(7) Verification of claimed degrees/education/military service

(8) Professional license and certification verification.

(b) In order to perform and continue performing work under this task order, all contractor and subcontractor personnel shall be subject to an Agency-determined background investigation commensurate with the personnel's level of access and privileges to Agency data and systems. At a minimum, all contractor and subcontractor personnel must receive a favorable National Agency Check with Inquiries (NACI) plus a credit search report that the Agency will conduct. To avoid unnecessary delays, new contractor and subcontractor personnel will be granted interim access to Agency data and systems that are required by the task order pending completion of the background investigation. The Government will immediately terminate the contractor's or subcontractor's employee's access to Agency data and systems, including passwords, if a background investigation produces unacceptable results as determined by the Agency.

(c) Contractors shall verify that the contractor has met the following minimum pre-screening requirements for the personnel the contractor plans to use on the task order:

(d) For each contractor and subcontractor employee that will be assigned to the task order, the contractor and subcontractor shall complete a Questionnaire for Public Trust Positions, SF 85p, a Credit Release Authorization and two (2) Standard Applicant Fingerprint Cards (Form FD 258).

These forms shall be forwarded to the TOCOR prior to a contractor or subcontractor employee beginning to work onsite or having access to Agency data or systems.

(e) The Agency will accept existing favorable NACI plus credit search reports for proposed contractor and subcontractor employees that are not older than three (3) years at the time the contractor or subcontractor provides them to the TOCOR.

(f) Prior to commencement of task order performance, the contractor shall notify the CO, in writing, that the background checks and application of the suitability determination criteria, as set forth in (e) above, have been completed for affected individuals.

(g) Under the FY 2001 Defense Authorization Act, (P.L. 106-398), including Title X, subtitle G "Government Information Security Reform." Contractors are subject to the provision of the Computer Security Act of 1987. The contractor and its team of subcontractors shall conform to the provisions of these Acts.

(h) Whenever the contractor becomes aware that the retention of an employee for work at an onsite location under this task order is inconsistent with the interests of national security, such information shall be immediately provided to the CO that the contractor has removed that employee, and the contractor shall replace the employee with a qualified substitute. The removal and replacement shall be at no cost to the Government.

(i) The contractor agrees to insert terms that conform substantially to the language of this clause in all subcontracts under this task order. The contractor agrees to insert terms that conform substantially to the language of this clause in all subcontracts under this task order.

NOTE: This clause only applies to contractor and subcontractor personnel who will work at a designated "Sensitive Site," at a Government site or have access within the Agency computer systems.

PART II - CONTRACT CLAUSES

SECTION I - CONTRACT CLAUSES

I.1 NOTICE Listing Contract Clauses Incorporated by Reference

NOTICE:

The following solicitation provisions and/or task order clauses pertinent to this section are hereby incorporated with the same force and effect as if they were given in full text. The Contracting Officer will make their full text available. Also, the full text of a clause may be accessed electronically at https://www.acquisition.gov/far/index.html

CLAUSE NO.	TITLE	DATE	FP	TM
52.202-1	DEFINITIONS	JUL 2004	x	X
52.203-3	GRATUITIES	APR 1984	x	X
52.203-5	COVENANT AGAINST CONTINGENT FEES	APR 1984	x	X
52.203-6	RESTRICTIONS ON SUBCONTRACTOR SALES TO THE GOVERNMENT	SEP 2006	x	
52.203-7	ANTI-KICKBACK PROCEDURES	JUL 1995	x	X
52.203-8	CANCELLATION, RESCISSION, AND RECOVERY OF FUNDS FOR ILLEGAL OR IMPROPER ACTIVITY	JAN 1997	x	X
52.203-10	PRICE OR FEE ADJUSTMENT FOR ILLEGAL OR IMPROPER ACTIVITY	JAN 1997	x	X
52.203-12	LIMITATION ON PAYMENTS TO INFLUENCE CERTAIN FEDERAL TRANSACTIONS	SEP 2007	x	X
52.203-13	CONTRACTOR CODE OF BUSINESS ETHICS AND CONDUCT	APR 2010	X	X
52.203-15	WHISTLEBLOWER PROTECTIONS UNDER THE AMERICAN RECOVERY AND REINVESTMENT ACT OF 2009	MAR 2009	x	X
52.204-2	SECURITY REQUIREMENTS	AUG 1996	x	X
52.204-4	PRINTED OR COPIED DOUBLE-SIDED ON RECYCLED PAPER	AUG 2000	x	X
52.204-7	CENTRAL CONTRACTOR REGISTRATION	APR 2008	x	X
52.204-9	PERSONAL IDENTITY VERIFICATION OF CONTRACTOR PERSONNEL	SEP 2007	x	X
52.204-10	REPORTING EXECUTIVE COMPENSATION AND FIRST-TIER SUBCONTRACT AWARDS	JULY 2010	X	X
52.204-11	AMERICAN RECOVERY AND REINVESTMENT ACT - REPORTING REQUIREMENTS	MAR 2009	x	X
52.207-3	RIGHT OF FIRST REFUSAL OF EMPLOYMENT	MAY 2006	x	X

