

ORDER FOR SUPPLIES OR SERVICES

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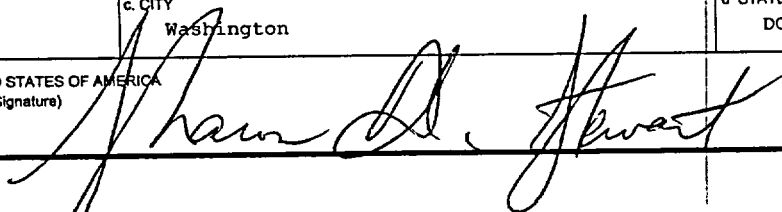
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IMPORTANT: Mark all packages and papers with contract and/or order numbers

1 DATE OF ORDER AUG 22 2002		2 CONTRACT NO. (If any) GS-35F-4366G		6 SHIP TO	
3 ORDER NO. NRC-33-01-183-001		4 REQUISITION/REFERENCE NO 06/12/02 CIO01179-010		5 NAME OF CONSIGNEE U.S. Nuclear Regulatory Commission Attn: Pat Smith	
5 ISSUING OFFICE (Address correspondence to) U.S. Nuclear Regulatory Commission Division of Contracts Attn: Sharon Stewart, MS T-7-I-2 Contract Management Branch 1 Washington DC 20555				b STREET ADDRESS Mail Stop T-3F23	
7 TO		c CITY Washington		d STATE DC	e ZIP CODE 20555
a NAME OF CONTRACTOR PEC Solutions, Inc.				f SHIP VIA	
b COMPANY NAME ATTN: Roy Carter Vice President, Enterprise System Div.				8 TYPE OF ORDER	
c STREET ADDRESS 12750 Fair Lakes Circle				<input type="checkbox"/> a PURCHASE ORDER <input checked="" type="checkbox"/> 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.	
d CITY Fairfax,	e STATE VA	f ZIP CODE 22033		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	
9 ACCOUNTING AND APPROPRIATION DATA APPN: 31X0200.27D B&R:27W15307268 BOC:252A JCN:N7042 Obligate: \$1,300,000.00 and APPN:31X0200.27D, BOC: 252A, B&R:27D15301199 JCN:N7048 Obligate \$164,213.45				10 REQUISITIONING OFFICE ASLBP Pat Smith, (301) 415-7352	
11 BUSINESS CLASSIFICATION (Check appropriate box(es))					
<input checked="" type="checkbox"/> a SMALL <input type="checkbox"/> b OTHER THAN SMALL <input type="checkbox"/> c DISADVANTAGED <input type="checkbox"/> d WOMEN-OWNED					
12 FOB POINT Destination		14 GOVERNMENT B/L NO		15 DELIVER TO FOB POINT ON OR BEFORE See SOW	
13 PLACE OF		16 DISCOUNT TERMS N/A			
a INSPECTION		b ACCEPTANCE Sally Adams (301) 415-6588			

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)
	The NRC hereby accepts PEC's offer dated April 22, 2002, as revised 5/16/02, 6/18/02, 7/11/02, 7/24/02, and 7/26/02, to design and deliver a pilot Digital Data Management System in accordance with the statement of work for the effort at the prices contained in the price schedule for this order. (See Section D of the SOW for terms and conditions specific to this order.)					

18 SHIPPING POINT		19 GROSS SHIPPING WEIGHT		20 INVOICE NO		SUBTOTAL	
21 MAIL INVOICE TO							
a NAME U.S. Nuclear Regulatory Commission Division of Contracts				17(h) TOTAL (Cont. pages)			
b STREET ADDRESS (or P O Box) Attn: S. Adams, Mailstop T-7I2				17(i) GRAND TOTAL			
c CITY Washington		d STATE DC	e ZIP CODE 20555	\$1,464,213.45			
22 UNITED STATES OF AMERICA BY (Signature) 				23 NAME (Typed) Sharon Stewart TITLE CONTRACTING/ORDERING OFFICER			

OPTIONAL FORM 347 (6/95)

TEMPLATE-ADM001

ADM02

PRICE SCHEDULE
DIGITAL DATA MANAGEMENT SYSTEM

Task 1				Total		
Item #	Labor Category Description	Estimated Hrs	Rate	Total		
12/01/2001-11/26/2002						
1	Functional Expert	562.6	\$161.28	\$90,768.36		
2	Program Manager	2,244.5	\$126.86	\$284,737.27		
3	Information Systems Analyst I	1,140	\$112.80	\$128,608.00		
4	Information Systems Analyst II	1,063.15	\$103.66	\$110,311.45		
5	Information Systems Analyst III	1,185.85	\$89.95	\$106,568.15		
6	Information Systems Engineer I	1,280.55	\$80.22	\$102,723.22		
7	Information Systems Engineer II	1,103.15	\$62.53	\$69,078.15		
8	Information Systems Engineer III	520	\$52.51	\$27,305.20		
9	Information Systems Technician	570	\$39.73	\$22,676.10		
11/27/2002-11/26/2003						
10	Functional Expert	75.3	\$166.12	\$12,508.84		
11	Program Manager	379.6	\$130.87	\$49,622.33		
12	Information Systems Analyst I	180	\$103.66	\$18,658.80		
13	Information Systems Analyst II	253.3	\$92.34	\$23,389.72		
14	Information Systems Analyst III	269.3	\$82.63	\$22,252.26		
15	Information Systems Engineer I	253.3	\$54.41	\$13,801.05		
16	Information Systems Engineer II	253.3	\$54.41	\$13,801.05		
17	Information Systems Engineer III	253.3	\$39.89	\$10,104.14		
18	Information Systems Technician	253.3	\$39.89	\$10,104.14		
Total Direct Labor				\$1,139,766.53		
Total Labor				\$1,139,766.53		
Equipment & Misc.						
Item #	MFG	Item #	Description	Unit	Unit Price	Total
19	Def	GS-3SF-4076D	220-8316 Dell Precision Workstation 340 Monitor	1	1,552.34	\$1,552.34
20	Def	GS-3SF-4076D	220-8316 Dell Precision Workstation 340 Monitor	1	1,926.02	\$1,926.02
21	Def	GS-3SF-4076D	220-8316 Dell Precision Workstation 340 Monitor	1	1,552.34	\$1,552.34
22	Def	GS-3SF-4076D	220-8316 Dell Precision Workstation 340 Monitor	1	1,925.08	\$1,925.08
23	Def	GS-3SF-4076D	220-8316 Dell Precision Workstation 340 Monitor	1	1,925.08	\$1,925.08
24	Def	GS-3SF-4076D	220-8316 Dell Precision Workstation 340 Monitor	1	2,262.34	\$2,262.34
25	Def	GS-3SF-4076D	220-8316 Dell Precision Workstation 340 Monitor	1	1,412.21	\$1,412.21
26	Def	GS-3SF-4076D	220-8316 Dell Precision Workstation 340 Monitor	2	831.34	\$1,662.68
27	Def	GS-3SF-4076D	220-8316 Dell Precision Workstation 340 Monitor	2	1,211.00	\$2,422.00
28	Def	GS-3SF-4076D	220-8316 Dell Precision Workstation 340 Monitor	2	1,018.00	\$2,036.00
29	Def	GS-3SF-4076D	220-8316 Dell Precision Workstation 340 Monitor	12	14.00	\$168.00
30	Def	GS-3SF-4076D	220-8316 Dell Precision Workstation 340 Monitor	12	14.00	\$168.00
31	Def	GS-3SF-4076D	220-8316 Dell Precision Workstation 340 Monitor	6	85.00	\$510.00
32	Def	GS-3SF-4076D	220-8316 Dell Precision Workstation 340 Monitor	6	85.00	\$510.00
33	Def	GS-3SF-4076D	220-8316 Dell Precision Workstation 340 Monitor	25	45.00	\$1,125.00
34	Def	GS-3SF-4076D	220-8316 Dell Precision Workstation 340 Monitor	6	19.00	\$114.00
35	Def	GS-3SF-4076D	220-8316 Dell Precision Workstation 340 Monitor	15	98.00	\$1,470.00
36	Def	GS-3SF-4076D	220-8316 Dell Precision Workstation 340 Monitor	1	32.00	\$32.00
37	Def	GS-3SF-4076D	220-8316 Dell Precision Workstation 340 Monitor	1	19.00	\$19.00
38	Def	GS-3SF-4076D	220-8316 Dell Precision Workstation 340 Monitor	1	707.60	\$707.60
39	Def	GS-3SF-4076D	220-8316 Dell Precision Workstation 340 Monitor	1	221.32	\$221.32
40	Def	GS-3SF-4076D	220-8316 Dell Precision Workstation 340 Monitor	6	87.50	\$525.00
41	Def	GS-3SF-4076D	220-8316 Dell Precision Workstation 340 Monitor	2	16.87	\$33.74
42	Def	GS-3SF-4076D	220-8316 Dell Precision Workstation 340 Monitor	1	209,907.00	\$209,907.00
Software						
44	Media Edge	GS-3SF-4506G	MEP-301-M	1	24,690.00	\$24,690.00
Software Maintenance						
45	Media Edge	GS-3SF-4076D	220-8316	1	1,552.34	\$1,552.34
46	Media Edge	GS-3SF-4076D	220-8316	1	1,926.02	\$1,926.02
47	Media Edge	GS-3SF-4076D	220-8316	1	1,552.34	\$1,552.34
48	Media Edge	GS-3SF-4076D	220-8316	1	1,925.08	\$1,925.08
49	Media Edge	GS-3SF-4076D	220-8316	1	1,925.08	\$1,925.08
50	Media Edge	GS-3SF-4076D	220-8316	1	2,262.34	\$2,262.34
51	Media Edge	GS-3SF-4076D	220-8316	1	1,412.21	\$1,412.21
52	Media Edge	GS-3SF-4076D	220-8316	2	831.34	\$1,662.68
53	Media Edge	GS-3SF-4076D	220-8316	2	1,211.00	\$2,422.00
54	Media Edge	GS-3SF-4076D	220-8316	2	1,018.00	\$2,036.00
55	Media Edge	GS-3SF-4076D	220-8316	12	14.00	\$168.00
56	Media Edge	GS-3SF-4076D	220-8316	12	14.00	\$168.00
57	Media Edge	GS-3SF-4076D	220-8316	6	85.00	\$510.00
58	Media Edge	GS-3SF-4076D	220-8316	6	85.00	\$510.00
59	Media Edge	GS-3SF-4076D	220-8316	25	45.00	\$1,125.00
60	Media Edge	GS-3SF-4076D	220-8316	6	19.00	\$114.00
61	Media Edge	GS-3SF-4076D	220-8316	15	98.00	\$1,470.00
62	Media Edge	GS-3SF-4076D	220-8316	1	32.00	\$32.00
63	Media Edge	GS-3SF-4076D	220-8316	1	19.00	\$19.00
64	Media Edge	GS-3SF-4076D	220-8316	1	19.00	\$19.00
65	Media Edge	GS-3SF-4076D	220-8316	1	19.00	\$19.00
66	Media Edge	GS-3SF-4076D	220-8316	1	19.00	\$19.00
67	Media Edge	GS-3SF-4076D	220-8316	1	19.00	\$19.00
68	Media Edge	GS-3SF-4076D	220-8316	1	19.00	\$19.00
69	Media Edge	GS-3SF-4076D	220-8316	1	19.00	\$19.00
70	Media Edge	GS-3SF-4076D	220-8316	1	19.00	\$19.00
71	Media Edge	GS-3SF-4076D	220-8316	1	19.00	\$19.00
72	Media Edge	GS-3SF-4076D	220-8316	2	16.87	\$33.74
73	Media Edge	GS-3SF-4076D	220-8316	1	1,362.76	\$1,362.76
74	Media Edge	GS-3SF-4076D	220-8316	2,500	\$0.05	\$125.00
75	Media Edge	GS-3SF-4076D	220-8316	11,589	\$33.67	\$389,799.32
76	Media Edge	GS-3SF-4076D	220-8316	11,589	\$33.67	\$389,799.32
77	Media Edge	GS-3SF-4076D	220-8316	11,589	\$33.67	\$389,799.32
78	Media Edge	GS-3SF-4076D	220-8316	11,589	\$33.67	\$389,799.32
79	Media Edge	GS-3SF-4076D	220-8316	11,589	\$33.67	\$389,799.32
80	Media Edge	GS-3SF-4076D	220-8316	11,589	\$33.67	\$389,799.32
81	Media Edge	GS-3SF-4076D	220-8316	11,589	\$33.67	\$389,799.32
82	Media Edge	GS-3SF-4076D	220-8316	11,589	\$33.67	\$389,799.32
83	Media Edge	GS-3SF-4076D	220-8316	11,589	\$33.67	\$389,799.32
84	Media Edge	GS-3SF-4076D	220-8316	11,589	\$33.67	\$389,799.32
85	Media Edge	GS-3SF-4076D	220-8316	11,589	\$33.67	\$389,799.32
86	Media Edge	GS-3SF-4076D	220-8316	11,589	\$33.67	\$389,799.32
87	Media Edge	GS-3SF-4076D	220-8316	11,589	\$33.67	\$389,799.32
88	Media Edge	GS-3SF-4076D	220-8316	11,589	\$33.67	\$389,799.32
89	Media Edge	GS-3SF-4076D	220-8316	11,589	\$33.67	\$389,799.32
90	Media Edge	GS-3SF-4076D	220-8316	11,589	\$33.67	\$389,799.32
91	Media Edge	GS-3SF-4076D	220-8316	11,589	\$33.67	\$389,799.32
92	Media Edge	GS-3SF-4076D	220-8316	11,589	\$33.67	\$389,799.32
93	Media Edge	GS-3SF-4076D	220-8316	11,589	\$33.67	\$389,799.32
94	Media Edge	GS-3SF-4076D	220-8316	11,589	\$33.67	\$389,799.32
95	Media Edge	GS-3SF-4076D	220-8316	11,589	\$33.67	\$389,799.32
96	Media Edge	GS-3SF-4076D	220-8316	11,589	\$33.67	\$389,799.32
97	Media Edge	GS-3SF-4076D	220-8316	11,589	\$33.67	\$389,799.32
98	Media Edge	GS-3SF-4076D	220-8316	11,589	\$33.67	\$389,799.32
99	Media Edge	GS-3SF-4076D	220-8316	11,589	\$33.67	\$389,799.32
100	Media Edge	GS-3SF-4076D	220-8316	11,589	\$33.67	\$389,799.32

