ORDER FOR SUPPLIES OR SERVICES

PAGE 1 OF PAGES 61

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

1. DATE OF ORDER: 09-29-2000	2. CONTRACT NO. (If any): GS-35F-0285K
3. ORDER NO.: DR-00-0365 MODIFICATION NO.:	4. REQUISITION/REFERENCE NO.: ASL-00-308, 8/10/00

5. ISSUING OFFICE (Address correspondence to)
U.S. Nuclear Regulatory Commission
Division of Contracts and Property Mgt.
Attn: T-7-I-2
Contract Management Branch No. 2
Washington DC 20555

6. SHIP TO:
a. NAME OF CONSIGNEE: U.S. Nuclear Regulatory Commission
b. STREET ADDRESS:
c. CITY: Washington | d. STATE: DC | e. ZIP CODE: 20555
f. SHIP VIA:

7. TO:
a. NAME OF CONTRACTOR: USinternetworking, Inc.
b. COMPANY NAME:
c. STREET ADDRESS: One USI Plaza
d. CITY: Annapolis | e. STATE: MD | f. ZIP CODE: 21401

8. TYPE OF ORDER
[ ] a. PURCHASE ORDER
Reference your _____
Please furnish the following on the terms and conditions specified on both sides of this order and on the attached sheet, if any, including delivery as indicated.

[X] b. DELIVERY/TASK ORDER
Except for billing instructions on the reverse, this delivery/task order is subject to instructions contained on this side only of this form and is issued subject to the terms and conditions of the above-numbered contract.

9. ACCOUNTING AND APPROPRIATION DATA See CONTINUATION Page
B&R:07D15301189,JOB CODE:M70270,BOC:253A, APPN. NO.: 31X0200.07D. OBL-$345,000. - B&R:07D-15-307-115, JOB CODE: M70740,BOC:253A,APPN NO.:31X0200.07D, OBL: $122,000.

10. REQUISITIONING OFFICE:

11. BUSINESS CLASSIFICATION (Check appropriate box(es))
[ ] a. SMALL [ ] b. OTHER THAN SMALL [ ] c. DISADVANTAGED [ ] d. WOMEN-OWNED

12. F.O.B. POINT	14. GOVERNMENT B/L NO.	15. DELIVER TO F.O.B. POINT ON OR BEFORE	16. DISCOUNT TERMS
Destination			N/A

13. PLACE OF		FOR INFORMATION CALL: (No collect calls)
a. INSPECTION	b. ACCEPTANCE	Donald A. King (301) 415-6731

17. SCHEDULE (See reverse for Rejections)

ITEM NO. (A)	SUPPLIES OR SERVICES (B)	QUANTITY ORDERED (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)	QUANTITY ACCEPTED (G)
	See the attached addendum. This is a FIXED PRICE type order. PERIOD OF PERFORMANCE: Date of award thru 13 months. The U. S. Nuclear Regulatory Commission accepts USinternetworking, Inc.'s quote dated 8/25/00 as amended on 9/20/00, which is hereby incorporated into and made a part of this order. The successful performance of this effort, in support of an NRC License Support Network, is contingent upon a GSA Contractor Teaming Agreement Solution. The teaming partners include: Project Performance Corp.(Team Leader see DR-00-0266), Vector Research, Inc. (Team Member See DR-00-0364), USinternetworking, Inc. (Team Member). Each teaming partner is issued an order under its GSA Schedule Contract. This order is one of three orders issued under this teaming arrangement. GS-35F-0285K TIN: 52-2078325 DUNS: 01-686-0699		See CONTINUATION Page			

18. SHIPPING POINT	19. GROSS SHIPPING WEIGHT	20. INVOICE NO.	$467,000.00	SUBTOTAL
			$.00	17(h) TOTAL (Cont. pages)
			$467,000.00	17(i). GRAND TOTAL

SEE BILLING INSTRUCTIONS ON REVERSE

21. MAIL INVOICE TO:
a. NAME: U.S. Nuclear Regulatory Commission, Office of the Chief Financial Officer
b. STREET ADDRESS (or P.O. Box): Attn: GOV/COM Acctng. Section T-9H4
c. CITY: Washington | d. STATE: DC | e. ZIP CODE: 20555

22. UNITED STATES OF AMERICA BY (Signature): Sharon D. Stewart

23. NAME (Typed): Sharon D. Stewart
Contracting Officer
TITLE: CONTRACTING/ORDERING OFFICER

AB

OPTIONAL FORM 347 (6/95)

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A.1 ADDENDA SCHEDULE OF SUPPLIES OR SERVICES AND PRICE/COSTS

1 PROJECT TITLE

The title of this project is as follows:

NRC LICENSING SUPPORT NETWORK

2. BRIEF DESCRIPTION OF WORK

a) Brief description of work:

The U.S. Nuclear Regulatory Commission requires web-based system design, development, operation, and maintenance in conjunction with the development of a Licensing Support Network (LSN) .

(b) Only Contracting Officers of the NRC or other individuals specifically authorized under this contract may authorize the initiation of work under this contract. The provisions of this contract shall govern all required work hereunder.

3. SCHEDULE

The Contractor shall provide technical and production support services to NRC in accordance with the "DESCRIPTION/SPECIFICATIONS/WORK STATEMENT" for the contract period of performance at the rates as set forth below. The successful performance of this effort in support of an NRC License Support Network is contingent upon a GSA Contractor Teaming Agreement Solution. The teaming partners include Project Performance Corporation (Team Leader), Vector Research, Incorporated (Team Member) and Usinternetworking, Incorporated (Team Member). Each teaming partner is being issued an order under its GSA Schedule contract. This order of one of three orders issued.

BASE PERIOD (Period of Performance 13 months)

	Est. Qty.	Unit	Unit Price*	Total Amount
FIXED PRICE				
A001 Host Website (Monthly)	[redacted]			
A002 Maintain Website (Monthly)				
A003 Installation Cost				
Total Base Year				**$467,000.00**

Ex. 4

OPTION PERIOD 1 (Period of Performance 12 months)

FIXED PRICE
B001 Host Website
(Monthly) [redacted] Ex. 4

Total Option Period 1.....$357,000.00

OPTION PERIOD 2 (Period of Performance - 12 months)

FIXED PRICE
C001 Host Website
(Monthly) [redacted] Ex. 4

Total Option Period2.....$357,000.00

OPTION PERIOD 3 (Period of Performance - 12 months)

FIXED PRICE
D001 Host Website
(Monthly) [redacted] Ex. 4

Total Option Period 3.....$357,000.00

OPTION PERIOD 4 (Period of Performance - 11 months)

FIXED PRICE
E001 Host Website
(Monthly) [redacted] Ex 4

Total Option Period 4.....$327,250.00

TOTAL AMOUNT FOR ALL SERVICES ALL PERIODS.....$1,865,250.00

A.2 CONSIDERATION AND OBLIGATION–FIRM FIXED PRICE (JUN 1988)

The firm fixed price of this order is $467,000.

(END-OF-CLAUSE)

SECTION A.3
Description/ Specifications/Work Statement
Licensing Support Network (LSN)

OUTLINE

1. **Background with Project Objectives**
2. **Scope**
3. **Statement of Work**
4. **Period Of Performance**
5. **Schedule of Deliverables**
6. **Personnel**

1. BACKGROUND

The U.S. Nuclear Regulatory Commission has a requirement for web-based system design, development, operation, and maintenance in conjunction with the development of a Licensing Support Network (LSN) to be used in the licensing of a high-level radioactive waste repository at Yucca Mt., Nevada.

The Licensing Support Network Administrator (LSNA) and the sponsoring office, the Atomic Safety and Licensing Board Panel (ASLBP), are responsible for ensuring the timely implementation of the LSN in time for the anticipated 2002 submission of the repository license application to the NRC. The target date for operational implementation of the LSN is August 2001. The LSN is a critical tool to ensure that document access, and the associated hearing agenda, can all be handled in an expeditious manner.

NRC has identified an aggressive schedule of activities that need to be accomplished to provide this licensing support capability, from initial planning and coordination activities through delivery and maintenance of an operational system. This contract is intended to deliver the required range of services in a three-phase project, with each phase separately authorized and funded.

Supplemental background information on a number of topics is included as APPENDIX A to this statement of work.

1.2 Project Objectives

The objective of implementing the LSN is to reduce the time needed for the licensing hearing and give the Agency some chance of meeting the congressionally mandated three-year licensing process time frame. It is generally acknowledged that although the system does not guarantee the licensing time frame will be met, without the LSN it may not be possible to meet the mandated time frame. The system will achieve this time saving by:

- replacing classic "discovery" exchanges among parties by making all parties' relevant documents publicly accessible before docketing;

- establishing an electronic and publicly accessible docket; and
- making motions practice a fully electronic process.

The system must be available in time to allow DOE and NRC to meet their obligations to make documents available 30 days after DOE's submission of its site recommendation to the President of the United States (currently scheduled for July 2001). Other participants make documents available 30 days after the site selection decision becomes final, after review by Congress.

1.2 Functionality

The following paragraphs provide a summary of the functional requirements for the four LSN components:

1. Establishing an effective Internet-based method of accessing (search & retrieval) the records collections of the parties and potential parties to the high-level waste repository licensing proceeding.
2. Providing an audit/compliance subsystem, including the automated tools and policies and procedures needed to monitor participant compliance with the availability and document integrity submission requirements found in 10 CFR Part 2, Subpart J.
3. Providing a web-accessible official docket file for the proceeding.
4. Providing electronic information exchange to support motions practice.

In addition, the functionality required from all participant systems, including the NRC's high-level waste document collection are described below. LSN functional requirements are presented in APPENDIX C.

1.2.1 Internet-based Access Core Functionality

The core functionality of the system is to provide a system that:

- Provides shared access to documentary material;
- Provides timely, effective access, search, and retrieval for large collections of diverse documents;
- Identifies where associated images are easily located, if not available on the system;
- Provides unique document ID across the enterprise (electronic equivalent of a Bates #);
- Provides priority access (to approximately 500 users) during key phases of the licensing process;
- Delivers documents into the NRC docket file;

- Assures integrity of exchanged documents;
- Allows LSNA to document integrity of the participant collections;
- Ensures uninterrupted performance over at least a three-year licensing time frame.

The system shall provide a privacy policy statement, as approved by the Chairman, and as provided by the NRC task manager, pursuant to the June 2, 1999 memorandum entitled Privacy Policies on Federal Web Sites (M99-18) from OMB to the heads of executive departments and agencies (examples provided at http://www.cio.gov/docs/m9918.htm).

1.2.2 Audit System

The LSNA is the individual within NRC responsible for coordinating access to the data via the LSN and for ensuring the integrity of data available on it. The LSNA provides technical support to the Pre-Application Presiding Officer, verifying substantial and timely compliance with the requirements in 10 CFR § 2.1003 regarding availability of material in electronic form. Additionally, the LSNA is responsible for monitoring and coordinating the ongoing integrity of the data that has been made available. To accomplish this mission, the LSN will have an audit and reporting capability to independently monitor system activities of the LSN site and the underlying participant collections.

To ensure the ongoing availability of data, component subsystems such as the participants' servers and the LSN server site must be made available to the LSN audit system for collection of server activity associated with posting, modification, and deletion activities, as well as server performance data, in responding to requests for files. The audit system will provide authorized individuals the ability to monitor participants' document server performance in providing requested object files (e.g., document files) to system users upon request.

Component subsystems, such as the participants' servers and the LSN server site, must also be made accessible to the audit system to enable it to record all activity (accounting) associated with posting, modification, and deletion activities conducted on each underlying document collection's bibliographic, text, and image files.

1.2.3 Participant System Functionality

Each participant (including NRC) must meet core requirements for making available on the web their documentary materials and for providing the computerization necessary to comply with the Subpart J provisions for document production and service. These include requirements for providing web accessible bibliographic headers (structured data) and searchable text (unstructured data) of its documentary material and a description of where an authenticated image of the document may be obtained. Where text is not available (e.g., topographical maps, engineering drawings, etc.), the image must be made available online in lieu of the text file. Structured data bibliographic headers are required for items not suitable for image or text. Similarly, structured data bibliographic headers are required for privileged, confidential, safeguards, and other types of limited access documents.

1.2.4 Infrastructure Requirements

Housing the LSN at an off-site location was examined in a sensitivity analysis. As a result of this analysis, NRC requires that the LSN be established for long-term operation at a full-service site external to the NRC campus.

2. SCOPE

The contractor shall provide all necessary personnel, materials, hardware, software, labor, supplies, equipment, host location, telecommunications, travel, and other direct costs necessary to accomplish the performance of the tasks described in Section 3.0 below.

The LSN is responsible for addressing various requirements associated with NRC's mission to complete the adjudicatory process for the license application in a three-year time frame. Four components comprising the system's functionality have been identified:

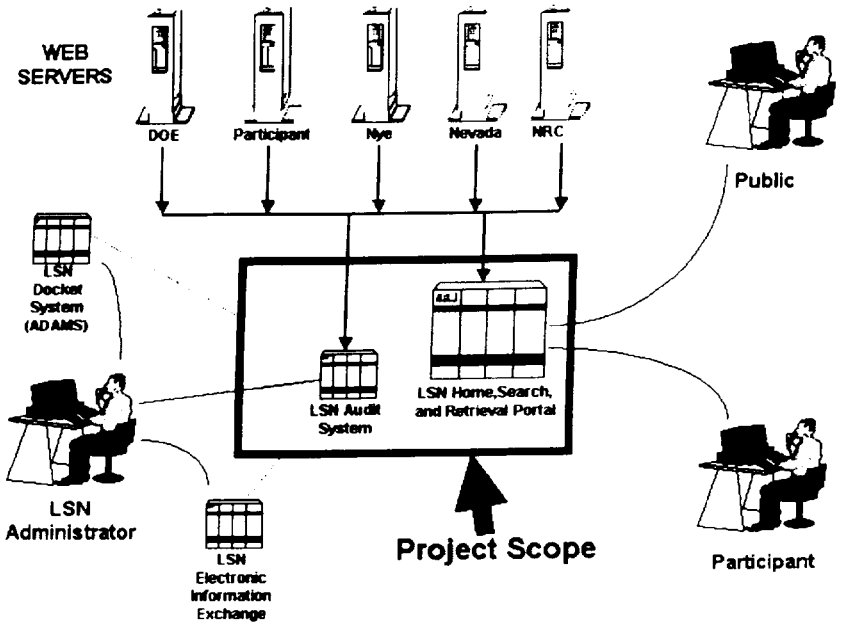
(1) Establishing an effective Internet-based method of accessing (search & retrieval) the record collections of the parties and potential parties to the high-level waste repository licensing proceeding;

(2) Providing an audit/compliance subsystem, including the automated tools and policies and procedures needed to monitor participant compliance with the availability and document integrity submission requirements found in 10 CFR Part 2, Subpart J;

(3) Providing a web-accessible official docket file for the proceeding; and

(4) Providing electronic information exchange to support motions practice.

