01/2016 - 03/31/2023 if all option periods are exercised. The vendor quote dated 01/04/2016 is hereby incorporated by reference. Clauses (attachment 2), Quality Assurance Surveillance Plan (attachment 3), Performance Requirements Summary *(Use Reverse and/or Attach Additional Sheets as Necessary)*				

25. ACCOUNTING AND APPROPRIATION DATA
See schedule

26. TOTAL AWARD AMOUNT *(For Govt. Use Only)*
$61,982,376.00

☐ 27a. SOLICITATION INCORPORATES BY REFERENCE FAR 52.212-1, 52.212-4. FAR 52.212-3 AND 52.212-5 ARE ATTACHED. ADDENDA ☐ ARE ☐ ARE NOT ATTACHED.

☐ 27b. CONTRACT/PURCHASE ORDER INCORPORATES BY REFERENCE FAR 52.212-4. FAR 52.212-5 IS ATTACHED. ADDENDA ☐ ARE ☐ ARE NOT ATTACHED.

☒ 28. CONTRACTOR IS REQUIRED TO SIGN THIS DOCUMENT AND RETURN 1 COPIES TO ISSUING OFFICE. CONTRACTOR AGREES TO FURNISH AND DELIVER ALL ITEMS SET FORTH OR OTHERWISE IDENTIFIED ABOVE AND ON ANY ADDITIONAL SHEETS SUBJECT TO THE TERMS AND CONDITIONS SPECIFIED.

☐ 29. AWARD OF CONTRACT: _____ OFFER DATED _____. YOUR OFFER ON SOLICITATION (BLOCK 5), INCLUDING ANY ADDITIONS OR CHANGES WHICH ARE SET FORTH HEREIN, IS ACCEPTED AS TO ITEMS:

30a. SIGNATURE OF OFFEROR/CONTRACTOR

31a. UNITED STATES OF AMERICA *(SIGNATURE OF CONTRACTING OFFICER)*

ELECTRONIC SIGNATURE

30b. NAME AND TITLE OF SIGNER *(Type or print)*

30c. DATE SIGNED

31b. NAME OF CONTRACTING OFFICER *(Type or print)*
Brent Maravilla

31c. DATE SIGNED
03/31/2016

19. ITEM NO.	20. SCHEDULE OF SUPPLIES/SERVICES	21. QUANTITY	22. UNIT	23. UNIT PRICE	24. AMOUNT
	(attachment 4), EVM Procedures (attachment 5), Agency Security Requirements for Contractor Personnel (attachment 6), and Confidentiality Agreement (attachment 7) are also incorporated by reference. The total value of this order is $61,982,376. The Contracting Officer Representative is Glendora Spinelli [Spinelli.Glendora@epa.gov (202) 564-5042]. The Alternate Contracting Officer Representatives are Michelle Torreano [Torreano.Michelle@epa.gov (202) 566-2141], and Michele Clark [Clark.Michele@epa.gov (202) 564-6229]. TOCOR: Glendora Spinelli Max Expire Date: 03/31/2023 Period of Performance: 04/01/2016 to 03/31/2017				
0001	Base Period Labor (04/01/2016 - 03/31/2017) Labor Hours Ceiling = $9,290,277 Requisition No: PR-OECA-16-00021, PR-OECA-16-00022				
	Delivery: 04/01/2016 Accounting Info: 16-17-B-E1B-501E50-2505-LJCD0000-16E1B6E003-001 BFY: 16 EFY: 17 Fund: B Budget Org: E1B Program (PRC): 501E50 Budget (BOC): 2505 Job #: LJCD0000 DCN - Line ID: 16E1B6E003-001 Funding Flag: Partial Funded: $989,520.00 Accounting Info:				
	Continued ...				

32a. QUANTITY IN COLUMN 21 HAS BEEN

☐ RECEIVED ☐ INSPECTED ☐ ACCEPTED, AND CONFORMS TO THE CONTRACT, EXCEPT AS NOTED: _____

32b. SIGNATURE OF AUTHORIZED GOVERNMENT REPRESENTATIVE	32c. DATE	32d. PRINTED NAME AND TITLE OF AUTHORIZED GOVERNMENT REPRESENTATIVE

32e. MAILING ADDRESS OF AUTHORIZED GOVERNMENT REPRESENTATIVE	32f. TELEPHONE NUMBER OF AUTHORIZED GOVERNMENT REPRESENTATIVE
	32g. E-MAIL OF AUTHORIZED GOVERNMENT REPRESENTATIVE

33. SHIP NUMBER	34. VOUCHER NUMBER	35. AMOUNT VERIFIED CORRECT FOR	36. PAYMENT	37. CHECK NUMBER
☐ PARTIAL ☐ FINAL			☐ COMPLETE ☐ PARTIAL ☐ FINAL	

38. S/R ACCOUNT NUMBER	39. S/R VOUCHER NUMBER	40. PAID BY

41a. I CERTIFY THIS ACCOUNT IS CORRECT AND PROPER FOR PAYMENT		42a. RECEIVED BY *(Print)*	
41b. SIGNATURE AND TITLE OF CERTIFYING OFFICER	41c. DATE	42b. RECEIVED AT *(Location)*	
		42c. DATE REC'D *(YY/MM/DD)*	42d. TOTAL CONTAINERS

NAME OF OFFEROR OR CONTRACTOR
Booz Allen Hamilton Inc.

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	16-17-B-E1B-501E50-2505-16E1B6E003-002 BFY: 16 EFY: 17 Fund: B Budget Org: E1B Program (PRC): 501E50 Budget (BOC): 2505 Job #: LJCDSC00 DCN - Line ID: 16E1B6E003-002 Funding Flag: Partial Funded: $52,080.00 Accounting Info: 16-17-B-E1B-501E50-2505-16E1B6E004-001 BFY: 16 EFY: 17 Fund: B Budget Org: E1B Program (PRC): 501E50 Budget (BOC): 2505 Job #: LJCM0000 DCN - Line ID: 16E1B6E004-001 Funding Flag: Partial Funded: $659,680.00 Accounting Info: 16-17-B-E1B-501E50-2505-LJCMSC00-16E1B6E004-002 BFY: 16 EFY: 17 Fund: B Budget Org: E1B Program (PRC): 501E50 Budget (BOC): 2505 Job #: LJCMSC00 DCN - Line ID: 16E1B6E004-002 Funding Flag: Partial Funded: $9,720.00				
0002	Base Period ODCs (04/01/2016 - 03/31/2017) Ceiling = $25,000 Requisition No: PR-OECA-16-00021 Delivery: 04/01/2016 Accounting Info: 16-17-B-E1B-501E50-2505-LJCMSC00-16E1B6E004-002 BFY: 16 EFY: 17 Fund: B Budget Org: E1B Program (PRC): 501E50 Budget (BOC): 2505 Job #: LJCMSC00 DCN - Line ID: 16E1B6E004-002 Funding Flag: Complete Funded: $25,000.00				
1001	Option Period I Labor (04/01/2017 - 03/31/2018) Labor Hours Ceiling = $9,323,272 (Option Line Item) 01/31/2017 Delivery: 04/01/2017				9,323,272.00
1002	Option Period I ODCs (04/01/2017 - 03/31/2018) Ceiling = $25,000 (Option Line Item) 01/31/2017 Delivery: 04/01/2017 Continued ...				25,000.00

NAME OF OFFEROR OR CONTRACTOR
Booz Allen Hamilton Inc.

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
2001	Option Period II Labor (04/01/2018 - 03/31/2019) Labor Hours Ceiling = $9,388,681 (Option Line Item) 01/31/2018 Delivery: 04/01/2018				9,388,681.00
2002	Option Period II ODCs (04/01/2018 - 03/31/2019) Ceiling = $25,000 (Option Line Item) 01/31/2018 Delivery: 04/01/2018				25,000.00
3001	Option Period III Labor (04/01/2019 - 03/31/2020) Labor Hours Ceiling = $9,238,139 (Option Line Item) 01/31/2019 Delivery: 04/01/2019				9,238,139.00
3002	Option Period III ODCs (04/01/2019 - 03/31/2020) Ceiling = $25,000 (Option Line Item) 01/31/2019 Delivery: 04/01/2019				25,000.00
4001	Option Period IV Labor (04/01/2020 - 03/31/2021) Labor Hours Ceiling = $8,694,972 (Option Line Item) 01/31/2020 Delivery: 04/01/2020				8,694,972.00
4002	Option Period IV ODCs (04/01/2020 - 03/31/2021) Ceiling = $25,000 (Option Line Item) 01/31/2020 Delivery: 04/01/2020				25,000.00
5001	Option Period V Labor (04/01/2021 - 03/31/2022) Labor Hours Ceiling = $8,147,255 (Option Line Item) 01/31/2021 Continued ...				8,147,255.00

NAME OF OFFEROR OR CONTRACTOR
Booz Allen Hamilton Inc.

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	Delivery: 04/01/2021				
5002	Option Period V ODCs (04/01/2021 - 03/31/2022) Ceiling = $25,000 (Option Line Item) 01/31/2021				25,000.00
	Delivery: 04/01/2021				
6001	Option Period VI Labor (04/01/2022 - 03/31/2023) Labor Hours Ceiling = $7,724,780 (Option Line Item) 01/31/2022				7,724,780.00
	Delivery: 04/01/2022				
6002	Option Period VI ODCs (04/01/2022 - 03/31/2023) Ceiling = $25,000 (Option Line Item) 01/31/2022				25,000.00
	Delivery: 04/01/2022				
	The obligated amount of award: $1,736,000.00. The total for this award is shown in box 26.				

Information Engineering Support for the
Integrated Compliance Information System (ICIS)

Performance Work Statement
Attachment 1

IV BACKGROUND

The Office of Enforcement and Compliance Assurance (OECA) within the U.S. Environmental Protection Agency (EPA) is responsible for ensuring that the regulated community is in compliance with environmental regulations, individual permits, and other enforceable agreements. As part of this mission, OECA not only defines the national direction for all environmental enforcement and compliance programs but also conducts operational activities (e.g., case litigation, inspections) for these programs. These environmental programs often are implemented by our partners (states, territories, tribes, and local governments), and in those cases, OECA performs more of an oversight role rather than an operational role.

OECA has faced three fundamental challenges since its inception in 1994. First, the enforcement and compliance business has evolved from a media-specific program activity such as water or air enforcement into a multimedia and sector-based program requiring new management approaches and different methods of managing information. Second, the information system infrastructure existing at the time was insufficient to support the new methods of doing business (e.g., high cost of maintaining disparate technologies). Third, information management has evolved, forcing OECA and its regulatory partners (e.g., states and locals) to adopt new and innovative approaches to information management.

The mission of the Enforcement Targeting and Data Division (ETDD) within OECA's Office of Compliance (OC) is to provide targeting, evaluation and information resources, products and services to maximize compliance with environmental laws and to realize environmental and human health benefits. Among ETDD's responsibilities is the management of national information systems that contain detailed information on enforcement activities in both EPA regions and states. Until 2000, the systems which provided this information operated independently between the various program areas. For example, the Permit Compliance System (PCS) supported enforcement, compliance, and permitting activities under the National Pollutant Discharge Elimination System (NPDES), a mandated provision under the Clean Water Act (CWA). The National Compliance Data Base (NCDB) supported the Pesticides and Toxic Substances programs. The Air Facility System (AFS) supported air enforcement. The Enforcement Docket System (Docket) supported federally-reported, non-criminal, enforcement actions and provided information for a number of reporting requirements within OECA. Docket and many OECA systems were mainframe-based and were developed independently. Some enforcement and compliance information was entered in both Docket and the specific media systems, requiring duplicate data entry. Integration of the information between the systems was difficult.

The re-engineering of OECA information systems began as the Enforcement and Compliance Initiative (ECI). This initiative recommended that a consolidated system was needed to meet the needs of OECA. The system developed as a result of this recommendation is the Integrated Compliance Information System (ICIS). ICIS integrates most of the enforcement and compliance data used by OECA into a single integrated system.

ICIS is a highly complex and sophisticated, interactive, desk-top system supported by hundreds of related data tables, business rules, and/or files with a common architecture and applications to enter, access, evaluate, and distribute the information.

Information Engineering Support for the
Integrated Compliance Information System (ICIS)

Performance Work Statement
Attachment 1

The goal of ICIS is to meet the information management needs of OECA's enforcement and compliance program; the needs of the Clean Water Act's NPDES permitting, enforcement and compliance program; and the needs of the Clean Air Act's stationary source enforcement and compliance program. Current and anticipated users of ICIS include OECA, the Office of Water (OW), the Office of Air and Radiation (OAR), EPA regions, states authorized to implement the NPDES program, and states and localities authorized to implement Title V of the Clean Air Act with regard to stationary sources. Some entities regulated under the NPDES program submit data to ICIS using ICIS's electronic reporting tools. Over time, it is possible that Clean Air Act stationary source program data will be submitted to ICIS via electronic reporting tools.

This development project has been implemented using a phased approach, with ongoing operations and maintenance of previously-developed modules, as described below.

Phase I

Phase I of ICIS, referred to as ICIS Federal Enforcement and Compliance (FE&C), established a multimedia database with a web-based user interface. This first phase created an integrated system to support federal enforcement and compliance tracking, targeting and reporting, including annual reporting for the Government Performance and Results Act (GPRA) (e.g., pounds of pollutants reduced from enforcement cases). This phase was implemented in June of 2002, replaced several legacy systems, and continues in operation today.

Phase II

Phase II of ICIS, also called PCS Modernization, integrated the requirements of the NPDES program into ICIS by expanding on Phase I capabilities to create ICIS-NPDES. PCS Modernization was needed to support the EPA and state business requirements of the NPDES permitting, enforcement and compliance program. PCS was one of the Agency's largest and most complex systems, and since 1985, it served as the official national information system for managing the NPDES program. The NPDES program evolved considerably since the creation of PCS to include the traditional major sources of pollution as well as the smaller and/or non-traditional sources such as concentrated animal feeding operations (CAFOs), combined sewer overflows (CSOs), sanitary sewer overflows (SSOs), storm water and pretreatment. While the NPDES program expanded, PCS did not change. Therefore, PCS lacked the functionality and data to meet the information management needs of the evolving NPDES permitting and enforcement program.

ICIS Phase II was implemented in June of 2006 for 21 "direct user" states (states that use ICIS directly to manage their NPDES program), 2 tribes and 9 territories. ICIS Phase II continued with the development of the capability to electronically transfer, or "batch", data from state systems into ICIS-NPDES using the National Environmental Information Exchange Network and eXtensible Markup Language (XML) data transfer formats. The batch release of ICIS Phase II was accomplished in three parts:

Part 1: Hybrid States. *Hybrid states* are those that electronically transfer Discharge Monitoring

Report (DMR) data from their state information system to ICIS-NPDES and enter all of the non-DMR NPDES data into ICIS-NPDES via the ICIS web-based data entry screens. Most hybrid states use ICIS-NPDES to directly manage their NPDES program. Implementation of the capability to batch DMRs to ICIS-NPDES was completed in May 2008 with the migration of the first hybrid state. Additional hybrid states were migrated to ICIS-NPDES in August 2008 and spring of 2009.

Part 2: NetDMR. NetDMR is an electronic reporting tool that provides functionality for regulated facilities to electronically sign and submit DMRs to ICIS-NPDES via EPA's Central Data Exchange (CDX). The NetDMR tool was developed pursuant to an Exchange Network grant managed by Texas with the participation of 11 other states, the Office of Environmental Information (OEI) and OECA. A National instance of NetDMR operates as a module of ICIS, and is hosted on EPA's CDX servers. States also have the capability to locally host the NetDMR tool, while still relying on ICIS-NPDES for the data flows. EPA is responsible for the National instance of NetDMR only. Implementation of the National instance of NetDMR occurred in June of 2009.

Part 3: Full Batch States. *Full Batch states* have their own systems to manage the NPDES program and electronically transfer all of their NPDES data from their state systems via CDX to ICIS-NPDES. These states transfer DMR data as well as all other data families in ICIS-NPDES. There are currently 24 full batch states. The final phase of the Batch capability was released into production in December of 2012.