\$1,464,313.45

PRICE SCHEDULE :
DIGITAL DATA MANAGEMENT SYSTEM

[illegible]

**PRICE SCHEDULE
DIGITAL DATA MANAGEMENT SYSTEM**

Optional Task 3			Total	
Item #	Equipment Category Description	Estimated Hrs	Rate	
11/27/2002-11/28/2003				
83	Functional Expert	245	\$168.12	\$40,998.40
84	Program Manager	338.3	\$130.97	\$44,225.66
85	Project Manager	251	\$111.29	\$27,935.75
86	Information Systems Analyst II	251	\$108.79	\$27,106.25
87	Information Systems Analyst III	492	\$92.34	\$45,431.28
88	Information Systems Analyst I	400	\$42.63	\$17,052.00
89	Information Systems Engineer I	208	\$54.61	\$11,359.28
90	Information Systems Engineer II	226	\$39.89	\$8,995.14
11/27/2003-11/28/2004				
92	Functional Expert	464.8	\$171.10	\$79,544.38
93	Project Manager	607.6	\$134.59	\$81,776.86
94	Information Systems Analyst III	100	\$119.78	\$11,978.00
95	Information Systems Analyst II	912.8	\$92.11	\$84,020.45
96	Information Systems Analyst I	789.3	\$65.11	\$51,402.12
97	Information Systems Engineer I	789.3	\$65.11	\$51,402.12
98	Information Systems Engineer II	720.8	\$65.11	\$46,944.60
99	Information Systems Technician	720.8	\$37.00	\$26,670.56
100	Total Direct Labor	8,065		\$771,546.23

Equipment & Misc.	MFG	GSA Contract #	Item #	Description	Unit	Unit Price	Total
101 Web/Portal Server							
Compq	GS-35F-0195J	313291		Profant DL360 Rack Model Single 128GB P3, 1GB SDRAM, (2) 18.2GB HD RAID 1, CD-ROM, Dual NIC	2	4,093.00	\$8,186.00
102 Database Server							
Compq	GS-35F-4120D	500-1134519		Profant ML570 Tower Model w/Slide Rails Single 800MHz P3, 2GB SDRAM, (2) 18.2GB HD RAID 1, (4) 18.2GB HD RAID5, CD-ROM, Dual NIC	1	25,087.00	\$25,087.00
103 Backup Database Server							
Compq	GS-35F-4120D	500-1134519		Profant ML570 Tower Model w/Slide Rails Single 800MHz P3, 2GB SDRAM, (2) 18.2GB HD RAID 1, (4) 36GB HD RAID5, CD-ROM, Dual NIC	1	25,087.00	\$25,087.00
104 Video Server/Streaming Server							
Compq	GS-35F-4120D	500-1134519		Profant ML570 Tower Model w/Slide Rails Single 800MHz P3, 2GB SDRAM, (2) 18.2GB HD RAID 1, (4) 36GB HD RAID5, CD-ROM, Dual NIC	1	26,543.00	\$26,543.00
105 Video Application Server							
Compq	GS-35F-0195J	313291		Profant DL360 Rack Model Single 128GB P3, 1GB SDRAM, (2) 18.2GB HD RAID 1, CD-ROM, Dual NIC	1	4,093.00	\$4,093.00
106 Video Industry/Capture Server							
Compq	GS-35F-0195J	313291		Profant DL360 Rack Model Single 128GB P3, 1GB SDRAM, (2) 18.2GB HD RAID 1, CD-ROM, Dual NIC	1	4,093.00	\$4,093.00
107 Client Workstation							
Dell	GS-35F-4078D	220-5727		Dell Optiplex GX240 MiniTower P4, 1.7 GHz, 128MB SDRAM, 40GB HD, nVidia 32MB, CD-ROM, VZK Prod, 17" monitor	2	931.34	\$1,862.68
108 Client Monitor							
EIZO	GS-35F-0195J	06-19234		Flatscan L350P Touch Panel LCD Compq Rack Model 8142 (K2)	2	1,199.83	\$2,399.66
Compq	GS-35F-4120D	500-553322		Baying Kit	2	1,296.00	\$2,592.00
Compq	GS-35F-4120D	500-553325		Extractor Fan	2	82.00	\$164.00
Compq	GS-35F-4120D	500-553331		Slide Panel Kit	2	294.00	\$588.00
Compq	GS-35F-4120D	500-553326		Rack Cable Management Kit	2	203.00	\$406.00
Compq	GS-35F-4120D	500-503744		Keyboard Drawer	2	111.00	\$222.00
Compq	GS-35F-4120D	500-503930		KVM 164 Port Switch Box	2	762.00	\$1,524.00
Compq	GS-35F-4120D	500-553310		KVM 128 Canade Cable	8	494.00	\$3,952.00
Compq	GS-35F-4120D	500-553317		Windows 2000 Server 1 CPU	2	20.00	\$40.00
Compq	GS-35F-4120D	3483-821531		Windows 2000 Server CAL	175	19.00	\$3,325.00
Compq	GS-35F-4120D	3493-821549		Windows 2000 Dsk Kit CD w/Book Dsk	2	11,549.00	\$23,098.00
Compq	GS-35F-4120D	3494-821513		SQL Server 2000 Enterprise Edition-Processor Lic	2	18.00	\$36.00
Compq	GS-35F-4120D	3494-830339		SQL Server 2000 Enterprise Edition-Disk Kit CD	1	37.00	\$74.00
Compq	GS-35F-4120D	989-801609		Backup Exec NT/2000 Agent for SQL Server	1	447.00	\$447.00
Compq	GS-35F-4120D	403-1127748		Backup Exec NT/2000 Open File Option	1	423.00	\$423.00
Compq	GS-35F-4120D	403-1127814		Backup Exec NT/2000 Media Kit CD	1	32.00	\$32.00
Compq	GS-35F-4120D	4031063911		Adobe Acrobat Capture V3.0	1	707.60	\$707.60
Compq	GS-35F-4044D	2210-1156		Adobe Acrobat V3.0	3	221.32	\$663.96
129 Digital Data/Media/Document Management							
Media Edge	GS-35F-4506G	MEP-303		Advanced DNS Solution Suite Upgrade Collaborative Server and Portal Server (50 additional users) Indexing Software Video Controller Software Concurrent User Upgrade	1	41,500.00	\$41,500.00
130 Software Maintenance							
Microsoft	GS-35F-4120D	3513-852883		SQL Server Ent Edition Upgrade Advantage-Processor	2	9,674.00	\$19,348.00
Media Edge	GS-35F-4506G	MEP-303-M		Advanced DNS Solution Suite Maintenance	1	14,880.00	\$14,880.00
131 Digital Data Management Software Maintenance							
Media Edge	GS-35F-4506G	MEP-303-M		Profant Server Software Incremental additional 50 users including Corp Portal, Collaboration Server Indexing Software Video Controller Software AccuCap NT Real Time Transcription	1	14,880.00	\$14,880.00
132 Travel - local, not to exceed							
132	Reproduction				1	\$989.10	\$989.10
133	Software Equipment & Misc				2,500	\$0.05	\$125.00
134	Material Handling					11.36%	\$211,226.00
Total Equipment & Misc							
						\$225,232.41	\$225,232.41

Total Optional Task 3

\$1,046,776.84

PRICE SCHEDULE
DIGITAL DATA MANAGEMENT SYSTEM

Summary			
Task 1 - System Design & Document, Training and Multimedia Management Pilot			
Optional Task 2 - Integrated System			
Optional Task 3 - Audio/Visual Components			
Required Tasks	Optional Tasks	Total	
\$1,464,213.45	\$355,640.14	\$1,819,853.59	
	\$1,006,778.64	\$1,006,778.64	
		\$2,826,632.23	
		\$1,464,213.45	
		\$1,362,418.78	

Digital Data Management System (DDMS)

STATEMENT OF WORK

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Digital Data Management System (DDMS)

STATEMENT OF WORK

1. BACKGROUND

The U.S. Nuclear Regulatory Commission (NRC) has a requirement for establishing and operating a courtroom with digital information retrieval, utilization, and display capabilities in conjunction with potential licensing proceedings for a high-level radioactive waste repository at Yucca Mountain, Nevada. These capabilities also are expected to be available for use in other licensing proceedings conducted by the Atomic Safety and Licensing Board Panel (ASLBP) in the NRC's Rockville, Maryland facility. Additionally, it is envisioned that portable and remote capabilities would be used to support local hearings conducted across the United States.

The ASLBP is responsible for conducting the adjudicatory proceeding regarding the Department of Energy's (DOE) application for construction authorization for a High Level Waste (HLW) repository at Yucca Mountain, Nevada. The current estimated date for beginning evidentiary hearings is January 2005.

The scope and nature of this proceeding dictate the essential need for efficient capture and management of the enormous volume of multimedia data that must be processed and displayed in a very short time frame for this hearing. The enormity of the HLW repository licensing hearing is evidenced by the number of documents that the Office of the Secretary (SECY) estimates will be part of the hearing docket at the completion of the proceeding. The SECY estimate of 50,000 documents is 300 times the volume associated with a typical ASLBP hearing and 24 times the volume of the largest hearing currently being conducted. In the current environment, ASLBP hearings are conducted using paper-based information and limited audio/visual (A/V) capabilities. This current approach clearly cannot support a hearing of the magnitude of the HLW repository licensing proceeding and cannot meet Commission rules established for the proceeding including the provision for online access to the SECY electronic docket during the hearing. [Reference: 10 C.F.R. 2.1013(d)]

NRC has conducted a comprehensive analysis to examine alternative solutions, including the utility of its existing Agency-wide Document Access and Management System (ADAMS) (<http://www.nrc.gov/reading-rm/adams.html>), for establishing an "electronic courtroom"/hearing room Digital Data Management System (DDMS) to fulfill this mission need. As part of this analysis, NRC has developed a vision of a DDMS that will be used in the Rockville hearing room and in a hearing room that will be established in the Las Vegas, Nevada area to conduct the majority of the proceeding. The system will enable the creation and use of an integrated, comprehensive digital record for the HLW repository licensing proceeding. Using information that is pre-filed electronically by hearing participants in the agency's ADAMS-based Electronic Hearing Docket (EHD), DDMS will record, store, and display the text and image of documents and other digital data presented in the hearing and permit access and retrieval of the entire documentary and video record of the proceeding in an electronic format. The system will allow counsel for the parties to bring prepared materials to the evidentiary hearing electronically and have it integrated and accessible concurrently with the record being presented in the hearing room. The record will be continually accessible by the presiding officer

and the parties in the litigation. The DDMS will support hearing activities and information management during the pre-hearing, hearing, and post-hearing phases.

NRC has identified an aggressive schedule for providing this courtroom data and document management capability, from initial planning and coordination activities through delivery and maintenance of an operational system. This project is intended to deliver the required range of services in a four-phase project, with each phase separately authorized and funded. The first three phases of work are completed under this SOW. The fourth phase, implementation of the Las Vegas capability, will be completed separately, at a later date.

The major objective of the DDMS is to help the NRC meet the congressionally-dictated three-year time requirement for the HLW repository licensing proceeding and to meet the regulatory requirement that there be online access to the HLW repository hearing docket during the hearing. Properly structured, the DDMS will support other ASLBP hearings as well. The DDMS is intended to achieve time and resource savings by improving the efficiency of conducting this high profile HLW repository licensing hearing with the anticipated large volume of electronic discovery and evidentiary information and is essential to the ASLBP in preparing timely decisions throughout the proceeding. It will also support the Office of General Counsel (OGC) and the Office of Nuclear Materials Safety and Safeguards (NMSS) staff in preparing for evidentiary proceedings and may be useful to Commissioners' staff in performing appellate review/oversight activities.

The DDMS will be used in the Rockville hearing room and in a hearing room that will be established in the Las Vegas area to conduct the majority of the proceeding. The system will enable the creation and use of an integrated, comprehensive digital record for the HLW repository proceeding. Using electronically pre-filed information stored in, and extracted from, the agency's EHD, DDMS will record, store, and display the text and image of documents presented in the hearing and permit access and retrieval of the entire documentary and video record of the proceeding in an electronic format. The system also will allow counsel for the parties to bring prepared materials to the evidentiary hearing electronically and have that information integrated and accessible concurrently with the record being presented in the hearing room and added to the agency EHD via the DDMS. The completed record will be continually accessible during scheduled hours by the presiding officer and the parties in the litigation.

2. OBJECTIVE

The contractor shall provide all necessary personnel, materials, hardware, software, labor, supplies, equipment, travel, and other direct costs necessary to accomplish the performance of the tasks described below. This contract will be accomplished through the issuance of tasks. In Task 1, the contractor shall complete the detailed design of the comprehensive DDMS system and shall deliver the first module of the envisioned DDMS, demonstrating the capabilities identified that are associated with a document and case data handling system for use in legal proceedings, thereby creating the Information Technology (IT) pilot environment at the NRC. In Task 2, the contractor shall install the A/V environment in the ASLBP courtroom on the third floor of NRC's Two White Flint building. In Task 3, the contractor shall: completely integrate the IT and A/V components in Rockville; upgrade IT in Rockville; upgrade A/V in Rockville; and provide maintenance and operational support during extensive implementation

and trial use of the system at the NRC Headquarters. In a subsequent procurement action, the government will acquire the hardware, software, and services needed to install a parallel configuration and maintain an operationally-equivalent DDMS in Las Vegas.