NRC's existing document management system (ADAMS), containing publicly accessible docket files, will meet the docket requirements. Similarly, NRC's existing Electronic Information Exchange (EIE) infrastructure will meet the Subpart J motions practice requirements. Therefore, the coverage of this statement of work is focused on the search and retrieval component and the audit capability, as represented in the following schematic:



2.1 NRC's System Development Life Cycle Methodology Mandatory

NRC's Management Directive 2.5 "Application Systems Life-Cycle Management," establishes the policies for developing and maintaining application systems. The ***SDLCM Methodology Handbook*** and its companion volume of procedures, standards, and forms implement Directive 2.5 by providing life-cycle structure and guidance for all NRC Projects. Use of the ***SDLCM Methodology Handbook***, Version 2.2, is mandatory. This handbook defines the life cycle of an application system; it describes the structure of the methodology and each of the seven components; and it describes the processes for developing, enhancing, and maintaining systems. The handbook clearly discusses what activities a project team must perform within each of the seven components and what products a project must produce. The companion volume, ***SDLCM Methodology Procedures, Standards, and Forms***, Version 1.2, contains the procedures that document various activities and the standards and forms that facilitate the preparation of all products.

Hard copies of these volumes are available from the NRC contracting officer. NRC will pursue a Package-Based Life-Cycle Model, as described in Section 3.4 of the ***SDLCM Methodology Handbook***.

3. STATEMENT OF WORK

The contractor shall deliver a fully operational LSN search and retrieval capability and a fully operational audit capability.

The LSN search and retrieval capability is defined as the combined totality of hardware, software, communications, data management processes, documentation, security, and backup

and recovery services that makes relevant documentary material available by methods including searching, retrieving, and delivery to the users of the headers, text, and images, as detailed in 10 CFR Part 2, Subpart J. The specific method of providing access to documentary material is not mandated by the LSN Rule in order to accommodate on-going and future technology advances [63 FR 71735, SUPPLEMENTARY INFORMATION]. For the purposes of fulfilling these requirements, the technology to be adopted for development and implementation of the LSN is based on the facility popularly known as the "World Wide Web" (www or web) on the Internet. More specifically, this can be defined as dissemination of information with HTTP (Hypertext Transport Protocol) servers to HTTP clients. To accomplish this, the delivered system must:

- Be integrated using modular design techniques and well-documented interfaces which allow individual components of the system to be replaced without significantly impacting other components.

- Be connected to the Internet with the capability of being accessed by any Internet user with attributes including, but not limited to:

  - Accessibility to arbitrary Internet users using "plain vanilla" web browsers (e.g., no browser specific features and maximize LSN server processing).

  - Connection being sufficient to provide reasonable responsiveness per Functional Requirement 2.26.01 (see Appendix C) during periods of normal usage.

  - Utilize search engine index technologies based on the process of software programs visiting participant web sites, reading their pages and other information in order to create index entries (i.e., "crawl" the sites).

  - Access by publicly-available computers equipped with a web browser.

  - Remote administration for all LSN components

  - Presentation of web pages which are authored in compliance with the Web Content Accessibility Guidelines for access by individuals with disabilities http://www.w3.org/TR/WAI-WEBCONTENT/ and Section 508 of the Rehabilitation Act.

  - Capability of user interface compatible with current browser technologies including access using both graphical and text-only browsers to documentary collections.

  - Following industry best practices for web page and site layout and formatting.

  - Maintaining a consistent organization and style throughout the LSN-related portion of the web site.

  - Providing aids to users to include on-line help on use of the site, usage guidelines, and contact information for further assistance.

- Adhere to established Federal Government, international, and/or industry hardware and software standards, including, but not limited to:

- Network access shall be HTTP/1.1 [http://www.faqs.org/rfcs/rfc2068.html] over TCP (Transmission Control Protocol, [http://www.faqs.org/rfcs/rfc793.html]) over IP (Internet Protocol, [http://www.faqs.org/rfcs/rfc791.html]).

- Associating server names with IP addresses shall follow the DNS (Domain Name System), [http://www.faqs.org/rfcs/rfc1034.html] and [http://www.faqs.org/rfcs/rfc1035.html].

- Web page construction being HTML version 4.0 [http://www.w3.org/TR/REC-html40/].

Each LSN participant must provide on the web a bibliographic header with each document or other material submitted, including submissions for which no text or image is available and for privileged, confidential, safeguards and other types of limited access documentary material, as specifically identified. The system shall therefore be capable of:

- Electronically obtaining (e.g., crawling participant sites), storing, and retrieving bibliographic headers (structured data records) in the system. Header records will contain between 19 and 35 fields of information including multi-valued, alpha, numeric, alphanumeric, and date field structures. Bibliographic headers will be stored in a manner retrievable through reference to any field. Bibliographic headers will be stored in a manner that the contents of their fields can be searched for specific data.

- Electronically obtaining (e.g., crawling participant sites), storing, and retrieving the indexes to document texts (unstructured data) located on target participant servers. That is, the document index (both structured and unstructured) will be located on the LSN system, but the document files (text or image) will remain located on the participant machines. If the user selects a document (text or image) for viewing, it will be delivered from the participant machine. The capability of storing and retrieving from the LSN cache (vice participant machine) the text or image of selected documents (e.g., highly popular documents) is also desired.

- Providing comprehensive search and retrieval tools for structured and unstructured data indexes to assist users in identifying documents consistent with the technology. All texts shall be identifiable through queries of the occurrence of text content through all document texts. Specific query options include the ability to:

  - Search for the occurrence of a phrase in the full text of documents, perform proximity searching (i.e. search for phrases near each other or near the beginning or end of the document), perform wild card searching, perform root searching, perform frequency searching, and arbitrarily combine any search strategy through the use of Boolean operators.

- Providing tools to allow NRC to establish multiple database files on the search and retrieval capability so that NRC can create specialized or limited access collections such as a Protective Order File.

The LSN audit capability is defined as the combined totality of hardware, software, communications, data management processes, documentation, security, and backup and recovery services that provides the LSNA with access to participant collections to allow the LSNA to independently verify the integrity of data available via the LSN. The LSN shall be designed to allow the LSNA to coordinate the availability and the integrity of the information stored within the LSN. To meet these requirements the audit capability must have the following attributes:

- Be able to access and index documentary collections that are placed on web-accessible servers by the participants. The collections may be comprised of structured header data, unstructured text, and/or images.

- Be able to access an electronic log of all retrievals of LSN documents from the participants' web sites. This log will contain the IP address or DNS host name of the recipient's computer and the date and time of delivery. The log shall be in either the web standard "Common Log Format" or "Combined Log Format."

- Provide a monitoring/audit station which shall be established to allow the LSNA to obtain, store, and report information on the availability and integrity of LSN information. The monitoring/audit station shall have the capability of non-interactively "crawling" participant web sites, and fetching a subset or the entire site for analysis. The monitoring/audit station shall have the capability of tracking changes on participant web sites, monitoring participant site responsiveness and other performance characteristics, and reporting this information to the LSNA.

- Be able to crawl and recognize non-indexable image files formatted as TIFF CCITT G4 for bi-tonal images or PNG (Portable Network Graphics) per [http://www.w3.org/TR/REC-png-multi.html]) format for grey-scale or color images, or PDF (Portable Document Format) for compound documents.

For both the search and retrieval capability and the audit capability, the system must:

- Be able to crawl and index structured data headers located on participant servers.

- Be able to crawl and index formatted text (e.g., ASCII, Word, WordPerfect, PDF) found on participant machines that complies with US.ISO_8859-1 and provides a searchable full text representation of the document.

- Utilize non-interactive web "crawlers" when canvassing participant collections.

- Be configured with hardware sufficient to store and serve all information, e.g., sufficient disk storage, RAM (Random Access Memory), processing power, network interface, etc. at estimated usage levels, and to be easily upgradable, should estimates fail to adequately characterize usage. Concurrent usage is estimated at 150 users during peak periods. In addition, significant spikes in general public usage may occur as a result of license hearing publicity (e.g., articles in the Washington Post). In some cases, it may be necessary to limit access to only the priority users.

- Be configured with software, licensed at sufficient levels, to store and serve all documentary and associated materials, e.g. networking-capable operating system, web server software, HTML authoring and site maintenance software, database server, etc. at anticipated usage levels.

- Be designed to maintain the integrity of the collection and provide for timely recovery in the event of a hardware or software failure with complete restoration of the site within the parameters of the participant's disaster recovery plan.

- Be designed to maintain the security of the collection and the system itself including the ability to deny unauthorized access or update privileges, detect and defeat compromise attempts, and defend against denial of service attempts.
- The system design and configuration must be fully documented to preserve operational capabilities over staff transitions.

- Documentation must be prepared and published on the web site describing how to use the features of the web site, specifically the search and retrieval functions.

Detailed functional requirements for the system implementation shall be agreed upon and documented during the design phase.

3.1 Task 1: Design Phase

Immediately upon commencement of the design phase, the contractor will be provided with background documentation including documentation developed by the NRC contractor during the project approval phase and other materials provided by the NRC project officer. These materials will identify the scope, and initial functional and data requirements, and provide an analysis of alternative solutions. The contractor will compile those materials and shall deliver a ***Project Definition and Analysis Document (PDAD)*** document to demonstrate their understanding of the functional and data requirements, alternative approaches considered, and the nature of problems to be addressed in connecting legacy and to-be-developed systems by the participants. The contractor shall develop an overall system operations concept to be included with this document.

Once the contractor has demonstrated an understanding of the system design objectives, the contractor shall develop a ***Project Action Plan*** for NRC review and acceptance. This document must address both an overall project management plan, and a software development plan. Upon NRC review and acceptance, the contractor shall commence formal system design and shall deliver both a formal ***Logical Design Document***, and, a ***Physical Design Document***. These documents will contribute to the selection of appropriate tools to be used in the implementation phase. Products to be developed during the course of the design phase shall include, if and as appropriate to a Package-Based Life-Cycle Model, the following elements:

- Data Model
- Process Model
- Context Diagram
- Data Flow Diagram

- Data Dictionary
- User Interface Designs
- External Systems Interface Diagrams (with Processes, External Agents, External Interfaces, etc.)

The above noted elements may be developed as separate products or as sections of the ***Logical Design Document*** and the ***Physical Design Document***, depending on the contractor's proposed implementation schedule. However, each of these final documentary products shall be included as a tabbed section in the PDAD. Each of these documents shall, as needed, be updated throughout the design and implementation phases.

The contractor shall utilize the information contained in the physical and logical design documents to develop an overall deployment plan entitled the ***Tactical Integration Plan***. This deliverable must present an overall deployment plan including roles and responsibilities, schedules, risk mitigation for products and for integration difficulties, and must address the sequence and resources that will be applied to linking the LSN to other participant systems.

3.1.1 Design Controls

During the design phase of the project, the contractor will be required to establish a requirements map to the specific recommended COTS implementation of the requirement. The mapping will identify the different instances of each requirement and the ways the operation is implemented, when appropriate. The purpose of this mapping will be to ensure that all requirements are met with the products as is, or by tailoring or customization. The contractor may propose development management tools (such as those from Rational Software Corporation, for example) where appropriate.

During the design phase of the project, the contractor will be required to establish a configuration management capability (e.g., software/procedures) compatible with the configuration management plan that will be provided by the government. The configuration management plan is based on Chapter 5, "Configuration Management" of the SDLCM. Any system changes to satisfy the requirements will be entered into the configuration management system.

3.1.2 Design Consultation with Participants

Travel to consult with participant organizations during the design phase will be required. Trips to Las Vegas to meet with technical representatives of participant organizations

shall be scheduled so as to maximize the number of participants attending (e.g., not meet with each participant individually). The participants include:

- U.S. Department of Energy, Office of Civilian Radioactive Waste Management
- U.S. Nuclear Regulatory Commission
- State of Nevada
- Nye County, NV
- Tribal Interests/National Congress of American Indians (NCAI)
- Industry Coalition/Nuclear Energy Institute (NEI)
- Public/Nevada Nuclear Waste Task Force (NNWTF)

- Affected Units of Local Government (AULG):
  - Clark County, NV
  - Churchill County, NV
  - Esmerelda County, NV
  - Eureka County, NV
  - Inyo County, CA
  - Lander County, NV
  - Lincoln County, NV
  - Mineral County, NV
  - White Pine County, NV

Planning for and coordinating the trips shall be performed in close coordination with the NRC project task officer.

3.1.3 Design Review

The design review shall be scheduled so as to represent the completion of the design effort and delivery to the NRC of final drafts of the ***Physical Design Document***, the ***Logical Design Document***, and the ***Tactical Integration Plan***. The contractor shall present the comprehensive LSN design to the NRC in a formal design walkthrough session. The contractor shall prepare a design review program and present the results of all activities, findings, and products developed during the design phase of the LSN effort. A general outline and agenda covering the topics for each session shall be provided to the government at least one week prior to the start of the Design review.

The design walkthrough must include complete budget projections for tools, technologies, communications, network, personnel and other resources required for the implementation phase of LSN development.

The contractor is responsible for promptly incorporating the results of NRC's reviews of deliverables and issuing final versions of those documents per guidance in NRC's SDLCM.

Upon timely completion of NRC's review and approval of the walkthrough and budget estimates, the contractor will be formally notified by the Contracting Officer of authorization to commence Task 2: Implementation.

3.1.4 Order Hardware and Software for Implementation

The contractor shall be responsible for providing the hardware, software, infrastructure and other support needed for the Implementation of the LSN. In order to ensure timely availability of the resources needed to commence implementation, the contractor must address how it intends to ensure that orders are placed for needed resources as early in the design phase as practicable.