Phase III

Phase III has modernized and integrated the Air Facility System (AFS) into ICIS by creating a module known as ICIS-Air. AFS had long been used by EPA, States, and local governments to track Clean Air Act enforcement and compliance activities for major stationary sources of air pollution. Integration of AFS into ICIS modernized an old, difficult-to-use system that no longer met current program business needs. AFS was EPA's database for compliance and enforcement data, as well as a limited amount of permit data, for stationary sources of air pollution regulated by EPA, state and local air pollution control agencies. The environmental regulatory community uses this information to track the compliance status of stationary, or point, sources with various programs under the Clean Air Act (CAA).

The initial release of ICIS-Air was implemented in October 2014. ICIS-Air Release 1 provides all the core functionality of AFS and includes a web interface, modern system-to-system data exchanges, and full integration within the ICIS computing environment. Data for all organizations formerly using AFS was migrated from AFS into ICIS as part of the deployment of ICIS-Air Release 1. AFS was decommissioned in December 2014 with the shutdown of the EPA Mainframe.

Subsequent releases of ICIS will add more functionality to meet emerging needs of the CAA Stationary Source enforcement and compliance program, meet the needs of the NPDES Electronic Reporting Rule, keep the system current with policy and programmatic changes, strengthen the system's electronic reporting capabilities, and enable support for the Agency's E-Enterprise initiative.

Information Engineering Support for the
Integrated Compliance Information System (ICIS)

Performance Work Statement
Attachment 1

V PURPOSE

The purpose of this Performance Work Statement (PWS) is to continue the operations and maintenance of ICIS, while enhancing ICIS and all associated electronic reporting tools and web services to meet the requirements of the proposed NPDES Electronic Reporting Rule and enhancing the ICIS-Air functionality developed under ICIS Phase III in order to reflect additional programmatic requirements from the modernization of AFS. Successful management and performance of multiple, concurrent, complex, inter-related, and dynamic projects will be required to achieve this purpose. The use of innovative development methodologies in the execution of these projects will be critical. Furthermore, all work should focus on achieving the essential functions at the lowest life cycle cost consistent with required performance, quality, and reliability.

VI SCOPE

The contractor shall support ETDD in its effort to continue to modernize OC information systems by expanding the ICIS-Air functionality, meeting expanded requirements for NPDES eReporting tools, and integrating other programs as needed. The contractor shall also provide ongoing operations, maintenance and enhancement support for ICIS and all its modules, tools, and capabilities. This includes the following core activities, as well as others:

- The contractor shall perform work under this PWS using Agile processes or other iterative methodologies with frequent release cycles to the extent possible and reasonable.

- The contractor shall provide support for the Operations and Maintenance of production ICIS to include all online, web-based, functionality; the Business Objects (BO) component used for reports and retrievals; overnight processes; various data warehouses and nightly ETL (Extract, Transform, and Load) processes; dashboards; functionality for electronic data transfer and other web services; the National instance of the NetDMR Tool; the NPDES eReporting Tool (NeT); the interfaces between ICIS and other systems, such as the Facility Registry System (FRS); and all system infrastructure.

- The contractor shall provide enhancements for further modernization of ICIS FE&C, ICIS-Air and ICIS-NPDES. This may include requirements and capabilities arising from the incorporation of recent CAA policy changes, development of a CAA permitting module, creation of web services to obtain CAA stack test data, new capabilities related to EPA's E-Enterprise initiative, changes resulting from the promulgation of the NPDES eReporting Rule as it goes final, or incorporation of document management capabilities. Enhancements also include any modification requested by EPA to ICIS that is not documented in the most recent version of the Detailed Design and Technical Specification Documents in effect upon the initiation of this task order.

- The contractor shall provide a variety of support to EPA to ensure the system meets technical and programmatic performance expectations, and to ensure that the system always remains technically and programmatically up to date while striving to keep a downward pressure on operating costs.

- As directed, the contractor shall provide technical support (including new services and testing), outreach, training, and coordination needed to enable third party application developers to develop their own applications which leverage ICIS data and functionality and add value by extending the data reporting, data management and data analysis capabilities offered by ICIS and other ETDD systems.

VII GENERAL OUTLINE

The following is a general outline of tasks to be performed during the course of this PWS, with the specifics dependent on programmatic priorities and budget availability each year:

Task 1: Project Management
Task 2: Transition Planning and Implementation
Task 3: Update Detailed Design
Task 4: Develop Software Technical Specifications
Task 5: Develop Software
Task 6: Test Software, System Components and Processes
Task 7: Support Implementation of Phases/Releases of ICIS
Task 8: Support Operations, Maintenance, and Enhancement of ICIS
Task 9: Support Development, Operations, Maintenance and Enhancement of eReporting Tools
Task 10: Support Communications and Outreach
Task 11: Support Training
Task 12: Develop and Maintain System and User Documentation
Task 13: Support Third Party Developers for eReporting
Task 14: Support Data Migration

Current and comprehensive system documentation is available on a public web site, including Detailed Design documents, Software Technical Specifications, Data Migration Plans, Data Mapping documents, Test Plans, Test Cases and Results, training materials and User Guides. Summary metrics for ICIS are also included on the DVD to convey quantitative data about system size and usage.

The contractor shall work in coordination with staff from the EPA's Office of Environmental Information (OEI), the EPA's National Computer Center (NCC), offices within EPA's Office of Water (OW) and Office of Air and Radiation (OAR), other offices within OECA, EPA regional and state and local staff, and other contracting staff as necessary throughout the completion of the work specified in this task order for maintaining and enhancing ICIS to ensure smooth operations within the EPA's information

technology infrastructure. The EPA shall provide system access and access to Agency personnel as necessary to fulfill the requirements of this Task Order (TO).

The contractor shall provide all data, software (deployment files, support files, and source code files), documentation, reports and notes developed or collected during the performance of this TO to the Task Order Contracting Officer's Representative (TOCOR). All project documentation deliverables shall be prepared using Agency standard software packages (i.e., MS Word, MS Excel, MS Project).

Unless otherwise noted under the task description, these deliverables shall be provided electronically. Unless otherwise noted under the task description, all deliverables shall be provided to the TOCOR in a draft version, allowing two weeks for the EPA to review. Comments provided by the TOCOR shall be incorporated into the deliverable and a final version developed and submitted back to the EPA within two weeks of the contractor receiving comments.

All software shall be delivered in both source and executable formats. Software includes application code developed as well as all scripts, procedures, and configuration information necessary to establish and maintain the software environments for ICIS, along with any other artifacts that are created as a result of this Work Statement.

In situations where the contractor has direct interaction with other government personnel, the contractor shall wear proper identification at all times (the badge should contain the individual's name, along with the name of his/her company, and/or the company logo), verbally identify him/herself and the company they represent before a meeting or phone call or webinar begins, identify him/herself as a contractor, especially when not physically present, and attend only those portions of a workshop or conference essential to the successful completion of the tasks.

The contractor shall not release any information acquired during this contract, including data that is considered by the agency to be enforcement sensitive, to any party without prior approval of the TOCOR. The agreement, in Attachment 9, shall be signed by each individual contractor personnel working on the project and copies provided to the TOCOR. It shall be the contractor's responsibility to provide updated information as personnel are changed on the project.

VIII DESCRIPTION OF TASKS

TASK 1 - Project Management

The purpose of this task is to allow for activities which ensure the successful completion of all work under this PWS. The contractor shall be responsible for managing costs and ensuring value within the approved budget parameters. As part of this task, the contractor shall maintain project and task level schedules to plan and track progress of work being performed on this Task Order including a Work Breakdown Structure (WBS) and associated work packages for each phase (or task) of the project. This includes creating, updating and tracking an Integrated ICIS Project Schedule which integrates and

coordinates all work scheduled to be performed on ICIS, NetDMR and NeT as part of this Task Order. The contractor's Project Manager shall be responsible for notifying the EPA TOCOR as soon as any real or potential problems are apparent or suspected. As part of this task:

a) The contractor shall attend bi-weekly ICIS Project Management progress meetings (normally in person) with the TOCOR and other relevant EPA staff. The contractor shall prepare progress meeting notes describing activities for that period, staffing changes, progress on deliverables and schedule and any new or previously unresolved issues that shall be addressed. These notes from the previous meeting will be reviewed and approved at the start of each meeting. Progress meeting notes shall be delivered to the TOCOR electronically within three (3) business days of the progress meeting.

b) The contractor shall attend senior program management meetings with the TOCOR and office, division and branch level management to review and discuss overall project management, status and issues. The contractor shall prepare meeting notes highlighting any issues and/or action items. These meeting notes are due within five (5) business days after the meeting. These meetings will be held periodically as scheduled by the EPA TOCOR; the number of which will not exceed once per quarter.

c) The contractor shall provide a monthly status report of the ICIS project to the TOCOR, no later than the 15th of the month after the end of the month being reported. This report shall include a description of activities, resources expended by task and sub-task and labor category, progress on deliverables, and any issues needing to be addressed. Additionally, this report shall include information on sizing estimates (i.e., what project resources are being used and how this estimate is affecting the schedule, scope and cost of the project).

d) Initially for the year, and then monthly thereafter, the contractor shall provide a financial report no later than the 15th of the month after the end of the month being reported, to include a breakdown of the hours and funding (both budgeted and actual) expended on the project by task and sub-task for that month and totals of what has been expended to date under this Task Order.

As part of this monthly financial report, the contractor shall provide Earned Value Measurement (EVM) statistics sufficient to meet all requirements of EPA's EVM Procedures. These typically include:

1) Budgeted Cost of Work Scheduled (BCWS/PV)
2) Budgeted Cost of Work Performed (BCWP/EV)
3) Actual Cost of Work Scheduled (ACWS)
4) Actual Cost of Work Performed (ACWP/AC)
5) Cost Performance Index (CPI)
6) Schedule Performance Index (SPI)

These statistics shall be reported by task for the month and cumulatively, and also at the project level, for the month and cumulatively. The contractor shall notify the TOCOR in advance if the SPI and/or CPI variance is anticipated to exceed, or has, exceeded the 10% threshold and

shall provide written explanation of exceedances.

e) The contractor shall maintain a Change Request Report which contains the title, description, priority, and impact of issues (e.g., Software Problems, suggested changes, etc.) identified by contacts through the ICIS Customer Support process and its associated customer service management tools as well as by EPA Technical SMEs verbally or via email notification. These issues are documented using the Change Request form and describe the issues identified by the users and SMEs. These Change Request forms are discussed during project management meetings or more often for urgent issues. The contractor shall identify risks, issues, and change requests for each program area (i.e., Federal Enforcement and Compliance, NPDES, or Air) of the ICIS project; and maintain/track them in a database along with status, resolution, and impact. The status of requests on this report shall be discussed as part of the bi-weekly ICIS progress meetings (refer to a), with high priority items (those having an effect on schedule or budget) being discussed in the program management meetings.

Task #	Deliverable	Due Date	Number of Copies
1	Integrated ICIS Project Schedule	Task Order Start Date + 1 month	1 electronic
1	Updated Integrated ICIS Project Schedule	As needed	1 electronic
1	Sub-Task Schedules	Within two weeks of sub-task being defined	1 electronic
1a	Progress Meeting Notes	Bi-weekly, within 3 business days of meeting	1 electronic
1b	Program Management Meeting Notes	Monthly, within 5 business days of meeting	1 electronic
1c	Monthly Project Status Report	15th of each month	1 electronic
1d	Monthly Project Financial Report	15th of each month	1 electronic
1e	Change Request Report	Monthly	1 electronic

Acceptance Criteria:

The contents of schedules, meeting notes, reports, plans, and assessments will be reviewed and approved by the TOCOR. Final acceptance will be made after all requested revisions have been made. Acceptance by the TOCOR will be based upon the correctness, accuracy, usefulness, and completeness of the deliverable and timely (per schedule) delivery of the deliverable.

Information Engineering Support for the
Integrated Compliance Information System (ICIS)

Performance Work Statement
Attachment 1

TASK 2 – Transition Planning and Implementation

The purpose of this task is to ensure that the contractor develops and, as directed, implements a plan for smoothly and efficiently transitioning the work on ICIS from one contractor to another, and as needed, from one contract vehicle to another. Due to the size and complexity of ICIS, it is critical that the contractor demonstrate how they will ensure smooth transition of the work without jeopardizing the ongoing operations and development of ICIS. This task is three-fold:

a) The contractor shall develop an Incoming Transition Plan which provides their approach to assuming the operations, maintenance and development of ICIS while minimizing the impact to the ICIS user community. This plan shall include, but is not limited to, the following:

- Project Team training plan
- Plan for knowledge transfer
- How transition activities will be coordinated and achieved
- Definition of when transition and knowledge transfer can be called complete
- Management approach for implementing Transition Plan
- Identification of necessary activities and briefings and meetings needed
- Proposed schedule for all transition tasks and activities
- Coordination of team activities
- Identification of risks and associated risk mitigation strategies

b) The contractor shall, at the end of the contract, develop an Outgoing Transition Plan which provides their approach to transitioning the operations, maintenance and development of ICIS while minimizing the impact to ICIS user community. This plan shall include, but is not limited to, the following:

- Milestones and deliverables
- Status of all deliverables and activities
- Plan for knowledge transfer
- Training Plan
- Identified resources for supporting transition activities
- Documentation inventory
- Identification of, and schedule for, recommended meetings and briefings with new contractor
- Identification of wrap-up activities
- Memorandum of Understanding between contractors
- Identification of all applicable licenses, passwords, configuration and build instructions, information on the use of CDX for ICIS, all other system interfaces, scripts, backups, trouble reports, transaction logs, and all other applicable system documentation, procedures, and instructions

- Definition of what constitutes successful completion of transition

c) Upon acceptance of the final plan, and receipt of technical direction to implement the plan, the contractor shall implement either transition plan.

Task #	Deliverable	Due Date	Number of Copies
2a	Draft Incoming Transition Plan	1 Week after Task Order award	1 electronic
2a	Final Incoming Transition Plan	1 Week after receipt of EPA comments	1 electronic
2c	Implement Incoming Transition Plan	At acceptance of Final Incoming Transition Plan and per technical direction	NA
2b	Draft Outgoing Transition Plan	2 Weeks after notification by TOCOR	1 electronic
2b	Final Outgoing Transition Plan	1 Week after receipt of EPA comments	1 electronic
2c	Implement Outgoing Transition Plan	At acceptance of Final Outgoing Transition Plan and per technical direction	NA

Acceptance Criteria:

The contents of the Transition Plan will be reviewed by technical staff at EPA and reviewed and approved by the TOCOR. Final acceptance will be made after all requested revisions have been made. Acceptance by the TOCOR will be based upon the correctness, accuracy and completeness of the deliverable and timely (per schedule) delivery of the deliverable.

TASK 3 – Update Detailed Design

The purpose of this task is to update and document changes needed to the existing Detailed Design arising from enhancements to further modernize ICIS FE&C, ICIS-Air and ICIS-NPDES. Utilizing system modernization Needs Analyses, Business Cases, Alternatives Analyses, current system requirements and functionality, current system documentation, meetings with Subject Matter Experts within EPA and state and local governments, the contractor shall document the scope and functionality of the design changes to ICIS, including changes to support the proposed NPDES Electronic Reporting Rule. All documents shall be provided by the TOCOR. A work group, composed of EPA technical staff and selected regional and state/local ICIS system users, will be convened to review and comment on the updated Detailed Design. The contractor shall ensure that all updates to the Detailed Design for ICIS are developed in line with the existing ICIS functionality and architecture. The contractor shall develop updates to the design of ICIS which are efficient, complete and adhere to standards set forth for implementing and securing systems in the EPA shared environment.