3. SCOPE

A. The DDMS encompasses IT (both courtroom-resident and web-accessible) and A/V capabilities installed in two hearing rooms; one at NRC headquarters in Rockville, Maryland; and a second in the Las Vegas, Nevada area. The requirements for this second hearing room, which is contemplated in 2004, must be included in the detailed design as a parallel site, so planning information about the Las Vegas hearing room is included, but the site will not be implemented under this SOW. The courtroom in Rockville will be configured by upgrading the existing AV and IT infrastructure and introducing new document management capabilities. The Las Vegas-area courtroom will be configured in a facility, yet to be identified, expected to be built out to NRC specifications in General Services Administration (GSA) controlled, leased space by (1) installing new A/V capabilities to be compatible with those installed in Rockville; and (2) expanding the document management capabilities developed for Rockville. The scope of the full system also includes capabilities that allow access to a web-based copy of the DDMS by participants from their sites.

B. While the target application for the DDMS is the HLW hearing, the system could be used for any adjudicatory proceeding. Since the DDMS will provide an electronic hearing room in Rockville, this capability could be used for non-HLW hearings that currently are frequently conducted at locations other than the agency's existing Rockville hearing room. In addition, the DDMS provides a basic portable hearing capability that could be expanded to support other hearings based on experience gained in using the hearing-room-based DDMS.

C. The design concept includes two features that are possible future enhancements:

1. Complete A/V capabilities including support for public access in the form of video streaming and gas plasma screens in satellite audience galleries.
2. A portable system that could be used to provide basic support for an HLW hearing at another site or to support other offsite hearings.

The implementation capabilities for videostreaming and a portable system have been deferred until such time as funding becomes available and/or the Commission decides to pursue these options, but the architecture shall anticipate and be flexible enough to accommodate these as future enhancements, although such work is outside the scope of this SOW.

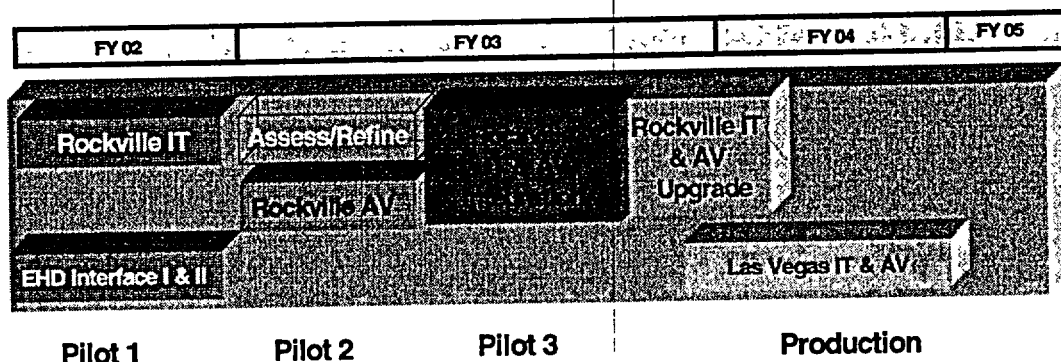
3.1 Full System Scope

A. The full system capability required will satisfy all requirements for the HLW repository licensing hearings as detailed in the requirements included in APPENDIX A to this Statement of Work. The entire DDMS will be designed, developed, and implemented in a modular fashion beginning with the highest priority modules in FY 2002. The modular rollout plan will allow for phased implementation with built-in decision points. Each subsequent module will begin only when NRC management approves the continuation. Continuation is contingent upon

successful completion of the prior task; and subject to the availability of funds for each task; and shall commence only after receiving management approval to proceed. Figure 3-1 illustrates this modular approach.

Figure 3-1

DDMS Phased Roll-Out Plan



B.
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capability, therefore, includes the following salient features:

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1. The IT technical architecture will be built around a centralized database in Rockville. The system shall feature distributed document storage capabilities using a database architecture that provides data stores in both the Rockville and Las Vegas-area facilities;
2. The architecture shall feature a two-way interface with the HLW repository licensing proceeding EHD. The interface shall allow downloading from the EHD to perform initial population of records into the DDMS, uploading of modified records with any court-generated markings or identification from the DDMS into ADAMS, and refresh by downloading from the EHD of any new or revised entries in the EHD since the previous download cycle;
3. Data and document management capabilities that provide document indexing and subsequent retrieval based on routine bibliographic data and court-specific markings such as evidence (accepted, rejected, withdrawn), exhibit number assigned, issues, parties, witnesses, or other documents associated with the evidence (such as where it is introduced in a transcript);
4. Hearing management functions such as facilitating the electronic generation and capture of pleadings, issuances, exhibits, witness lists, and indices, and preparing notifications/instructions to participating hearing personnel;

5. Real-time transcription will be performed on-site and the resultant electronic transcript will be used to automatically update both the EHD (via transcript entry into ADAMS) and the DDMS to provide next-day availability;
6. A protective order file will be established in the DDMS with security features to restrict access to this file, with controls at varying degrees from groups of individuals-to-groups of documents, down to the level of individual user-to-individual document and combinations thereof;
7. Complete capabilities that allow access to a web-based copy of the DDMS documentary collection by participants from their sites, allowing parties and the presiding officer to deal efficiently with the record of the proceeding in preparing pleadings/rulings;
8. Complete A/V capabilities including support for public access (including optional introduction of gas plasma screens and web streaming) to be provided in the courtroom's audience gallery areas.

C. The DDMS shall include capabilities, during the hearing, to:

1. Update the DDMS with new electronic and paper exhibits that will be introduced and used at the hearing;
2. Establish a presentation podium to facilitate electronic interaction by counsel with the courtroom technologies;
3. Record markings made on pre-filed materials to reflect important attributes such as disposition (e.g., identified, accepted, rejected, withdrawn); exhibit number assigned to a piece of evidence; or issues, parties, or witnesses associated with the evidence;
4. Intake transcripts, including real time transcription, that will be generated during each hearing session.

D. These new materials, modified documents, and transcripts shall be provided from the DDMS back to ADAMS and the EHD to be entered into the official record.

3.2 Scope of Interaction with Concurrent Projects

A. Specifically excluded from this Statement of Work are the three capabilities described below that are provided by other NRC systems:

1. Electronic Information Exchange (EIE), which will be used to meet the requirements for receiving electronic submissions of exhibits and pleadings;
2. ADAMS, which is the repository for maintaining and updating the EHD for the HLW repository proceeding;

3. Licensing Support Network (LSN), which provides electronic search access to discovery materials.

B. However, work under this contract does include these specific interactions with other NRC systems:

1. Establishing a direct interface with the EHD for the purpose of providing access to documentary materials from the EHD;
2. Subsequently uploading documentary materials from the DDMS back into the ADAMS system to capture courtroom-generated updates to the originally docketed items in ADAMS or submitting newly introduced items to the EHD via ADAMS.

3.3 Infrastructure Considerations and Requirements for Operational Implementation

All work performed under this Statement of Work shall anticipate the following minimum infrastructure upgrades to support the eventual operational deployment of the final system configuration. However, these items are not deliverables under the first task resulting from this Statement of Work. The following will be accomplished by the contractor under subsequent tasks or by other NRC contractors, as indicated:

1. Upgrade the Local Area Network (LAN) currently installed at the ASLBP Rockville Hearing Room to support the DDMS server and workstations as an isolated node from the rest of the NRC infrastructure. Establishing an isolated node will allow participant access to networks and databases associated with courtroom activities without creating access security issues to NRC's existing LAN/WAN environment. (Other NRC contractors)
2. Installation of a LAN and workstations in the Las Vegas area facility. (Other NRC contractors)
3. Installation and lease of telecommunications lines that support the exchange of information between Rockville and the Las Vegas area. (Other NRC contractors)
4. Installation of server platform resources to support operational processing capabilities and additional peripherals such as scanners and video storage devices for the Rockville facility. (Task 3)
5. Installation of operational configuration consisting of server platform resources to support additional processing capabilities and peripherals such as scanners and video storage devices for the Las Vegas area facility. (Other NRC contractors)
6. Expanded A/V equipment for the Rockville facility. (Task 2)
7. New A/V equipment for the Las Vegas area facility. (Other NRC contractors)

8. A laptop-based server to be used as a portable IT capability. (Task3)
9. A remote web-access server configuration. (Task 3)
10. An audience gallery external to the courtroom and video-streaming configuration. (Optional - Other NRC contractors)

3.4 NRC's System Development Life Cycle Management (SDLCM) Methodology Mandatory

A. 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 (1) defines the life cycle of an application system; (2) describes the structure of the methodology and each of the seven components; and (3) 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.

B. Copies of these volumes are included in APPENDIX C. The contractor shall follow a Package-Based Life-Cycle Model, as described in Section 3.4 of the **SDLCM Methodology Handbook**.

4. PERFORMANCE REQUIREMENTS

A. Through a series of tasks, the contractor shall acquire hardware, software, and provide services to deliver the complete system in Rockville, Maryland, via discrete modules of system components over a period of time. Assuming successful contractor performance in initial/previous efforts, and the continued availability of funding and management approval to proceed, the contractor/team that is awarded the work to develop the initial module will be issued successive tasks for additional modules of system components. The current plan is for the final phase, encompassing the installation and deployment of DDMS at a hearing room in the proximity of Yucca Mountain, in Nevada, to be competed at some time in the future, as a separate acquisition through CISSCO II, again. Contractors or subcontractors working on this effort will not be excluded from working on the follow-on, final effort, which is also referred to as "Task 4" throughout this solicitation.

B. This Statement of Work covers all of the activities required to provide a comprehensive DDMS system in Rockville, Maryland, although each subsequent task after Task 1 will be a separate Task, and issued only upon the successful completion of the prior task, and subject to the availability of funds for each task, and management approval to proceed. In Task 1, the contractor shall complete the detailed design of the comprehensive DDMS system including those elements that will be implemented via successive implementation, and shall deliver the

first module of the envisioned DDMS, demonstrating the capabilities associated with a document and case data handling system for use in legal proceedings. In Optional Task 2, the contractor shall install the A/V environment in the ASLBP courtroom on the third floor of NRC's Two White Flint building. In Optional Task 3, the contractor shall: complete integration of the IT and A/V components in Rockville; upgrade IT in Rockville; upgrade A/V in Rockville; and support the extensive pre-operational trial use of the system at HQ. In a subsequent procurement action, the government will contract for the hardware, software, and services needed to install and integrate IT-A/V in Las Vegas for a fully operational DDMS. However, since the requirements for this separate component are key design considerations, they are fully defined in this SOW, as "Task 4" functional requirements.

4.1 Task 1: Design of the Full DDMS Capability

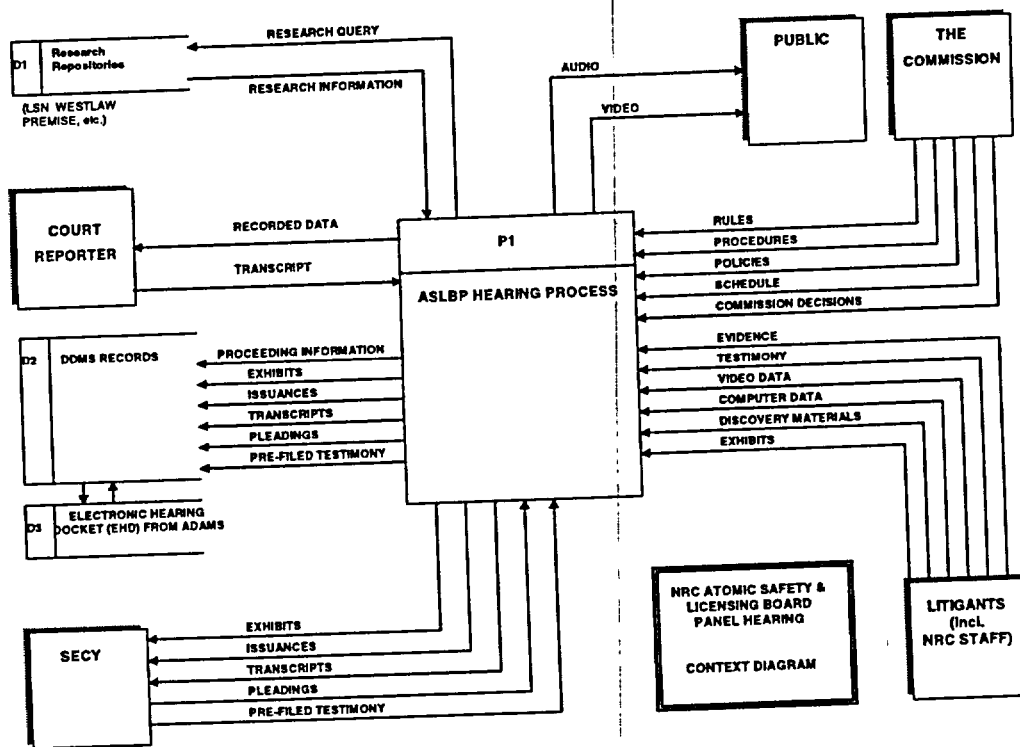
The contractor shall complete the design for DDMS, fulfilling all the requirements identified in this Statement of Work for the full system capability.

4.1.1 Detailed Design Basis

A. APPENDIX B includes conceptual design and functional requirements documentation for the DDMS developed by the NRC contractor, ASPEN Systems, during the project approval phase. These materials provide the design basis for DDMS, namely the functional requirements, specific technologies considered during preliminary industry surveys, a description of the NRC's adjudicatory proceedings, and an analysis of alternative solutions considered. The contractor is required to develop and deliver a comprehensive detailed design that covers the entire system capability, including those functionalities to be implemented in subsequent tasks. Detailed design documents developed in this initial task will become the implementation basis -- subject to iteration or application of lessons learned -- for all subsequent system development. The contractor may utilize the recommended products from the ASPEN Study, unless the contractor's proposal specifically identifies substitute products or software. In general, the contractor may or may not want to include or exclude specific recommendations from the ASPEN Study, as this study formed the basis for approval for DDMS. The exception is the detailed functional requirements identified in the ASPEN Study, which must be fulfilled, as identified, and are not subject to modification.