3.2 Task 2: Implementation

The objectives of Task 2 are to:

- Perform software and system engineering and deliver production release versions of the LSN software until deployment to all users is accomplished.
- Develop comprehensive training materials.
- Perform product testing and acceptance.
- Elicit customer acceptance of all critical products and deliverables, and achieve authorization to move from the engineering phase to the deployment phase.
- Roll out the integrated solution.

The contractor shall implement the system approved by the NRC project officer at the completion of the design phase. The contractor's implementation shall establish the infrastructure needed to support this application. This includes servers, other hardware, operating system and applications software, telecommunications capabilities, and facilities allocated to supporting this application. The overall system to be delivered includes, but is not limited to, the following capabilities:

LSN Portal (Homepage) - This will provide licensing participants, public, and other interested parties portal entrance for all LSN information. Users will issue searches on document bibliographic data (fields) or text (content) using a single interface. If a document is requested by the user, the LSN will allow the user to view the document text or image (if image is made available by the participant). The object files (text, and image if available) will remain on the participant machines for delivery to users upon request for viewing. In addition, users will be able to gain access (hyperlink, for example) to other LSN components (EIE or Docket) or other pertinent information from the LSN portal.

Data retrieval element -- This element will consist of one or more programs that will routinely "rove" participant sites, identify and characterize textual and structured data found at those sites, and return the data to the LSN Portal and audit system for indexing. The object files themselves (e.g., text and image files) will remain on participant machines.

Audit element -- This element will consist of one or more programs that will evaluate the status of documents (current) versus the characterization of what was initially/previously placed on one of the participant sites (baseline). The objective is to establish a capability to ensure that one a document is placed on line, that any change to a textual document, image file, or to its associated structured data header is identified to the LSNA for investigation as to the circumstances of the change.

Data storage -- This element is responsible for storing both data to be processed and the results of that processing. Both file system storage and database storage will be accommodated. The database will be a network-capable SQL relational database that will provide structured data to both the data retrieval element and the compliance element.

Data processing -- This element will process the data retrieved, store the results of the processing, and generate the required reports. This includes hardware and software resources processing baseline characteristics for the audit component and the overall

performance metrics for system assuredness, analysis of that information, and processing that information so that it may be output to useful management reports on a daily basis.

Data presentation and reporting tool -- This element consists of several programs that process report outputs and assist a user in specification of on-demand reports.

System assuredness tools -- This element provides a level of assuredness that the systems the LSN is housed on are functioning as required. There are several main sub-elements:

Security mechanisms -- Security sub-elements include a firewall or firewall software, secure remote administration software, and intrusion detection software.

Network/configuration monitoring and management -- This sub-element monitors hardware and software and reports outages or sub-optimal operation. It also gathers low-level statistics on network operation for trend and throughput analysis.

Physical plant and reliability mechanisms -- This sub-element provides appropriate environmental and power conditioning and implements disaster recovery mechanisms, e.g., a backup/restore capability.

In addition to these core capabilities, the contractor must provide development tools for creation of the web page presence compatible with the portal recommended for use in the LSN implementation.

3.2.1 Engineering the Solution

Before commencing software engineering, the contractor shall develop a ***Software Development Plan*** for inclusion into the ***Project Action Plan***. The ***Software Development Plan*** will detail the activities and schedules for designing, coding, integrating, and testing the COTS and developed software modules to provide the full functionality of the software for the project. Upon NRC review and approval of this ***Software Development Plan***, the contractor may commence software engineering activities.

Based on the updated PDAD, the design documents, and the results of the walkthrough sessions, the contractor shall develop the system engineering solution that integrates all the operational capabilities. The preferable engineering solution will be a system architecture that emphasizes the use of off-the-shelf solutions that can be modified and installed and requires minimal changes to custom coding with subsequent COTS releases.

In creating all core and support processes, the contractor shall perform software development and integration. The software shall meet the functional and performance specifications agreed upon as a result of the design review sessions noted above.

During this phase, the contractor shall adhere to its chosen software development methodology for managing the creation of software units, modules, and subsystem components. Throughout the process of code development, the contractor shall maintain ongoing documentation in the form of a ***Software Engineering Notebook*** (equivalent to systems documentation file) which will become part of the overall system documentation. As a logical check, during the

performance of this activity, the contractor shall revisit the data models, physical models, logical models and ERDs to ensure that any variances that occur during code development are identified, resolved, or documented as needed.

The outputs of this task will be solution modules and subsystem components which are ready for testing, and the deliverable will be a thorough and complete ***Software Engineering Notebook*** which will be added to the system documentation library developed an maintained by the contractor. The government will require delivery of the system documentation library at the close of the contract effort.

3.2.2 Build the Solutions

3.2.2.1 Audit and Search & Retrieval

Using the design materials noted above, the contractor shall establish the LSN search and retrieval and audit components of the system. The contractor will be responsible for all activities associated with system development including, but not limited to, building the database structure, associated tables, validation routines, and data dictionaries needed for fully functional search and retrieval via the portal site and for an audit system that monitors the addition, deletion, and modification of files stored on participants' servers. The contractor shall develop additional program code, as necessary, with the understanding that customization of underlying database and portal application packages should be minimized. The contractor shall be responsible for all integration activities including, but not limited to, the integration of software units into software modules, integrating modules into subsystems and systems, and integrating those systems with the network comprised of the identified external participants. The contractor shall prioritize connections to participant systems by developing external systems interfaces first to the NRC ADAMS collection, then the DOE collection, then a volunteer AULG site (TBD) and then the remaining participant sites.

The deliverable product for this task is an installed software Production Release 1.0, reflecting requirements of the core functionality. Subsequent release versions may be necessary during the deployment phase, until such time as deployment is complete and the system transitioned for routine maintenance and operations. Product releases shall be maintained under a configuration management system. The target date for Production Release 1.0 is per Section 5.0, Schedule of Deliverables.

As an incremental step to full system deployment, the contractor shall establish and open the LSN URL to participants and public. A brief statement (e.g. site under construction) shall be posted and additional informational updates shall be made by the contractor until the site becomes fully operational.

3.2.2.2 Backup and Recovery Systems

Using the design materials noted above, the contractor shall establish the LSN backup and recovery components of the system. The contractor will be responsible for all activities associated with system development needed for fully accomplishing routine backup and re-establishment of functional search and retrieval via the portal site and for an audit system that monitors the addition, deletion, and modification of files stored on participants' servers. As with the development of the core capabilities, the contractor shall develop additional program code

for backup and recovery operations, as necessary, with the understanding that customization of underlying packages for this capability should be minimized. The contractor shall be responsible for all integration activities including, but not limited to, the integration of software units into software modules, integrating modules into subsystems and systems, and integrating those systems with the primary operational configuration.

Backup and recovery systems shall be fully addressed in all design and engineering documentation. Documentation for computer operations and maintenance shall provide full coverage for all backup and recovery activities. Operator training plans shall also include coverage for these capabilities.

3.2.3 Training

3.2.3.1 Training Plan

The contractor shall develop a comprehensive training and support program that addresses all facets of system administration with specialized modules for technical and operations staff, and that meets generally accepted end user training requirements for instruction on the software suite of products. The contractors' plan should anticipate that two contractor and two Federal staff will require operational training for the search & retrieval and audit components of the system. The training program plan must address provision of formal classroom instruction, self-paced training, and computer-based instruction. The training plan and developed products (written instructional materials with screen views for instructor-led sessions, and computer-based courseware with icon flowcharts and instruction dialogue boxes) must address accessibility for visually- and hearing-impaired personnel (or waivers therefrom; ref. Section 508 of the Rehabilitation Act).

The contractor shall address provision of training for external users via a Federal staff who will be utilizing the CD-ROM tutorial products discussed below.

The deliverable for this task is a ***Draft LSN Training Plan (Technical and End User)*** which shall be submitted to the government for review and approval. The contractor shall incorporate the government's comments and then produce a ***Final LSN Training Plan (Technical and End User)***.

3.2.3.2 On-Line Help System and Tutorials

To augment the Help features already incorporated in core software and desktop products, the contractor shall perform software development and integration of tailored on-line help and off-line tutorial products. For the portal application, help features shall include software feature descriptions, function and process descriptions, "wizards," and other tools which will assist users in using the LSN. The scope of these help features is intended to augment existing features that may already come with software packages and new features should only be developed for features of the LSN portal site which result from code development and extensions beyond those found in the native products. For the audit application, additional online help feature development should be kept to a minimum but should be fully documented in the system documentation.

A single tutorial product covering LSN access, search and retrieval capabilities, pointers for downloading and printing, etc., shall be developed. The tutorial product may be developed for delivery via CD-ROM technologies, the LSN portal site, or other means approved by the NRC. Tutorial content should be structured such that any given "chapter" could be used in a standalone mode. For example, librarians in the Nevada State Library and Archives system or members of the general public may want to skip past sections on desktop customization because they will not be provided with those options, whereas participants' legal, licensing, and technical staff who are "priority users" may be afforded the opportunity to tailor their desktops and would need that section of the tutorial.

Code for the help and tutorial products shall be included in the system documentation to be delivered as described elsewhere in this statement of work. (e.g., as a section in design documentation, in the Engineering Notebook, as a section in the Software Test Plan, Test Results, etc.)

Additionally, all tutorial and on-line products shall be fully incorporated in the user and system administration training documentation.

The deliverable products for this task are: (1) the fully integrated code to invoke these help features and tutorials, (2) the narrative explanations to be contained in the help windows, dialog boxes, pull-downs, pop-ups and any other interface presentations to the user, and (3) the documentation for these capabilities as provided for users and system administrators and detailed elsewhere in this statement of work.

As a deliverable, the contractor shall deliver a pre-master version or on-line demonstration of the ***LSN Tutorial*** for the review and approval by the government prior to production. For the CD-ROM use as a delivery mechanism, the deliverable product shall include 750 prints of an ***LSN Tutorial CD***.

3.2.4 Integration with NRC's Electronic Docket and EIE Capabilities

The contractor shall establish links from the LSN portal site to NRC's electronic docket file for the HLW repository licensing located on an Agency external server. Current user access to the docket is provided to users via CITRIX™. The repository is established as a FileNet application.

The contractor shall also establish a link to the NRC homepage where information and downloadable software can be found for individuals wishing to submit electronic versions of documents to NRC (NRC's Electronic Information Exchange program).

3.2.5 Code and Integration Testing

The contractor shall implement a methodology for performing unit, module, and system testing during the course of development. Testing shall be performed by the contractor following an established software quality assurance methodology of the contractor's choosing, contingent on approval of the NRC's approval of the recommended methodology.

The contractor shall perform integration testing on each participant system connected to ensure that the site can be successfully crawled, indexed, and can respond to the LSN users' request

for delivery of text, image, or structured data files in response to queries. The testing will also validate that data on the participant site can be baselined, and that changed data can be identified by the LSN software.

Testing will also validate that audit software is capable of aggregating, sorting, cross-cutting, and otherwise manipulating site data, participant server statistics, etc.

Testing will also validate that report software can be exercised against the stored data and indexes to generate summary reports for management review as well as for search and retrieval user output.

3.2.6 Requirements Testing

The contractor shall create an ***LSN Test Plan*** per guidance provided in the SDLCM to use prior to delivering the system to the NRC. Each requirement will be tested in the product suite prior to delivery to NRC for government acceptance testing. The process flows and concept of operations reflected in the design documentation will be used to define test scenarios to ensure that the requirements can be satisfied in the normal progress of work. The ***LSN Test Plan*** must address testing of the backup and recovery capabilities under at least two scenarios: a partial recovery and a complete rebuild/recovery.

The NRC will subject the completed system to its own System Test and Acceptance Methodology prior to accepting delivery of the product. All hardware and software components will be tested against the defined functional requirements. The government will implement detailed code review against developed code, scripts, CGIs, etc. Detailed code review will not be routinely performed against the "out-of-the-box" functionality of packaged software (operating system, RDBMS, portal application) unless customization (previously identified by the contractor and approved by the government at the design review) is performed by the contractor on the software packages.

After NRC acceptance testing has been completed and required changes have been addressed by the contractor, the contractor shall present a readiness review session with NRC and present the results of all activities, findings, and products developed during the engineering phase. The readiness review shall be scheduled immediately upon the completion of the Engineering phase. The readiness review should group topics as logically as possible to facilitate comprehensive yet succinct issue coverage. Based on a successful review, NRC will issue a go/no go decision on deployment.

3.2.6.1 Test Report

The contractor shall develop and deliver an overall test report document to cover unit, module, subsystem and overall system integration testing. Actual testing reports may be generated at any of the levels addressed (ex., Test Report chapters 1, 2 & 3 for the results of unit, module, and subsystem testing, chapters 4 & 5 for the results of system testing and final acceptance testing), but the contractor shall document the comprehensive findings in a single document. The results of the tests, and analysis performed on them, remediation, work-arounds, unresolved issues, and enhancements recommended for future releases shall all be documented in a report entitled ***LSN Comprehensive Software & System Test Results***.

The output products of this task are fully tested software modules and subsystems which are stored in the software configuration library and the deliverable is the ***LSN Comprehensive Software & System Test Results***.