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The contractor shall perform the following tasks in updating the ICIS Detailed Design:

a) The contractor shall review the existing functionality of a Legacy system if applicable, and/or the requirements arising from a specific programmatic enhancement to determine the required scope and functionality for enhancing ICIS to offer the new capability.

b) The contractor shall develop a Data Requirements document for incorporating functionality from a legacy system or adding new major capability, and support a Modernization Data Requirements Workgroup, composed of EPA Headquarters, region and state/local participants, to flesh out and verify the data that will be required to be part of ICIS from the Legacy system or other programmatic data source.

c) The contractor shall identify outstanding design issues and recommend resolutions.

d) The contractor shall define the screen layouts, functionality, report definitions, business rules, other system interfaces, physical data structures (updates to existing structures and new tables), data dictionary to support all defined functions for enhancements or new capabilities as they will be integrated with ICIS including data entry, ad hoc and standard reporting, and electronic data transfers (data flows). These screens, reports, and data flows must follow the existing standards and methods in place for ICIS and conform to all relevant Agency data standards.

e) The contractor shall conduct a technology review to evaluate and recommend hardware and software changes necessary to build out the ICIS architecture and hardware/software infrastructure to include new system functionality. This will be reviewed by EPA technical staff and, upon receipt of comments from EPA, the contractor shall incorporate requested changes into the detailed design.

f) The contractor shall support the work group, composed of EPA technical staff, regional users and state/local users, convened for the purpose of reviewing the new detailed design. The contractor shall review and consolidate all comments received from the workgroup and include them as an appendix to the detailed design document. The contractor shall update the detailed design to reflect user comments as requested by the TOCOR or EPA designated technical lead.

Task #	Deliverable	Due Date	Number of Copies
3b	Data Requirements Paper	To be determined per the enhancement or new functionality	1 electronic
3c	Design Issues Paper	To be determined per the enhancement or new functionality	1 electronic

Task #	Deliverable	Due Date	Number of Copies
3e	Technology Review Paper	To be determined per the enhancement or new functionality	1 electronic
3d	Draft Update to ICIS Detailed Design document	To be determined per the enhancement or new functionality	1 electronic
3e	Revised Update to the ICIS Detailed Design document	2 weeks after receipt of comments from EPA and users	1 electronic
3f	Consolidated Comments Appendix	With revised Update to the ICIS Detailed Design from 3e	1 electronic

Acceptance Criteria:

Papers will be reviewed by the TOCOR and other designated EPA and/or user technical staff. This review will focus on completeness, accuracy, readability, and utility for informing subsequent actions by EPA. Detailed Designs will be reviewed by the TOCOR and other designated EPA and/or user technical staff. This review will focus on how well the design accommodates new and existing requirements, determination of whether or not design minimizes the impact on ICIS, completeness and efficiency of design, adherence to data and architecture standards, and how well the design integrates with the existing ICIS architecture and functionality. The contractor shall incorporate changes into the Revised Detailed Design to include all changes required by the TOCOR or other designated EPA technical lead.

Task 4: Develop Software Technical Specifications

The purpose of this task is to develop and document Software Technical Specifications for new functionality, defect corrections, and changes and/or enhancements to existing functionality from which the software can be developed. Utilizing the Detailed Design for the new program (e.g., ICIS-Air for Phase III), input from the appropriate Subject Matter Experts at EPA, and any applicable industry standards for software design, the contractor shall develop and document the software technical specifications for the new phases of, or capabilities within, ICIS. All technical specifications will be developed using tools which support a standard structured approach to systems development and software design in the ICIS hardware/software environment.

In designing both new and/or updated EDT processes and ICIS Web functionality, the contractor shall utilize the version of system code as of the start date of this task and take into account any impacts to the existing ICIS system. New processes shall be designed to have minimal impact on the existing application and processes as well as the existing user communities. In addition, the design of such processes and software must take into account the current schedule for daily, overnight and weekend processing. All new software and processes associated with the new and/or updated

functionality must be optimized during design and through development and implementation to operate in as efficient a manner as possible. In all work related to enhancing and adding capability to ICIS, the contractor shall strive to make the changes and enhancements efficient from the users' perspective as well as efficient from the system performance perspective.

The contractor shall perform ongoing technical analysis and update the technical specifications of the specific processing functions and procedures for ICIS as changes arise from defects discovered during the testing phases, from ICIS maintenance, or from changes to EPA policy or data standards.

Depending on the alternative selected for developing the technical specifications, the schedule of deliverables may change. For example, it may be more expedient to develop software technical specifications by data family or by business function than to develop the specifications all at once.

4.1 Software Technical Specification for Electronic Data Transfer

The contractor shall draft and finalize Software Technical Specification documents for Electronic Data Transfer (EDT) functionality of a new data family to be added to FE&C, ICIS-Air or ICIS-NPDES. For existing EDT data families requiring changes to business rules, transactions types, etc., the contractor shall update and finalize the existing Software Technical Specification documents. In performing this task, the contractor shall consider and use all appropriate sources of information, such as: prior ICIS-NPDES or ICIS-Air EDT Software Technical Specifications; ICIS EDT Architecture and Design documents; Gap Analyses; input from subject matter experts at EPA and EPA's federal and state/local partners; existing ICIS-NPDES and ICIS-Air schemas posted publicly; software modules and business rules developed as part of the online data entry functionality of ICIS, and all software development standards and procedures. The contractor shall use any lessons learned from prior implementations of EDT functionality to define and staff this task so as to achieve timely software products with a high degree of correctness.

All data being transmitted from state and local systems to ICIS will go through EPA's Central Data Exchange (CDX) facility managed by OEI. CDX will be responsible for security, up-front validation of the XML or schema, logging and archiving of data, sending the data to the ICIS node, receiving status and files from ICIS EDT and sending communications to the state/local user upon receipt of their data. The contractor shall participate in design/specification meetings set up by the TOCOR with OEI/CDX and their contractors to review and finalize the changes to processes, procedures, and software that will be required to implement electronic data transfer processes and maintain them throughout this task order.

When formally directed, the contractor shall perform the following activities:

a) The contractor shall complete a "Gap Analysis" or review of the ICIS online functionality and business or validation rules against the draft schema files for all data families, documenting any additions and changes needed. The purpose of this gap analysis is to ensure consistency between EDT and web functionality and shall include all data families as directed. Existing validation code from the ICIS online and EDT functionality shall be used where possible.

b) The contractor shall review the data requirements by data family and develop a recommended approach and plan for the development of the Software Technical Specifications to include the order and priority of development for each data family and accommodate the business requirements that ICIS supports.

c) The contractor shall review and update the ICIS Software Technical Specifications as they apply to the flow of data from states and locals to ICIS. This technical specification shall include:

1) updated architecture for the electronic data transfer of data into ICIS,
2) the design of the EDT Processing software and procedures using, as appropriate, flow charts, pseudo-code and/or use cases, object module definitions and diagrams, final screens and report layouts, database updates,
3) mappings with business rules for each field of the XML instance documents plus rules for populating ICIS tables and documenting the details of how the required functionality will be accomplished in the system,
4) a listing of error messages/causes/fixes for all errors arising from the parsing of the XML files by ICIS, and incorporating feedback from the IPT review of draft error messages,
5) design and definition of security layer between ICIS and CDX,
6) discussion of major design decisions to include pros, cons and recommendation with justification. This information must be provided to EPA in draft prior to final decision making to allow time for input from EPA technical staff.
7) discussion of the selection of technical tools and methods including pros, cons, and recommendations with justification. This must be provided to EPA in draft prior to final decision making to allow time for input from EPA technical staff
8) listing of existing ICIS methods to be reused for data validation by data family,
9) listing of existing ICIS EDT methods to be used for data or XML file validation by data family,
10) listing of new methods with description of how they are to be implemented by data family,
11) mappings of XML tags into ICIS table columns by data family,
12) EDT Audit Report layouts and/or method of returning errors to users submitting via EDT, and
13) details of error processing.

4.2 Software Technical Specification for ICIS Web Functionality

The contractor shall review, update and complete the Software Technical Specification for for additions or changes to screens, data elements, or business rules that impact ICIS Web Functionality. In performing this task, the contractor shall consider and use all appropriate sources of information, such as existing documentation and existing Web functionality. The contractor shall ensure that all new and modified screens and navigation are 508 compliant.

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The contractor shall perform the following activities as part of this sub-task:

a) The contractor shall review the data and functional requirements and develop a recommended approach and plan for the development of the Software Technical Specifications to include the order and priority of development for each module.

b) The contractor shall define the overall software technical design and develop the definition of the overall technical design and solutions for building and integrating new or updated functionality into ICIS. This task includes following ICIS screen standards (i.e., headers, footers, navigation, security, bread crumb strategy) and maintaining full consistency with ICIS exception handling techniques, overall system security handling, common code and procedures, system parameters, web services design and infrastructure to include database code design. The contractor will document in each technical specification that all new and updated ICIS screens and navigation to be developed or changed must adhere to Section 508 standards.

   As part of this overall software technical design, the contractor shall define the technical specifications for any interfaces to Agency systems as defined in the Detailed Design, overall ICIS system security framework, any specific archival functions, and the existing ICIS interface strategy. For each new and/or updated functionality, the contractor shall define the software specifications for the input, update, and retrieval of data, to include definition of the relevant modules, development of use cases and/or pseudo code, definition of the screens and relevant XML schemas, security updates, interfaces, and database updates to include:

   1) updated architecture for any electronic transfer of data into ICIS
   2) the design of the software and procedures using, as appropriate, flow charts, pseudo-code and/or use cases, object module definitions and diagrams, final screens and report layouts, database updates
   3) mappings with business rules for each new data field plus rules for populating ICIS tables and documenting the details of how the required functionality will be accomplished in the system
   4) discussion of major design decisions to include pros, cons and recommendation with justification. This information must be provided to EPA in draft prior to final decision making to allow time for input from EPA technical staff
   5) discussion of the selection of technical tools and methods including pros, cons, and recommendations with justification. This must be provided to EPA in draft prior to final decision making to allow time for input from EPA technical staff
   6) listing of existing ICIS methods to be reused for data validation by data family
   7) listing of existing ICIS methods to be used for data validation by data family
   8) listing of new methods with description of how they are to be implemented by data family
   9) screen layouts
   10) needed updates to the System Administration Module

   needed updates to the System Administration Module.

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Task #	Deliverable	Due Date	Number of Copies
4.1a	Gap Analysis	To be determined per the enhancement or new functionality	1 electronic
4.1b 4.2b	Recommended Approach or Plan	To be determined per the enhancement or new functionality	1 electronic
4.1c	Draft Software Technical Specifications for EDT	To be determined per the enhancement or new functionality	1 electronic
4.1c	Revised Software Technical Specifications for EDT	2 Weeks after the receipt of comment from EPA	1 electronic
4.2c	Draft Software Technical Specifications for ICIS Web Functionality	To be determined per the enhancement or new functionality	1 electronic
4.2c	Revised Software Technical Specifications for ICIS Web Functionality	2 Weeks after the receipt of comment from EPA	1 electronic
4.1c, 4.2c	Updated ICIS Architecture Document	As part of Software Technical Specifications	1 electronic
4.1c, 4.2c	Updates to the ICIS Design Document	As part of Software Technical Specifications	1 electronic
4.1c, 4.2c	Design Decision Papers or Briefings	Bi-weekly during Technical Specification development	1 electronic

Acceptance Criteria:

Acceptance by the TOCOR, and other designated EPA personnel, subject matter experts and technical programmatic staff within EPA or states will be based upon a review of the deliverable as it is developed to ensure that the deliverable is complete, technically correct, well-organized, and meets the requirements for integration with ICIS, CDX, and other EPA systems and IT infrastructure.

Task 5: Develop Software

The purpose of this task is to develop the new software application and procedures releases for ICIS based upon the Software Technical Specifications and Design Documents and the ICIS Integrated Schedule. All software shall be developed adhering to the software standards and development methodology set forth for ICIS. In addition, where appropriate, software development should take

advantage of Agile or other approved iterative methodologies. New releases of ICIS shall be integrated into ICIS minimizing the changes necessary to existing software modules and business rules; in other words, new software and processes should be refined to have minimal impact on the existing application and processes as well as the existing user community. In addition, any addition and/or revision of the software must utilize existing software and take into account the current schedule for daily, overnight and weekend processes. All new software and processes associated with a new release of ICIS must be optimized during revision and implementation to operate in as efficient manner as possible. In all work related to enhancing and adding capability to ICIS, the contractor shall strive to make the changes and enhancements efficient from the users' perspective as well as efficient from the system performance perspective. All software and procedures shall be thoroughly tested; there shall be no known Severity 1 or 2, or high priority Severity 3 problems left open by the contractor prior to delivery to the EPA for Test and Acceptance by NCC, EPA staff, and pilot states/locals.

All software shall be developed and/or revised according to the software standards set forth for ICIS taking advantage of current system infrastructure tools and capabilities. The contractor shall define common routines where possible and reuse applicable modules from the current online ICIS system. All software must be thoroughly documented both internally (via explanatory comments) and externally to ease future operational and maintenance activities as well as enable expansion activities. The TOCOR will verify that all changes required by the EPA resulting from a review of the code delivered for deployment have been made. The contractor shall ensure the release of software to be tested and placed into production is Section 508 compliant.

The contractor shall provide deployment files (e.g., EAR, WAR, BO Universes, BO Reports, configuration files), support files (e.g., JIRA files, documentation on deployment files), and source code files (e.g., all programming files used to create EAR, WAR, and BO files) for each deployment into the Production ICIS Environment.

a) As directed, the contractor shall develop software and processes for ICIS per the Software Technical Specifications. This may include:
   - supporting the capability to retrieve incoming submission files from CDX via web services
   - performing parsing and validation of incoming data in XML format against business rules and mapping provided in the technical specifications
   - continuing a messaging capability to inform submitters of the receipt and processing completion of their submissions via web services
   - continuing a system administration capability to monitor EDT status history and send messages to CDX
   - applying updates to the ICIS database from all valid incoming transactions
   - logging of field and record rejections in an historical file
   - creation of error report listings and audit reports using Business Objects
   - creation of XML transactions containing resulting errors for transmittal back to the user, and
   - new Web functionality to support additional CAA stationary source enforcement and

compliance activities, NPDES programmatic requirements, or federal enforcement and compliance requirements.

b) The contractor shall perform a preliminary security scan using the AppScan Software on the software prior to deployment in the ICIS Test environment. The contractor shall provide the results of the security scan to the EPA TOCOR and NCC security expert and shall incorporate the changes required by NCC and the EPA staff into the software, perform any retesting necessary and resubmit the software for approval to the TOCOR. The application must be provided to NCC for their security scanning and review three weeks prior to deployment into the ICIS Production environment. The contractor shall make changes required resulting from that security review prior to deployment.

c) The contractor shall track all errors and changes to the software and processes utilizing the ICIS Change Control procedures.

Task #	Deliverable	Due Date	Number of Copies
5a,b	Draft Release Software	Due dates per the Integrated ICIS Project Schedule	1 electronic
5a,b	Revised Release Software	3 Weeks after receipt of comments from EPA and NCC Staff	1 electronic
5c	Change Report	Bi-weekly during the Project Management Meetings	1 electronic

Acceptance Criteria:

Acceptance by the TOCOR will be based upon a review of each software package as it is developed and tested by EPA designated subject matter experts and technical programmatic staff within EPA Headquarters or regions and states/locals and the TOCOR to ensure that the software meets the requirements for that function being developed. Acceptance by the TOCOR will be based upon:

- conformance to NCC and EPA policies and standards, such as those requiring Section 508 compatibility
- demonstration of adequate testing; demonstration that performance meets requirements of design specifications
- demonstration that the software performs in an efficient manner within the software/hardware environment
- provision of thorough documentation, and
- conformance to NCC's policies and procedures for acceptance testing and delivery of proper documentation.

All software deliverables shall include documentation of architectural and coding design

alternatives discussing the pros and cons leading to the final deliverables. Coding comments, following published standards, must be included within the application code to capture the developer's description and intention of code.

Task 6 - Test Software, System Components and Processes

The purpose of this task is to ensure that ICIS release software, architecture, and procedures have been fully tested based upon well-defined Test Plans. This task includes the correction and retesting of problems found during the various testing phases. The contractor shall use lessons learned from prior ICIS Phases and release implementations to define the Testing task in order to achieve optimum and timely testing and subsequent correction of problems.