B. A contextual overview of the DDMS system is represented in the following graphic:

Figure 4-1
DDMS Context Diagram



C. The contractor shall conduct a session (or series of sessions) with the objective of an overall concept of operations with specific emphasis on defining and documenting a user-friendly interface specification based on how the users intend to actually use the system in the courtroom environment. NRC judges, support staff, and practicing attorneys - both NRC staff and external constituents - will be made available to participate in these sessions.

D. Following NRC's SDLCM, the contractor shall compile materials from the NRC's internal approval process found in the "DDMS Business Case" and materials from the facilitated sessions on user interfaces and concept of operations definition found in the ASPEN Study, and shall deliver a **Project Definition and Analysis Document (PDAD)** document to demonstrate its understanding of the functional, data, and user interface/operational requirements. This deliverable shall address alternative design approaches considered, identify the development environment, and present the nature of problems to be addressed in integrating with NRC legacy systems (e.g., ADAMS and EHD). The contractor shall develop and document a final overall system operations concept to be included with this document.

E. Once the contractor has demonstrated an understanding of the system design objectives, the contractor shall develop a **Project Action Plan (PAP)** for NRC review and acceptance. This document shall address both an overall project management plan, and a software development plan. The project management plan shall expand upon the basic plan submitted in the contractor's written portion of the proposal, and any changes or deviations from the proposal shall be clearly marked and identified. Upon NRC review and acceptance, the

contractor shall compile a detailed design based on the functional requirements and concept design found in the ASPEN Study, and shall deliver both a formal **Logical Design Document (LDD)**, and a **Physical Design Document (PDD)**. 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; and External Systems Interface Diagrams (with Processes, External Agents, External Interfaces, etc.). These elements may be developed as separate products or as sections of the LDD and the PDD, depending on the contractor's proposed implementation schedule. However, each of these final documentary products shall be an update to the PDAD and included as a tabbed section in the PDAD. Each of these documents shall, as needed, be updated throughout the design and implementation phases.

F. 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 (TIP)**. The contractor shall address how it intends to manage transition between phases of the project to minimize disruptions in work, retain key staff, address potential technical or schedule issues, and ensure overall program continuity. Additionally, this deliverable shall present an overall deployment plan including roles and responsibilities, schedules, and risk mitigation for products and for integration difficulties within project phases and between project phases, and shall address the sequence and resources that will be applied to linking the DDMS to the NRC infrastructure and integrating the DDMS with the NRC's EHD.

4.1.2 Description of Total System for Detailed Design Coverage

This section provides a summary description of the total system anticipated by NRC when all phases of the effort have been completed. The overall system concept is described in detail in APPENDIX B and is provided here in a condensed form as a frame of reference to provide bidders with the context for the full system capability, the scope of the detailed design efforts, and the integration capabilities that shall be anticipated.

4.1.2.1 Detailed Design for Document Management Component

The contractor shall design a central database that houses all DDMS hearing indexing information and permits the electronic documents and exhibits to be distributed on document servers that are maintained near the actual hearing locations. The design shall ensure that electronic information can be quickly transferred to users in the hearing rooms. The centralized index database shall be maintained in Rockville. The system shall provide for remote telecommunications links from Rockville that will allow hearing users in Las Vegas to use the centralized index database located in Rockville. Full functional capabilities for the DDMS shall be supported at both the Rockville and Las Vegas area sites. Limited functional capabilities of the DDMS shall also be available for other hearing locations.

4.1.2.2 Detailed Design for Videoconferencing

The contractor shall design a capability for multi-point videoconferencing that allows other locations to participate in the proceedings, along with the sharing of any video, audio, or data sources, via Integrated Services Digital Network (ISDN), T1, or fiber optic connections in the

courtrooms. This capability shall be fully integrated with the overall courtroom in such a way as to allow judges and others to participate fully in courtroom proceedings from different locations.

4.1.2.3 Detailed Design for Real-time Transcription

The contractor shall design a capability that identifies all infrastructure (e.g., network connections) in the courtrooms necessary to support a Court Reporter supplying real-time transcription services. A court reporting service has not yet been selected to support the Yucca Mountain repository licensing proceedings.

4.1.2.4 Detailed Design for Video Capture / Playback

The contractor shall design a capability in which video cameras capture and broadcast the proceedings to the public hearing participants. The design shall provide for a voice-activated camera switching system at each facility that functions similarly to the one currently installed in the NRC's Rockville hearing room. Fixed cameras shall be provided and be aimed at the three judge positions, the parties' tables, the intervenors' tables, and witness positions. The judges will have a camera shot of the entire bench, and the other positions will have either one to three people per camera shot. When someone talks, the system shall instantly select the corresponding camera. The selected camera image along with audio from all microphones and other sources will then be recorded and/or distributed as needed. The contractor shall also provide design for two pan-tilt-zoom cameras to be strategically mounted for wide-angle coverage of the well area, one of which shall incorporate technology that allows it to follow the movements of an individual in the courtroom well-area wearing a lavalier microphone.

4.1.2.5 Detailed Design for Video Cassette Recorder (VCR)

The contractor shall design a capability that provides devices to capture the video images recorded by the various video cameras operating throughout the hearing room. The system shall be designed so that several Video Cassette Recorders (VCR) can be operated simultaneously during a hearing. The contractor shall provide design for devices that record VHS format tapes and be able to signal the designated operator when the tape is about to become full during a recording session. The government requires using both digital video recording and analog video recording technologies: analog to perform initial capture and archiving of the proceedings, and digital to support the subsequent management, distribution, and searching of video information.

4.1.2.6 Detailed Design for Evidence and Argument Presentation

A. The contractor shall design a capability that provides the multiple components necessary to present evidence and argument in the hearing room. These components include the ability to connect laptop devices into the courtroom system, display units, computer terminal monitors, projection devices, projection screens, digital presentation devices, and video markers.

B. The contractor design shall anticipate providing large wall-mounted display units (gas plasma) for use in the gallery areas or for public viewing outside the hearing room as a future enhancement.

C. The contractor design shall anticipate providing desktop display units (monitors) for presentation of electronic evidence or exhibits to the judges, litigants, clerks, witnesses, and for audience view. The participants in the hearing room that need individual access to a computer screen or need to view audiovisual presentations will each be provided a flat panel display unit on the tabletop in front of them. At this juncture, the Government does not anticipate the use of any custom-designed millwork for tables to house computer screens or other IT equipment.

D. The contractor design shall anticipate providing additional monitors for seats that do not have a workstation, to enable those participants in the hearing room that need individual access to a computer screen or need to view AV presentations on the table in front of them.

E. The contractor design shall anticipate providing LCD or DLP projector units to provide projection capabilities and DaLite Electrol ceiling recessed motorized screens (8' x 10').

F. The contractor design shall anticipate providing digital presentation devices (DPD) to present paper or physical exhibits not yet in electronic format.

G. The contractor design shall anticipate providing video markers to allow presenters to draw or point on video images as easily as if they were using a pen or pointer. The system shall be connected to the video source and the monitors active in the courtroom. The system shall allow a user to perform circling, underscoring, and other highlighting as well as to write or type notes on top of the video image using keyboards, light pens, digitizing tablets, or touch screen technologies.

4.1.2.7 Detailed Design for Audio Translation

The contractor shall design a capability that ensures the ability to integrate various technologies that may be used by skilled translators/interpreters in delivering simultaneous and consecutive interpreting to groups and individuals using telephone communications equipment. The interface capabilities shall allow interpreters the ability to listen and respond via the telephone.

4.1.2.8 Detailed Design for Audio Support

The contractor shall design a capability that provides microphones capable of being manually- or voice-activated.

4.1.2.9 Detailed Design for Audio/Video System Control

A. The contractor shall design a state-of-technology control system to manage and control the capture devices during the hearing. This control system is necessary for the judge or clerk to enable the capture devices to function as required. The system shall be capable of controlling the system, VCRs, projectors, monitors, sound systems, and other future electronic additions to the room. The control panel design shall include both matrix and touch panel controls.

1. Matrix switchers shall be provided for audio and video components necessary to accept all video, audio, and computer outputs, and to control which sources are sent to which devices. Controls shall be provided to allow any video, computer,

or audio source to be sent to any or all the connected devices, anywhere, at any time, including media feeds for press.

2. Touch panel controls shall be provided to control the system and all other room media systems. These panels will be custom programmed for the NRC, using powerful one-touch macros to set the rooms up into various operational modes. Two remote control panels are required to support the hearing, one for the judge and another for the clerk.

B. The contractor shall design a system that provides audio speakers throughout the hearing room for the purposes of broadcasting the proceedings. In addition to speaker support for people with normal hearing, the system shall include the capability to support the needs of translation services and assistive listening.

4.1.2.10 Detailed Design for Hearing Management Component

The contractor shall design a system able to deliver comprehensive hearing management capabilities needed to ensure that the administrative and logistic staff has supporting information available to assist the judges in conducting the hearing. Some of the hearing management information will be managed by the document management components that also contain bibliographic or profile linkages from documents to exhibits, witness lists, etc.

4.1.2.11 Detailed Design for Hearing Management Reporting Component

A. The contractor shall design a system wherein the document management component has the flexibility to provide customizable standard reports and ad hoc reports in both print and display media that can be used by the judges, clerks, and other ASLBP administrative personnel in the administration of the hearing. The reports shall include information such as:

1. Witnesses scheduled to testify at a specific date;
2. Lists of exhibits related to witnesses scheduled for a specific date;
3. Lists of exhibits used in a specific hearing.

B. Some of the required reports can be predefined; however, ad hoc reporting capability is also required to support all fields of information contained in the document management system and the databases used to track witnesses, exhibits, calendars, etc. Open Database Connectivity (ODBC) compatible report generating tools shall provide a graphical user interface for designing and producing both predefined and ad hoc reports required to support the hearing.

4.1.2.12 Detailed Design for Hearing Management Research Support Component

The contractor shall design a DDMS environment that accommodates access to research databases simultaneously with having access to the case record contained in the DDMS to support performing legal research. The capability shall be structured so as to ensure that the access to legal research tools is at the user's expense (e.g., not hard-wired to a single customer account). Research databases that shall be accessible are Westlaw™, Lexis/Nexis™, Premise™, and may include other research databases that may be designated by the judges and attorneys. In addition to those online case law databases, there are rules

and other policy documents (e.g., 10 C.F.R. Parts 2 and 63, the Atomic Energy Act of 1954, and the Nuclear Waste Policy Act of 1982) that are available in electronic form from various websites, subscription services, etc., that shall be accessible via the DDMS system or may be stored on the DDMS server.

4.1.2.13 Detailed Design for Hearing Management Integrated Case Management System

The contractor shall design an integrated case management system that integrates the document management, the multimedia management, and the administrative tools required to support the hearing. Unlike the general purpose document management system, the case management system is a specialized solution required to provide specific support to the requirements for a trial or hearing environment. The contractor shall provide a case management capability that maintains the docket materials in active use in the courtroom, and manages the interfaces between lawyers, issues, schedule, witnesses, and the court calendar. Because many of these elements are not document-centric, they conceptually do not fall within the capabilities of the electronic document management system component.

4.1.2.14 Detailed Design for Multimedia Management Component for Transcript Handling

The contractor shall design a system architecture that provides support for court transcription service vendors who will provide real-time transcription services at the courtroom sites. Real time transcription will be used to support requirements to provide Americans with Disabilities Act (ADA) required trial information to hearing-impaired individuals. The system shall provide for connecting with court-reporter-provided equipment and devices used for computer-aided transcription or voice recognition-based Stenomasks to capture and distribute real-time testimony.

4.1.2.15 Detailed Design for Multimedia Management Component for Video Handling

The contractor shall design a capability to automatically create an index for video recordings generated during the hearing. This capability shall be integrated with real-time transcription technologies to provide a video that is synchronized with the output of the computerized real-time court reporting component. The resulting product of this integration shall be stenographic text of the proceedings taken down by the court reporter and translated by real-time transcription software, and integrated with a simultaneously created videotape so that the text of the testimony appears on the screen (in closed caption format) with the video record of courtroom events. The delivered capability shall contain an internal clock in the video camera or VCR components that can be synchronized with the court reporter's computer to ensure that the video and text records of trial proceedings match. The delivered capability shall result in an overall system approach that allows a specific portion of the video record to be found by searching the text record, rather than relying on a video-only search.

4.1.2.16 Detailed Design for Communications Component: Telecommunications

A. The contractor shall provide design for specification, and application-end-integration with the existing NRC wide area network infrastructure to ensure the ability to connect distant, remote locations using NRC wide area network resources. For the DDMS, telecommunications components shall be integrated to ensure that information can be transmitted between the NRC's Rockville hearing room and other remote locations such as the Las Vegas, Nevada area. The information to be transmitted includes:

1. Documents pre-filed in the NRC's EHD via ADAMS that may be required at a remote hearing;
2. E-mail messages for ASLBP officials;
3. Remotely captured hearing documents to be added to the EHD docket record;
4. Transcripts from remote hearings to be added to the EHD docket record;
5. Bibliographic updates to pre-filed exhibits.

B. The telecommunications capabilities shall also support video conferencing transmissions and Internet access to support research. The communications capabilities shall utilize existing NRC telecommunications infrastructure and would piggyback on existing agreements and pricing structures; however, the design shall anticipate that the implementation contractor will provide all equipment components required at the DDMS server or control panel terminal of the communications channel, for both the Rockville and Las Vegas-area locations. The contractor shall anticipate a T1 dedicated digital circuit (private line) that would support transmissions at speeds up to 1.54 Mbps.