3.2.7 Deployment

3.2.7.1 Deployment Preparation

As a result of efforts during the Design phase, the following documentation requirements will have already been met and form the basis of the LSN documentation archive:

- Project Definition and Analysis Documents (Software Requirement Specification portion)
- Tactical Integration Plan (including overall deployment plan)
- Logical Design Document
- Physical Design Document
- Software Development Plan

During the Software Engineering phase, the following key documents identified in the SDLCM will have been developed:

- Software Development Plan
- Software Engineering Notebook
- Test Plan
- LSN Comprehensive Software and System Test Results

Prior to commencing the deployment of the LSN, the contractor shall develop an ***LSN Operational Support Guide*** which covers the key areas of Operations responsibilities for both the Search & Retrieval and Audit components of the system. This documentation will be provided to the system operators during the Operations and Maintenance phase of this contract. Therefore, this guide should be comprehensive and should be comprised of four volumes organized as:

Volume I: LSN Operations Guide & Procedures
Volume II: LSN Software Management Guide
Volume III: LSN Hardware Management Guide
Volume IV: LSN Performance Management Guide

In Volume I: LSN Operations Guide & Procedures, the contractor shall include information about the system environment, including, but not limited to: (1) identification of the software sponsor, developer, and user organization; (2) the Data Center where the software is installed; (3) communications information, such as TCP/IP information, host names, IP addresses, LP(printers). It should contain specific operational procedures, checklists and commentaries with coverage for:

A. Application on line (Start Up)
B. Application off line (Shut Down)

C. System Restart/Recovery
D. Application Restart/Recovery
E. Backups
   - schedule
   - retention
   - labeling-automatic
   - procedures

F. Backup problems
   - primary POC
   - backup POC
   - timeouts
   - alternate procedures

G. Console
   - console/physical/automated requirements
   - error messages
   - operator actions
   - log file

In Volume II: LSN Software Management Guide, the contractor should include coverage for information and procedures for software maintenance required. This volume should include detailed configuration information on (1) the number and name of logical disk drives; (2) the logical file system and how mounted; (3) a brief description of what is in the directories; (4) the location of proprietary software, application programs, user directories, backup files (5) licensed program products and proprietary software (6) system scripts (self documenting) and their directory location; (7) application scripts; and (8) chron jobs. It should additionally cover:

A. Core COTS Administration Guides
B. Developed Code Documentation
C. Other Maintenance Utilities
D. Software (system, DBMS, or application) Problems
E. Application Software Operational Procedures
F. Job Registry (if necessary)
   - job name, identification & purpose
   - programs executed per job
   - stream control statements needed for each job process
G. Job Operating Requirements (if necessary)
   - job progressions per process
   - job process time and turnaround time estimates
H. Input-Output
   - file information, name, label
   - recording media
   - retention schedule and disposition of files
   - print, output & distribution information

In Volume III: LSN Hardware Management Guide, the contractor should include coverage for information and procedures for system maintenance required. This volume should include detailed configuration information including: (1) a complete list of hardware purchased, including model number, (2) a hardware resource list; and (3) the number and name of physical disk drives. It should additionally cover:

A. Hardware Configurations
B. Manufacturer's Information
   - specifications
   - operating procedures
   - error indicators
   - problems
   - console/physical/automated requirements
   - error messages
   - operator actions
   - log file

In Volume IV: LSN Performance Management Guide, the contractor should include coverage for:

A. Performance Monitoring
   - requirements

Each operational task should be documented in a set of detailed procedures. Examples of existing procedures will be provided. The deliverable product for this task is four copies (two for HQ and two for the operational site) of the four volume set of ***LSN Operational Support Guide***.

3.2.7.2 Rollout Plan

The contractor shall address the above elements and other key decisions reached during the Design review and develop a comprehensive rollout strategy identifying contingencies to other systems integration, labor and other resources, timing, sequence and schedules, and any other contingencies and ensure these items are incorporated in the rollout plan. Additionally the contractor shall address how these elements and key decisions are integrated across the entire deployment phase. This information shall be delivered in a document entitled ***LSN Rollout Plan.*** The deployment plan should include the overall strategy for deploying the solution, including identification of target users, planned release version contents, verification of required infrastructure upgrades having been accomplished, and, development of a final installation schedule.

The contractor shall create a rollout strategy that addresses the locations and organizations that will be accessed by the LSN. Additionally, the rollout strategy shall address target users who will go to the LSN with information requests. The rollout strategy document shall be included as a tab section and be included in the TIP.

The contractor shall provide descriptions of the products being introduced into the NRC toolkit environment so that they may be reviewed and approved by the NRC toolkit committee prior to the system going operational. A toolkit request document is usually one to three pages per product being introduced.

3.2.7.3 User Guide

The contractor shall develop a ***Draft LSN User Guide*** in paper-based media containing all the instructional materials included in the CD-ROM tutorial, noted elsewhere in this statement of work.

Upon government review and approval of the draft version of the guide, the contractor will finalize the product and deliver the final ***LSN User Guide***.

At a minimum, the User Guide should address user installation instructions, if any, that would be needed by an internet based user. It should also provide a user training and orientation plan and instructions for the use of online help and tutorials.

3.2.7.4 Install

The contractor shall be responsible for accomplishing tasks necessary to install hardware, software, and establish connectivity to make the system operational. NRC anticipates that the hardware, software, and other infrastructure arrangements that will be used for system operations will be the resources used for system development.

Installation activities shall include the delivery of two complete sets of all engineering, operations, and user guide documentation to the operators of the system. The contractor will be responsible for providing training to the operations and maintenance personnel in both hardware and software operations.

3.2.7.5 Train users

NRC staff will assume responsibility for delivering training to end users utilizing the tutorial CD and User Guide materials developed under this contract and delivered to the government.

3.2.7.6 Announce System Availability

NRC staff will assume responsibility for announcing system availability to the participants.

3.2.8 Update PDAD and TIP

The contractor shall update the previously created PDAD and TIP documentation with the products, decisions, and documentation developed under the Task 2: Development.

3.2.9 Operational Readiness Review

The contractor shall prepare a design review program and present the results of all activities, findings, and products developed during the implementation phase of the LSN effort. The readiness review shall be conducted at the completion of the implementation phase. A general outline and agenda covering the topics for each session shall be provided to the government at least one week prior to the start of the Operational Readiness Review.

The operational readiness review must include complete budget projections for all hardware maintenance and replacement schedules, software licenses and upgrade schedules, communications, network, personnel, and other recurring costs required for the operational phase of the LSN. Upon timely completion of NRC's review and approval of the readiness review and budget estimates, the contractor will be formally notified by the Contracting Officer of authorization to commence Task 3: Operations and Maintenance.

The contractor is responsible for promptly incorporating the results of NRC's reviews of deliverables and issuing final versions of those documents in accordance with NRC's SDLCM.

3.3 Task 3: Operations and Maintenance

Under this task area, the contractor shall transition the implemented system to an operational mode. The objectives of this task are to:

- Transition from development environment to operational environment.
- Perform problem fixes and minor enhancements to the operational product.
- Provide configuration management in support of release-based maintenance.
- Perform emergency maintenance and support for system recovery.
- Provide the ability to integrate late-coming parties (if required).

3.3.1 Transition

3.3.2 Operational Maintenance

The contractor shall provide general (release-based and emergency) maintenance support of the LSN application software, files and databases, and all associated backup and recovery subsystems, as defined by the NRC's System Development and Life-Cycle Methodology (SDLCM). Overall project management and chairmanship of the Configuration Control Board shall be provided by NRC's task manager.

The contractor shall provide operational support for the LSN Search & Retrieval and Audit components, and for all associated backup and recovery subsystems, including scheduled reviews, subsequent to participant sites being "crawled" and the LSN indexes being updated. The contractor shall monitor the LSN every business day, to ensure correct, stable and efficient operation of the system, including, but not limited to: (1) verifying system operation; (2) checking the status of transaction and index updates resulting from scheduled "crawls" of participant sites; and (3) reviewing, on a daily basis, the operational reports and logs. On a scheduled basis (at least monthly), the contractor shall check the size, growth, space utilization, and integrity of the underlying RDBMS tables, control-point directories, and database structures, and perform other diagnostic routines, as outlined in the ***LSN Operational Support Guide.*** The contractor shall administer user IDs and user access levels per requirements engendered in the overall design concept. The contractor shall provide response to questions from database administrators of the participants' collections regarding LSN computer systems, database, directories, problem reports, problem notifications, and status reporting, as directed by the NRC task manager.

When LSN maintenance and operational support responsibilities result in the discovery of an actual or potential LSN problem that needs to be diagnosed and/or corrected, or when database monitoring identifies a database change that is needed, the contractor shall promptly notify the NRC task manager via phone (and/or pager) and e-mail. The contractor shall provide resources to perform an ad hoc analysis of the LSN application code, scripts, agents, and database tables in response to technical questions from the NRC task manager. The contractor should anticipate staffing levels of support consistent with the ***LSN Operational Support Guide.***

The contractor shall make routine and ad hoc preventive and corrective changes to the LSN databases as requested or approved by the NRC task manager. In general, the changes shall either be to crawlers, scripts, agents, the database structures and/or data definitions, or shall be for the purpose of correcting data in the databases. Additionally, the contractor should anticipate routine and corrective maintenance activities such as resizing the database,

performing diagnostics on data in the database, running maintenance and backup jobs, etc. In addition to the resources allocated to support efforts outlined in the ***LSN Operational Support Guide***, the contractor should anticipate two instances of preventive and/or corrective changes to the databases per calendar month.

3.3.3 Change Management and Release Management

Using the Configuration Management capability established during the design phase (Section 3.1.1), the contractor shall establish a formal Change Management procedure to control, track, and report changes being proposed for or made to the delivered production release. The contractor and the government shall utilize the approved change management procedures as part of the overall Configuration Management approach. Change Management shall adhere to NRC's System Development Life Cycle Methodology procedures and guidelines as detailed in Component 6 of the SDLCM Handbook, Version 2.2. Change requests shall be submitted to the contractor by the NRC task manager before analysis is performed. The contractor shall act upon them according to the priority assigned by the NRC task manager. The contractor shall not engage in any work that would be classified as enhancement, according to the definition in the SDLCM without specific authorization of the task manager.

The contractor shall provide release-based maintenance support of the LSN application software, files and databases, and all associated backup and recovery subsystems. Under release management, the contractor shall take a defined release, plan the release, and manage changes to the release during the case of its development, or, in the case of COTS version releases, during its implementation. The contractor should anticipate that the NRC task manager will strive to limit version releases to no more than one per fiscal year, insofar as the change management process can identify and aggregate identified and approved releases amenable to packaging in a single release.

3.3.4 Emergency Maintenance

When LSN maintenance and operational support responsibilities result in the discovery of an actual or potential LSN problem that needs to be diagnosed and/or corrected, or when database monitoring identifies a database change that is needed, the contractor shall promptly notify the NRC task manager via phone (and/or pager) and e-mail. The contractor shall provide resources to respond to urgent LSN application problems. For urgent LSN application problems, on-call support is required between 6:00 am (Eastern) and 12:00 midnight (Eastern). This on-call support may be provided by a contact person supplied with a NRC-supplied beeper. The contact person shall be augmented by individuals available to perform analysis or take corrective action as discussed below. For urgent application problems that require immediate analysis or corrective/preventive action, the contractor may spend up to a maximum of four hours of effort without prior approval from the NRC task manager using a pre-authorized baseline of support hours designated for emergency maintenance. Emergency corrective efforts requiring more than four hours shall be authorized via e-mail by the NRC task manager. The contractor should anticipate that the baseline support effort will be comprised of an average of 3 problems per month, each problem requiring from 4 to 16 hours of effort. The contractor should anticipate that the baseline support effort will be comprised of two events per fiscal year which result in the need for rebuild-from-backup.

3.3.5 Additional Participant Integration

The contractor should have the capability to integrate additional participants as necessary into the LSN. The contractor should anticipate that one additional participant will be integrated in FY2002. For estimating purposes, the number of documents to be collected from this site is approximately 12,000 pages per year.

3.4 Reporting

3.4.1 Weekly Reports and Meetings

The contractor shall provide weekly Activity Reports to include any exceptions or changes from the existing plans. The weekly report will be delivered by Tuesday COB for review prior to a regular Wednesday Project Meeting. The weekly will include a proposed agenda for the meeting to cover management issues and any technical issues that would impact schedule, cost, or technical risk.

3.4.2 Project Management Plan

The contractor shall submit a detailed ***Project Management Plan*** to cover the tasks under each of the above noted Tasks. The plan will show tasking and subtasking, milestones, labor categories and/or staff assigned and the projected number of hours estimated to complete each task/subtask by staff member. This plan will be maintained in Microsoft Project® 4.0 format. This plan will be progressed at the above level of detail on a monthly basis for the duration of the task order. The ***Project Management Plan*** will also include dollars by labor category/assigned personnel which will support the contractor's estimate for each task order executed under this contract.

3.4.3 Monthly Reports

The contractor shall provide a monthly status report that covers a larger scope of review than the weeklies. Each monthly will include updates to the ***Project Management Plan*** (Work Breakdown Schedule) listing the reasons for changes, proposed adjustments and justification, cost and schedule impacts. The ***Project Management Plan*** developed under task 3.4.2 will be progressed with the latest hours/costs and submitted as part of the monthly report. If at any time the project deviates from 5% in cost or schedule from the project management plan, the contractor shall schedule an update with the NRC task manager.

4. PERIOD OF PERFORMANCE

For FY 2001, the performance goals and metrics associated with establishing initial LSN capability are to:

- Establish the LSN homepage.
- Connect the LSN homepage with the NRC document collection.
- Connect the LSN homepage with the DOE document collection.
- Confirm ability to link the LSN homepage with NRC's external ADAMS hearing docket.
- Confirm ability to the NRC's EIE system.

- Establish the LSN audit capability.

For FY 2002, the performance goals and metrics are to:

- Connect the LSN homepage with the remaining parties.
- Activate Linkage between LSN homepage and NRC's external ADAMS docket for the high-level waste repository licensing proceeding.
- Provide routine reports generated from the LSN audit capability.
- Provide website availability to exceed 99% of scheduled uptime.

For FY 2003 through FY 2006, the performance goals and metrics are:

- Monitor the integrity of participant collections and provide routine reports generated from the LSN audit capability.
- Provide website availability to meet or exceed 99% of scheduled uptime.
- Not add more than 11 calendar days to the three-year licensing process due to system non-availability.

4.1 Task 1 - Period of Performance

The period of performance for the Design task commences immediately upon award of this task order. The government's current implementation schedule anticipates that the design phase for search and retrieval subsystem, and associated backup and recovery, will conclude no later than October 9, 2000. The implementation schedule anticipates that the design phase for the audit subsystem, and associated backup and recovery, will conclude no later than October 11, 2000.

4.2 Task 2 - Period of Performance

The contractor shall commence the Design Phase of the project immediately upon receipt of the government's notification that all issues identified during the design reviews have been satisfactorily addressed by the contractor and that funding is available for the Task Order covering the Development Phase. The government's current implementation schedule anticipates integration and code development will commence on or about November 16, 2000, and continue through July 2001.

4.3 Task 3 - Period of Performance

The period of performance of system operations and maintenance begins with the date upon which the government declares the system operational (currently projected in July 2001) and continues through the end of FY 2002 (e.g., September 30, 2002). The government may exercise a series of one year extensions with the contractor(s), assuming continued satisfactory performance, through the end of FY 2005.