For each release of ICIS:

a) The contractor shall develop a comprehensive test plan and employ software tools, as necessary, for the execution of that test plan. The test plan shall provide a comprehensive approach to accomplishing functional testing, system testing, beta testing, integration testing, regression testing, user validation testing (UVT), and user acceptance testing (UAT). The test plan shall include specific test cases and expected results from each test case. The contractor shall include sufficient test cases/scenarios to verify that the new ICIS software, database, procedures, and interfaces have been thoroughly tested and verified. For any data flows from state and local systems to ICIS, the test plan should include steps for testing CDX uploads using files provided by pilot participants, if available, and/or "mocked up" by the contractor.

b) The contractor shall perform functional, integration, system, and regression testing of the ICIS release, fully exercising the test plan created in Step a). The contractor shall document the test results and provide them as an addendum to the test plan. The contractor shall log and track in the Change Tracking database all defects and necessary changes which are a result of testing. The contractor shall make the necessary changes to the software and/or processes based upon the test results and retest to verify that the revised software and procedures work as required.

c) As requested by the TOCOR, the contractor shall support EPA, and potentially regional and/or state and/or local users, in their User Validation Testing (a.k.a. Beta Testing) of the ICIS release. This testing will be performed in EPA's ICIS testing environment. Beta testers will test that the application is functionally correct and is acceptable from a user's perspective. The contractor shall make the necessary changes to the software and/or processes based upon the test results.

d) The contractor shall perform Load Testing of the new ICIS release. In conjunction with OEI staff and their contractor(s), NCC staff and ICIS Team Technical staff, the contractor shall develop a Load Test Plan, develop Load Test test cases and data, and conduct load testing of the new ICIS release, and hardware configuration. The contractor shall document the results incorporating recommendations for improving performance and/or procedures. Based upon

changes required to improve performance, the contractor shall make the necessary changes to the processes and software.

e) The contractor shall provide technical support during User Acceptance Testing (UAT) in the verification of user testing and modify software and/or processes as necessary to correct errors identified by the User Testers. For testing the transmission of programmatic data from a federal/state/local system to ICIS and in cooperation with staff from CDX and their contractor, regions/states/locals and their contractors, and other technical EPA staff designated by the TOCOR, the contractor shall conduct User Validation Testing (UVT) and User Acceptance Testing (UAT) in the form of "end to end" testing.

Additionally, the contractor shall:

- track all errors and changes utilizing the Change Control procedures
- refresh the Test database with data migrated for the regions/states/locals prior to UVT and UAT if relevant
- establish procedures based upon the methodology in the Test Plan
- provide technical support to the UVT and UAT Testers, and
- modify software and/or processes to correct errors identified by the UVT and UAT Testers and EPA, based upon the methodology documented in the Test Plan.

If EPA and other participating government organizations determine at the end of UVT that the data meets acceptable thresholds and the system functionality operates correctly and efficiently, EPA may decide to forego a separate UAT or cut the timeframe and activities back. Problems found during EPA and user testing shall be corrected by the contractor and retested by the contractor and EPA prior to deployment.

f) Prior to the deployment of new and/or revised software into the ICIS Test or Stage environments, the contractor shall perform the security scanning of the software using the AppScan software and provide the results to the NCC Technical Lead. The contractor shall deliver the new and/or enhanced software to NCC for a security scan a minimum of three (3) weeks prior to the implementation date. The contractor shall make all changes required as a result of that security scan and retest prior to deployment into the ICIS Production environment.

Task #	Deliverable	Due Date	Number of Copies
6a	Draft Test Plan	2 Months after the start of this task	1 electronic
6a	Revised Test Plan	2 Weeks after receipt of comments from EPA	1 electronic
6b	Test Plan addendums for Test Cases with results	2 Weeks after the completion of each testing phase	1 electronic

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Task #	Deliverable	Due Date	Number of Copies
6b, c, d, e, f	Revised Software and Procedures from each Phase of Testing	2 Weeks after the completion of each testing phase	1 electronic
6	For all software deliveries, all deployment files (e.g., EAR, WAR, BO Universes, BO Reports, configuration files), support files (e.g., JIRA files, documentation on deployment files), and source code files (e.g., all programming files used to create EAR, WAR, and BO files).	Day of deployment into Production (deployment cannot begin without these deliverables being supplied)	1 electronic
6d	Load Testing Report	2 Weeks after the completion of the Load Test	1 electronic
6f	Final Software for Security Scanning	3 Weeks prior to the production deployment date	1 electronic
6e	Change/Defect Reports	Bi-weekly during testing	1 electronic

Acceptance Criteria:
Acceptance by the TOCOR will be based upon:

- conformance to NCC and EPA policies and standards such as those requiring 508 compatibility
- demonstration of adequate testing; demonstration that performance meets requirements of design specifications
- demonstration that the system functions and processes work correctly and efficiently
- demonstration that the software performs in an efficient manner within the software/hardware environment
- conformance to NCC's policies and procedures for acceptance testing and delivery of proper documentation, and
- software errors identified during the specified testing phases have been corrected and retested pursuant to the test plan.

All software and procedures will be deployed first in the EPA ICIS Test environment for EPA, User Validation Testing, and User Acceptance Testing per the task schedule. Acceptance by EPA is contingent upon no known Severity 1 or 2, or high priority Severity 3 problems left open by the contractor prior to delivery to the EPA for Test and Acceptance by NCC, EPA staff, and pilot states.

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Task 7 – Support Implementation of Phases/Releases of ICIS

The purpose of this task is to provide technical assistance to EPA to prepare for successfully transitioning a new phase or release of ICIS from the development environment through test to production. In conducting this task:

a) The contractor shall develop an Implementation Plan and/or Implementation Checklist for transitioning the phase or release of the ICIS into the production environment. The Implementation Plan shall include a list of specific users (i.e., specific states or local entities), specific instructions, tasks, time frames and responsibilities which will be used by the EPA (usually OECA and OEI personnel) and contractor staff to implement the new releases of ICIS (database structures, screens, software and processes) into the EPA's ICIS production environment. This Implementation Plan shall incorporate data migration activity if data must be migrated from a legacy system. A draft will be reviewed by EPA and NCC staff. The contractor shall incorporate comments and changes received from the TOCOR and other designated EPA staff, and shall deliver a final Implementation Plan.

b) The contractor shall provide technical support for the installation of the ICIS software and set up procedures on EPA equipment. While actual installation of the software into EPA's environment must be done by NCC staff, the contractor shall provide technical assistance by helping to analyze problems and solutions, and developing special utilities and procedures.

c) The contractor shall provide ongoing support in rapidly resolving any issues/problems that occur during implementation across the user community, who, depending on the release of ICIS, may include EPA Headquarters, regional and state and local users. The contractor shall:

- provide technical support in the form of troubleshooting the system
- revise and install processes and/or software to correct problems or resolve issues
- monitor regularly scheduled processes
- conduct periodic performance testing, and recommend future infrastructure scalability specifications, and
- update documentation.

The contractor shall provide this support via telephone, electronic mail, web conferencing, remote access to the system, on site consultation, and other means as required.

d) The contractor shall input and track in the Change Control database through resolution all changes to software and procedures that have resulted from problems or issues encountered during implementation, providing the TOCOR with Problem Reports.

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Task #	Deliverable	Due Date	Number of Copies
7a	Draft Implementation Plan and/or Checklist	1 Month after the start of this task	1 electronic
7a	Final Implementation Plan and Checklist	2 weeks after receipt of EPA comments	1 electronic
7b,c	Revised Software	Upon Deployment	1 electronic
7b,c	Revised HW/SW Settings and procedures	Upon Deployment	1 electronic
7d	Change and Problem Reports	Bi-weekly after the start of this task	1 electronic

Acceptance Criteria:
Acceptance by the TOCOR will be based upon:

- conformance to NCC and EPA security and software policies and procedures
- demonstration of adequate testing
- demonstration that ICIS functions and processes work correctly and efficiently
- demonstration that performance meets the requirements in the design specifications
- if relevant, verification that the data has been successfully migrated
- if relevant, sign-off by states and locals on the migration of their data into ICIS

TASK 8 - Support Operations, Maintenance and Enhancement of ICIS

The purpose of this task is to provide technical support to the EPA and the ICIS user community in the operations, maintenance (O&M), and enhancement of ICIS. The user community of ICIS currently consists of EPA Headquarters, regional, state, and local agency managers and staff. To maintain the transparent operation of ICIS, it is critical that the system be maintained at a high level of performance and that all problems or issues be corrected and resolved as quickly as possible.

ICIS has over 2,500 users nationwide who have access via an internet connection. ICIS is housed and maintained at EPA's National Computer Center (NCC) on a series of Sun, IBM, and virtualized Dell servers running AIX, Solaris, Linux, and Oracle 11g. (By mid-FY2015, ICIS will be moved to NCC's virtualized environment comprised of primarily Dell servers running Linux and Oracle 11g). Software is programmed in Java and PL/SQL, J2EE, Struts, JQuery, and Hibernate. There are currently four separate hardware/software environments. (During FY2015, this number will be reduced to three environments: Production, Test, and Staging). ICIS includes:

- an online, web based, application which allows approved users to directly enter and/or modify their data
- Business Objects (BO/BI) products (Business Intelligence version 4, Xcelsius, Crystal

Reports) providing reporting and retrieval capabilities

- a data warehouse housing the NDPES data which is refreshed nightly through an ETL (Extract, Transform and Load) process
- a data warehouse housing the Air stationary source data which is refreshed nightly through an ETL which utilizes "change-data-capture" methodology using the Informatica Tool
- several processes which run nightly to support permit status and compliance activities
- functionality to support electronic data transfer of NPDES data from states, stationary source air data from states and local agencies, and Federal inspections from selected other EPA systems
- the National instance of the NetDMR electronic reporting tool
- the NPDES eReporting Tool (NeT)
- The OECA Suite of Measures Summary (OSMS) Dashboard using the BI dashboard tool
- the interface between ICIS and the Facility Registry System (FRS) and other EPA systems, and
- a wide variety of system infrastructure.

In support of operations and maintenance, the contractor shall perform the following activities:

a) The contractor shall apply Agile and/or iterative development methodologies in order to provide rapid resolution of any issues and problems that occur with the software, hardware, data, and procedures implemented in the production version of ICIS (NOTE: O&M and enhancement support for the National instance of the NetDMR tool and NeT is tasked separately, under Task 9). This includes troubleshooting the system, making revisions to processes and/or software, monitoring regularly scheduled processes, conducting periodic performance testing, recommending future infrastructure scalability specifications, updating system documentation (i.e., Software Technical Specifications), and interpreting software for EPA staff. The contractor shall provide any necessary revised software and/or procedures to the TOCOR for testing and acceptance. Based upon the results of testing by EPA, the contractor shall provide the finalized software to include any additional changes necessary. The contractor shall provide this support via the telephone, electronic mail, remote access to the system, and/or on site or virtual consultation. The contractor shall support scheduled deployments, and also the emergency deployments (scheduled as needed), of modified software into the EPA computing environment.

   The contractor shall support the investigation, planning, and implementation of ad hoc or emergency corrections to the data arising from data migrating incorrectly from legacy systems, data entry errors by users, introduced by errors in the ICIS code, or addressing derived identifiers from web data entry that have been requested by regulated authorities and approved by EPA.

   As part of their ongoing support of ICIS, the contractor shall support the upgrades to the ICIS infrastructure/platforms (all hardware/software environments) to include: upgrades and patches to hardware and software applications (i.e., Business Objects (BO), Oracle, Weblogic, and the

operating system) and changes required by EPA's policies (i.e., new security requirements, enterprise architecture). As part of this support, the contractor shall participate with EPA on scheduled conference calls with the support team at NCC. The contractor shall interface regularly with NCC staff in accomplishing this support.

As part of their ongoing support of ICIS, the contractor shall maintain the ICIS Electronic Data Transfer Node on EPA's Exchange Network. The contractor shall work with EPA, CDX and NCC contractor staff to support the upgrades to the ICIS EDT Node infrastructure/platforms (all hardware/software environments) to include: upgrades and patches to hardware and software applications (i.e., Next Generation Node web methods, Oracle interface, Weblogic interface, and the operating system) and changes resulting from EPA's policies (i.e., new security requirements, enterprise architecture). As part of this support, the contractor shall participate with EPA on regularly scheduled conference calls with the support team at CDX. The contractor shall interface regularly with CDX and NCC staff and contractors in accomplishing this support.

In all work related to modifying ICIS, the contractor shall strive to make the changes efficient from the users perspective ("usability") as well as efficient from an internal system performance and system architecture perspective (i.e., software should not do unnecessary work; minimize the demands on the software/hardware infrastructure). The contractor shall follow EPA information technology standards and provide due diligence when making system architectural decisions. EPA technical staff will review and finalize any design decisions.

Design deliverables will include documentation of architectural and coding design alternatives discussing the pros and cons leading to the final deliverables. Coding comments, following published standards, shall be included within the application code to capture the developer's description and intention of code routines. As software is modified, comments shall be corrected or enhanced where deficient. The contractor shall make changes required by EPA resulting from a review of the new or revised code delivered for deployment. All software and data modifications and enhancements shall be deployed first in the EPA ICIS Test environment for EPA and User Acceptance Testing per an agreed upon schedule. The contractor shall adhere to Section 508 standards when building new, or changing existing, web functionality and web pages.

b) The contractor shall evaluate problems or issues identified by the ICIS user community and forwarded by EPA staff designated by the TOCOR. This includes interpreting whether questions reflect a lack of understanding of the ICIS application including how the data was migrated or are due to a data migration problem, a problem with the system, or a desire for a change in functionality. The contractor shall determine whether the identified issue is a defect or a change request and designate a proposed severity level (1, 2, 3, 4) and priority (urgent, high, medium, low). The contractor shall develop a Level of Effort (LOE) estimate for change requests or defect corrections as requested by the TOCOR. The contractor shall track all defects and change requests and their status and provide a current listing to the TOCOR on a monthly basis. The contractor shall summarize these defects and present in written format to

the TOCOR during the bi-weekly project meetings. Upon approval by the TOCOR the contractor shall make detailed electronic information on change requests or defect corrections available for integration with ICIS Customer Support service desk software.

c) The contractor shall evaluate and monitor ICIS for areas of performance tuning and optimization to improve system stability and performance on an ongoing basis. The contractor shall implement system monitoring procedures to initially establish a baseline, and thereafter, use these monitoring tools to continuously monitor the system to identify areas of instability, unacceptable performance, or bottlenecks. Based on findings, the contractor shall identify areas where modifications to the system would significantly improve system performance and/or stability including the environment at NCC. Upon review and approval by the EPA TOCOR or designated technical staff, the contractor shall make, or coordinate, the appropriate software or configuration changes following the standard methodology in place for enhancing and fixing ICIS.

d) To ensure that ICIS does not become technologically obsolete, the contractor shall maintain a technology "Road Map" for ICIS to include short term and long term objectives and upgrades to the ICIS infrastructure and operation software (to include Business Objects), changes to system processes and functionality geared toward improving the timing and performance of processes and software, and changes necessary to comply with Agency directives.

e) The contractor shall provide statistics on ICIS to include a monthly report on data entry and EDT activity, performance of the web application, user access, reports, NetDMR and NeT; a daily report on all overnight and recurring processes to alert EPA, NCC, and the contractor to any issues, timeouts, or errors that occurred; and a spreadsheet maintaining a running log of times and results of these processes (including system backups). In addition, the contractor shall provide a yearly "Summary of ICIS Statistics" document which reflects the latest internal system information on the system including electronic reporting tools. It should contain such information as languages used, number and types of tables, lines of code.

f) The contractor shall ensure that all changes to ICIS are analyzed from the overall ICIS perspective looking across the system to provide consistency in the implementation of ICIS System functionality and capability. Requests for changes and/or enhancements often come in from one program (e.g., either a FE&C user or a NPDES user or an Air user). When an enhancement or change has been authorized and implemented for one program, a like change should generally be made to programs not requesting the change. The contractor shall raise any issues of compatibility and overall adverse impacts to the system that are associated with a proposed change.

g) The contractor shall ensure that all O&M activities are coordinated with the activities taking place under any modernization efforts for ICIS. This includes changes and enhancements to design, technical specifications, software, configuration management, database, and the Business Objects environment (reports, universes, filters, objects, configuration, IIRS Extract, Transformation, and Load process). Any changes which will affect the scope and schedule for

other activities taking place under this PWS must have the interface issues documented and receive explicit approval by the EPA TOCOR.