4.1.2.17 Detailed Design for Communications Component: Local Area Networking

A. The contractor shall provide design, specification, and application-end-integration for a LAN node capability to support the courtroom environment, in consultation with NRC's Office of the Chief Information Officer (OCIO)/Information Technology Infrastructure Division (ITID). The design shall be such that the NRC staff (judges, clerk, and support personnel) has access to the NRC corporate enterprise LAN environment while at the same time preventing non-NRC participants from having any access to the NRC corporate enterprise LAN during the process of using the DDMS resources, including legal research capabilities. For the Rockville location, existing NRC infrastructure contractors, utilizing the specification provided by the DDMS contractor, will install the required configuration. For the Las Vegas-area location, the contractor selected to implement the Las Vegas facility (Task 4) shall provide for the installation, integration and testing of the required configuration in addition to the design and specification. The required LAN configurations shall support the following DDMS requirements:

1. Transmit/share pre-filed documents and exhibits stored on a server to the hearing participants;
2. Connect multiple workstations, display devices, printers, and input devices that support the hearing;
3. Allow hearing participants to transmit new electronic documents and exhibits to the server.

B. The design shall anticipate that the Rockville facility will be upgraded by NRC infrastructure contractors to utilize Category 5 cabling (Cat 5) that supports transfers up to 100 Mbps. The contractor shall develop a specification for the Las Vegas-area hearing room that utilizes the above noted Cat 5 type cabling.

4.1.2.18 Detailed Design for Data Storage Components

A. The contractor shall design a capability that provides disk storage for the management of electronic information used by the DDMS during the hearings. The design shall anticipate the projected volumes of data for the Yucca Mountain HLW Repository proceeding and additional case proceedings for which the resource may be used.

B. It currently is anticipated that the hearings for the Yucca Mountain license application will encompass at least 150 hearing days. Assuming twelve (12) hours of hearings per day, this would result in 1800 hours of recorded hearing video information. If video-streaming support is required, this data shall be compressed and stored or forwarded to accommodate various types of Internet users. The compound effect of managing video could result in the storage of video in multiple formats/resolutions (Real Video, Windows Media, and Quick Time). Based on the projected dominance and availability of the Windows Media, a Windows-based format for storing digital multimedia information shall be anticipated. The government estimates the following storage requirements for just the Yucca Mountain Case:

1. 79 GB for electronic documents;
2. 4 GB for information profiles;
3. 8 GB for full-text indices;
4. 1.2 TB for video recording storage (assume 1.5 Mbps recording rate using an MPEG format).

C. The NRC anticipates that the electronic documents, profile descriptions, and full-text indices will be stored online to support the performance requirements of the DDMS. These items combined will require a total of approximately 91 GB of online disk storage. It is not necessary to store all 150 hearing days of video information online on disk drives. The video storage requirement for a single day is approximately 6 GB or 12 GB for two days (the required storage time frame for video). A total of approximately 103 GB of online storage is therefore required for the DDMS. Offline or near-line storage devices like tapes and Compact Disk (CD)/Digital Versatile Disk (DVD) devices can be used to provide a more cost-effective media for managing the large volume of hearing video. This requires hierarchical storage management (HSM) of data, i.e., software that moves and tracks data across multiple storage media.

D. For estimating purposes, the contractor shall assume that the document and page totals of all other cases in aggregate are equal to those outlined for the Yucca Mountain Case. Therefore, total document volume sizing for the DDMS should annually be double those of just the Yucca Mountain Case, which are described in detail in section 4.2.2.3

4.1.2.19 Detailed Design for Data Storage Component Digital Versatile Disk (DVD)

The contractor shall design a system that provides a DVD-Random Access Memory (RAM) capability, per the ASPEN Study, to support offline/near-line storage.

4.1.2.20 Detailed Design for Optional World Wide Web Access Videostreaming Component

The contractor shall design a system that is able to implement a videostreaming capability. Currently, NRC has an interagency agreement with the National Institutes of Health to provide NRC the support of a webcast infrastructure system with capacity to accommodate NRC-originated "live" programming webcasts and store "archived" webcasts for later access by viewers via a Web Page on an "on-demand" basis, 24-hours-a-day, seven days-a-week. The contractor shall assume that NRC does not proceed beyond this interagency agreement by the time of DDMS implementation and shall propose the design for building of the entire infrastructure necessary to support videostreaming, not anticipating any existing in-house services as well as an alternative design that does utilize the existing capability. A total of 1.2 terabytes (TB) of video information will be created during the hearings for the Yucca Mountain license application during a 150 hearing day period. It is expected that the videostreaming solution will support access to a two-day time period, the previous and the current day's hearing information. In addition, during the hearing, portions of the hearing will be involved in proprietary information that will not be streamed to the public. This means that the output from the cameras used to record the entire proceeding cannot be automatically distributed to the public and the data stream shall be controllable by the judges (via a preview monitor) to ensure that secure information is not accidentally or unintentionally distributed.

4.1.2.21 Detailed Design for World Wide Web Access Remote Access Component

The contractor shall develop a design that provides a mechanism whereby the NRC judges and other staff, and the other participants' attorneys can access the DDMS hearing information (including exhibits, transcripts, and other textual information as well as case management information such as schedules, witnesses, etc.) from a remote location such as a hotel room or law offices, working in conjunction with NRC's OCIO/ITID. To ensure that the DDMS database is not subjected to malicious destruction, the contractor shall architect the web access capability so that a mirror copy of the DDMS database being used in the courtroom would be maintained as a web-accessible copy. The contractor is responsible for all hardware, software, and security components necessary to implement a secure web access capability at NIST Level 5. The web-accessible version shall be accessible/available only to authorized users, and not the general Internet public, and access shall be controlled by password issued by the DDMS administration. The solution shall have the ability to be updated each day from the EHD at the completion of the day's hearing. The solution shall provide a capability to ensure that only publicly available (i.e., non-classified, non-safeguards) DDMS information is published to the web-accessible version outside the firewall.

4.1.2.22 Additional Detailed Design Attributes

A. In addition to the core capabilities, the system shall address the following attributes:

1. **Meet Americans With Disabilities Act (ADA) Section 508 requirements.** All components that provide user interface capabilities shall be Section 508 compliant or address acceptable alternatives as described in the ADA. (See: <http://www.section508.gov/>)

2. **Provide mechanisms to easily develop and add custom components to extend the system.** The architecture shall be such that modular, COTS products can be added to its core functionality to address deficiencies identified by the users during testing.
3. **Accommodate third-party component providers by adhering to open system standards.** The architecture shall be such that new software components can be integrated into the system without seriously impacting other hardware or software components. The DDMS system shall consist of products that are standards-compliant. Image Format Standards are Tag Image File Format (TIFF) Version 6.0 (multi-page) or Section 508-compliant Portable Document Format (PDF) [e.g., rendered with Adobe 5.0 or higher in order to meet Section 508 requirements]. Current industry standards for compression shall be used. For documents, Consultative Committee International Telephone and Telegraph (CCITT) Group 3 and 4 compression shall be supported. For pictures (color images), the Joint Photographics Expert Group (JPEG) shall be supported at a JPEG glossy quality level at or above 75 on the scale of 1 to 100. For video, Moving Pictures Experts Group (MPEG) MPEG -1 and MPEG-2 shall be supported. Remote access shall use Transmission Control Protocol/ Internet Protocol (TCP/IP) as the communications protocol. Data Base software shall be ODBC compliant. ODBC compliant applications can use products such as, but not limited to, ORACLE™, SYBASE™, INFORMIX™, and SQL Server™ databases interchangeably. Database software shall be Structured Query Language (SQL) compliant. The desktop user interface shall be Windows NT Graphical User Interface (GUI) based. The system shall host its database in an ODBC compliant relational database management system (DBMS) to ensure a standard method for accessing relational (structured) data, which is how the bibliographic data (headers) is characterized. A second core capability is implicit with the requirement for an ODBC compliant DBMS: the DDMS's database software shall provide access to documentary material through SQL-based structured index searching (on bibliographic header record fields). This will allow the DDMS to provide full text, image and bibliographic search and retrieval capabilities in a single search interface screen (although there may be a "single screen" each for simple vs. complex searches); to do so without requiring complex navigation or differing protocols; and to move between and among full text, images, and bibliographic entries without having to interactively open and close different applications packages. These underlying standards are what will allow users to simultaneously search for key words and terms against both bibliographic databases and full text files.
4. **Allow the use of authoring tools for developing additional custom components.** The architecture shall provide a capability to allow server-resident application software customization after initial installation, by use of extensions (or other techniques) that do not invalidate core software licenses.
5. **Be capable of adding additional nodes to address high user demand.** The system shall be scalable. The DDMS shall be designed using modular design techniques for both its hardware and software, and have well-documented

software interfaces. To meet this requirement, the Operating System (OS) software shall be a mature, robust operating system and be interoperable, capable of working on multiple platforms. Server platforms shall also be scalable. Server hardware shall be high-speed, high-performance and support or be upgradable to multi-processors (dual, quad, or eight-way, depending on the application resident on the server).

6. **Allow for performing routine administrative and maintenance activities from a remote console, workstation, or terminal.** This core capability details the specific capabilities needed by DDMS database administrators: the ability to perform database administration (start up, shut down, file maintenance, tuning, etc.), monitor session activity and system usage, administer user accounts, backup/restore, and otherwise monitor system performance. The DDMS shall provide access to the servers and all of their services, via both local (Rockville) and remote (Las Vegas) access for NRC staff, who are authorized to perform various activities (e.g., search and retrieve, upload transcripts, and generate reports). The DDMS shall provide the necessary tools to ensure availability and the integrity of the DDMS database. These capabilities include such basic functions as the capability to initialize the software and hardware necessary to operate the DDMS, and the capability for the orderly shut down of the software and hardware components of the DDMS. To accomplish file maintenance, the DDMS shall provide authorized users with the capability to perform changes to the database structure (adding, deleting, modifying fields). This would include database administration features which include having an editable table of valid field values for the DDMS bibliographic header and any other header information in the system. The DDMS shall provide authorized users the capability to adjust database performance parameters or to restrict or disable database features in order to optimize system performance.
7. **Be capable of application upgrades.** This core capability is required to address system currency, maintainability, and scalability requirements. This capability implies that the system to be developed will not rely on extensive customization which could prevent the system from being routinely upgraded with new vendor releases. Customization engenders regression testing against new releases of software and, if extensive, could be cost prohibitive. Therefore, the client and server software shall be a commercial off-the-shelf product that can be installed with only minimal customization (field definition, screen design, etc.) insofar as possible while still meeting functional requirements.
8. **Be fully featured for storage, search, retrieval, and reporting.** The DDMS shall be designed using products that are capable of creating bibliographic headers for transcripts and associated exhibit materials. It shall allow for downloading existing digital images from the EHD, and supporting creating a digital image of each page of text material introduced in the proceeding. It shall maintain navigational linkages between pleadings, depositions, and transcripts and their associated/attached exhibits. *The implementation of this functionality shall not use hyperlinks (which introduce records retirement issues) and shall be accomplished in a single environment that is easily understandable and quick to*

learn. The software environment shall preserve transcript formats including page and line numbers in the image format for uniformity in reference. The software environment shall provide the ability to link exhibit document records in the EDMS file with their point-of-reference in the full text transcript where they are introduced. It also shall include the ability to display limited access warnings. Additionally, the software shall provide a means to generate various reports by category (e.g., witness names, exhibits, issues), including custom reports (e.g., generate an electronic list of all exhibits that indicates where in the record they were introduced).

9. **Provide a restricted access capability which is the repository for the Protective Order File materials to which only certain parties in the proceeding have access for the purpose of utilization/display during the proceeding, as required by the Rules of Practice, 10 C.F.R. Part 2.1013(d).**
10. **Provide on-line documentation.** This core capability provides on-line documentation as part of an on-line help capability. This is a critical capability because of the diversity in the level of sophistication of the users. To support users, the DDMS shall provide help screens to assist user interaction with the (OS, RDBMS) system processes and to respond to system messages, and help screens to assist user interaction with the application software and to respond to application software messages. The online help features of the DDMS shall be field-sensitive and shall include narrative, not just a cryptic, system-jargon, numbered E-message. For example, the DDMS shall provide interactive capabilities to assist the user in retrieving documents when the field values that uniquely define the documents are not known to the user.

B. The above noted capabilities are required for both general case information and for information that might be included in a protective order file. Protective order information is that information to which a judge provides access only on showing of need, pursuant to conditions, and to named individuals.

4.1.3 Detailed Design Controls

A. During the detailed design phase of the project, the contractor will adhere to the NRC's SDLCM.

B. The government believes that a Commercially Available Off the Shelf (COTS) implementation may offer a significant opportunity for lowering costs, decreasing risks, and minimizing the attendant schedule delays that frequently accompany projects with a large amount of customization required.

C. Regardless of whether COTS or custom development is proposed, the contractor shall establish a requirements map (traceability matrix) to the proposed solution for use in the design review process. This requirements map shall address all four modules or phases of the DDMS project even though the technological implementation may fall in a later task. The mapping will

identify the instances of each requirement and the way the operation is implemented for each instance, as appropriate. The purpose of this mapping is to ensure that all requirements are met and that the mechanisms to meet those requirements are identified either as products that are "as is," or as tailored or customized solutions. The contractor may propose development management tools (such as those from Rational Software Corporation, for example) where appropriate.