CENTRAL DATA EXCHANGE (CDX) SUPPORT SERVICES, TASK ORDER CLAUSES

GSA Alliant Contract No. GS00Q09BGD0022 **Task Order No.** EP-G11H-00154

CLAUSE NO.	TITLE	DATE	FP	TM
52.207-5	OPTION TO PURCHASE EQUIPMENT	FEB 1995	x	x
52.208-9	CONTRACTOR USE OF MANDATORY SOURCES OF SUPPLY OR SERVICES	OCT 2008	x	X
52.209-6	PROTECTING THE GOVERNMENT'S INTEREST WHEN SUBCONTRACTING WITH CONTRACTORS DEBARRED, SUSPENDED, OR PROPOSED FOR DEBARMENT	SEP 2006	x	X
52.215-14	INTEGRITY OF UNIT PRICES	OCT 1997	x	X
52.222-3	CONVICT LABOR	JUN 2003	x	X
52.222-21	PROHIBITION OF SEGREGATED FACILITIES	FEB 1999	x	X
52.222-26	EQUAL OPPORTUNITY	MAR 2007	x	X
52.222-29	NOTIFICATION OF VISA DENIAL	JUN 2003	x	X
52.222-35	EQUAL OPPORTUNITY FOR SPECIAL DISABLED VETERANS, VETERANS OF THE VIETNAM ERA, AND OTHER ELIGIBLE VETERANS	SEP 2006	x	X
52.222-36	AFFIRMATIVE ACTION FOR WORKERS WITH DISABILITIES	JUN 1998	x	X
52.222-36	ALTERNATE I	JUN 1998	x	X
52.222-37	EMPLOYMENT REPORTS ON SPECIAL DISABLED VETERANS, VETERANS OF THE VIETNAM ERA, AND OTHER ELIGIBLE VETERANS	SEP 2006	x	X
52.222-54	EMPLOYMENT ELIGIBILITY VERIFICATION	JAN 2009	x	X
52.223-5	POLLUTION PREVENTION AND RIGHT-TO-KNOW INFORMATION. ALTERNATE I	AUG 2003	x	X
52.223-5	ALTERNATE I	AUG 2003	x	X
52.223-5	ALTERNATE II	AUG 2003	x	X
52.223-6	DRUG-FREE WORKPLACE	MAY 2001	x	X
52.223-15	ENERGY EFFICIENCY IN ENERGY-CONSUMING PRODUCTS	DEC 2007	x	X
52.223-16	IEEE 1680 STANDARD FOR THE ENVIRONMENTAL ASSESSMENT OF PERSONAL COMPUTER PRODUCTS	DEC 2007	x	X
52.223-16	ALTERNATE I	DEC 2007	x	X
52.224-1	PRIVACY ACT NOTIFICATION	APR 1984	x	X
52.224-2	PRIVACY ACT	APR 1984	x	X
52.225-1	BUY AMERICAN ACT -SUPPLIES	FEB 2009	x	X
52.225-3	BUY AMERICAN ACT - FREE TRADE AGREEMENTS - ISRALI TRADE ACT	JUN 2009	x	X
52.225-5	TRADE AGREEMENTS	AUG 2009	x	
52.225-8	DUTY-FREE ENTRY	FEB 2000	x	X
52.225-13	RESTRICTIONS ON CERTAIN FOREIGN PURCHASES	JUN 2008	x	
52.227-14	RIGHTS IN DATA—GENERAL	DEC 2007	x	X
52.227-14	ALTERNATE II	DEC 2007	x	X
52.227-14	ALTERNATE III	DEC 2007	x	X