h) The contractor shall maintain an ICIS system at the contractor's site configured and operational to be as close a replica of the ICIS production environment as feasible and reasonable. The contractor shall use this environment for development, testing of problem fixes, testing of enhancements and general troubleshooting and problem investigation and resolution.

i) The contractor shall support EPA and the ICIS user community with the maintenance and support of the BO/BI tool to include periodic product upgrades to maintain a current level of the product; review and recommendations for upgrades, changes, and redesign of the various universes and objects, and development and modification of Business Objects reports and universes. The contractor shall participate in meetings and/or conference calls to define specific reporting requirements, and then build and test reports as requested. The contractor shall monitor the ICIS Production environment for long running and inefficient queries and make recommendations for improvement as requested by the TOCOR.

j) The contractor shall maintain the process and data structures which support the exchange of data between ICIS and the Facility Registry System (FRS), and other EPA systems. This includes analysis, making any necessary changes to the exchange software and/or data structures, data formats, or requirements in either ICIS or FRS, meeting as necessary with the FRS contractor to work out issues and schedules, monitoring the exchange as it is running, and reporting any problems to EPA. Currently, the schedule for the exchange is monthly. This may be renegotiated to occur more frequently based upon feedback from the user community and other EPA offices. The contractor shall maintain the FRS Procedures document, making updates as necessary. As requested by the TOCOR, the contractor shall work with the FRS Team and ICIS Team members to convert the FRS/ICIS data exchange to use web services in order to increase the frequency of the exchange and to eliminate what is now a somewhat manual process.

k) The contractor shall provide technical assistance to the EPA for the enhancement of ICIS to support new data and reporting requirements arising from EPA's proposed NPDES Electronic Reporting Rule, changes to the NeT electronic reporting tool, changes to the NetDMR electronic reporting tool, new data and reporting requirements for the ICIS-Air regulated community, and any future electronic tools developed for ICIS data. Deliverables will include documentation of architectural and coding design alternatives discussing the pros and cons leading to the final deliverables. In support of this task, the contractor shall perform the following:

- Provide technical support in performing analyses to determine the extent of modifications needed to ICIS and its software and hardware interfaces with NetDMR, NeT and any future electronic reporting tools developed for ICIS that are necessary to support electronic reporting requirement or tool enhancements. Support includes reviews, alternative analyses; flow charts, pseudo code and/or use cases for each

affected part of the system such as the details and calculations used in determining significant non-compliance (SNC), reportable non-compliance (RNC),and quarterly non-compliance reporting; appropriate modeling techniques depicting the process flow and objects or modules of the system; final screens, final definitions of XML schemas and instance documents for associated EDT transactions; database updates and mappings; details of how the required functionality will be accomplished in the system; definition or update of BO universes and report layouts; Data Element Dictionary updates; level of estimates (LOEs); and revised Software Technical Specifications.

- As requested by the TOCOR, the contractor shall provide technical support to EPA and its state and local partners in analyzing and evaluating the feasibility of design options for software enhancements or interfaces to ICIS and its software and hardware interfaces with NetDMR, NeT, and any future electronic reporting tools developed for ICIS. This technical support shall include review of documentation, participation in conference calls and/or meetings with specified EPA staff as well as states/locals/tribes, and participation in "lessons learned" discussions with the intent of ensuring that designs that are part of, or interface with, ICIS and its software and hardware interfaces with NetDMR, NeT and any future electronic reporting tools developed for ICIS are both sound and practical.

l) For all enhancements and corrections to ICIS, the contractor shall perform the appropriate steps and tasks as outlined in Steps 4 through 7 of this PWS for developing, modifying, testing, and implementing changes to ICIS.

m) The contractor shall provide technical support to EPA and its state and local partners in analyzing and evaluating the feasibility of methods for exchanging data electronically, in whole or part, to and from ICIS via EPA's Exchange Network or via data transfers internal to the EPA computing environment. The contractor shall provide technical support in designing, developing and implementing selected alternatives.

This technical support shall include the development and review of documentation; preparation of materials and participation in conference calls and/or meetings with specified EPA staff from OECA, OEI and other program offices as well as states and locals; support of Integrated Project Teams (IPTs) and steering committees created to support relevant data flows; and/or analysis and development of options (and the feasibility of those options) for interfacing with ICIS. The contractor shall incorporate changes, as needed, into the ICIS Data Publishing document.

n) The contractor shall support the extract and refresh of ICIS data from a copy of the ICIS online system tables to assist EPA staff in fulfilling data requests from States, locals, regions, and HQ staff that arise during development of their ICIS EDT capability, as well as fulfilling data requests from electronic reporting tools to include NetDMR and NeT. This technical support will include include providing information on the ICIS data structures; helping extract data in XML, comma delimited or JSON format from ICIS using SQL statements, PL/SQL routines, data extraction tools such as Informatica, Business Objects, and building web services; assisting

in optimizing the extracts of information from ICIS; helping support the exchange of information between ICIS and other systems to eliminate duplicate data entry; and responding to questions or requests for information on data transfer issues as well as the ICIS system, data, and architecture.

The contractor shall design, develop, test and implement web service extractions for electronic reporting tools and provide new or revised technical specification and flow documentation to support the release of web services as part of an overall ICIS production release. The contractor shall support EPA technical and designated regional and state/local staff in User Acceptance and User Validation Testing of the web services.

The contractor shall assist EPA staff with using Business Objects (BO) to publish ICIS data to the user community through the installation and configuration of web services offered by BO and modification to BO universes to support the generation of recurring reports based upon record updated date ranges. The contractor shall ensure that all extracts and web services are optimized and load tested to lessen the impact on the existing ICIS infrastructure

o) The contractor shall maintain the ICIS Operations Manual. The contractor shall work with EPA technical staff to ensure that the ICIS Operations Manual contains all the current procedures, run books, call plans, operations, process flow diagrams, and schedules required to ensure that ICIS is operating correctly and efficiently. As part of this task, the contractor shall meet with EPA as necessary to explain (and then document) the "behind the scenes" activities and to brainstorm on any other production control activities that are necessary in the short and long term. This Operations Manual shall include the current problem resolution process both at the contractor's end and within EPA. The contractor shall provide updates to the Manual to incorporate any changes to ICIS operations since the last update.

p) The contractor shall procure an annual renewal of the AppScan software license for use in performing security scanning of software prior to the deployment to the ICIS Test environment. Prior to the deployment of new and/or revised software into the ICIS Test or Stage environments, the contractor shall perform the security scanning of the software using the AppScan software and provide the results to the NCC Technical Lead. The contractor shall provide the final software to NCC for their security scanning and review three weeks prior to deployment. The contractor shall make changes required resulting from that security review prior to deployment.

q) The contractor shall review, and update as necessary, all relevant and required documentation supporting the electronic transfer of DMR data to ICIS (i.e., ICIS-NPDES Flow Configuration Document (FCD), ICIS-NDPES Architecture document, ICIS-NPDES Design document and the ICIS-NPDES EDT Software Technical Specifications) to support the reporting of error messages back to NetDMR in XML format and to reflect all new or changed hardware, software and processes needed to support NetDMR.

r) The contractor shall verify and coordinate with CDX on modifying the existing ICIS-NPDES

node or establishing a fully functional node on the Exchange Network to use when handling the NetDMR data. The contractor shall be responsible for establishing and configuring the node to route NetDMR files, creating and maintaining web services for retrieving the incoming NetDMR XML instance documents from the EPA server, routing status messages to NetDMR and providing an XML file or error messages to NetDMR by utilizing the existing ICIS-NPDES EDT DMR functionality.

s) The contractor shall process incoming NetDMR batch files and return rejection information to NetDMR.

t) The contractor shall perform architectural and capacity planning for all ICIS computing environments, and for their own ICIS development/testing/problem resolution environment, and create and maintain new computing environments as needed.

u) The contractor shall evaluate all proposed changes to ICIS by identifying multiple approaches and selecting the solution that makes the most sense from a cost and efficiency perspective and provides the greatest value to the government.

v) Where possible, contractor shall develop or configure, test, stage, and release applications by applying processes utilizing Agile or other iterative methodologies employing a frequent release cycle.

Task #	Deliverable	Due Date	Number of Copies
8a	Scheduled Deployments: Revised Software and/or Procedures	Per an agreed upon schedule	1 electronic
8a, p	Scheduled Deployments: Final Software and/or Procedures: deployment files (e.g., EAR, WAR, BO Universes, BO Reports, configuration files), support files (e.g., ERWin files, version control and issue tracking files, documentation on deployment files), and source code files (e.g., all programming files used to create EAR, WAR, and BO files).	One week prior to planned deployment into Production (deployment cannot occur without these deliverables)	1 electronic
8a	Revised Software Technical Specifications	Updates provided as part of each deployment	1 electronic

Information Engineering Support for the
Integrated Compliance Information System (ICIS)

Performance Work Statement
Attachment 1

Task #	Deliverable	Due Date	Number of Copies
8a	Emergency Deployments or Data Fixes: Revised Software, Procedures, or Scripts	Within 48 hours of problem identification	1 electronic
8a	Emergency Deployments or Data Fixes: Final Software, Procedures, or Scripts	Evening after Test Signoff by the EPA TOCOR	1 electronic
8b	Summary of Defects and Change Requests	Bi-weekly	1 electronic
8b	LOEs	2 Weeks after requested by the TOCOR	1 electronic
8c	Proposals for Areas of Performance Optimization	Quarterly as part of each release, and as identified	1 electronic
8d	Updated ICIS Technology Roadmap	Quarterly	1 electronic
8e	Statistics Report	Monthly	1 electronic
8e	Nightly Reports	Daily	1 electronic
8e	Downtime Log	Daily	1 electronic
8e	Summary of ICIS Statistics	Annually	1 electronic
8g	ICIS Task Order Interface Issues	Quarterly as part of each release	1 electronic
8i	New and/or Modified Business Objects Universe, Objects, and Reports	To be determined by each request for functionality	1 electronic
8j	Revisions to FRS-ICIS Exchange Procedures	2 Weeks after issue or change has been identified	1 electronic
8j	Final Revisions to FRS-ICIS Exchange Procedure	2 weeks after receipt of comments from EPA	1 electronic
8k, m	Responses to questions, information requests, and data transfer issues; meeting notes	3 business days after each question, request, issue or meeting	1 electronic

Information Engineering Support for the
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Task #	Deliverable	Due Date	Number of Copies
8k, m	Analysis and/or Alternatives Papers	Upon request	1 electronic
8k, m	Draft or Revised technical documentation	Upon request	1 electronic
8n	Web Service Load Test Report	2 wks after completion of Load Test	1 electronic
8n	Implementation of new EDT Functionality	1 week after Load Test Report	1 electronic
8n	Extracts of Data	Within 2 days of request by EPA	
8n	Published Web Service(s)	Within 2 weeks of final testing	
8o	Revisions to Operations Manual	Quarterly as part of each release	1 electronic
8o	Final Revisions to Operations Manual	2 weeks after receipt of comments from EPA	1 electronic
8r	New and/or Modified ICIS Node	Based upon OEI maintenance schedule and ICIS quarterly release schedule; no more than 2 times/fiscal year	1 electronic
8r	New and/or Modified software for ICIS Interface to NetDMR	Quarterly as part of each release	1 electronic

Acceptance Criteria:
Acceptance by the TOCOR will be based upon:

- conformance to NCC and CDX policies, procedures and standards
- adherence to EPA's data and XML standards
- demonstration of complete testing; demonstration that the systems functions and processes work correctly and efficiently
- demonstration that performance meets the requirement in the design specifications, and
- conformance to CDX's and NCC's policies and procedures for acceptance testing and delivery of proper documentation.

Acceptance for EPA and User Testing is contingent upon no known Severity 1, 2, or high priority Severity 3 problems. EPA will provide the results of the testing activity. Problems found, including defects verified as not fixed, during EPA or user testing will be forwarded to the contractor and shall be corrected prior to deployment.

Information Engineering Support for the
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Attachment 1

Task 9 – Support Development, Operations, Maintenance and Enhancement of eReporting Tools

The purpose of this task is to provide technical support to the EPA and the ICIS user community in operating, maintaining and enhancing the existing eReporting tools for ICIS-NPDES, and the development of future eReporting tools for ICIS-NPDES or ICIS-Air. This includes the current version of the National installation of NetDMR and the NPDES eReporting Tool (NeT).

NetDMR and NeT will need to be enhanced to support new reporting requirements arising from EPA's proposed NPDES Electronic Reporting Rule, user requested changes, defects in the code, and software or hardware upgrades. This task also includes the development and maintenance of any new tools or NeT forms developed for the ICIS-Air regulated community such as Title V Annual Certifications, or any other future ICIS-interfacing electronic reporting tools developed on behalf of the regulated community. The technical support includes coordinating with EPA's Central Data Exchange organization and contractors concerning the aspects of the eReporting tools that rely on CDX services.

With the implementation of NetDMR and NeT, the overall ICIS user community expanded to include many NPDES regulated facilities, some of which are also regulated under the CAA. To maintain the successful operation of ICIS and to support the efficient collection of high-quality, timely data for inclusion in ICIS, it is critical that the eReporting tools be maintained at a high level of performance, that all problems/issues be corrected and resolved as quickly as possible, and that enhancements be made smoothly, efficiently, and without introducing errors.

The contractor will analyze the feasibility of using NetDMR and NeT long-term by determining the total number of online fillable PDF forms to be developed for NeT and the total volume of users expected to use the NeT and NetDMR tools. The contractor will use this information to determine any hardware and/or software upgrades needed for NeT and NetDMR to support these forms and users and provide a report to EPA on their findings with recommendations. In addition, the ICIS-NPDES application may need to be modified based upon future enhancements to NetDMR and NeT. The contractor will coordinate with members of the ICIS O&M Team assigned to perform work under Task 8 while performing the duties under this task, including updating the ICIS-NPDES and ICIS-Air web application, EDT code, ICIS-NPDES node and XML schema files as necessary to support upgrades to NetDMR or NeT.

In all work related to modifying existing or future ICIS electronic reporting tools, the contractor shall strive to make the changes efficient from the users perspective ("usability") as well as efficient from an internal system performance and system architecture perspective (i.e., software should not do unnecessary work and should minimize the demands on the software/hardware infrastructure). The contractor shall provide due diligence when making system architect decisions giving EPA's technical staff the opportunity to participate in these decisions. The contractor shall develop or configure, test, stage, and release applications by applying processes utilizing Agile or other iterative methodologies employing a frequent release cycle.

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The contractor shall, in conjunction with the contractor team assigned to perform work under Task 8, analyze the requirements for updating the ICIS web application, EDT code, and XML schema files to support data requirements under the proposed NPDES Electronic Reporting Rule, or other state and Federal electronic online fillable PDF forms to be implemented in NeT, NetDMR or other new electronic reporting tools under this contract as identified by EPA.

The contractor will be responsible for making modifications to the NeT and NetDMR user interfaces Section 508 compliant and ensuring new functionality for these tools and other new tools as identified is Section 508 compliant before implementation.

The contractor shall evaluate all proposed changes to NeT, NetDMR, and other eReporting Tools by identifying multiple approaches and selecting the solution that makes the most sense from a cost and efficiency perspective and provides the greatest value to the government.

9.1 Support of the NetDMR Tool

In performing this sub-task, the contractor shall provide technical assistance to the EPA in developing, testing, and implementing releases of the National instance of the NetDMR tool and its interfaces (data flows) with ICIS-NPDES.

During performance of this sub-task, the contractor shall:

a) design, develop, test, implement and document enhancements to NetDMR
b) provide comprehensive support through interactions with NetDMR stakeholders to create and maintain hardware and software environments
c) give assistance to EPA staff providing ICIS permit and "empty slot" DMR data to NetDMR
d) identify NetDMR requirements impacting the ICIS DMR EDT and Online systems
e) test outgoing ICIS data files and incoming NetDMR EDT files
f) perform load balance testing of the environments used by NetDMR
g) assist in the implementation or enhancement of NetDMR at CDX
h) assist in the relocation of NetDMR from CDX to NCC servers upon request
i) assist in the implementation or enhancement of the relocated version of NetDMR at NCC and replace NetDMR customized CROMERR services with integrated CDX CROMERR services.