D. The contractor shall 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.

4.1.4 Detailed Design Constraints

The following detailed design constraints have been identified and proposed solutions to address these constraints shall be covered by the contractor in its proposal responding to this Statement of Work:

1. Implementation of the Las Vegas courtroom will be handled as a separate procurement action by the government; therefore, implementation of the Las Vegas component is not covered in this SOW.
2. The server platforms established for Module 1 to demonstrate the document management, case management, upload/download, and real-time transcription capabilities shall be the ongoing development environment resource and pre-release test bed. Each subsequent module delivered shall be based on fully reusable hardware and software components for the next modules implemented.
3. Space and workstations are available in NRC offices for the location of a limited number of developers, as detailed in Section 5, Place of Performance.
4. The NRC Technical Center (2nd floor of Two White Flint North complex) will house the development platform specified by the contractor.
5. The DDMS shall be able to access data formatted for storage in EHD which is proposed to be implemented with FileNet EDMS software, shall be able to query that database routinely for any updated data, and shall be able to export DDMS records for entry back into the EHD via updates to ADAMS.
 - a. NRC's OCIO has advised that the DDMS design shall be compatible with the current operational version of ADAMS. However, the contractor should anticipate that a revision to the NRC ADAMS system will be announced in June or July, 2002. OCIO advises that this ADAMS Release 4.0 will replace outdated versions of the COTS products that ADAMS is built upon to take advantage of product improvements made by the vendor over the past four years. It will

provide ADAMS performance and stability improvements. It will replace existing COTS items with newer COTS products with little or no change to the custom code. It upgrades both the client and server software to FileNet Panagon 3.1 and 5.1, respectively. Watermark imaging software will be replaced with FileNet's IDM Viewer. Also planned for ADAMS Release 4.0 is a Yahoo type search and retrieval web interface. This will be rolled out as a prototype for public stakeholders who prefer a Web application interface. The existing CITRIX™ client will continue to be made available.

b. The contractor is also advised that there may be an ADAMS Release 5.0 in FY2002 that will take advantage of features in the newer versions of the FileNet COTS product and will provide Web browser support, which will allow for more efficient desktop support and public/remote access to the EHD without needing to use CITRIX™. It should be noted that the Web browser provided by the newer version of the COTS product will still provide the same Windows "look and feel" that users see under the current ADAMS implementation.

c. Therefore, the contractor is required to address its approach to maintaining technology conformance with the evolving NRC infrastructure during the course of a potential multi-year effort to complete the DDMS.

d. The underlying Operating System (OS) for ADAMS FileNet™ will be NT 4.0, the database will be MS/SQL 7.0, the client will be fat--web access provided via CITRIX™ with plans for alternative browser access via Excalibur™ RetrievalWare™ software for public users only.

6. Courtroom LAN upgrades shall ensure the isolation of the node being used to support the DDMS, and at the same time provide NRC staff users access to non-isolated LAN resources that are part of the NRC enterprise.
7. Subscriptions to legal research services will be made separately by each of the parties involved in the Yucca Mountain HLW proceedings. For purposes of design and piloting efforts, existing NRC subscriptions are available for access by NRC users. Customization and integration of subscription software and databases shall not be presumed in the design of the DDMS gateway to those services.
8. All architecture components proposed shall conform to current NRC standards outlined in Section 4.2.2.4; items not currently in the NRC inventory of hardware and software, including products that may be used during the software development process, shall be granted a waiver for use during the development phase, and it is the contractor's responsibility to generate documentation for a request that the proposed components be added to the NRC baseline prior to their being introduced to the operational phase. The NRC Project Manager will submit the request to the Chief Information Officer, who must approve the request before it can be implemented.
9. The agency standard is NT 4.0, and NRC currently supports two SQL databases as its standard, SQL 7.0 and Sybase™ 12.

10. OCIO/ITID has standardized its maintenance support contracts on Compaq™ and Dell™ servers. The contractor shall consult with the DDMS Project Manager on server brands and models to be used for the system prior to committing to delivery to NRC.
11. The exact nature of the process for accessing documents from EHD to populate the DDMS shall be addressed by the contractor's proposal as shall the software routine used to upload hearing generated information into the ADAMS environment. ADAMS fully utilizes the FileNet security model, incorporates versioning features, and could utilize FileNet's check-in/check-out feature if the contractor elects to incorporate this in its proposed design.
12. The NRC technical infrastructure (detailed in Section 4.2.2.4) is constantly evolving but the contractor shall anticipate there will be long lead times and that the current infrastructure, with just routine upgrades, is what will be used. (The replacement of WordPerfect™ with Microsoft Office™ is scheduled to be reexamined in FY 2003 but the reexamination may not happen until FY 2004.)
13. NRC anticipates having one (1) full time equivalent system administrator available during the operational phase of the DDMS system. The offeror shall provide a solution that allows for full database administration from either Rockville or Las Vegas, and shall address whether government staff needs to be augmented by contractor staff.
14. The contractor shall propose a system architecture that provides flexibility and backup capabilities that will allow for partial operational capabilities or for one hour (1 hr.) recovery capabilities.
15. The contractor shall anticipate that the Rockville courtroom will continue to be actively used during upgrade of its AV capabilities. There are other hearings that must be accommodated during the update of this facility's AV capability.
16. Space has not yet been identified for a Las Vegas-area courtroom facility.
17. NRC will house the development environment. The contractor is responsible for identifying in its proposal the complete suite of hardware and software needed and will be responsible for ordering, installing, and configuring the development system in NRC space working in conjunction with NRC infrastructure contractors.
18. Installation of equipment and infrastructure items, such as cables, in the Rockville Hearing Room must be respectful of the NRC's desire to maintain the current decorum of the Hearing Room and cannot include drilling holes in the paneling or other actions that would alter the physical appearance of the room without prior coordination with NRC's Office of Administration, which will be done through the DDMS Project Manager.
21. The contractor must be responsive to data and system security requirements that are imposed upon the DDMS by federal agencies, such as the National

Security Agency (NSA). Specifically, NSA security specialists may conduct security and penetration testing on the system to determine vulnerabilities which the contractor must correct.

22. The contractor must be responsive to the findings of the NRC's independent "red team" analyses which are a critical element of the NRC management control function.

4.1.5 Detailed Design Review: Acceptance Criteria for Design Activities

A. The detailed design work covering all IT and A/V components, including those for implementation during follow-on phases, shall take place during the first task and is a deliverable under Task 1. The contractor is required to complete a detailed design for the entire system by addressing how the operational system will accomplish the stated functional requirements, and successfully deliver key design documents -- PDAD, LDD, PDD, and TIP -- that conform to NRC's SDLCM guidelines. The TIP shall specifically map out the DDMS modular development through the use of targeted pilots. All designs shall be finalized prior to the commencement of development work. Upon timely completion of NRC's review and approval of the walk through and budget estimates, the contractor will be formally notified by the Contracting Officer of authorization to commence the engineering phase of this task and to acquire pilot components. All the products delivered under Task 1 shall anticipate being reused for, or updated during later stages of the overall system development.

B. A design review, or walk through, 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**. A Requirements Traceability Matrix is required to be identified with the key documents used at the formal design 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 DDMS 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.

C. The design walk-through shall include complete budget projections for tools, technologies, communications, network, personnel and other resources required for the subsequent phases of DDMS development.

D. The contractor shall incorporate the results of NRC's reviews of deliverables within 15 days of receipt of NRC's comments, and issue final versions of those documents per guidance in NRC's SDLCM.

4.2 Task 1: System Capabilities of the Module 1 Component

A. The contractor shall provide a fully featured and fully integrated operational pilot computer system giving judges and lawyers the capability to control the use of documentary material in a digital environment during administrative law hearings. The software delivered for the pilot DDMS shall be scalable so as to support the hearing room environments for Rockville, and a courtroom to be established in the Las Vegas area.

- a. In its final operational configuration, the DDMS shall be capable of supporting multiple formal hearing room environments simultaneously.
- b. The final operational configuration of the DDMS shall be capable of supporting smaller proceedings conducted at temporary locations across the country via portable devices with relatively low speed (e.g., dial-up) communications access.

B. The following sections provide a summary of the functional requirements for the DDMS components. A comprehensive list of identified requirements is included in APPENDIX A.

4.2.1 Elements of the Fully Featured Operational Pilot

The ASLBP presented a business case analysis in order to receive authorization to proceed with the project. The business case represents the conceptual design (analysis and description) of the system that the NRC envisions for implementation. The salient attributes of the system as proposed in that document are included as APPENDIX B of this document. The pilot software delivered in Task 1 must be scalable to a fully operational system as detailed in the following sections.

4.2.1.1 Intake

A. The contractor shall provide a capability that collects and organizes all the information needed to conduct an NRC administrative hearing. Collecting the information requires capabilities to:

1. capture paper-based and electronic-based materials presented for the first time in the courtroom setting;
2. access and manipulate data available in existing NRC agency legacy systems;
3. capture marking information generated in the process of the courtroom hearing that is associated with the use of transcripts and exhibits (e.g., when during the transcript an exhibit was introduced; what part of a document was read aloud by a witness; or, capture markups done on displayed images with annotations tools such as found in Watermark™);
4. capture the output of court transcription and real time captioning systems and synchronize them with each other and with recorded video; and,
5. capture and associate information related to case administration activities including court schedules, witnesses scheduled, testimony scheduled, and issues pertinent to these scheduled activities.

B. The DDMS shall accommodate input devices that will reside in the courtroom technology infrastructure and be able to import, process, store, and manipulate the information needed to support the proceeding that is generated by those devices. The DDMS shall support capturing multimedia electronic information from the courtroom in their original format and shall include all software resources and/or integration in order to perform data transformations to make the

courtroom-introduced data immediately useable by the lawyers, judges, and support staff using the DDMS. It shall also support the electronic capture of paper-based information from the courtroom via scanning and conversion of paper documents, e.g. to capture required written signature pages.

4.2.1.2 Import and Export

The DDMS shall provide a mechanism to select and access pre-filed documents and pleadings located in NRC's ODBC compliant ADAMS system and shall provide a mechanism to organize and control those documents for use within the courtroom environment without need for an active ADAMS session while those documents are being used. The capability shall include the access to both pre-filed electronic documents full-text index information and to non-electronic information using the metadata. It shall timely reflect changes made to documents residing in the EHD in Rockville, MD to obtain EHD updates and to transfer hearing record updates. To ensure timeliness of information, this interface shall be available six days per week (to exclude scheduled periods when ADAMS is undergoing maintenance) and shall canvass the EHD collection for updates not less than once every 24 hours (during periods of scheduled EHD availability). In addition to accessing docket materials locally within the DDMS, the system shall provide access to the underlying EHD to support review of the current electronic docket and export of information back to the EHD via ADAMS. The EHD is available on the web by accessing the NRC home page, clicking on the Electronic Reading Room folder and choosing Electronic Hearing Docket in the menu that appears. Instructions for using the EHD for browsing, searching and retrieving documents are contained on the EHD web site. The EHD is available 18 hours a day, seven days a week except for scheduled maintenance. Scheduled maintenance is performed daily between 11:00 p.m. and 5:00 a.m. Eastern Standard Time or Eastern Daylight-Saving Time with the exception of Friday. On Friday, scheduled maintenance will be performed between 6:00 p.m. and 11:00 p.m.

4.2.1.3 Data and Format Handling

A. Data handling shall address the full range of media and file types including native file formats that are not in NRC standards but that may be offered by counsel during proceedings. Data handling and manipulation capabilities of the DDMS shall be integrated in such a way that all data types and formats may be seamlessly manipulated in the courtroom environment by the DDMS application without incurring time delays due to a data transformation, import, or conversion process having to be invoked at the time the data is called by the DDMS.

B. The contractor shall provide a capability for re-purposing data contained in the DDMS environment by providing hardware and/or software resources to:

1. Organize, transform, package (or otherwise preformat), and migrate structured and unstructured data for output in formats acceptable to NRC's ODBC compliant ADAMS (FileNet) system;
2. Generate a case record consisting of compound documents (e.g., text and/or image based documentary materials, and transcript materials synchronized with digital and VHS tape recordings) capable of being recorded on media such as CD-ROM or DVD;

3. Identify, transform, package (or otherwise preformat), and deliver structured and unstructured data and documents, and media files such as digital video, from any of the DDMS' stored media formats, to courtroom display devices. The DDMS shall deliver content without incurring time delays due to a data transformation, export, or conversion process having to be invoked at the time the data is called by the display device; and
4. Make case materials available for import to judges' and lawyers' desktop environments and authoring (software) packages to facilitate motions practice.

4.2.1.4 Organization, Search, and Retrieval

The DDMS shall provide advanced search methods to assist judges, lawyers, NRC staff, and witnesses in finding evidentiary information. Organizing the information for effective use requires the system to provide a capability to search and retrieve multiple data formats including metadata, documentary exhibits, audio, visual, and full text transcripts contained in the DDMS data store. The DDMS shall provide a searchable full-text index for all textual documents and the text handling capabilities shall provide a mechanism to identify where in a transcript an exhibit was offered and accepted. The DDMS shall provide a SQL compliant relational database for management of structured data (including descriptive information used in the EHD such as docket number, accession number, etc.) as well as sufficient number of structured data fields required for comprehensive management of case information. The relational database structure shall be capable of capturing, storing, organizing, sorting, reporting (standard and ad hoc), and printing structured and unstructured fielded data about assignments of judges, assignments of panels, hearing schedules, witnesses, exhibits, transcripts, parties, legal counsel, and issues. The DDMS shall also support storing, searching and retrieving structured metadata references to non-electronic exhibits as descriptive profile information identifying where a physical object or thing may be located.

4.2.1.5 Data Management

The DDMS shall provide data manipulation capabilities to assist NRC administrative staff in preparing for and operating the actual courtroom sessions. The DDMS shall provide software resources necessary to identify and queue information that will be needed in forthcoming sessions based on various data value criteria contained in structured case management data. The DDMS shall provide software resources to update information previously stored in the record, including the ability to insert or append information into the record, e.g. the electronic marking of evidence/exhibits to be presented as evidence as either Identified, Received, Accepted, Rejected, or Withdrawn and any structured or metadata records associated with changes to the underlying data or file. The DDMS shall support the tracking and identification of multiple versions or revisions of pre-filed documents in the EHD, and the DDMS shall deliver the latest version of a pre-filed document when a retrieval request is issued. The DDMS shall provide information management controls to identify, version, and track the physical marking of electronic documents with a user selectable/customizable electronic marker, e.g. an image stamp. The DDMS shall provide information management controls to support modifying existing portions of the record by providing editing tools (or access to them) for existing text, audio, video, and structured data files as directed by the judge(s). The DDMS shall provide

information management controls to support the deletion of electronic information or references to exhibits from the record.