5. SCHEDULE OF DELIVERABLES (Project Start 10/2/00)

Task Element	Description	Due Date
3.1	Project Action Plan (PAP)	10/11/2000
3.1	Project Definition and Analysis Document (PDAD)	10/20/2000
3.1	Logical Design Document	11/27/2000
3.1	Physical Design Document	12/11/2000
3.1	Tactical Integration Plan (TIP)	12/14/2000
3.1.3	Design Review Agenda	12/14/2000
3.1.3	Design Review	12/21/2000
3.2.1	Software Development Plan (part of PAP)	12/14/2000
3.2.1	Software Engineering Notebook	7/31/2001
3.2.2	Open LSN URL to participants and public	2/22/2001
3.2.2	**Production Release 1.0**	**7/31/2001**
3.2.3.1	Draft LSN Training Plan (Technical and End User)	1/16/2001
3.2.3.1	Final LSN Training Plan (Technical and End User)	6/18/2001
3.2.3.2	Deliver LSN Tutorial	7/3/2001
3.2.6	Draft LSN Test Plan	1/29/2001
3.2.6	Final LSN Test Plan	3/12/2001
3.2.6.1	LSN Comprehensive Software & System Test Results	6/28/2001
3.2.7.1	LSN Operational Support Guide	5/29/2001
3.2.7.2	LSN Rollout Plan	5/8/2001
3.2.7.3	Draft LSN User Guide	5/11/2001
3.2.7.3	LSN User Guide	7/3/2001
3.4.1	Weekly Project Activity Report	Each Wednesday
3.4.3	Monthly Progress Report	Last government work day of each calendar month

6.0 PERSONNEL

Key staff positions are:

- Project Manager

- Task Area Leads for Each Task Area
- Senior Analyst
- Senior Software Engineer
- Senior Database Analyst

Qualifications for the individuals providing support are as stated in the Schedule Contract.

APPENDIX A

SUPPLEMENTAL BACKGROUND INFORMATION

1. Mission Need

Section 114 (d) (2) of the Nuclear Waste Policy Act of 1982 (NWPA) requires the Commission to issue a final decision approving or disapproving issuance of the construction authorization for a mined geologic repository to store high-level radioactive waste at Yucca Mountain, NV, within three years of the U.S. Department of Energy (DOE) license application. The LSN is a critical tool to ensure that document access, and the associated hearing agenda, can all be handled in an expeditious manner. As outlined in 10 CFR Part 2, Subpart J, it will establish a system to provide shared document discovery and facilitate electronic motions practice for the hearings on DOE's license application for the repository.

2. NRC's Preliminary Benchmarking Results

The objective of the LSN is to facilitate the NRC's ability to comply with the schedule for decision on the repository construction authorization, to provide an electronic environment that facilitates a thorough technical review of relevant documentary material, and to ensure equitable access to the information for the parties to the hearing. Preliminary technology investigation and evaluation has been conducted with the objective of finding:

- relatively sophisticated search and retrieval software solutions
- that are web-based
- covering diverse collections of technical documentation
- that have been made uniformly accessible
- in a cost efficient, ***minimally-customized*** way
- with an interface that is easy to use.

Background research immediately identified existing DOE systems that provided web-based access to diverse legacy documentary collections via a uniform user interface. The first location identified was the newly developed portal site to the DOE's Office of Scientific and Technical Information (OSTI). Subsequent to identifying this location, another DOE organization - Environmental Safety & Health (ES&H) - was located which also utilized a portal software application.

Benchmarking was not performed against LSN's requirements for electronic document exchange because of our intention to rely on NRC's EIE infrastructure. Similarly, benchmarking was not performed against the requirements for making an electronic docket available because of our intention to rely on NRC's ADAMS infrastructure. Therefore, while these two elements are a critical part of the LSN, they are outside of the scope of this project.

Review of a participant audit and compliance component was performed by an NRC consultant in support of the LSNA and the TWG's development of candidate architectures. Attributes for this capability include solutions that:

- provide programs that visit Web sites and read their pages and other information to create entries for a search engine index;
- use the hypertext links on each page to discover and read a site's other pages;
- provide programs that then selectively create an index (sometimes called a "catalog") from the pages that have been read;
- are programmable to identify documents at those sites that are new or updated against the maintained index;
- examine other attributes of host server performance such as response time parameters.

The contractor evaluation found that the software required to perform participant site auditing, specifically robots and spiders that would crawl the web and report changes, afforded the following choices:

(1) a bare-bones package, requiring custom software code development to manipulate the raw data gathered into something meaningful, or

2. a package that already had most of this functionality built in.

The projected cost of custom development was far higher than the cost of the enhanced packages.

3. Data Requirements

The data, functional, and infrastructure requirements associated with the LSN are derived from 10 CFR Part 2, Subpart J and also from the essential elements of an automated discovery system, that, in turn, feeds an electronic docket. DOE and NRC must make their materials available on the web beginning 30 days after DOE's submission of its site recommendation to the President of the United States. All other participants must make their documents available 30 days after congressional action on the site recommendation. Implicit in this time line is the need to provide the hardware and software defined by the selected design concept to the extent required to meet the functional requirements.

Data used by the system resides on computer systems to be provided by the participants. It is comprised of structured data bibliographic headers, searchable full text, and images for those documents that are not text searchable. Data requirements for meeting the audit and compliance capability are met using the files and additional metadata characterizations extracted from files on the participant's servers and from usage log files of the participant servers themselves.

Data volume will be a significant factor in determining whether a hardware and software architecture can be judged to be "efficient and effective." High and low data volume estimates are provided on the tables included in APPENDIX A. These charts indicate that there could be significant variation in the number of documents that DOE will make available. However, for the purposes of this project, the contractor should use the high estimate of relevant LSN pages.

4. Docket File Functionality

The LSN is intended to support the hearing process and the NRC resources established for maintaining licensing dockets. The LSN provides no resources to accomplish the docketing process within NRC, but still must provide an easy path (e.g., hyperlink) to the NRC docket (housed in ADAMS).

In its management of the official docket, the Office of the Secretary (SECY) must provide a docket that receives, stores, distributes, and maintains documents. A separate pre-license application docket will provide similar capabilities. In addition to the official docket, there is a requirement to provide a Protective Order File. Moreover, consistent with the original LSS requirements, unavailability of the electronic docket for more than four hours in any day must be communicated back to the Presiding Officer so that the day is not counted in the computation of time. Case management capabilities associated with the docket include transcript and deposition exhibit management.

5. Electronic Information Exchange Functionality

Each participant must utilize a secured, electronic process by which all filings are able to be submitted/received electronically to comply with service requirements.

NRC resources must support motions practice, i.e., the process of formally communicating, submitting, and responding to legal submissions that is conducted between the parties and the Presiding Officer. This is the mechanism whereby all filings are able to be submitted/received electronically. NRC will provide this mechanism -- Electronic Information Exchange (EIE) -- for participants to use for all their motions practice. The NRC also can receive electronically transmitted depositions via EIE and enter them into the docket file. Similarly, the Presiding Officer's issuances and orders will also be transmitted electronically via EIE.

This core capability provides a means to authenticate transmitted files in support of motions practice. NRC has established a separate, agency-wide EIE capability that ensures the integrity of files being transported across the Internet. The LSN site and the participants to the Yucca Mountain licensing proceeding must be able to utilize this existing NRC capability, which is based on PureEdge™ (formerly UWI™) forms and Verisign™ digital signaturing software. The NRC procedure provides a mechanism whereby all filings can to be submitted/received electronically and incorporates password security code techniques as part of the digital signature certificate issuance procedure, including digital signaturing technologies for transmission of documents. The NRC procedure should provide a mechanism to deliver all answers, orders, and decisions in accordance with 10 CFR § 2.1013(c) [e.g., electronically, using a secure process].

6. Participant Commitments

Participants must demonstrate substantial and timely compliance with key Subpart J procedural requirements to be granted party status in the subsequent licensing adjudication. These include requirements that participants follow document and data format standards for providing electronic access and that they follow procedures and standards for motions practice.

Participants also must designate an official responsible for administering their computer system to make their documents available. Section 2.1009 of 10 CFR makes this official responsible

for, among other things, establishing procedures to make that participant's documents available, to ensure that each of the participant's documents has a unique ID, and to train the participant's staff on how to make their documents available. The rule also requires participants to have this designated official certify that procedures have been implemented, that documentary material has been made electronically available, and to update these certifications at 12-month intervals.

DOE, as the applicant, must submit the license application to the docket in electronic form.

7. Policies and Procedures for System Participants and Users

These activities are not covered under this SOW. NRC staff will be directly responsible for the development of policies and procedures associated with system participation and users. NRC will work closely with the LSN contractor to coordinate policies and procedures compatible with the technical solution being implemented.

8. Interfaces With Other Systems

The LSN intrinsically interfaces with participant systems, with the ADAMS electronic docket established to support agency adjudications, and with file transfer mechanisms that will be used to support electronic filings.

Interface With NRC's ADAMS System -- ADAMS makes the agency's publicly available official record material available on an Internet accessible file server and an electronic document management system with structured and unstructured data storage, search, and retrieval capabilities. NRC's high level waste related documents must be identified and aggregated into a directory or library area at that URL location and must be made available. With this need to open the ADAMS external server to a "crawler," detailed technical interaction between the OCIO and LSN integrators will be required.

ADAMS contains, in both its internal/non-web-accessible and externally accessible collection, directory areas dedicated to licensing docket files. The LSN will utilize this capability to meet the docket requirements of 10 CFR Part 2, Subpart J. At a minimum, the docket file location will be the target URL/directory for a uni-directional hot-link from the LSN homepage to provide users with single-click access to the docket.

Interface with NRC's Electronic Information Exchange (EIE) Infrastructure -- NRC's EIE infrastructure will be used to meet secure transmission requirements for motions practice during the licensing proceeding. Little, if any, additional integration is anticipated.

Interface with Participant Systems -- Department of Energy -- The Department of Energy anticipates developing their document access system on a UNIX platform with C2Net's Apache/Stronghold and utilizing Fulcrum as the text search engine.

Interface with Participant Systems -- State of Nevada -- The State of Nevada has not provided information on their automation plans.

Interface with Participant Systems -- Nye County, NV -- Nye County hosts their current website on America On Line (AOL).

Interface with Potential Participant Systems -- Clark County, NV -- Clark County uses Windows NT Server 4.0 (IIS 4) with Infoseek and Excite search engines.

Interface with Potential Participant Systems -- Lincoln County, NV -- Lincoln County uses Windows NT Server 4.0 (IIS 4) with Asp MS Access search engines.

Interface with Potential Participant Systems -- White Pine County, NV -- White Pine County uses Windows NT Server 4.0 (IIS 4) with Asp MS Access search engines.

Interface with Potential Participant Systems -- AULG's on a Shared County Host -- A number of the participant counties have expressed an interest in sharing resources. The platform for this system has not yet been identified.

Interface with NCAI, Industry, Citizen Advocacy Groups --These organizations have not yet identified their intended hardware and software platforms.

Interface with Potential Participant Systems -- It should be anticipated that parties not yet identified will petition to intervene in the licensing proceeding. Once the LSN is established, it will be incumbent upon those participants to conform their system capabilities to those that have been established and made operational in the LSN final configuration.

APPENDIX B

DATA VOLUME HIGH AND LOW ESTIMATES

HIGH ESTIMATE OF RELEVANT LSN PAGES

as of February 15, 2000

Year	DOE Pages/Year	DOE Cumulative	NRC Pages/Year	NRC Cumulative	Others Pages/Year	Others Cumulative	Total Pages Added Yearly	Total Cumulative Relevant Pages
1999		4,000 k[1]		306 k[2]		90 k[3]		4,396 k
2000	440 k	4,440 k	34 k	340 k	9 k	99 k	483 k	4,879 k
2001	488 k	4,928 k	37 k	377 k	10 k	109 k	535 k	5,414 k
2002	887 k	5,815 k	38 k	415 k	11 k	120 k	936 k	6,350 k
2003	1,015 k	6,920 k	77 k	492 k	12 k	132 k	1,194 k	7,544 k
2004	1,245 k	8,165 k	121 k	613 k	13 k	145 k	1,379 k	8,923 k
2005	1,306 k	9,471 k	119 k	732 k	14 k	159 k	1,439 k	10,362 k
2006	1,326 k	10,797 k	43 k	775 k	16 k	175 k	1,385 k	11,747 k
2007	864 k	11,661 k	46 k	821 k	17 k	192 k	927 k	12,674 k
2008	933 k	12,594 k	43 k	864 k	19 k	211 k	995 k	13,669 k
2009	1,008 k	13,602 k	46 k	910 k	21 k	232 k	1,075 k	14,744 k
2010	952 k	14,554 k	57 k	967 k	23 k	255 k	1,032 k	15,776 k

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[1] This estimate assumes that approximately 50% of currently stored DOE program-relevant (~8 million) pages may be relevant to the HLW licensing proceeding in accordance with the definition of "documentary material" in 10 CFR § 2.1001 of the LSN Rule when other participant requests are addressed by the presiding officer. {Note: The previous DOE page estimate to be stored through 1999 was over 7.3 million pages, applying a 50% relevancy factor.} Yearly additions (pages/year) for DOE and NRC are based on the yearly percentage increases used in the previous LSS input estimates. (Milestone date shifts have been taken into account).

[2] It is estimated that there are 18,000 currently stored NRC program-relevant documents with an average of 17 pages per document. The high estimate conservatively assumes a highly contentious, multi-paneled licensing hearing with potentially unforseen delays and extensions that will combine to take the equivalent of 2.5 years. Accordingly, hearing transcripts (~285 pages/day, 5 days/week, 48 weeks/year) and exhibit material (~1,000 pages/month) have been added into years 2003 - 2005 estimates.

[3] It is estimated that approximately 6,000 program-related documents (~10 pages/document) are currently stored by other LSN participants and an additional 3,000 program-related documents (~10 pages/document) are stored by their consultants and contractors. Yearly additions are estimated at 10% per year.