Additionally, in support of this sub-task, the contractor shall complete the following activities:

j) The contractor shall support NetDMR by attending NetDMR User Group meetings, meetings between the lead NetDMR state representatives, CDX staff and EPA staff to provide technical input on issues relating to the ICIS-NPDES EDT design and NetDMR interface. The contractor shall provide the EPA TOCOR and technical staff with technical input on issues and report the status in revising, enhancing and testing the interface between ICIS-NPDES and NetDMR.

k) The contractor shall provide technical support to the TOCOR in performing analyses to

determine the extent of modifications to NetDMR that are necessary to support the enhancement. Support includes any of the following: reviews and/or alternative analyses; flow charts, pseudo-code and/or use cases for each functionality of the system such as the replacement of customized CROMERR account and digital signature feature with CDX shared CROMERR services; appropriate modeling techniques and diagrams depicting the process flow and objects or modules of the system; final screens; final definitions of XML schemas and/or instance documents for associated ICIS-NPDES Batch transactions; database updates and mapping; details of how the required functionality shall be accomplished in the system (i.e., activity diagrams, use cases, process/state diagrams level of effort estimates (LOEs)); and revised Software Technical Design and Specification documents.

l) The contractor shall develop an Implementation Plan and/or checklist for each release of the National instance of NetDMR functionality into the production environment. This plan shall include a list of specific users (i.e., permittees and/or states), specific instructions, tasks, time frames and responsibilities which shall be used by the EPA (OC, OEI/NCC, and OEI/CDX), and contractor staff in implementing the NetDMR functionality into EPA's Production environment. This Implementation Plan shall incorporate activities from any other tasks relevant to the implementation of NetDMR including updates to system documentation, load testing, and "end to end" testing with pilot permittees and/or states. A draft will be reviewed by EPA and NCC staff. The contractor shall incorporate comments and changes requested by the TOCOR and other designated EPA technical staff and deliver a final Implementation Plan to the EPA TOCOR and other designated EPA staff.

m) In cooperation with EPA CDX staff and their contractor, NetDMR pilot states and their contractors and other technical EPA staff and contractors designated by the TOCOR, the contractor shall support User Acceptance Testing (UAT) for enhancements to DMR and error message flows in the form of "end to end" testing. The contractor shall track all errors and changes to the National instance of NetDMR and ICIS-NPDES utilizing the ICIS Change Control procedures. The contractor shall refresh the Test database with migrated data and/or production data for the NetDMR states prior to testing. The contractor shall set up procedures based upon the methodology in the Implementation Plan, and the contractor and EPA will provide technical support to the UAT testers. The contractor shall modify software and/or processes to correct errors identified during the testing.

n) The contractor shall perform Load Testing of NetDMR releases in the EPA environment. In conjunction with OEI staff and their contractor, NCC staff, and ICIS Team technical staff, the contractor shall develop a Load Test Plan, develop Load Test test cases and data, and conduct load testing of the NetDMR Tool. The contractor shall document the results incorporating recommendations for improving performance and/or procedures. Based upon changes required to improve performance, the contractor shall make the necessary changes to the processes and software. If load testing indicates changes are needed in server/hardware/network configurations, the contractor shall coordinate with OEI staff and contractors to effect the necessary changes.

o) The contractor shall provide technical support for the installation of NetDMR software releases and set up procedures on EPA equipment. While actual installation of the software in EPA's environment must be done by NCC and CDX staff, technical assistance in the form of helping to analyze problems and solutions, and developing special utilities and procedures shall be provided by the contractor.

p) The contractor shall provide ongoing support in the rapid resolution of any issues/problems that occur during implementation across the user community, who will include EPA Headquarters, regional, state and permittee users. The contractor shall provide technical support in the form of troubleshooting for the system, revision and installation of processes to correct problems or resolve issues, initial monitoring of regularly scheduled processes, and review of performance upon implementation. The contractor shall input and track through to resolution in the ICIS Change Control database all changes to software and procedures that have resulted from problems or issues encountered during implementation, providing the EPA with Problem Reports.

q) For every release, the contractor shall provide the final software to NCC for their security scanning and review three weeks prior to deployment. The contractor shall make changes required resulting from that security review prior to deployment.

r) The contractor shall maintain the National Installation of NetDMR tool and its hardware and software interface with ICIS. The contractor shall work with EPA and CDX staff to support changes to the NetDMR software tool and its hardware and software interface with ICIS to include: upgrades and patches to NetDMR screens, database and code; upgrades and patches to code that handles the processing of NetDMR flow requests to ICIS and the return of results to NetDMR; upgrades and patches to SQL statements used for extracting data from ICIS for NetDMR; upgrades and patches to the mapping of SQL statements into XML file format using tools available through CDX such as Velocity Mapper; and maintenance of the copy of ICIS and denormalized tables used by the ICIS NetDMR interface. The contractor shall keep themselves apprised of anticipated upgrades and patches from CDX and shall interface regularly with CDX staff in the accomplishment of this support. In the event a decision is made to transfer the National Installation of NetDMR from CDX to NCC, the contractor will work with EPA in implementing and maintaining the NetDMR production environment.

9.2 Support of the NPDES eReporting Tool (NeT)

The purpose of this sub-task is to support the enhancement and expansion of the NeT tool. NeT uses two commercial off the shelf (COTS) software packages to provide online fillable PDF forms to be filled out by members of the regulated community, route the forms to Federal or State regulatory authorities for review and approval, then transfer the data to ICIS electronically. As part of this task, the contractor shall procure services for the support and maintenance of the Avoka SmartForm Factory and Adobe LiveCycle COTS software packages needed for the support of the NeT Tool. Online fillable PDF forms include NPDES master general permit (MGP), notice of intent (NOI), notice of termination (NOT), low erosivity waiver (LEW), no exposure certification (NEC) and special regulatory program

report (CAFO, biosolids, SSO, CSO, storm water, storm water MS4, etc.) forms, along with CAA forms such as Title V annual compliance certifications.

NeT supports a development methodology that is quicker and less expensive than traditional methods, has an architecture extensible enough to meet the needs of all types of electronic reporting proposed under the NPDES Electronic Reporting Rule, and has been placed into production with some changes to the overall architecture required to support NPDES general permits that need to be added to NeT. In addition, and in conjunction with Task 8, the ICIS-NPDES application will need to be expanded to support more online fillable PDF forms for the regulated community and store new data elements required under the proposed NPDES Electronic Reporting Rule and/or resulting from the analysis of Appendix A of the Rule.

The first online fillable PDF form developed for the initial production release of NeT was Region 6's Offshore Oil and Gas general permit which required some customized code to populate ICIS with limits and did not include functionality for populating ICIS-NPDES with program reports, permit components or a review process for Regulatory Authorities. The next online fillable PDF form developed was the Office of Water's Storm Water Multi-Sector general permit (MSGP), which included functionality for populating ICIS-NPDES with program reports, permit components, a review process, and interfacing with CDX to restrict users to specific permits.

NeT will ultimately host hundreds of online fillable PDF forms for the regulated community to fill out and needs to be expanded to provide generalized code for populating ICIS-NPDES with limits, permit components, program reports and permit schedules, or ICIS-Air with air facility and Title V Annual Certification data. It also may need expansion to offer features such as pre-populated data within the online fillable PDF forms, routing of forms for approval and disapproval, customized subscriber agreements under EPA's Cross Media Recordkeeping Requirements (CROMERR), or updates to CDX's digital signature and user account management modules used by NeT.

The contractor shall support EPA in implementing its NPDES rulemaking efforts by enhancing the NeT tool functionality to capture Federally-required data from permit applicants and populate the tables in the ICIS-NPDES system with this data.

The contractor will maintain the functionality required to ensure the NeT tool fully supports electronic reporting from the NPDES and CAA regulated community. NeT production functionality needs to ensure a NeT preparer, certifier or responsible official user fills out only the data on the online fillable PDF form deemed necessary for their particular business or situation, and a NeT user is able to digitally sign an online fillable PDF form as a NeT certifier or responsible official user for specific facilities. There must also be NeT production functionality allowing a Federal or State regulatory authority user to review and approve or deny an online fillable PDF form digitally signed by a NeT certifier or responsible official user, and for notifying the NeT submitter, certifier and/or responsible official user of approval or denial. NeT will also continue to need functionality for submitting the data to ICIS-NPDES or ICIS-Air with the ability to return the form to the NeT submitter, certifier and/or responsible official user if ICIS rejects the form, and to pass data with CDX that will allow certifiers and regulatory authorities to track the results of the submission in CDX filtered by general permit or

category, as requested by EPA.

During performance of this sub-task, the contractor shall:

a) Participate in discussions of major state and Federal online fillable PDF form design decisions and discuss design issues to include pros, cons, and recommendations with justification with EPA and state SMEs in meetings to identify specification and requirements for new forms to be developed under this task. The contractor shall also participate in meetings with EPA and their contractor(s) to identify changes to specifications and requirements for the NeT tool and its existing forms overall. The contractor shall, in performing this task, consider and use all appropriate sources, including ICIS-NPDES and ICIS-Air EDT and system documentation, the gap analysis of NPDES eReporting Rule Appendix A data performed under the previous ICIS contract, and input from subject matter experts at EPA to develop requirements that result in the least amount of changes being made to the ICIS application, schema and data flows and NeT. Upon completion of the identification of specifications and requirements, the contractor will provide a final Technical Requirements Document for one or more online fillable PDF forms upon request by EPA.

b) Provide assistance to EPA staff in developing state and Federal online fillable PDF forms, such as NPDES MGP NOI, NOT, LEW, NEC and program report forms, for NeT using the Avoka SmartForm Factory software, and in creating the work flow processes for other programs, implementing web services and functionality to populate permits, components, permitted features, limit sets, limit set schedules and parameter limits in ICIS-NPDES.

c) Enhance NeT tool functionality if needed to include the capture of stationary source air compliance data for storage in ICIS-Air, and assist EPA staff in creating one or more state and Federal CAA online fillable PDF forms, such as Title V annual compliance certifications, for NeT using the Avoka SmartForm Factory software, and in creating the work flow processes for other programs.

d) Provide assistance to EPA staff in designing, creating, reviewing, and modifying the work flow processes for online fillable PDF forms developed under this task, promoting forms and processes into production, and troubleshooting issues for future forms and work flow processes.

e) Support EPA in enhancing the NeT tool functionality to capture Federally required data and provide this data to ICIS in XML format, as well as state required data from the NeT online fillable PDF forms and provide this data to the state in XML format.

f) Work with EPA, NCC and CDX technical contract staff as necessary to develop, test, and implement enhancements to NeT using best practices, and to identify additional requirements and design changes for incorporating state and Federal online fillable PDF forms into NeT as identified by EPA. This work includes implementing and maintaining shared CROMERR services and CDX registration account data.

g) Perform unit, functional and integration testing of state and Federal online fillable PDF forms, process work flows for forms, and functionality the contractor has developed under this task or

other tasks.

h) Support EPA and state staff in beta and user acceptance testing of online fillable PDF forms, process work flows and functionality developed for NeT in EPA's test environment. The contractor shall perform testing of NeT state and Federal online fillable PDF forms, process work flows and functionality, and assist EPA staff with deploying NeT software and procedures in EPA's ICIS Test environment for EPA Beta and User Acceptance Testing (UAT). EPA technical staff will test that the application is functionally correct and is acceptable from the user's perspective. The contractor shall use the test results to make, or assist EPA in making, necessary changes to the NeT software and/or processes. EPA's acceptance of the software is contingent upon the contractor's resolution of the known Severity 1 and 2 problems and, to the extent feasible, high priority Severity 3 problems related to the work performed under this contract prior to delivery to the EPA for NCC, EPA staff, and pilot states for Test and Acceptance. While actual installation of the software in EPA's environment must be done by NCC staff, technical assistance in the form of helping to analyze problems and solutions, developing special utilities and procedures shall be necessary from the contractor.

i) Provide technical assistance and knowledge transfer to EPA staff in establishing data standards, populating data in ICIS-NPDES and ICIS-Air, implementing web services, and creating, designing and implementing form and work flow process development for state and Federal online fillable PDF forms upon request by EPA. Findings for each state or Federal online fillable PDF form developed under this subtask shall be documented in a draft Requirements Document by EPA staff and finalized by the contractor in a Final Requirements Document. The contractor shall revise existing documentation as necessary to reflect the work performed under this contract.

j) Maintain the NeT CR/DR list, identifying those CRs and DRs the contractor is responsible for, to accurately reflect changes arising from new requirements and activities associated with resolving CR/DRs. The contractor will assist in identifying and implementing solutions for issues that arise during the implementation of state and Federal online fillable PDF forms, their process work flows and functionality; and any change requests (CRs) and Defect Requests (DRs) identified during work performed under this contract. The contractor will assist EPA with the implementation of CR/DR functionality identified but not addressed under the previous ICIS contract. The contractor will also work with EPA and CDX contract staff to test and implement the requirements for addressing CDX enhancements identified during work under this contract and any open CRs or DRs from the previous ICIS contract that are directly related to the contractor's work.

k) Update architecture, design and user documentation based upon changes and enhancements to the NeT tool.

l) Coordinate with EPA in applying changes to the ICIS-NPDES or ICIS-Air XML schema files to support data requirements for state and Federal electronic online fillable PDF forms being developed under this contract and for data requirements under Appendix A of the final NPDES Electronic Reporting Rule.

m) Perform load testing of functionality for each state and Federal online fillable PDF form to test out various tools and methodologies to ensure that NeT will perform efficiently and optimally within the EPA Hardware/Software (HW/SW) environment and on the ICIS-NPDES node on the Exchange Network. The contractor will use the results to make recommendations to EPA concerning changes needed to the environments and/or ICIS-NPDES node to support the electronic reporting process and to improve the ICIS-NPDES node and EDT software and process flow.

n) Provide revised software and/or procedures to EPA for testing and acceptance. Based upon the results of testing by EPA, the contractor shall make changes to the software and/or procedures and provide the finalized software to EPA for any additional testing by EPA and final acceptance.

o) Maintain a comprehensive NeT Implementation Guidance Document of procedures for promoting NeT online fillable PDF forms and workflow processes into production for EPA staff to follow. This document will include the locations of all files and the contents of configuration files with changes needed to release an updated version of NeT into production, along with a checklist listing the steps to follow in order to accurate implement a new or updated online fillable PDF form, workflow process, or NeT functionality.

p) Develop an integrated deployment checklist for the release of all state and Federal online fillable PDF forms that will be deployed into the production NeT environment during the duration of this contract, to include work steps required to implement the changes to the ICIS-NPDES or ICIS-Air system in support of those requirements. This checklist shall include a list of specific tasks or steps, an estimated start and end date, task duration, and who is responsible for each task/step.

q) Provide technical support for implementing new state and Federal online fillable PDF forms, process workflows and functionality for NeT developed under this contract on EPA equipment, train EPA on the implementation procedures, and assist EPA staff with the implementation of online fillable PDF forms. While actual installation of the software in EPA's environment must be done by NCC staff, technical assistance in the form of helping to analyze problems and solutions, and developing special utilities and procedures shall be necessary from the contractor.

r) Provide assistance to EPA in preparing Regulatory Authorities to provide support for their online fillable PDF forms to members of the regulated community by offering demonstrations on the features of the NPDES e-Reporting tool, answering questions regarding their forms and the tool, and coordinating with CDX on issues involving user registration.

s) Provide ongoing support in the rapid resolution of any issues/problems that occur during NeT implementation across the user community, which includes EPA Headquarters, Regional and State users. The contractor shall provide technical support in the form of troubleshooting the system, revision and installation of processes to correct problems or resolve issues, initial monitoring of regularly scheduled processes, and review of performance upon implementation. The contractor shall input and track through to resolution in the Change Control database all changes to software and procedures that have resulted from problems or issues encountered during implementation, providing the EPA with Problem Reports.

t) Assist EPA in determining the best way of completing the transition from the Office of Water's eNOI tool, including the planning, development, testing and implementation of a possible migration of data from the tool into ICIS and/or NeT. The contractor will also provide levels of effort (LOEs) for tasks such as migrating data from OW's eNOI database into ICIS-NPDES and providing bulk data upload capability into NeT.

u) Design, develop and implement the conversion of NetDMR functionality into NeT if a decision is made to consolidate the functionality within just one eReporting tool.