4.2.1.6 Information Access

The DDMS shall provide tools to support all hearing activities where the information from the hearing as well as other standard legal research (external) databases is used by the judges to issue findings, orders, and decisions. The DDMS shall provide a means for judges and litigants to access all pleadings and pre-filed information (that the agency initially stores in the ADAMS/EHD) that support the hearing. The DDMS shall provide software that allows judges to rapidly identify, review and synthesize materials presented in the courtroom (including review of voluminous audio/video recordings) on focused issues in order to reuse the data and information in formulating their issuances. Synthesizing information includes the ability to organize information by issue, by witness, by governing law, regulation, or guidance, or chronologically. The DDMS shall provide access to other NRC information resources (e.g., NRC's ADAMS, Federal Register Notices (FRNs), NRC's internal Internet website, etc.) containing electronically available copies of the rules, policies, and procedures that govern the hearing concurrently with a DDMS session being active. The system shall allow judges to access the native search and retrieval capabilities of subscription-based, external collections of legal research information (e.g., Westlaw™, Lexis/Nexis™) in order to reference legal opinions and precedential decisions to assist them in formulating their issuances concurrently with maintaining an active session in the DDMS.

4.2.1.7 Integration with Audio/Visual (A/V) Technologies

The contractor shall anticipate full integration of the information management and data manipulation capabilities with hardware devices and the audio and visual equipment used to present information in the courtroom. To provide this flexibility, the DDMS information and data management environment shall be open-standards compliant. The system shall be capable of data transformations on information already contained in its databases or invoking display device drivers necessary to support the selective display of information to all data devices in the hearing room, including computers, projectors, cameras, etc. The DDMS shall support the real-time intake and, if necessary, transformation, for presentation of litigator case information brought into the courtroom for the first time via laptop, CD-ROM, DVD, videotape, audiotape, live A/V feeds, teleconferencing, and videoconferencing.

4.2.1.8 User Interface

The contractor shall provide a user interface for all DDMS components that allows the professional user (e.g. judge, attorneys) to easily search, retrieve and display information. A seamless interface encompassing all software processing resources shall be provided to allow the professional user to focus on the hearing and not the DDMS: standard process and transactions shall be presented in such a way as to limit the amount of keying or browsing/scrolling necessary to perform processing of commands, file names, directory locations, etc., by the users during court sessions. The DDMS shall use accepted industry icons to represent the format of the information being reviewed, i.e. audio, video, image, Word, etc.

4.2.2 Performance Standards

4.2.2.1 System Availability

The contractor shall deliver a Pilot System that demonstrates how the final operational system can be available to users during the scheduled hours of availability, which are: 21 hours a day from 6:00 a.m. through 3:00 a.m. of the following day, (Eastern), seven days a week, 365 days a year. The operational system must be available 99% of the scheduled time during any calendar month. In addition, in no event may the operational system be unavailable for more than four access hours of any scheduled availability day, excluding the 3 hours available for daily maintenance activities, as such an event would force the NRC would forfeit the entire hearing day, according to the Rules governing these proceedings.

4.2.2.2 System Performance Requirements

The system shall perform rapidly enough so as not to impede the flow of courtroom proceedings. Therefore, the contractor shall propose a plan for ensuring that the system can measure and perform the following:

- a. provide server response to a search request for structured data (**ex: witness_name=Jones* AND hearing_date>20030101**) within 10 seconds and provide a user with some system response or activity response with no more than a seven second delay after this response parameter;
- b. provide server response to a search request for unstructured data (**ex: title CONTAINS 'groundwater flow'**) within 30 seconds and provide a user with some system response or activity response with no more than a seven second delay after this response parameter;
- c. deliver for display the text of a document associated with an already retrieved bibliographic structured data record (**ex: response to a double click on an icon for the text file that corresponds to the retrieved bibliographic item**) within 10 seconds for the first page of text and within six seconds for each successive page of text and provide a user with some system response or activity response with no more than a seven second delay after these response parameters;
- d. deliver for display the image version of a document associated with an already retrieved bibliographic structured data record (**ex: response to a double click on an icon for the TIFF or PDF that corresponds to the retrieved bibliographic item**) within 30 seconds for the first image and within nine seconds for each successive image and provide a user with some system response or activity response with no more than a seven second delay after these response parameters;
- e. deliver, from the server, for playback an audio or video file of a document associated with an already retrieved bibliographic structured data record within 45 seconds and provide a user with some system response or activity (**ex:**

response to a double click on an icon for the mpeg that corresponds to the retrieved bibliographic item) response with no more than a seven second delay after this response parameter;

- f. process raw text to index (or otherwise searchable structure) in less than 20 seconds for a document of 10 pages of full text, to an index file containing indices for 645,000 pages of textual material;
- g. support a maximum of 150 concurrent logged-in users; and
- h. use not more than 30% of processor capacity for any application software server at peak user capacity conducting individual searches consisting of a query against both structured (non-key) and non-structured data elements in a single search statement.

The contractor shall propose a plan for measuring each of these elements, which will become part of the Quality Assurance (QA) Plan, as required by the NRC's SDLCM.

4.2.2.3 System Scalability

A. The contractor shall deliver a system with software that is scalable to accommodate the projected volume of data for the Yucca Mountain HLW repository proceedings and additional proceedings for which the resource may be used. The Yucca Mountain proceeding document estimates are:

1. FY 2002 through FY 2003: 600 documents consisting of 12,000 pages; no transcripts. This is the pre-Application phase which may last from October 2001 to September 2003. The 600 document estimate is based upon the possibility of 20 technical, access or discovery issues arising over a two year period for the pre-application phase. There is a likelihood of 30 filings for each of 20 major issues, thus $30 \times 20 = 600$ documents;
2. FY 2004: 4,159 documents consisting of 83,180 pages; 30 transcripts consisting of 8,550 pages for a total of 4,189 documents and 91,730 pages. The transcript calculations are based on the ASLBP formula for the first pre-hearing conference which is 2 weeks x 3 Licensing Boards¹ x 5 days a week x 285 pages per day of hearings;
3. FY 2005: 9,501 documents consisting of 190,020 pages; 225 transcripts consisting of 64,125 pages for a total of 9,726 documents and 254,145 pages;
4. FY 2006: 5,987 documents consisting of 119,740 pages; 225 transcripts consisting of 64,125 pages for a total of 6,212 documents and 183,865 pages; and

¹ A Licensing Board is a panel of judges; multiple Licensing Boards are expected to be established for the HLW proceedings.

5. FY 2007: 2,632 documents consisting of 105,280 pages; no transcripts.

B. Volume projections are not available for additional cases for which the system may be used, although for system scalability planning purposes, assume two times the Yucca Mountain proceeding document estimates, which is consistent with the direction provided in Section 4.1.2.18 Detailed Design for Data Storage Components.

4.2.2.4 Existing Infrastructure Parameters

A. The DDMS shall be accessible in courtroom and remote locations to both NRC and non-NRC authorized users. To ensure accessibility for all users, the contractor shall deliver a software capability compatible with NRC's existing desktop infrastructure, the laptop environment, and a non-NRC-desktop user environment. Specifically, the DDMS shall operate on NRC's existing client desktop computers. The current standard NRC desktop hardware configuration is an IBM-compatible workstation with an Intel Pentium III processor or higher (500 MHz or greater). The standard workstations have 128mb RAM, 10G hard drives, and an Intel Pro100b LAN card. The architecture supports PCI and AGP video.

B. For NRC remote users, the current standard NRC laptop hardware configuration is an IBM-compatible laptop with an Intel Pentium processor or higher. The laptops have 96mb RAM and 6G hard drives.

C. For non-NRC-desktop users, the contractor shall assume the use of standard Microsoft Windows™ operating systems and applications software and Internet Explorer™ 5.x, Netscape™ 4.x, Lynx™2-8-4, and Opera Internet browsers.

D. NRC standard desktop applications are:

1. Microsoft Windows NT 4.00.1381, Service pack 6a;
2. NT Client Agent;
3. Microsoft SQL server 6.5 and SQL drivers for NT;
4. Novell NetWare Client for Windows NT/2000;
5. Diskkeeper;
6. Ensemble 1.22;
7. Informs 4.3;
8. Watermark 3.1.1.2;
9. Microshield v.5;
10. Network Access Suite 3.0;
11. Norton AntiVirus Corporate Edition;
12. PeopleSoft People Tools 7.57;
13. Corel WordPerfect 8.0.0;
14. Corel Presentations 8.0.0;
15. Corel QuattroPro 8.0.0;
16. GroupWise 5.5.3;
17. Netscape Communicator 4.7;
18. ADAMS 3.1.1 (custom); and
19. FTP Corp's Onnet 32 tools suite (includes FTP, 3270, Telnet, ping, etc.).

E. NRC's ADAMS system is the agency record repository and is the initial intake capability for documents associated with any case docket. The DDMS shall provide a mechanism to import from the EHD and propagate to the ADAMS record repository. ADAMS Release 4.0 will replace outdated versions of the commercial off-the-shelf (COTS) product (FileNet) that ADAMS is built upon in order to take advantage of product improvements made by the vendor over the past four years. It will provide ADAMS performance and stability improvements with little or no change to the custom code. It upgrades both the client and server software to FileNet Panagon 3.1 and 5.1, respectively. Also planned for ADAMS Release 4.0 is a Yahoo type search and retrieval web interface. This will be rolled out as a prototype for public stakeholders who prefer a Web application interface. The existing CITRIX client will continue to be made available. (Detailed information about the ADAMS System is available on the NRC web site at: <http://nrcweb.nrc.gov:81/NRC/ADAMS/adams.htm>.)

F. ADAMS Release 5.0 will take advantage of features in the newer versions of the COTS product and will provide Web browser support, which will allow for more efficient desktop support and public/remote access without needing to use CITRIX. It should be noted that the Web browser provided by the newer version of the COTS product will still provide the same Windows "look and feel" that users see under the current ADAMS implementation. Watermark imaging software will be replaced with FileNet's IDM Viewer. The ADAMS Operating System will be NT 4.0, the underlying database will be MS/SQL 7.0, and the client will be a "fat client" with web access provided via CITRIX with plans for alternative browser access via Excalibur RetrievalWare software for public users only.

4.2.2.5 NRC Enterprise Server Environment

The DDMS shall use, as far as is possible, server technology that is consistent with NRC operations standards for similar technology including but not limited to hardware vendor, machine type, and operating systems. The system servers shall provide the ability to multitask more than one application. (For information purposes, at NRC, servers are procured with the application they are supporting, and purchasing is the responsibility of the sponsoring office/project that is implementing the application. The office running the project coordinates the proposed configuration with NRC's OCIO/ITID prior to approving the purchase. OCIO/ITID has a preference for either Compaq or Dell servers because they have umbrella service and maintenance contracts covering these brands. It is acceptable to propose other brands of equipment, but the offeror shall therefore address maintenance support by other means than piggy-backing on the existing NRC maintenance umbrella contracts which cover Compaq or Dell brands.)

4.2.2.6 Security and Recovery

The contractor shall deliver a reliable and comprehensive suite of technology to ensure easy and rapid recovery of the DDMS functionality in the event of component failure. The server environment shall include comprehensive backup and recovery capabilities, including remote data stores/replication data stores used to enhance response time for the Las Vegas courtroom. Database transaction failure or incompleteness shall be recovered in such a way as to leave the database intact and operational during the recovery. All database errors, data replication inaccuracies, synchronization flaws and other system events shall be logged. Any approach involving synchronization shall ensure that databases are synchronized at a minimum

of once every 24 hours. The system shall be recoverable rapidly enough so as not to impede the flow of courtroom proceedings as per the availability requirements noted above. The contractor shall incorporate comprehensive system security and administrative controls over data and user access. The system shall provide multi-level (individual controls as well as group controls) user-based security, including network, operating system, database, database administration, file, and document controls as necessary to provide open access in the courtroom, identified access via the internet, and user access from remote locations, yet prevent unauthorized access to protective order materials. To meet these objectives, the system shall:

- a. Provide access to non-NRC staff in such a way as to prevent non-NRC users from accessing internal data, databases, data processing resources, NRC LAN and WAN, or IT assets not specifically allocated to the DDMS;
- b. Restrict access to DDMS for all non-pre-identified individuals (e.g., anyone who is not a "party") from either courtroom or remote access environments (regardless of whether by internet access or dial-in connection);
- c. Restrict all users, except the designated database administrator, from deleting information stored in the DDMS;
- d. Allow only authorized users, like the Court Clerk, to update or modify information stored in the DDMS system; and
- e. Allow only authorized users, such as the designated database administrator, from invoking data migration into or out of any files.

The NRC Management Directive 12.5 provides specific guidance for ensuring that system security controls are included for a system such as DDMS, which is classified as a "Major Application." Consistent with this guidance, the contractor shall perform a Risk Assessment, develop a System Security Plan (SSP), and prepare a Contingency Plan. The contractor shall conduct the Risk Assessment using the risk-based approach outlined in Directive 12.5, before completing the detailed design for DDMS. For the System Security Plan, the contractor may propose adding other key elements to this Plan, based on the contractor's experience with other systems, but at a minimum, the contractor shall develop and deliver a comprehensive security plan in accordance with Directive 12.5, that addresses in detail system backup and recovery, security administration, security CONOPS, security features, and security test plans. For the Contingency Plan, the contractor shall develop a Plan which guarantees that the system is operational for the required 21-hours each day, 365 days-a-week, and no hearing time is lost due to system unavailability.

4.2.2.6.1 Comprehensive Security Plan

The NRC SDLCM is scalable to the project, and due to recent agency concerns about meeting security requirements, the DDMS will include a separate Security Plan that addresses the processes and procedures to be employed to ensure adequate data and system security. The contractor may propose adding other key elements to this Plan, based on the contractor's experience with other systems, but at a minimum, the contractor shall develop and deliver a

comprehensive security plan that addresses in detail system backup and recovery, security administration, security CONOPS, security features, and security test plans.