CENTRAL DATA EXCHANGE (CDX) SUPPORT SERVICES, TASK ORDER CLAUSES

GSA Alliant Contract No. GS00Q09BGD0022 **Task Order No.** EP-G11H-00154

CLAUSE NO.	TITLE	DATE	FP	TM
52.227-16	ADDITIONAL DATA REQUIREMENTS	JUN 1987	x	
52.227-17	RIGHTS IN DATA-SPECIAL WORKS	DEC 2007	x	X
52.227-19	COMMERCIAL COMPUTER SOFTWARE - RESTRICTED LICENSE	DEC 2007	x	
52.229-3	FEDERAL, STATE, AND LOCAL TAXES	APR 2003	x	X
52.229-4	FEDERAL, STATE, AND LOCAL TAXES (STATE AND LOCAL ADJUSTMENTS)	APR 2003	x	X
52.232-7	PAYMENTS UNDER TIME-AND-MATERIALS AND LABOR-HOUR CONTRACTS	FEB 2007		X
52.232-8	DISCOUNTS FOR PROMPT PAYMENT	FEB 2002	x	X
52.232-9	LIMITATION ON WITHHOLDING OF PAYMENTS	APR 1984	x	X
52.232-18	AVAILABILITY OF FUNDS	APR 1984	x	X
52.232-25	PROMPT PAYMENT	OCT 2008	x	X
52.232-25	ALTERNATE I	FEB 2002		X
52.232-33	PAYMENT BY ELECTRONIC FUNDS TRANSFER-CENTRAL CONTRACTOR REGISTRATION	OCT 2003	x	X
52.233-1	DISPUTES	JUL 2002	x	X
52.233-1	ALTERNATE I	DEC 1991	x	X
52.233-3	PROTEST AFTER AWARD	AUG 1996	x	X
52.233-3	ALTERNATE I	JUN 1985		
52.243-1	CHANGES - FIXED-PRICE ALTERNATE I	AUG 1987	x	
52.243-3	CHANGES - TIME-AND-MATERIALS OR LABOR-HOURS	SEPT 2000		X
52.243-6	CHANGE ORDER ACCOUNTING	APR 1984	x	
52.244-5	COMPETITION IN SUBCONTRACTING	DEC 1996	x	
52.244-6	SUBCONTRACTS FOR COMMERCIAL ITEMS	JUN 2010	X	X
52.245-1	GOVERNMENT PROPERTY	JUN 2007	x	X
52.246-23	LIMITATION OF LIABILITY	FEB 1997	x	
52.246-24	LIMITATION OF LIABILITY - HIGH VALUE ITEMS	FEB 1997	x	
52.246-25	LIMITATION OF LIABILITY - SERVICES	FEB 1997	x	X
52.249-2	TERMINATION FOR CONVENIENCE OF THE GOVERNMENT (FIXED-PRICE)	MAY 2004	x	X
52.249-4	TERMINATION FOR CONVENIENCE OF THE GOVERNMENT (SERVICES) (SHORT FORM).	APR 1984	x	
52.249-6	ALTERNATE IV	SEP 1996		X
52.249-8	DEFAULT (FIXED-PRICE SUPPLY AND SERVICE)	APR 1984	x	
52.249-14	EXCUSABLE DELAYS	APR 1984		X
52.251-1	GOVERNMENT SUPPLY SOURCES	APR 1984	x	X
52.253-1	COMPUTER GENERATED FORMS	JAN 1991	x	X

CENTRAL DATA EXCHANGE (CDX) SUPPORT SERVICES - TASK ORDER CLAUSES

GSA Alliant Contract No. GS00Q09BGD0022 **Task Order No.** EP-G11H-00154

SECTION J - LIST OF ATTACHMENTS

J.1 LIST OF ATTACHMENTS (EP 52.252-100) (APR 1984)

Number	Attachment Title
1	Central Data Exchange (CDX) Support - Performance Work Statement (PWS)
2	Quality Assurance Surveillance Plan (QASP)
3	Government Furnished Property
4	Alliant Labor Category Descriptions
5	Homeland Security Presidential Directive

PART IV - REPRESENTATIONS AND INSTRUCTIONS

SECTION K - REPRESENTATIONS, CERTIFICATIONS, AND OTHER STATEMENTS OF OFFERORS

K.1 ONLINE REPRESENTATIONS AND CERTIFICATIONS (ORCA)

Contractors that have completed and filed their Online Representations and Certifications (OCRA) shall have the cognizant individual authorized to sign and certify for the contractor complete as indicated below and submit as part of the offeror's signed copy of the response to the Task Order Request for Proposal. (See the Contractor's Proposal Submission dated, April 11, 2011).

K.2 ORGANIZATIONAL CONFLICT OF INTEREST CERTIFICATION (APR 1984)

The offeror [ ] is [ ] is not aware of any information bearing on the existence of any potential organizational conflict of interest. If the offeror is aware of information bearing on whether a potential conflict may exist, the offeror shall provide a disclosure statement describing this information. (See Contractor's Proposal Submission, dated April 11, 2011).