9.3 Support of Future eReporting Tools (Optional Work)

The purpose of this sub-task is to support the development of new electronic reporting tools to be used by the ICIS regulated community if needed during the task order period of performance. A new electronic reporting tool may arise from the need to replace the NetDMR or NeT tool in the future, or to handle submissions of compliance data from the regulated community from any Legacy EPA systems other than PCS or AFS that might be added to ICIS in the future.

The contractor will assist EPA in creating a new electronic reporting tool for online fillable PDF forms that offers a development methodology quicker and less expensive than traditional methods, allows EPA staff to easily develop forms and work flow processes with the tool, has an architecture extensible enough to meet the needs of all types of electronic reporting needed by ICIS, and can be placed into production with few changes to the overall hardware and software architecture required to interface with ICIS.

The design for the new tool must offer features such as pre-populated data within the online fillable PDF forms, routing of forms for approval and disapproval, offering customized subscriber agreements under EPA's Cross Media Electronic Reporting Rule (CROMERR), incorporating CDX's digital signature and user account management modules, and populating the tables in the ICIS-NPDES system with this data. The contractor shall provide assistance to EPA staff in developing online fillable PDF forms, implementing web services and functionality to populate data in ICIS, reviewing work flow processes, promoting forms and processes into production, and troubleshooting issues.

The contractor shall work with EPA, NCC and CDX technical contract staff as necessary to develop, test, and implement enhancements to a new e-Reporting tool using best practices, and implementing and maintaining shared CROMERR services and CDX registration account data.

The contractor will design, develop and implement a new e-Reporting tool that continues EPA's mission to support electronic reporting from the NPDES and CAA regulated community. The new tool's production functionality needs to ensure a preparer, certifier or responsible official user fills out only the data on the online fillable PDF form deemed necessary for their particular business or situation, and a user is able to digitally sign an online fillable PDF form as a certifier or responsible official user for specific facilities. There must also be production functionality allowing a Federal or State regulatory authority user to review and approve or deny an online fillable PDF form digitally

signed by a certifier or responsible official user, and to notify the submitter, certifier and/or responsible official user of approval or denial. The tool will need functionality for submitting the data to ICIS-NPDES or ICIS-Air with the ability to return the form to the submitter, certifier and/or responsible official user if ICIS rejects the form, and to pass data with CDX that will allow certifiers and regulatory authorities to track the results of the submission in CDX filtered by general permit or category, as requested by EPA.

During performance of this sub-task, the contractor shall:

a) Participate in decisions and provide design options to include pros, cons, and recommendations with justification for a new e-Reporting tool with EPA and their contractor(s) to identify specifications and requirements and methods for transitioning existing forms from NeT. The contractor shall, in performing this task, consider and use all appropriate sources, including ICIS-NPDES and ICIS-Air EDT and system documentation, and input from subject matter experts at EPA to develop requirements that result in the least amount of changes being made to the ICIS-NPDES or ICIS-Air application, schema and data flows. Upon completion of the identification of specifications and requirements, the contractor will provide draft and final Software Design Document and Architecture Documents.

b) Participate in discussions of major state and Federal online fillable PDF form design decisions and discuss design issues to include pros, cons, and recommendations with justification with EPA and state SMEs in meetings to identify specification and requirements for new forms to be developed for the new e-Reporting tool. The contractor shall, in performing this task, consider and use all appropriate sources, including ICIS-NPDES and ICIS-Air EDT and system documentation, Section 508 web development requirements, and input from subject matter experts at EPA to develop requirements that result in the least amount of changes being made to the ICIS application, schema and data flows and NeT. The contractor shall strive to make any changes and enhancements for ICIS-NPDES, ICIS-Air and NeT operate efficiently both from the users' perspective and the system performance perspective. Upon completion of the identification of specifications and requirements, the contractor will provide a final Technical Requirements Document for one or more online fillable PDF forms upon request by EPA.

c) Provide assistance to EPA staff in developing state and Federal online fillable PDF forms, such as NPDES MGP NOI, NOT, LEW, NEC and program report forms or CAA forms, for the new e-Reporting tool, and in creating the work flow processes for other programs, implementing web services and functionality to populate ICIS with the data.

d) Provide assistance to EPA staff in designing, creating, reviewing, and modifying the work flow processes for online fillable PDF forms developed under this task, promoting forms and processes into production, and troubleshooting issues for future forms and work flow processes.

e) Support EPA in providing the new e-Reporting tool functionality to capture Federally-required data and provide this data to ICIS in XML format, as well as state-required data from the NeT online fillable PDF forms and provide this data to the state in XML format.

f) Work with EPA, NCC and CDX technical contract staff as necessary to develop, test, and implement the new e-Reporting tool using best practices, and to identify additional requirements and design changes for incorporating state and Federal online fillable PDF forms into the new e-Reporting tool as identified by EPA. This work includes implementing and maintaining shared CROMERR services and CDX registration account data.

g) Perform unit, functional and integration testing of state and Federal online fillable PDF forms, process work flows for forms and functionality the contractor has developed under this and other tasks.

h) Support EPA and state staff in beta and user acceptance testing of online fillable PDF forms, process work flows and functionality developed for the new e-Reporting tool in EPA's test environment. The contractor shall perform testing of state and Federal online fillable PDF forms, process work flows and functionality, and assist EPA staff with deploying the new e-Reporting tool software and procedures in EPA's ICIS Test environment for EPA Beta and User Acceptance Testing (UAT). EPA technical staff will test that the application is functionally correct and is acceptable from the user's perspective. The contractor shall use the test results to make, or assist EPA in making, necessary changes to the new e-Reporting tool software and/or processes. EPA's acceptance of the software is contingent upon the contractor's resolution of the known Severity 1 and 2 problems and, to the extent feasible, high priority Severity 3 problems related to the work performed under this contract prior to delivery to the EPA for NCC, EPA staff, and pilot states for Test and Acceptance. While actual installation of the software in EPA's environment must be done by NCC staff, technical assistance in the form of helping to analyze problems and solutions, and developing special utilities and procedures shall be necessary from the contractor.

i) Provide technical assistance and knowledge transfer to EPA staff in establishing data standards, populating data in ICIS, implementing web services, and creating, designing and implementing form and work flow process development for state and Federal online fillable PDF forms upon request by EPA. Findings for each state or Federal online fillable PDF form developed under this subtask shall be documented in a draft Requirements Document by EPA staff and finalized by the contractor in a Final Requirements Document. The contractor shall revise existing documentation as necessary to reflect the work performed under this contract.

j) Maintain the CR/DR list for the new e-Reporting tool, identifying those CRs and DRs the contractor is responsible for, to accurately reflect changes arising from new requirements and activities associated with resolving CR/DRs. The contractor will assist in identifying and implementing solutions for issues that arise during the implementation of state and Federal online fillable PDF forms, their process work flows and functionality; and any change requests (CRs) and Defect Requests (DRs) identified during work performed under this contract. The

contractor will also work with EPA and CDX contract staff to test and implement the requirements for addressing CDX enhancements identified during work under this contract and any open CRs or DRs from the previous ICIS contract that are directly related to the contractor's work.

k) Coordinate with EPA in applying changes to the ICIS-NPDES or ICIS-Air XML schema files to support data requirements for state and Federal electronic online fillable PDF forms being developed under this contract and for data requirements under Appendix A of the final NPDES Electronic Reporting Rule.

l) Perform load testing of functionality for each state and Federal online fillable PDF form to test out various tools and methodologies to ensure that the new e-Reporting tool will perform efficiently and optimally within the EPA Hardware/Software (HW/SW) environment and on the ICIS-NPDES node on the Exchange Network. The contractor will use the results to make recommendations to EPA concerning changes needed to the environments and/or ICIS-NPDES node to support the electronic reporting process and to improve the ICIS-NPDES node and EDT software and process flow.

m) Provide revised software and/or procedures to EPA for testing and acceptance. Based upon the results of testing by EPA, the contractor shall make changes to the software and/or procedures and provide the finalized software to EPA for any additional testing by EPA and final acceptance.

n) Maintain a comprehensive Implementation Guidance Document for the new e-Reporting tool that describes procedures for EPA staff to follow when promoting online fillable PDF forms and workflow processes into production. This document will include the locations of all files and the contents of configuration files with changes needed to release an updated version of into production, along with a checklist listing the steps to follow in order to accurate implement a new or updated online fillable PDF form, workflow process, or new functionality.

o) Develop an integrated deployment checklist for the release of all state and Federal online fillable PDF forms that will be deployed into the production in the new e-Reporting tool environment during the duration of this task order, to include work steps required to implement the changes to the ICIS system in support of those requirements. This checklist shall include a list of specific tasks or steps, an estimated start and end date, task duration, and who is responsible for each task/step.

p) Develop two user manuals for the new e-Reporting tool. One user manual will instruct preparer, certifier, responsible official and regulatory authority users on how to register for the new e-Reporting tool and how to prepare, sign and submit online fillable PDF forms with the new e-Reporting tool, and the other user manual will instruct regulatory authority users on how to register for the new e-Reporting tool, approve certifiers, review and approve or deny submitted online fillable PDF forms using the new e-Reporting tool.

q) Provide assistance to EPA in preparing Regulatory Authorities to provide support for their online fillable PDF forms to members of the regulated community by offering demonstrations on the features of the new e-Reporting tool, answering questions regarding their forms and the tool, and coordinating with CDX on issues involving user registration.

r) Provide technical support for implementing new state and Federal online fillable PDF forms, process workflows and functionality for the new e-Reporting tool developed under this contract on EPA equipment, train EPA on the implementation procedures, and assist EPA staff with implementation of online fillable PDF forms. While actual installation of the software in EPA's environment must be done by NCC staff, technical assistance in the form of helping to analyze problems and solutions, and developing special utilities and procedures shall be necessary from the contractor.

s) Provide ongoing support in the rapid resolution of any issues/problems that occur during the new e-Reporting tool implementation across the user community, which includes EPA Headquarters, Regional and State users. The contractor shall provide technical support in the form of troubleshooting the system, revision and installation of processes to correct problems or resolve issues, initial monitoring of regularly scheduled processes, and reviewing performance upon implementation. The contractor shall input and track through to resolution in the Change Control database all changes to software and procedures that have resulted from problems or issues encountered during implementation, providing the EPA with Problem Reports.

t) Assist EPA in determining the best way of transitioning from NeT, including the planning, development, testing and implementation of a possible migration of data from ICIS or NeT into the new e-Reporting tool. The contractor will also provide levels of effort (LOEs) for tasks such as migrating data from OW's eNOI database into ICIS-NPDES and providing bulk data upload capability into the new e-Reporting tool.

u) Design, develop and implement the conversion of NetDMR data into the new e-Reporting tool if a decision is made by EPA in the future to transition electronic DMRs from NetDMR into the new e-Reporting tool.

Task #	Deliverable	Due Date	Number of Copies
9	NetDMR and NeT Form and User Volume Feasibility Report	2 weeks after request from EPA unless otherwise agreed to by EPA	1 electronic
9.1	New and/or Modified NetDMR Tool software	According to release schedule	1 electronic
9.1	Results from UAT and Load Testing of NetDMR	Two weeks after completion of tests	1 electronic

Information Engineering Support for the
Integrated Compliance Information System (ICIS)

Performance Work Statement
Attachment 1

Task #	Deliverable	Due Date	Number of Copies
9.1	Implementation Plan for Release of NetDMR	According to release schedule	1 electronic
9.2	NeT CR/DR list	Bi-weekly	1 electronic
9.2	NeT LOEs	2 weeks after request from EPA unless otherwise agreed to by EPA	1 electronic
9.2	NeT Meeting Minutes resulting from Requirements Analysis and/or Review	1 week after request from EPA	1 electronic
9.2	NeT Technical Requirements Documents	Per an agreed upon schedule	1 electronic
9.2	NeT Design Meeting Notes	Within 3 days of meeting	1 electronic
9.2	NeT Forms, Processes, Software, XML Schema Files in Test	Per an agreed upon schedule	1 electronic
9.2	Revised NeT RA and RC User Manuals	Updates as needed after each deployment	1 electronic
9.2	Revised NeT Operations Manual	Updates as needed after each deployment	1 electronic
9.2	New and Enhanced NeT Forms, Workflow Processes, and/or Software	Prior to start of testing cycles	1 electronic
9.2	NeT Load Testing Results	2 weeks after completion of load test	1 electronic
9.2	Final Enhanced NeT Software and Procedures	After test approval by EPA	1 electronic
9.2	NeT Deployment Checklist	Per an agreed upon schedule	1 electronic
9.2	Revised NeT Implementation Guidance Document	1 week after 1st form deployment	1 electronic
9.2	Final Software and Procedures	1 week after 1st form deployment	1 electronic
9.3	New e-Reporting Tool LOEs	2 weeks after request from EPA unless otherwise agreed to by EPA	1 electronic
9.3	New e-Reporting Tool Meeting Minutes resulting from Requirements Analysis and/or Review	1 week after request from EPA	1 electronic

Information Engineering Support for the
Integrated Compliance Information System (ICIS)

Performance Work Statement
Attachment 1

Task #	Deliverable	Due Date	Number of Copies
9.3	New e-Reporting Tool Draft Software Design Document	Per an agreed upon schedule	1 electronic
9.3	New e-Reporting Tool Final Software Design Document	10 days after receipt of EPA comments	1 electronic
9.3	New e-Reporting Tool Draft Architecture Document	10 days after receipt of EPA comments	1 electronic
9.3	New e-Reporting Tool Final Architecture Document	Per an agreed upon schedule	1 electronic
9.3	New e-Reporting Tool Design Meeting Notes	Within 3 days of meeting	1 electronic
9.3	New e-Reporting Tool Forms, Processes, Software, XML Schema Files in Test	Per an agreed upon schedule	1 electronic
9.3	New e-Reporting Tool User Manuals	Updates as needed after each deployment	1 electronic
9.3	New e-Reporting Tool Operations Manual	Updates as needed after each deployment	1 electronic
9.3	New e-Reporting Tool Forms, Workflow Processes, and/or Software	Prior to start of testing cycles	1 electronic
9.3	New e-Reporting Tool Load Testing Results	2 weeks after completion of load test	1 electronic
9.3	New e-Reporting Tool Software and Procedures	After test approval by EPA	1 electronic
9.3	New e-Reporting Tool Deployment Checklist	Per an agreed upon schedule	1 electronic
9.3	New e-Reporting Tool Implementation Guidance Document	1 week after 1st form deployment	1 electronic
9.3	New e-Reporting Tool Draft Preparer/Certifier/Responsible Official User Guide	Per an agreed upon schedule	1 electronic
9.3	New e-Reporting Tool Final Preparer/Certifier/Responsible Official User Guide	10 days after receipt of EPA comments	1 electronic

Task #	Deliverable	Due Date	Number of Copies
9.3	New e-Reporting Tool Draft Regulatory Authority User Guide	Per an agreed upon schedule	1 electronic
9.3	New e-Reporting Tool Final Regulatory Authority User Guide	10 days after receipt of EPA comments	1 electronic
9.3	Final New e-Reporting Tool Software and Procedures	1 week after 1st form deployment	1 electronic

Acceptance Criteria:
Acceptance by EPA will be based upon:

- conformance to EPA and NCC and CDX policies, procedures and standards
- adherence to EPA's data and XML standards
- demonstration of complete testing; demonstration that the systems functions and processes work correctly and efficiently
- demonstration that performance meets the requirement in the design specifications, and
- conformance to CDX's and NCC's policies and procedures for acceptance testing and delivery of proper documentation.

Acceptance for EPA and User Testing is contingent upon no known severity 1, 2, or high priority 3 problems. EPA will provide the results of the testing activity. Problems found, including defects verified as not fixed, during EPA or user testing will be forwarded to the contractor and corrected prior to deployment.