LOW ESTIMATE OF RELEVANT LSN PAGES

as of February 15, 2000

Year	DOE Pages/Year	DOE Cumulative	NRC Pages/Year	NRC Cumulative	Others Pages/Year	Others Cumulative	Total Pages Added Yearly	Total Cumulative Relevant Pages
1999		100 k[4]		306 k[5]		60 k[6]		466 k
2000	11 k	111 k	34 k	340 k	6 k	66 k	51 k	517 k
2001	12 k	123 k	37 k	377 k	7 k	73 k	56 k	573 k
2002	22 k	145 k	38 k	415 k	7 k	80 k	67 k	640 k
2003	28 k	173 k	77 k	492 k	8 k	88 k	113 k	753 k
2004	31 k	204 k	121 k	613 k	9 k	97 k	161 k	914 k
2005	33 k	237 k	39 k	652 k	10 k	107 k	82 k	996 k
2006	33 k	270 k	43 k	695 k	11 k	118 k	87 k	1,083 k
2007	22 k	292 k	46 k	741 k	13 k	142 k	81 k	1,164 k
2008	23 k	315 k	43 k	784 k	14 k	156 k	80 k	1,244 k
2009	25 k	340 k	46 k	830 k	16 k	172 k	87 k	1,331 k
2010	24 k	364 k	57 k	887 k	17 k	189 k	98 k	1,429 k

[4] This estimate is the minimum number of relevant web pages that DOE currently intends to make available based on its understanding of what is "documentary material" under Subpart J. Yearly additions (pages/year) for DOE and NRC are based on the yearly percentage increases used in the previous LSS input estimates (Milestone shifts are taken into account).

[5] It is estimated that 18,000 currently stored NRC program-relevant documents have an average of 17 pages per document. For the low estimate, it is assumed that the licensing proceeding will take 1.5 years. Accordingly, hearing transcripts (~285 pages/day, 5 days/week, 48 weeks/year) and exhibit material (~1,000 pages/month) have been added into years 2003 - 2004 estimates.

[6] It is estimated that approximately 6,000 program-related documents (~10 pages/document) are currently stored by other LSN participants. Yearly additions are estimated to be 10% a year.

APPENDIX C
Licensing Support Network
Level One and Two Functional Requirements
Revised Draft

14 April 2000

1. Level One Functional Requirements

1.1 LSN System Definition

LSN 1.01 - The term Licensing Support Network is defined as the combined totality of hardware, software, communications, data management processes, documentation, security, and backup and recovery services that makes relevant documentary material available by methods including searching, retrieving and delivery to the users of the headers, text and images as detailed in 10 CFR Part 2, Subpart J to parties, potential parties, and interested governmental participants to the proceeding for a license to receive and possess high-level radioactive waste at a geologic repository operations area pursuant to 10 CFR, Part 63, as part of the electronic docket or electronic access to documentary material, beginning in the pre-license application phase.

The specific method of providing access to documentary material is not mandated by the LSN Rule in order to accommodate on-going and future technology advances. [63 FR 71735, SUPPLEMENTARY INFORMATION]. For the purposes of developing these requirements, the technology to be adopted for development and implementation of the LSN is based on the facility popularly known as the "World Wide Web" (www or web) on the Internet. More specifically, this can be defined as dissemination of information with HTTP (Hypertext Transport Protocol) servers to HTTP clients.

1.2 General Characteristics of Overall System

LSN 1.02 - LSN components shall be integrated using modular design techniques and well-documented interfaces which allow individual components of the system to be replaced without significantly impacting other components.

LSN 1.03 - The LSN shall adhere to established Federal Government, international, and/or industry hardware and software standards appropriate to meeting the intent of the Rule.

LSN 1.04 - The LSN shall provide for electronic exchange of information. This function shall allow users to identify and receive electronic documents (e.g. motions, filings, orders, decisions, etc.).

LSN 1.05 - The LSN shall utilize an electronic information exchange function that provides for an electronic acknowledgment that a motions practice document has been transmitted to a requester. The acknowledgment shall include, as a minimum, the name and electronic address of the recipient and the date the document was delivered.

LSN 1.06 - The LSN shall be capable of electronically storing and retrieving bibliographic headers in the system.

LSN 1.07 - The LSN shall be capable of electronically storing and retrieving document texts.

LSN 1.08 - The LSN shall be capable of electronically storing and retrieving digital images of each page of graphic documentary material.

LSN 1.09 - The LSN shall provide tools to assist users in identifying documents consistent with the technology.

LSN 1.10 - The LSN shall provide a user interface compatible with current browser technologies including access using both graphical and text-only browsers to documentary collections. Additionally, the LSN shall support access by non-interactive access by web "crawlers" to the LSNA.

1.3 LSN Administrator (LSNA) Related

LSN 1.11 - The LSN shall provide the LSNA with access to participant collections necessary and sufficient to allow the LSNA to independently verify the integrity of data available via the Licensing Support Network.

LSN 1.12 - The LSN shall be designed to allow the LSNA to coordinate the availability and the integrity of the information stored within the LSN.

1.4 Participant Web Site Specific

1.4.1 General

LSN 1.13 - Each LSN participant must designate an official who is responsible for the administration of its responsibility to make documentary material available.

LSN 1.14 - Each LSN participant must establish its own procedures to make its own documentary material available.

LSN 1.15 - Each LSN participant must train its own staff on how to make its documentary material available.

LSN 1.16 - Each LSN participant must have the designated official certify, in accordance with §2.1009, that procedures have been implemented, and that documentary material has been made electronically available. These certifications must be updated at 12-month intervals. DOE additionally certifies its compliance at the time of the license submission.

LSN 1.17 - Each LSN participant must obtain the computer system necessary to comply with the requirements for document production and service.

LSN 1.18 - For documents not provided to other parties in electronic form, potential parties, interested governmental participants, or a party responsible for the submission of documents must identify all documents not made available in electronic form per §2.1003 in an electronic notice; and make them available within five days after a request for a document on that list is received.

LSN 1.19 - DOE must provide electronic access to the LSN at DOE Headquarters and at all DOE Local Public Document Rooms (LPDRs) in the vicinity of the site, including Las Vegas, Reno, Carson City, Nye County and Lincoln County.

1.4.2 Document Production and Service

LSN 1.20 - Each LSN participant must prepare and publish its documentary collections in a manner that allows access by Internet users.

LSN 1.21 - Each LSN participant must ensure each document has a unique ID on their system.

LSN 1.22 - Each LSN participant must follow format standards for providing electronic access.

LSN 1.23 - Each LSN participant must provide a bibliographic header with each document or other material submitted, including submissions for which no text or image is available and for privileged, confidential, safeguards, and other types of limited access documentary material as specifically identified.

LSN 1.24 - NRC, DOE, and each other potential party, interested governmental participant or party shall provide an authentication statement that indicates where an authenticated image copy of the document can be obtained.

1.4.3 Timeliness

LSN 1.25 - DOE must make documentary material available 30 days after the submission of the site recommendation to the President. All participants, other than DOE, must make documents available 30 days after the selection decision becomes final after review by Congress.

LSN 1.26 - Each LSN participant must design and implement their web facility to ensure acceptable access and responsiveness during periods of normal activity consistent with performance specifications.

1.5. Docket Related

LSN 1.27 - The LSN, in its management of the electronic docket, must provide a docket that receives, stores, distributes, and maintains docket material beginning 30 days after DOE submission of the site recommendation to the President.

LSN 1.28 - The NRC, in its management of the electronic docket, must provide a Protective Order File.

LSN 1.29 - The NRC, in its management of the electronic docket, must deliver all answers, orders and decisions per §2.1013(c) (e.g., electronically, using secured process).

LSN 1.30 - The NRC, in its management of the electronic docket, must provide the computer system necessary to comply with service requirements.

LSN 1.31 - The NRC, in its management of the electronic docket, must maintain the docket.

LSN 1.32 - The NRC, in its management of the electronic docket, must provide an electronic docket that contains a list of all exhibits, showing where in the transcript each was marked for identification and where it was received into evidence or rejected.

LSN 1.33 - The NRC, in its management of the electronic docket, must enter hearing transcripts into the docket on a daily basis in order to provide next-day availability at the hearing.

LSN 1.34 - The NRC, in its management of the electronic docket, must establish a mechanism whereby all filings are able to be submitted/received electronically and to require a password security code for transmission of these documents.

LSN 1.35 - The NRC, in its management of the electronic docket, must provide a mechanism by which all Presiding Officer and Commission issuances and orders are transmitted electronically.

LSN 1.36 - The NRC, in its management of the electronic docket, must provide a mechanism by which the Presiding Officer and all counsel of all parties have access to the electronic docket (including Protective Order File) during the hearing.

LSN 1.37 - The NRC, in its management of the electronic docket, must identify a means by which the unavailability of the electronic docket for more than 4 hours in any day is communicated to the Presiding Officer so that the day is not counted in the computation of time (NRC SECY).

LSN 1.38 - The NRC, in its management of the electronic docket, must provide a mechanism to receive electronically transmitted depositions (including questions, cross-questions, and answers) and enter them into the docket file (NRC SECY).

LSN 1.39 - The NRC, in its management of the electronic docket, must identify a means by which only a part or parts of a deposition may be offered into evidence (NRC SECY).

LSN 1.40 - Each LSN participant must demonstrate substantial and timely compliance with §2.1003 in order to be granted party status.

LSN 1.41 - Absent good cause, each LSN participant must ensure that any exhibit is available before the commencement of that portion of the hearing where it will be offered.

LSN 1.42 - For parties and interested governmental participants, service is completed when a the sender receives electronic acknowledgment ("delivery receipt") that the electronic submission has been placed in the recipient's electronic mailbox.

LSN 1.43 - Each LSN participant may utilize an electronic acknowledgment ("delivery receipt") as proof of service.

LSN 1.44 - Deponents must submit an electronic index of all documents in his/her possession relevant to the subject matter of the deposition to all parties and interested government participants, identifying which were already made available electronically.

LSN 1.45 - Deponents must bring a paper copy of all documents included in an electronic index of all documents in his or her possession, relevant to the subject matter of the deposition, that

the deposing party or interested governmental participant requests that have not already been provided electronically.

LSN 1.46 - DOE must submit the license application to the docket in electronic form.

1.6. EIE Related

LSN 1.47 - During the pre-license application phase, each LSN participant must use the procedures specified in §2.1013(c) for service of all pleadings, answers, orders, and decisions.

LSN 1.48 - During the licensing proceeding, each LSN participant must use the procedures specified in §2.1013(c) for service of all pleadings, answers, orders, and decisions.

LSN 1.49 - Absent good cause, parties and interested government participants must submit all filings electronically using a password security code for transmission of documents to the electronic docket.

LSN 1.50 - Parties and interested government participants must transmit depositions to SECY in electronic form for entry into the docket.

2. Level Two Functional Requirements

LSN 2.03.01 - The standard for network access shall be HTTP/1.1 [http://www.faqs.org/rfcs/rfc2068.html] over TCP (Transmission Control Protocol, [http://www.faqs.org/rfcs/rfc793.html]) over IP (Internet Protocol, [http://www.faqs.org/rfcs/rfc791.html]).

LSN 2.03.02 - The standard for associating server names with IP addresses shall be the DNS (Domain Name System), [http://www.faqs.org/rfcs/rfc1034.html] and [http://www.faqs.org/rfcs/rfc1035.html].

LSN 2.03.03 - The standard for web page construction shall be HTML version 4.0 [http://www.w3.org/TR/REC-html40/].

LSN 2.03.04 - The standard for electronic mail (e-mail) exchange between e-mail servers shall be SMTP (Simple Mail Transport Protocol, [http://www.faqs.org/rfcs/rfc821.html]).

LSN 2.03.05 - The standard for the format of an electronic mail message shall be per [http://www.faqs.org/rfcs/rfc822.html] optionally extended by MIME (Multimedia Internet Mail Extensions) per [http://www.faqs.org/rfcs/rfc2045.html]) to accommodate multimedia e-mail.

LSN 2.04.01 - All participating entities shall ensure access to their documentary collection through electronic means. Specifically, ensuring that any Internet user, through the use of a web browser, will be able to locate, identify, and retrieve documents of interest in relevant formats (header, text, and image).

LSN 2.04.02 - All participating entities shall ensure that they can receive and reply to Internet-standard electronic mail by arbitrary Internet users using Internet-standard e-mail MUAs (Mail User Agents) and MTAs (Mail Transfer Agents).

LSN 2.05.01 - All participating entities shall maintain an electronic log of all retrievals of LSN documents from their web site. This log will contain the IP address or DNS host name of the recipient's computer and the date and time of delivery. The log shall be in either the web standard "Common Log Format" or "Combined Log Format."

LSN 2.05.02 - All participating entities shall maintain a log of all LSN-related electronic mail transactions. This log will contain the IP address or DNS host name of the recipient's computer, the sender and recipient's user names, and the date and time of exchange.

LSN 2.05.03 - All participating entities shall maintain a log of all non-electronic LSN-related deliveries. This log will contain recipient identification, date of delivery, and method of delivery.

LSN 2.06.01 - Bibliographic headers will contain all fields as described in Table A.

LSN 2.06.02 - Bibliographic headers will be stored in a manner that they can be retrieved through reference to any field as designated in Table A (key fields).

LSN 2.06.03 - Bibliographic headers will be stored in a manner that the contents of their fields can be searched for specific data.

LSN 2.08.01 - All participating entities must provision their web server with enough storage to accommodate their entire document collection headers, text, and images.

LSN 2.08.02 - All participating entities must store each document image in a page per file format.

LSN 2.09.01 - All participating entities must provide the capability of identification of relevant documents by searching the text of the document.

LSN 2.09.02 - All participating entities must provide an index or table of contents of documents housed on their web site.

LSN 2.09.03 - All participating entities must provide the capability to retrieve documents identified either through searching or browsing.

LSN 2.10.01 - All participating entities shall provide a web page interface to their documentary collections. These web pages must be written to be easily deciphered by graphical, text-only, and automated HTTP clients.

LSN 2.10.02 - Web pages must be authored in compliance with the Web Content Accessibility Guidelines for access by individuals with disabilities - http://www.w3.org/TR/WAI-WEBCONTENT/

LSN 2.10.03 - An HTML hypertext link must exist for every document entity (header, text, and image) intended to be made available. These links must be organized in logical fashion and be titled appropriately for the document to which they reference.

LSN 2.10.04 - Non-LSN-related information may be maintained on the same web site as LSN-related material but must be kept logically separate. All LSN materials on a particular site must be maintained together within a single hypertext sub-tree. The entire LSN-related sub-tree must be able to be navigated under a single URL (Uniform Resource Locator)

reference for each site. Site navigation links on LSN-related pages (e.g. a "home" button, or the result of a search) must point exclusively within the LSN-related sub-tree and not to another part of the web site or off site.