K.3 SIGNATURE BLOCK (EP 52.299-900) (APR 1984)

I hereby certify that the responses to the above Representations, Certifications and other statements are accurate and complete. (**See Contractor's Proposal Submission, dated April 11, 2011).**

ATTACHMENT 1

CENTRAL DATA EXCHANGE (CDX) SUPPORT SERVICES

ATTACHMENT 2

QUALITY ASSURANCE SURVEILLANCE PLAN (QASP)

ATTACHMENT 3

GOVERNMENT FURNISHED PROPERTY

ATTACHMENT 4

ALIANT LABOR CATEGORY DESCRIPTIONS

ATTACHMENT 5

AGENCY VERIFICATION PROCEDURES**

U.S. EPA
Central Data Exchange (CDX) Support

Statement of Work

United States Environmental Protection Agency (EPA)
Office of Environmental Information (OEI)
Office of Information Collection (OIC)

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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.

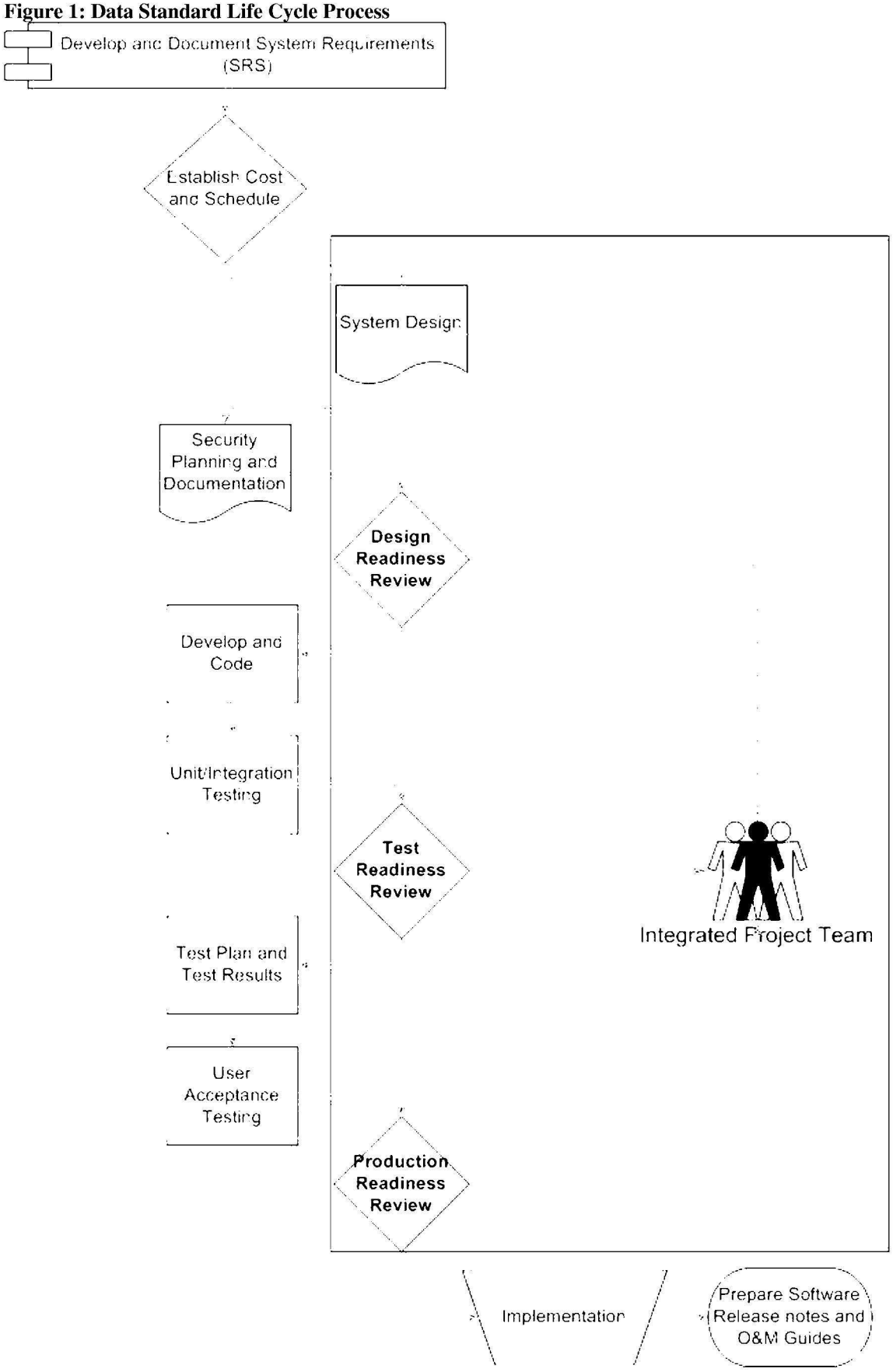
3.13 Successful Implementation

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.