Task 10 – Support Communications and Outreach

The purpose of this task is to provide technical assistance to the EPA in the communication and outreach activities for the ICIS project. In support of this task, the contractor shall perform the following activities:

a) The contractor shall provide technical support for User Preview or Review sessions which shall demonstrate selected existing, or new, system functionality and/or processes to the ICIS and NetDMR and NeT user communities. The contractor shall develop scenarios to demonstrate system functionality, develop presentation material to walk the users through what shall be demonstrated in the session, and present the material during the User Preview or Review sessions. These shall be scheduled on an "as needed" basis, but will not occur more than quarterly. The contractor may be requested to deliver some of these User Preview sessions more than once, with little or no change to the content, to reach a larger audience.

b) The contractor shall provide support for the ICIS National meeting. Work will include

preparation of briefing materials, presentations, user previews as specified in (a) above and documentation of the meeting through meeting minutes or summaries.

Task #	Deliverable	Due Date	Number of Copies
10a.	User Preview Sessions	Maximum of quarterly	1 electronic
10b.	ICIS National Meeting Support, briefing materials, User Previews, Meeting Minutes/Summary	Maximum of once each fiscal year	1 electronic

Acceptance Criteria:

Meetings will be held between EPA and the contractor to discuss purpose, content and format of all presentations, meeting minutes, demonstrations, newsletters, and briefings. Deliverables will be reviewed and approved by the TOCOR and other selected EPA staff or management. The contractor shall incorporate suggested revisions as requested by the TOCOR.

TASK 11 - Support Training

At the direction of the TOCOR, the contractor shall assist EPA in the ongoing training of EPA Headquarters, regional, state, local agency, tribal, and territorial staff including the EPA Team members who will be responsible for User Support & Training as well as ongoing Operations & Maintenance. Classroom training for FE&C currently runs three days; training for ICIS-NPDES runs five days; training for ICIS-Air runs three days. Training on the use of the NetDMR Tool typically takes about 3 hours. Training sessions shall include instructions on how to create reports and retrieve data from ICIS. Currently, online training modules exist for ICIS-Air and NetDMR. For all aspects of ICIS and its associated electronic reporting tools, there are PowerPoint training modules. Recorded online training modules and live webinar training sessions cover specific topics, as designed in the curriculum. As part of this task, the contractor shall perform the following activities:

a) The contractor shall prepare or enhance training materials for ICIS and related reporting and eReporting tools. These materials shall vary depending on the training options selected and the release, enhancement, or module of ICIS for which training is being done. These materials shall include such items as a training agenda, training manuals, online training modules, and/or CDs. All new and updated ICIS online training modules must adhere to Section 508 standards. A draft of the material shall be provided to EPA for review and comment. Comments shall be incorporated into the material at least two weeks prior to the training.

b) The contractor shall evaluate and propose other training options for training a diverse user community located nationwide.

c) The contractor shall maintain a set of data with test scenarios to be exported and archived after each training session and be available for import for the next training session.

d) The contractor shall conduct training sessions as directed by the EPA TOCOR. Each training session shall typically include two instructors. The number and location of training sessions will be determined periodically, typically for each fiscal year.

e) The contractor shall maintain training records, including evaluation forms provided by EPA, and training summaries and provide them to the TOCOR within two (2) weeks of completion of each training session given. The training summary shall include an attendee list of who attended the training and any comments, issues, and action items that came from the session.

Task #	Deliverable	Due Date	Number of Copies
11a.	Draft Set of Training Materials	3 Months after notification by the TOCOR	1 electronic
11a.	Final Set of Training Materials	2 weeks after receipt of comments from the TOCOR	1 electronic
11b.	Training Options	6 Weeks after the initiation of this task	1 electronic
11c.	Set of Test Data	2 Weeks prior to each training delivery	1 electronic
11e.	Evaluation Forms and Training Summary from each Training Session	Within 2 Weeks of delivery of training	1 electronic

Acceptance Criteria:

The contents of the training materials will be reviewed and approved by the TOCOR. The contractor shall modify the deliverables based upon the review by the TOCOR and other EPA staff. Final acceptance will be made after all requested revisions have been made. The contractor shall perform a "dry run" of some of the materials to achieve agreement and acceptance of the format and content.

TASK 12 – Develop and Maintain System and User Documentation

The purpose of this task is to ensure that users and administrators of ICIS are supported by the appropriate system and user documentation, outside of that built into the system and software, for the purpose of using, operating, and maintaining the system. As part of this task, the contractor shall create

and/or update the following deliverables:

a) The contractor shall update, and maintain, the ICIS User Guide to disseminate to all users instructions on the use of ICIS.

b) The contractor shall update, and maintain, the ICIS online help files and error messages, to ensure that users receive prompt, correct, and useful instruction immediately upon erroneous use of the ICIS web application.

c) The contractor shall update, and maintain, a Data Element Dictionary containing, for each data element in ICIS, a screen name, detailed description, format, size, business rules, BO Object name, XML tags, and reference table interface.

Task #	Deliverable	Due Date	Number of Copies
12a.	Draft User Guide or Updates	With each scheduled deployment of ICIS into the ICIS Test environment	1 electronic
12a.	Final User Guide or Updates	2 Weeks after the receipt of EPA comments	1 electronic
12b.	Draft Online Help Files/Messages	With each scheduled deployment of ICIS into the ICIS Test environment	1 electronic
12b.	Final Online Help Files/Messages	2 Weeks after the receipt of EPA comments	1 electronic
12c.	Draft Data Element Dictionary or Updates	With each scheduled deployment of ICIS into the ICIS Test environment	1 electronic
12c.	Final Data Element Dictionary or Updates	2 Weeks after the receipt of EPA comments	1 electronic

Acceptance Criteria:

Documents and deliverables will be reviewed by the TOCOR and other designated EPA and/or state/local business and technical staff. Final acceptance will be made after all requested revisions have been made and will be based upon correctness, accuracy and completeness of the deliverable and timely (per schedule) delivery of the deliverable.

Task 13 – Support Third Party Developers for eReporting (OPTIONAL TASK)

EPA is exploring a public-private model that would enable NPDES-regulated facilities to electronically submit their NPDES information (e.g., compliance monitoring data) to EPA and states.

This open platform e-File model would likely be similar to the Internal Revenue Service model for electronic reporting, which uses third-party software providers ("providers") for collecting and transmitting tax data (e.g., TurboTax, TaxACT, or others) from private citizens and businesses. Under this model, the Agency would not purchase data reporting services from any provider. Rather, all financial transactions would be between the providers and the members of the regulated community.

This task will only be executed upon receipt of direction from the Contracting Officer. The purpose of this task is for the contractor, as directed, to provide technical assistance to the EPA so as to enable realization of the open platform e-File model. This would position the community of environmental software application developers to extend the capabilities provided by ETDD-managed systems, and better leverage the extensive data assets of the ICIS program. In support of this task, the contractor may be directed to perform the following activities:

- Develop and document the standards, protocols and technical specifications for electronic reporting
- Propose minimum suitability and technical performance criteria for third party providers
- Review, test, and determine whether providers' software meets the criteria to successfully exchange, submit and load electronic reports into EPA or state data systems
- Maintain inventory of approved third party software by state and data flow
- Develop guidance on how software providers would share data with EPA or states via CDX
- Review and test software concept proposals
- Support coordination with state agencies to fully implement the open platform e-File model
- Conduct analyses to ensure compliance with the Cross Media Electronic Reporting Regulation (CROMERR)
- Provide technical and other support to the Exchange Network's Open Platform e-File Group
- Participate in Exchange Network technical workgroups to research and recommend options
- Develop and participate in providing training for third-party software providers, and answer technical questions
- Develop and implement services to support an open platform system that would be available to any commercial software provider that would want to offer a Federal electronic reporting service to their clients, and
- Provide technical and other support to software providers to ensure that all necessary ICIS services are readily accessible and useable.

Task #	Deliverable	Due Date	Number of Copies
13.1	Standards, protocols, testing specifications (draft and final)	Draft 3 Months after notification by the TOCOR, Final 2 Weeks after receipt of EPA comments	1 electronic

Information Engineering Support for the
Integrated Compliance Information System (ICIS)

Performance Work Statement
Attachment 1

Task #	Deliverable	Due Date	Number of Copies
13.2	Suitability/performance criteria	Draft 3 Months after notification by the TOCOR, Final 2 Weeks after receipt of EPA comments	1 electronic
13.3	Technical guidance	Draft 3 Months after notification by the TOCOR, Final 2 Weeks after receipt of EPA comments	1 electronic
13.4	Conformance analyses	One month after each third party submission	1 electronic
13.5	Inventory of approved software by state and data flow	One month after initial third party submission, updated monthly thereafter	1 electronic
13.6	Develop and implement services to support an open platform system. Conduct training and support to ensure accessibility and use of these services.	Draft 3 Months after notification by the TOCOR, Final 2 Weeks after receipt of EPA comments. Update quarterly thereafter.	1 electronic

Acceptance Criteria:

Acceptance by the TOCOR, and other designated EPA personnel, subject matter experts and technical programmatic staff within EPA or states will be based upon a review of the deliverable as it is developed to ensure that the deliverable is complete, technically correct, well-organized, and meets the requirements for integration with ICIS, CDX, eReporting Tools, Exchange Network data flows, and other EPA systems and IT infrastructure.

This will include consideration of issues such as:

- conformance to NCC and CDX policies, procedures and standards
- adherence to EPA's data and XML standards
- demonstration of complete testing; demonstration that the system functions and processes work correctly and efficiently
- demonstration that performance will meet the requirement in the design specifications, and
- conformance to CDX's and NCC's policies and procedures for acceptance testing and delivery of proper documentation.

TASK 14 – Support Data Migration (OPTIONAL TASK)

This task will only be executed upon receipt of direction from the Contracting Officer. The

purpose of this task is for the contractor, as directed, to support the migration, conversion and reconciliation of data from an existing Legacy system to a new release of ICIS. All data migration work will be guided by an approved Data Migration Plan developed as the first deliverable under this Task.

In the ICIS Test environment, for each group of users (by region and/or state/local organization), and following the Data Migration Plan, activities to be performed by the contractor when tasked include:

a) The contractor shall modify the Data Migration Plan to reflect any needed changes to timelines and activities that may occur during this project. The contractor shall work with EPA technical staff to develop and/or confirm a timeline for migrating states and locals from the Legacy system to ICIS.

b) The contractor shall support the Data Migration Clean-up Workgroup (if one is deemed necessary) in the Workgroup's data migration activities of: reviewing conversion rules, reviewing existing reference table values, cleaning up legacy data, filling in data gaps, responding to questions on the data, reviewing documentation and minutes from previous meetings to investigate and respond to questions regarding the history of conversion rules, manually entering data where absolutely necessary, coordinating with ICIS O&M contract staff to coordinate changes between the ICIS Online system and migration code, and performing quality assurance on converted data.

c) The contractor shall develop and finalize software needed to extract data from the Legacy system and integrate it with ICIS.

d) For all Modernization projects, the contractor shall make modifications to data migration software and mappings of data that are found to be necessary based upon the discovery of significant issues arising during the implementation.

e) The contractor shall apply the changes needed to correct all outstanding defects for the data migration software and data mapping that arise: during test migration iterations performed during this effort, from changes to ICIS that adversely affect previous migration code, or from business rule changes as requested by the TOCOR.

f) The contractor shall coordinate with the ICIS O&M staff to identify changes to the system that affect data migration codes and/or modify values in the ICIS Online system reference tables to include changes made to Legacy system code tables.

g) The contractor shall identify, install, and/or upgrade hardware and/or software required for the data migration task.

h) The contractor shall execute software to extract data from Legacy systems and move it to the ICIS data structures.

i) The contractor shall perform tests and document test results against the converted data to verify that the conversion software functioned correctly and the data has been converted to the new structure correctly. The contractor shall notify EPA of any discrepancies, provide detailed information and assistance in identifying the causes of anomalies, and assist in resolving discrepancies as needed. The contractor shall provide Error Reports to EPA, organized by migrating organization, for distribution to each organization for data clean-up.

j) The contractor shall perform data verification, documenting any issues with the conversion activity. The contractor shall maintain a log of all issues and their resolution. After each test data migration iteration, the contractor shall provide a table, by data family, showing whether or not each state and locality has met its threshold for readiness using existing algorithms.

k) The contractor shall perform steps (h) through (j) for each group or wave of states/locals until all data has been successfully migrated, converted, and reconciled.

l) The contractor shall support User Validation Testing (UVT) and User Acceptance Testing (UAT) by identifying and providing migrated data to the test environments, and shall make necessary modifications to the Data Migration software to correct critical problems identified during UVT and UAT.

m) The contractor shall develop a "Lessons Learned" report and update it after each implementation of a set of users.

n) In the Production environment, the contractor shall migrate the data using the previous steps and instructions contained within the data migration plan.

Task #	Deliverable	Due Date	Number of Copies
14a	Data Migration Plan	3 Weeks after the start of this Task	1 electronic
14b	Work Group Meeting Minutes	3 business days after meeting	1 electronic
14c	New Software code used for extracting, converting, reconciling and loading data from legacy system	6 Months after the start of this Task	1 electronic
14d	New or Updated Data Mapping	2 Weeks after each test iteration	1 electronic
14d, e	Modified Software code used for extracting, converting, reconciling and loading data	2 weeks after implementation of each group of data	1 electronic

Task #	Deliverable	Due Date	Number of Copies
14d	Updated Issues Document	2 weeks after each group of data has been loaded and verified	1 electronic
14h	Migrated Data	After each test iteration and upon implementation of a group of state/local users	N/A
14i	Error Reports	2 Weeks after each test iteration of Data Migration Execution	1 electronic
14j	Threshold Matrices by Data Family	2 Weeks After each test iteration of Data Migration Execution	1 electronic
14m	Updated Lessons Learned Report	2 Weeks after migrating new state/local users	1 electronic
14n	Migrated Data in Production	Immediately upon bringing up production after the implementation of new state/local users	N/A

Acceptance Criteria:

All test results, reference table values, and mappings will be reviewed and approved by the TOCOR and other EPA and/or state/local personnel designated by the TOCOR. This review will be based upon logging onto ICIS and verifying via the ICIS screens and reports, that the data has been migrated per the documented data migration mappings and rules. The data migration plan, process and software will be approved once all requested changes have been incorporated and all errors corrected and retested. The optimized data migration software will be tested with a full load of data to get a baseline for the amount of time to run, and changes will be made as necessary and as requested by the EPA TOCOR to operate efficiently within the EPA Test and Production environments. The Data Migration Team, consisting of the TOCOR, EPA team members, and contractor team members, will verify that each state/local has met the thresholds for data correctness and will conduct a Production Readiness assessment prior to the data being migrated into ICIS.

IX TRAVEL

Long distance travel costs approved in advance by the TOCOR are permitted to complete assignments under this PWS. Long distance travel is considered to be travel outside the Washington DC Metropolitan area.

a) As directed by the EPA TOCOR, the contractor shall travel to the EPA National Computer

Center (NCC) located in Research Triangle Park (RTP), North Carolina, for meetings with NCC technical staff. EPA's access servers, as well as the personnel responsible for maintaining EPA's hardware/software environment are located in RTP. The contractor will typically travel a maximum of once per year to RTP under this PWS, and each visit will likely include a minimum of one, and a maximum of two contract project personnel.

b) In conjunction with EPA Project staff, the contractor may be required to travel to one or more of the yearly national meetings during the course of this PWS. The necessity for this travel will be determined based upon the requirements and budget for each year. Each national meeting will likely require a minimum of two, and a maximum of four, contract personnel to be in attendance.

c) In conjunction with EPA Project staff, the contractor shall travel to EPA regions and/or states to provide training for new releases of ICIS. The necessity for this travel will be determined based upon the requirements and budget for each year. The number and locations of training sessions, and number of contractor personnel required, will be determined by each yearly task order.

d) It may be necessary for the contractor to travel with the EPA TOCOR or other EPA personnel to a regional or state location for a conference or workshop for the purpose of demonstrating and/or presenting functionality of ICIS. Each visit shall include a minimum of one and a maximum of three contractor personnel.