LSN 2.10.05 - Each web page must be identified with the organization, date of last page revision, and either contact information for the page maintainer or a link to this information.

LSN 2.11.01 - Each site shall allow monitoring of various parameters by a monitoring station established by the LSNA. Specific access shall include SNMP monitoring of network utilization and ICMP access for determination of certain performance characteristics as well as access to the normal web distribution facility.

LSN 2.11.02 - Each site shall allow LSNA access to their logs of electronic transactions in raw and summary formats to enable tracking of site usage.

LSN 2.12.01 - A monitoring/audit station shall be established to allow the LSNA to obtain, store, and report information on the availability and integrity of LSN information.

LSN 2.12.02 - The monitoring/audit station shall have the capability of non-interactively "crawling" participant web sites, and fetching a subset or the entire site for analysis.

LSN 2.12.03 - The monitoring/audit station shall have the capability of tracking changes on participant web sites, monitoring participant site responsiveness and other performance characteristics, and reporting this information to the LSNA.

LSN 2.13.01 - Each designated official must provide contact information to the LSNA including telephone number, e-mail address, and postal address.

LSN 2.14.01 - Procedures shall cover all aspects of the production and web publication process including (as applicable on a per-document basis) authorship, content guidelines, stylistic guidelines, distribution guidelines, maintenance and revision guidelines, format conversion, quality assurance, uploading to the web server, accessing documents, and removal from the web server.

LSN 2.14.02 - Procedures shall be acceptable to the LSNA. Procedural guidelines will be developed and provided sufficiently in advance of their production deadline to enable timely review by the LSNA and allow for revision.

LSN 2.15.01 - Staff shall be trained in document production, conversion, and web publication in compliance with acceptable procedures.

LSN 2.15.02 - Staff shall be trained in operation and maintenance of the web server system.

LSN 2.15.03 - Staff shall be trained in operation and maintenance of the web site.

LSN 2.15.04 - Staff shall be trained in performing the user assistance and help desk function.

LSN 2.17.01 - The system must provide the function of HTTP service. HTTP service may be provided by a dedicated computer, a virtual server (dedicated computer hosting multiple web sites), or be provided by a commercial web hosting service (that can comply with requirements).

LSN 2.17.02 - The system must be configured with hardware sufficient to store and serve all documentary and associated materials, e.g., sufficient disk storage, RAM (Random Access Memory), processing power, network interface, etc. at estimated usage levels, and to be easily upgradable, should estimates fail to adequately characterize usage.

LSN 2.17.03 - The system must be configured with software, licensed at sufficient levels, to store and serve all documentary and associated materials, e.g., networking-capable operating system, web server software, HTML authoring and site maintenance software, database server, etc. at anticipated usage levels.

LSN 2.17.04 - The system must be designed to maintain the integrity of the collection and provide for timely recovery in the event of a hardware or software failure with complete restoration of the site within the parameters of the participant's disaster recovery plan.

LSN 2.17.05 - The system must be designed to maintain the security of the collection and the system itself including the ability to deny unauthorized access or update privileges, detect and defeat compromise attempts, and defend against denial of service attempts.

LSN 2.17.06 - The system must be connected to the Internet with the capability of being accessed by any Internet user. This connection shall be sufficient to provide reasonable responsiveness during periods of normal usage.

LSN 2.17.07 - The system must be designed to be accessible to arbitrary Internet users. Industry best practices for web page and site layout and formatting must be followed. A consistent organization and style is to be maintained throughout the LSN-related portion of the web site. Aids to users shall be provided to include on-line help on use of the site, usage guidelines, and contact information for further assistance. Depending on the amount of information provided, the complexity of the site, and the software assistance provided, a user help desk functionality may be required.

LSN 2.17.08 - The system design and configuration must be fully documented to preserve operational capabilities over staff transitions. This documentation must be made readily available on the participant's web site logically apart from the LSN document collection materials.

LSN 2.17.09 - Documentation must be prepared and published on the web site describing how to use the features of the web site, specifically the search and retrieval functions.

LSN 2.18.01 - Identification shall be by means equivalent to the requirements for general publication, i.e. inclusion in a list, index, or table of contents on a web page.

LSN 2.18.02 - Availability can be achieved by publication on the relevant web site and proactive notification of the requester by telephone, e-mail, or fax or through direct delivery by e-mail, fax, or post.

LSN 2.18.03 - Requests will be accepted by telephone, e-mail, fax, or post, a user clicking the appropriate hyperlink on the web page listing, or filling out a web form.

LSN 2.19.01 - Access is to be provided by publicly-available computers equipped with a web browser.

LSN 2.19.02 - Access is to be provided to visually impaired and otherwise disabled individuals, as needed, through appropriate hardware and software, or by provision of user assistance.

LSN 2.20.01 - Each participant must convert their documents from their native format or from paper to a format that allows their publication through a web server including a header, text, and image portion.

LSN 2.20.02 - Quality standards for conversion must be maintained to ensure accurate representation of documents by web browsers.

LSN 2.21.01 - Each copy of a document must contain within it, its clearly designated document ID. The document ID must occur on every page within the document.

LSN 2.21.02 - Each representation of a document (header, text, and image) must be indexed by its document ID.

LSN 2.21.03 - It must be possible to retrieve all or any part of a document by providing its document ID.

LSN 2.22.01 - Header format shall be as shown in Table A with key fields as indicated. Key fields indicate items on which structured queries (e.g., author field contains "Smith") can be performed.

LSN 2.22.02 - Text format shall comply with US.ISO_8859-1 and be a searchable full text representation of the document. Documents must be accurately represented with an overall error rate of no more than 5.0%.

LSN 2.22.03 - Image format shall be TIFF CCITT G3.2D for bi-tonal images or PNG (Portable Network Graphics) per [http://www.w3.org/TR/REC-png- multi.html]) format for grey-scale or color images, or PDF (Portable Document Format) for compound documents. TIFF images will be stored at 300 dpi (dots per inch), grey scale images at 150 dpi with eight bits of tonal depth, and color images at 150 dpi with 24 bits of color depth. Images shall be stored as single image-per-page to facilitate retrieval of no more than a single page. Alternatively, images may be stored in a page-per-document format if software is incorporated in the web server that allows single-page representation and delivery.

LSN 2.22.04 - All texts shall be identifiable through queries of the occurrence of text content through all document texts. Specific query options include the ability to: search for the occurrence of a phrase in the full text of documents, perform proximity searching (i.e. search for phrases near each other or near the beginning or end of the document), perform wild card searching, perform root searching, perform frequency searching, and to arbitrarily combine any search strategy through the use of Boolean operators.

LSN 2.23.01 - Headers for limited access exhibits will be maintained as those for full access documents.

LSN 2.23.02 - Headers for limited access exhibits shall be logically organized on the web site in a list, index, or table of contents separate from those that designate full documents together with user instructions for reviewing these materials.

LSN 2.24.01 - Documents for which the electronic image is not available on the web site may be made available by means of authenticated image copy distribution. The web site shall contain the document's header record and its text representation.

LSN 2.24.02 - Headers and texts of documents for which no image is available shall be logically organized on the web site in a list, index, or table of contents separate from those that designate full documents together with user instructions for obtaining an authenticated image copy of the document.

LSN 2.24.03 - Requests for an authenticated image copy will be accepted by telephone, e-mail, fax, or post, a user clicking the appropriate hyperlink on the web page listing, or filling out a web form.

LSN 2.24.04 - Delivery of authenticated image copies shall be made by hand, courier, or post.

LSN 2.25.01 - The computer system providing document production and service must be designed, specified, acquired, integrated, and installed sufficiently in advance of the specified date, to meet the availability criteria. Customary funding and procurement lead times must be considered when scheduling these actions.

LSN 2.25.02 - Document conversion and web site page authoring and document collection population must be begun sufficiently in advance of the specified dated to meet the availability criteria. Collection size and resource availability must be considered when scheduling these actions.

LSN 2.25.03 - Each participating entity must ensure their site availability and integrate it into the overall LSN sufficiently in advance of the specified date to meet the availability criteria. The availability of other participant staff must be considered when scheduling these actions.

LSN 2.25.04 - Each participating entity must complete site and LSN integration testing acceptable to the LSNA sufficiently in advance of the specified date to meet the availability criteria. The availability of LSNA staff must be considered when scheduling these actions.

LSN 2.26.01 - Sites must be provisioned to be able to satisfy not less than 500 web page requests per minute.

LSN 2.26.02 - Sites must be provisioned to be able to deliver a web page or document page on average in not more than 5 seconds to a web browser located on the same LAN segment.

LSN 2.26.03 - Communications between the server and the Internet must be provisioned to be able to deliver acceptable interactive response.

A.4 NOTICE LISTING CLAUSES INCORPORATED BY REFERENCE

The following clauses are hereby incorporated by reference (by Citation Number, Title, and Date) in accordance with the clause at FAR "52.252-2 CLAUSES INCORPORATED BY REFERENCE" contained in this document. FAR 52.252-2 contains the internet address for electronic access to the full text of a clause.

NUMBER	TITLE	DATE
52.203-3	GRATUITIES	APR 1984
52.211-16	VARIATION IN QUANTITY	APR 1984
52.223-6	DRUG-FREE WORKPLACE	JAN 1997
52.225-2	BUY AMERICAN ACT--BALANCE OF PAYMENTS PROGRAM CERTIFICATE	FEB 2000
52.232-23	ASSIGNMENT OF CLAIMS	JAN 1986
52.243-1	CHANGES--FIXED PRICE ALTERNATE I (APR 1994)	AUG 1987

A.5 52.252-2 CLAUSES INCORPORATED BY REFERENCE (FEB 1998)

This contract incorporates one or more clauses by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. Also, the full text of a clause may be accessed electronically at this/these address(es):

www.NRC.GOV

A.6 52.213-4 TERMS AND CONDITIONS-SIMPLIFIED ACQUISITIONS (OTHER THAN COMMERCIAL ITEMS) (JULY 2000)

(a) The Contractor shall comply with the following Federal Acquisition Regulation (FAR) clauses that are incorporated by reference:

(1) The clauses listed below implement provisions of law or Executive order:

(i) 52.222-3, Convict Labor (Aug 1996) (E.O. 11755).

(ii) 52.225-13, Restrictions on Certain Foreign Purchases (July 2000) (E.O.'s 12722, 12724, 13059, 13067, 13121, and 13129).

(iii) 52.233-3, Protest After Award (Aug 1996) (31 U.S.C. 3553).

(2) Listed below are additional clauses that apply:

(B) Cannot be set aside for small business concerns (see 19.502- 2), and does not exceed $25,000.)

(ix) 52.232-33, Payment by Electronic Funds Transfer--Central Contractor Registration (May 1999). (Applies when the payment will be made by electronic funds transfer (EFT) and the payment office uses the Central Contractor Registration (CCR) database as its source of EFT information.)

(x) 52.232-34, Payment by Electronic Funds Transfer--Other than Central Contractor Registration (May 1999). (Applies when the payment will be made by EFT and the payment office does not use the CCR database as its source of EFT information.)

(xi) 52.247-64, Preference for Privately Owned U.S.-Flag Commercial Vessels (June 2000) (46 U.S.C. 1241). (Applies to supplies transported by ocean vessels.)

(2) Listed below are additional clauses that may apply:

(i) 52.209-6, Protecting the Government's Interest When Subcontracting with Contractors Debarred, Suspended, or Proposed for Debarment (JULY 1995) (Applies to contracts over $25,000).

(ii) 52.211-17, Delivery of Excess Quantities (SEPT 1989) (Applies to fixed-price supplies).

(iii) 52.247-29, F.o.b. Origin (JUN 1988) (Applies to supplies if delivery is f.o.b. origin).

(iv) 52.247-34, F.o.b. Destination (NOV 1991) (Applies to supplies if delivery is f.o.b. destination).

(c) FAR 52.252-2, Clauses Incorporated by Reference (FEB 1998). This contract incorporates one or more clauses by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. Also, the full text of a clause may be accessed electronically at this/these address(es):

www.NRC.GOV

(d) Inspection/Acceptance. The Contractor shall tender for acceptance only those items that conform to the requirements of this contract. The Government reserves the right to inspect or test any supplies or services that have been tendered for acceptance. The Government may require repair or replacement of nonconforming supplies or reperformance of nonconforming services at no increase in contract price. The Government must exercise its postacceptance rights--

(1) Within a reasonable period of time after the defect was discovered or should have been discovered; and

(2) Before any substantial change occurs in the condition of the

item, unless the change is due to the defect in the item.

(e) Excusable delays. The Contractor shall be liable for default unless nonperformance is caused by an occurrence beyond the reasonable control of the Contractor and without its fault or negligence, such as acts of God or the public enemy, acts of the Government in either its sovereign or contractual capacity, fires, floods, epidemics, quarantine restrictions, strikes, unusually severe weather, and delays of common carriers. The Contractor shall notify the Contracting Officer in writing as soon as it is reasonably possible after the commencement of any excusable delay, setting forth the full particulars in connection therewith, shall remedy such occurrence with all reasonable dispatch, and shall promptly give written notice to the Contracting Officer of the cessation of such occurrence.

(f) Termination for the Government's convenience. The Government reserves the right to terminate this contract, or any part hereof, for its sole convenience. In the event of such termination, the Contractor shall immediately stop all work hereunder and shall immediately cause any and all of its suppliers and subcontractors to cease work. Subject to the terms of this contract, the Contractor shall be paid a percentage of the contract price reflecting the percentage of the work performed prior to the notice of termination, plus reasonable charges that the Contractor can demonstrate to the satisfaction of the Government, using its standard record keeping system, have resulted from the termination. The Contractor shall not be required to comply with the cost accounting standards or contract cost principles for this purpose. This paragraph does not give the Government any right to audit the Contractor's records. The Contractor shall not be paid for any work performed or costs incurred that reasonably could have been avoided.

(g) Termination for cause. The Government may terminate this contract, or any part hereof, for cause in the event of any default by the Contractor, or if the Contractor fails to comply with any contract terms and conditions, or fails to provide the Government, upon request, with adequate assurances of future performance. In the event of termination for cause, the Government shall not be liable to the Contractor for any amount for supplies or services not accepted, and the Contractor shall be liable to the Government for any and all rights and remedies provided by law. If it is determined that the Government improperly terminated this contract for default, such termination shall be deemed a termination for convenience.

(h) Warranty. The Contractor warrants and implies that the items delivered hereunder are merchantable and fit for use for the particular purpose described in this contract.

2052.209-72 CONTRACTOR ORGANIZATIONAL CONFLICTS OF INTEREST JAN 1993

A.7 Other Applicable Clauses

[ ] See Addendum for the following in full text (if checked)

[ ] 52.216-18, Ordering

[ ] 52.216-19, Order Limitations

[ ] 52.216-22, Indefinite Quantity

[ ] 52.217-6, Option for Increased Quantity

[ ] 52.217-7, Option for Increased Quantity Separately Priced Line Item

[ ] 52.217-8, Option to Extend Services

[x] 52.217-9, Option to Extend the Term of the Contract

A.8 ELECTRONIC PAYMENT

The Debt Collection Improvement Act of 1996 requires that all payments except IRS tax refunds be made by Electronic Funds Transfer. It is the policy of the Nuclear Regulatory Commission to pay vendors by the Automated Clearing House (ACH) electronic funds transfer payment system. The electronic system is known as Vendor Express. Payment shall be made in accordance with FAR 52.232-33, entitled "Mandatory Information for Electronic Funds Transfer Payment".

To receive payment, the contractor shall complete the "Company Information" portion of the Standard Form 3881, entitled "ACH Vendor/Miscellaneous Payment Enrollment Form" found as an attachment to this document. The contractor shall take the form to the ACH Coordinator at the financial institution that maintains its company's bank account. The contractor shall discuss with the ACH Coordinator how the payment identification information (addendum record) will be passed to them once the payment is received by the financial institution. Further information concerning the addendum is provided at Attachment 1. The ACN Coordinator should fill out the "Financial Institution Information" portion of the form and return it to the Office of the Controller at the following address: Nuclear Regulatory Commission, Division of Accounting and Finance, Financial Operations Section, Mail Stop T-9-H-4, Washington, DC 20555, ATTN: ACH/Vendor Express. It is the responsibility of the contractor to ensure that the financial institution returns the completed form to the above cited NRC address. If the contractor can provide the financial information, signature of the financial institutions ACH Coordinator is not required. The NRC is under no obligation to send reminders. Only after the Office of the Controller has processed the contractor's sign-up form will the contractor be eligible to receive payments.

Once electronic funds transfer is established for payments

(i) 52.232-1, Payments (Apr 1984).

(ii) 52.232-8, Discounts for Prompt Payment (May 1997).

(iii) 52.232-11, Extras (Apr 1984).

(iv) 52.232-25, Prompt Payment (Jun 1997).

(v) 52.233-1, Disputes (Dec 1998).

(vi) 52.244-6, Subcontracts for Commercial Items and Commercial Components (Oct 1998).

(vii) 52.253-1, Computer Generated Forms (Jan 1991).

(b) The Contractor shall comply with the following FAR clauses, incorporated by reference, unless the circumstances do not apply:

(1) The clauses listed below implement provisions of law or Executive order:

(i) 52.222-20, Walsh-Healey Public Contracts Act (DEC 1996) (41 U.S.C. 35-45) (Applies to supply contracts over $10,000 in the United States).

(ii) 52.222-26, Equal Opportunity (Feb 1999) (E.O. 11246) (Applies to contracts over $10,000).

(iii) 52.222-35, Affirmative Action for Disabled Veterans and Veterans of the Vietnam Era (Apr 1998) (38 U.S.C. 4212) (Applies to contracts over $10,000).

(iv) 52.222-36, Affirmative Action for Workers with Disabilities (Jun 1998) (29 U.S.C. 793) (Applies to contracts over $10,000).

(v) 52.222-37, Employment Reports on Disabled Veterans and Veterans of the Vietnam Era (Jan 1999) (38 U.S.C. 4212) (Applies to contracts over $10,000).

(vi) 52.222-41, Service Contract Act of 1965, As Amended (MAY 1989) (41 U.S.C. 351, et seq.) (Applies to service contracts over $2,500).

(vii) 52.223-5, Pollution Prevention and Right-to-Know Information (APR 1998) (E.O. 12856) (Applies to services performed on Federal facilities).

(viii) 52.225-1, Buy American Act--Balance of Payments Program-- Supplies (Feb 2000) (41 U.S.C. 10a-10d) (Applies to contracts for supplies, and to contracts for services involving the furnishing of supplies, for use within the United States if the value of the supply contract or supply portion of a service contract exceeds the micro-purchase threshold and the acquisition--

(A) Is set aside for small business concerns; or

authorized by NRC, the contractor needs to submit an additional SF 3881 only to report changes to the information supplied.

Questions concerning ACH/Vendor Express should be directed to the Financial Operations staff at (301) 415-7520."

(END-OF-CLAUSE)

A.9 ENGINEERING CHANGES

(a) After contract award, the Government may solicit, and the Contractor is encouraged to propose independently, engineering changes to the equipment, software specifications, or other requirements of this contract. These changes may be proposed to save money, to improve performance, to save energy, or to satisfy increased data processing requirements. However, if proposed changes relating to improved performance are necessary to meet increased data processing requirements of the user, those requirements shall not exceed the contract requirements by more than 25%. If the proposed changes are acceptable to both parties, the Contractor shall submit a price change proposal to the Government for evaluation. Those proposed engineering changes that are acceptable to the Government will be processed as modifications to the contract.

(b) This clause applies only to those proposed changes identified by the Contractor, as a proposal submitted pursuant to the provisions of this clause. As a minimum, the following information shall be submitted by the Contractor with each proposal:

1. A description of the difference between the existing contract requirement and the proposed change, and the comparative advantages and disadvantages of each;

2. Itemized requirements of the contract which must be changed if the proposal is adopted, and the proposed revision to the contract for each such changes;

3. An estimate of the changes in performance and cost, if any, that will result from adoption of the proposal;

4. An evaluation of the effects the proposed change would have on collateral costs to the Government, such as Government-furnished property costs, costs of related items, and costs of maintenance and operation; and

5. A statement of the time by which the change order adopting the proposal must be issued so as to obtain the maximum benefits of the changes during the remainder of this contract. Also, any effect on the contract completion time or delivery

schedule shall be identified.

(c) Engineering change proposals submitted to the Contracting Officer shall be processed expeditiously. The Government shall not be liable for proposal preparation costs or any delay in acting upon any proposal submitted pursuant to this clause. The Contractor has the right to withdraw, in whole or in part, any engineering change proposal not accepted by the Government within the period specified in the engineering change proposal. The decision of the Contracting Officer as to the acceptance of any such proposal under this contract shall be final and shall not be subject to the "Disputes" clause of this contract.

(d) The Contracting Officer may accept any engineering change proposal submitted pursuant to this clause by giving the Contractor written notice thereof. This written notice shall be given by issuance of a modification to this contract. Unless and until a modification is executed to incorporate an engineering change proposal under this contract, the Contractor shall remain obligated to perform in accordance with the terms of the existing contract.

(e) If an engineering change proposal submitted pursuant to this clause is accepted and applied to this contract, an equitable adjustment in the contract price and in any other affected provisions of this contract shall be made in accordance with this clause and other applicable clauses of this contract. When the cost of performance of this contract is increased or decreased as a result of the change, the equitable adjustment increasing or decreasing the contract price shall be in accordance with the "Changes" clause rather than under this clause, but the resulting contract modification shall state that it is made pursuant to this clause.

(f) The Contractor is requested to identify specifically any information contained in the engineering change proposal which the Contractor considers confidential and/or proprietary and which the Contractor prefers not be disclosed to the public. The identification of information as confidential and/or proprietary is for information purposes only and shall not be binding on the Government to prevent disclosure of such information. Offerors are advised that such information may be subject to release upon request pursuant to the Freedom of Information Act. (5 U.S.C. 552).

(END-OF-CLAUSE)

A.10 SEAT BELTS

Contractors, subcontractors, and grantees, are encouraged to adopt and enforce on-the-job seat belt policies and programs for their employees when operating company-owned, rented, or personally owned vehicles.

CONTINUATION PAGE

A.11 LIST OF ATTACHMENTS

ATTACHMENT NUMBER	TITLE
1	SF3881, Payment Information Form ACH Vendor Payment System
2	Billing Instructions for Fixed-Price Contracts

*U.S. GPO: 1996-409-989/40170

ACH VENDOR/MISCELLANEOUS PAYMENT ENROLLMENT FORM

OMB No. 1510-0056
Expiration Date 06/30/93

ATTACHMENT NO. 1

This form is used for Automated Clearing House (ACH) payments with an addendum record that contains payment-related information processed through the Vendor Express Program. Recipients of these payments should bring this information to the attention of their financial institution when presenting this form for completion.

PRIVACY ACT STATEMENT

The following information is provided to comply with the Privacy Act of 1974 (P.L. 93–579). All information collected on this form is required under the provisions of 31 U.S.C. 3322 and 31 CFR 210. This information will be used by the Treasury Department to transmit payment data, by electronic means to vendor's financial institution. Failure to provide the requested information may delay or prevent the receipt of payments through the Automated Clearing House Payment System.

AGENCY INFORMATION

FEDERAL PROGRAM AGENCY

AGENCY IDENTIFIER:	AGENCY LOCATION CODE (ALC):	ACH FORMAT: ☐CCD+ ☐CTX ☐CTP

ADDRESS:

CONTACT PERSON NAME: | TELEPHONE NUMBER ( )

ADDITIONAL INFORMATION:

PAYEE/COMPANY INFORMATION

NAME | SSN NO. OR TAXPAYER ID NO.

ADDRESS

CONTACT PERSON NAME: | TELEPHONE NUMBER: ( )

FINANCIAL INSTITUTION INFORMATION

NAME:

ADDRESS:

ACH COORDINATOR NAME: | TELEPHONE NUMBER: ( )

NINE-DIGIT ROUTING TRANSIT NUMBER: _ _ _ _ _ _ _ _ _

DEPOSITOR ACCOUNT TITLE:

DEPOSITOR ACCOUNT NUMBER: | LOCKBOX NUMBER:

TYPE OF ACCOUNT: ☐CHECKING ☐SAVINGS ☐LOCKBOX

SIGNATURE AND TITLE OF AUTHORIZED OFFICIAL | TELEPHONE NUMBER

BILLING INSTRUCTIONS FOR FIXED PRICE CONTRACTS

General: The contractor shall prepare vouchers or invoices as prescribed herein. FAILURE TO SUBMIT VOUCHERS/INVOICES IN ACCORDANCE WITH THESE INSTRUCTIONS WILL RESULT IN REJECTION OF THE VOUCHER/INVOICES AS IMPROPER.

Form: Claims shall be submitted on the payee's letterhead, voucher/invoices, or on the Government's Standard Form 1034, "Public Voucher for Purchases and Services Other than Personal," and Standard Form 1035, "Public Voucher for Purchases Other than Personal--Continuation Sheet." These forms are available from the U.S. Government Printing Office, 710 North Capitol Street, Washington, DC 20401.

Number of Copies: An original and three copies shall be submitted. Failure to submit all the required copies will result in rejection of the voucher/invoice as improper.

Designated Agency Billing Office: Vouchers/Invoices shall be submitted to the following address:

U.S. Nuclear Regulatory Commission
Division of Contracts - T-7-I-2
Washington, DC 20555-0001

A copy of any invoice which includes a purchase of property valued at the time of purchase at $5000 or more, shall additionally be sent to:

Chief, Property Management Branch
Division of Facilities and Property Management
Mail Stop - T-7-D-27
Washington, DC 20555-0001

HAND-DELIVERY OF VOUCHERS/INVOICES IS DISCOURAGED AND WILL NOT EXPEDITE PROCESSING BY THE NRC. However, should you choose to deliver vouchers/invoices by hand, including delivery by any express mail service or special delivery service which uses a courier or other person to deliver the vouchers/invoices in person to the NRC, such vouchers/invoices must be addressed to the above Designated Agency Billing Office and will only be accepted at the following location:

U.S. Nuclear Regulatory Commission
One White Flint North - Mail Room
11555 Rockville Pike
Rockville, MD 20852

HAND-CARRIED SUBMISSIONS WILL NOT BE ACCEPTED AT OTHER THAN THE ABOVE ADDRESS

Note that the official receipt date for hand-delivered vouchers/invoices will be the date it is received by the official agency billing office in the Division of Contracts.

Agency Payment Office: Payment will continue to be made by the office designated in the contract in Block 12 of the Standard Form 26 or Block 25 of the Standard Form 33, whichever is applicable.

Frequency: The contractor shall submit a voucher or invoice only after the NRC's final acceptance of services rendered or products delivered in performance of the contract unless otherwise specified in the contract.

Preparation and Itemization of the Voucher/Invoice: The voucher/invoice shall be prepared in ink or by typewriter (without strike-overs). Corrections or erasures must be initialed. To be considered a proper voucher/invoice, all of the following elements must be included:

1. Contract number.

2. Sequential voucher/invoice number.

3. Date of voucher/invoice.

4. Payee's name and address. (Show the name of the contractor and its correct address. In addition, when an assignment of funds has been made by the contractor, or a different payee has been designated, include the name and address of the payee). Indicate the name and telephone number of the individual responsible for answering questions which the NRC may have regarding the voucher/invoice.

5. Description of articles or services, quantity, unit price, and total amount.

6. For contractor acquired property list each item purchased costing $50,000 or more and having a life expectancy of more than 1 year and provide: (1) an item description, (2) manufacturer, (3) model number, (4) serial number, (5) acquisition cost, (6) date of purchase, and (7) a copy of the purchasing document.

7. Weight and zone of shipment, if shipped by parcel post.

8. Charges for freight or express shipments. Attach prepaid bill if shipped by freight or express.

9. Instructions to consignee to notify the Contracting Officer of receipt of shipment.

10. For Indefinite Delivery contracts or contracts under which progress payments are authorized, the final voucher/invoice shall be marked "FINAL VOUCHER" OR "FINAL INVOICE."

Currency: Billings may be expressed in the currency normally used by the contractor in maintaining his accounting records and payments will be made in that currency. However, the U.S. dollar equivalent for all vouchers/invoices paid under the contract may not exceed the total U.S. dollars authorized in the contract.

Supersession: These instructions supersede any previous billing instructions.

R:\BILLING.396