4.2.2.7 System Administration Capabilities and Documentation

The system shall provide comprehensive software tools and products for all facets of administration for all servers, operating systems, database packages, text retrieval packages, applications (either COTS or developed), utilities or other tools required to establish the DDMS. The delivered system shall include the software needed to install the system, to make the DDMS operate on a routine basis, to upgrade the system, to perform emergency maintenance or recovery on the system, and to decommission/retire a system. The contractor shall provide comprehensive documentation (both in paper-based and electronic format) for all security and administration functions noted above.

4.2.2.8 Data Requirements

The delivered configuration shall have adequate data storage and handling capabilities to support the demonstration of all Module 1 capabilities using representative file formats and to demonstrate that scaled hardware and software subsequently procured for the operational DDMS will handle the storage capacities outlined in Section 4.1.2.18.

4.2.2.9 System Operational Capability Requirements

The DDMS shall support the HLW repository adjudicatory process (and other agency adjudications) through its entire life cycle that includes three stages: pre-hearing, evidentiary hearing and decision, and post-decision. Module 1 of the DDMS shall demonstrate real-time capabilities as follows:

- a. Administrative Management: allow multiple presiding officers to administer multiple concurrent hearings being conducted simultaneously in multiple locations;
- b. Pre-filed Information: provide access to pre-filed documentary materials, store them in a quickly accessible data repository, and retrieve pleadings, testimony and exhibits submitted in advance of the pre-hearing conferences and evidentiary hearings;
- c. Research Support: provide the capability for participants to conduct independent research on DDMS-held materials and access to external subscription databases during the conduct of a hearing session;
- d. Evidence and Argument Presentation: support the in-court introduction, presentation, and retrieval of exhibits and evidence at pre-hearing conferences and hearings in the courtrooms;
- e. Case Management: operational capabilities to track and link issues, exhibits, evidence, participants, counsel, witnesses, filings, orders and issuances,

schedules and due dates, transcripts, and all other case related events and documentary materials;²

- f. Records Management: provide a mechanism to deliver daily case information and files to the Agency's ADAMS system;
- g. Decision Support: provide tools for judges to develop and document decisions;
- h. Issuances: support the generation and storage of orders, directives, etc., promulgated by the presiding officer;
- i. Proceeding Information: provide means to capture all information presented and discussed during a hearing and support public/media presence at the hearing or at remote locations;
- j. Case Record Creation: provide a means to create the official hearing record for archiving, transfer and/or reuse in subsequent proceedings;
- k. Record Retrieval: provide a means to interactively search and retrieve record information from the DDMS database;
- l. Transcription Services: support the capture and retrieval of transcribed testimony, including real-time transcription; and
- m. Record to SECY: support the transmission of all agency record information to SECY.

4.2.2.10 Legacy System Integration Requirements

Per 10 C.F.R. Part 2, Subpart J, exhibits and pleadings (e.g., motions, briefs, petitions, responses, and contentions) are to be filed electronically by participants during the hearing using the NRC's EIE capability. These materials are delivered to an EIE server which is accessed by authorized document processing staff, and then forwarded electronically to SECY where they are procedurally filed for inclusion in the EHD and become part of the official record. These may include participant documents identified using another agency system, the Licensing Support Network (LSN), that provides for document discovery via the Internet. Thus, the EHD is the major source of documentary input into the DDMS. The DDMS shall receive all the pleadings and other documents from EHD to provide the basic documentary collection needed to conduct the hearings. The Legacy System relationships are shown in Figure 4-2.

² Examples of case management system application software already developed for litigator's or judges use in courtroom case management include FullCourt™, CaseLoad™, CCI-Maximus™, SUSTAIN™ or other similar products.

The diagram illustrates the Environmental Data Management System (EDMS) architecture, showing the flow of data between various databases and systems. A central vertical line, topped with a flame and bottomed with a base, separates the system into two main sections.

Left Section (Public Area):

- Internet** (cloud) connects to **Publicly Available LSN** (cylinder).
- Publicly Available LSN** connects to **NRC HLW Repository** (cylinder).
- NRC HLW Repository** connects to **EHD** (cylinder).
- EHD** is divided into a **Public Area** (left) and a **Protected Area** (right).
- Internet** (cloud) connects to the **Public Area** of **EHD**.

Right Section (Protected Area):

- Internet** (cloud) connects to **EIE** (cylinder).
- EIE** connects to **ADAMS** (cylinder).
- ADAMS** connects to **DPC** (rectangle).
- DPC** connects to **DDMS Rockville** (cylinder).
- DDMS Rockville** connects to **DDMS Replicated Data Store Las Vegas** (cylinder).

Central Interaction:

- A thick vertical line separates the two sections.
- Arrows indicate data flow from **NRC HLW Repository** and **EHD** to the central line.
- Arrows indicate data flow from **ADAMS** and **DPC** to the central line.
- Arrows indicate data flow from **DDMS Rockville** to the central line.

DDMS Development and Updates:

- DDMS Development** (cylinder) is connected to **DDMS Rockville** by a dashed line labeled **UPDATES & NEW MATERIAL UPLOADS**.
- DDMS Rockville** is connected to **DDMS Available to Participants via Internet** (cylinder) by a dashed line labeled **INITIAL DOWNLOAD & QUERY FOR UPDATES**.
- DDMS Available to Participants via Internet** is connected to **Internet (Using ID & Password Protect)** (cloud).

A. Using the resources of the development configuration, which the contractor shall acquire for the NRC Test Facility on the second floor at Two White Flint, the contractor shall implement the demonstration system approved by the NRC project officer at the completion of the design phase.

1. Perform software and system engineering and deliver pre-production release versions of the DDMS software until operational deployment is authorized; and
2. Support an Independent Verification & Validation (IV&V) contractor in its assessment of product testing and evaluation.

4.3.1 Engineering the Solution

A. During software engineering, the contractor shall refine and continuously update and maintain the previously-developed **Software Development Plan (SDP)** that is included in 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. Any updates or changes require NRC approval, and the contractor shall address impacts to the system, in terms of changes to the schedule or design.

B. Based on the updated PDAD, the design documents, and the results of the walk through sessions, the contractor shall develop the system engineering solution that integrates 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.

C. 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 (SEN)** (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 entity-relationship diagrams (ERD) to ensure that any variances that occur during code development are identified, resolved, or documented as needed.

D. In creating all core and support processes, the contractor shall perform software development and integration. The software shall meet the functional and performance specifications definitized at the end of the Design Phase.

E. 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 and maintained by the contractor. The government will require delivery of the system documentation library at the close of the contract effort.

4.3.2 Development

A. Using the design materials noted above, the contractor shall establish the DDMS demonstration system. The contractor shall develop a demonstration suite of hardware and software, in accordance with the NRC's SDLCM, in a configuration-controlled environment for (1) the primary court document database management, (2) case management, marking and tracking capabilities (3) database information upload and download, and (4) real-time court transcription intake. The developed system shall demonstrate a courtroom accessible environment, with the potential for the Internet-accessible environment that is to be fully developed in Task 3.

B. 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 for both local (courtroom) and web-based access (to be fully implemented in Task 3). The contractor shall develop additional program code, as necessary, with the understanding that customization of underlying database and application packages shall 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.

C. Subsequent release versions may be necessary during later phases, 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.

4.3.3 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 NRC's approval of the recommended methodology. The government may audit tests as part of its own Test and Acceptance Program.

4.3.4 Requirements Testing

A. The contractor shall create a **DDMS 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 government will audit these tests as part of its own test and acceptance program. 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 **DDMS Test Plan** shall address testing of the backup and recovery capabilities under at least two scenarios: a partial recovery and a complete rebuild/recovery. Contractor testing shall commence within 10 days of government acceptance of the DDMS Test Plan. Testing should be iterative with scheduled Pre-final and Final Testing. The purpose of these two separate test periods is to allow time for the contractor to make corrections identified during the Pre-final Test and incorporate all necessary changes prior to completing the Final Testing.

B. 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, application software) 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.

C. After NRC Pre-final acceptance testing has been completed and required changes have been addressed by the contractor and sufficiently tested in the Final Test, the contractor shall

conduct a readiness review session with NRC and present the results of all activities, findings, and products developed during the engineering phase. The Readiness Review Demonstration shall be scheduled immediately upon completion of the Engineering phase. The Readiness Review Demonstration shall group topics as logically as possible to facilitate comprehensive yet succinct issue coverage, as this will be the first major checkpoint in the system development life cycle. Based on a successful review, NRC will issue a go/no go decision on deployment beyond the Task 1 "Pilot".

4.3.4.1 Contractor's Test Report

A. The contractor shall develop and deliver an overall test report document to cover code testing, unit, module, and subsystem testing, and, overall system integration testing. Actual testing reports may be generated at any of the levels addressed (e.g., 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 under them, remediation, work-arounds, unresolved issues, and enhancements recommended for future releases shall all be documented in a report entitled **DDMS Comprehensive Software & System Test Results**.

B. 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 **DDMS Comprehensive Software & System Test Results**.

4.3.5 Performance Standard for Module 1 Deliverable

A. The deliverable product for this task is an installed software suite and the functional hardware, fulfilling the functional requirements noted in APPENDIX A and each operational capability detailed in Section 4.2.2.9 of this Statement of Work. The demonstration test environment for validating that the criteria have been met is outlined in Section 4.3.5.1, below.

B. The standard for determining acceptability of contractor testing is: Any indication that verifications were not performed as planned, not performed objectively, or not properly documented by the contractor will constitute a failure of the testing process.

C. The standard for ensuring that the delivered system complies with agency and federal information processing standards is: mandatory, all requirements mandated by law or regulation shall be 100% compliant.

D. The standard for determining acceptability that will be applied for government test and acceptance activities is: System testing and successful problem resolution shall be completed before the system can be deployed to users. Each government test will be marked as PASS or FAIL. All tests that receive a failed performance shall be evaluated by the DDMS project manager and ASLBP business manager to determine the impact on the system deployment. A failed test could result in a "no-go" decision, and must be addressed.

E. The standard for determining contractual acceptance of the product is: all functional requirements as definitized at the end of the design phase shall be met.

F. The standard for documentation deliverable is 100% conformance with content, format, and completeness as detailed in the SDLCM. All documentation delivered shall be spell-checked.

G. The standard for delivery of the system on schedule is: less than 5% variance in schedule against the contractor's baseline delivered with the Project Action Plan.

4.3.5.1 Quality Assurance (QA) Plan for Module 1

A. NRC will utilize a formal System Test and Acceptance Methodology Plan (STAMP) which applies Section 5 of the SDLCM model to the development and deployment of the DDMS. The STAMP documents the measures that will be employed to ensure the quality of the incremental and final products. This document describes how all of the components are to be considered together to form the logical whole of NRC's testing and acceptance process for the DDMS.

B. The DDMS project utilizes the SDLCM as an integral part of the development process. The goal of the STAMP is to assure the quality of the DDMS product by establishing controls and checkpoints throughout the development process that provide visibility into the quality of the evolving system. The attainment of quality will depend on discipline throughout the life cycle and will not be ensured solely by evaluation of the end product. The plan will emphasize periodic reviews and feedback on product status and quality from peers and users throughout the engineering and deployment phases.

C. Documentation Reviews: For documentation, NRC staff will thoroughly review the task deliverables and use them as one component of overall system acceptance. Deliverables must be in WordPerfect, Lotus 1-2-3, MicroSoft Project format and must be reviewed and approved by a Technical Editor, as well as the contractor's Project Manager. All deliverables must conform to SDLCM requirements in terms of content and structure. The government encourages the submission of draft versions which the government will review and comment upon without deduction, but all documents will be subjected to spell checking and documents with typographical errors will be rejected.

D. Contractor Code Reviews and Tests: The contractor will conduct requirements tests and the witnesses of the test will include federal staff in an audit role. Each requirement that is to be satisfied by the capabilities provided in a given release will be analyzed with respect to the test outputs. Problems or discrepancies noted during the execution of the test will be documented and resolved by the contractor.

E. Government Audit: The NRC will audit the requirements testing being performed by the contractor as detailed above. The objective of performing this audit is to verify that requirements testing has been performed. As an audit function, government staff will routinely visit the development facility to observe functional requirements testing. NRC staff will document the findings of each audit session on a functional requirements testing form and submit those reports for inclusion in the government test and acceptance report and project files. NRC staff audit reports, documenting that the functional requirements testing was objective, will be used as one component of overall system acceptance. Should the audit find that these verifications are not being objectively tested, the government will order the entire suite of functionality testing and verification be performed in the presence of federal staff.

F. Government Testing: The objective of the NRC testing is to permit the "shake out" of latent system errors, identify functional requirements that are not working properly, facilitate familiarization with and review of the system by users, and evaluate the status of the product and the readiness of the system for general deployment. These reviews will be segmented into three types of activities: 1) stress and performance testing using a product such as Empirix™, 2) compliance with the stated applicable government and/or industry standards, and 3) operational usability. Operational usability test users may make subjective observations such as about "ease of use" but these observations could not cause a test failure; such observations may be recorded and submitted for tailoring or customization of the application in a later release of the DDMS.

G. NRC staff will conduct these tests as outlined in a formal System Test and Acceptance Methodology Procedures (STAMP) document. Each requirement that is to be satisfied by the capabilities provided in a given release will be analyzed with respect to the test outputs pursuant to the NRC System Development Life Cycle Methodology Procedures P-2501 and P-2502. Problems or discrepancies noted during the execution of the test are documented and resolved prior to the Demonstration. A written report of the testing performed by each of the participants will be forwarded for inclusion in the government test and acceptance report and project files.

H. ASLBP staff along with staff from other organizations within NRC will be involved in helping execute the government testing. The majority of the testing will be performed at user workstations at the NRC Headquarters. Other test environments will include home computer and NRC contractor locations.

I. The test data will be provided by NRC. Documents should be set up to represent the different scenarios found in the operational capabilities and functional requirements. Other staged test scenarios will be set up to check error testing as well as performance based testing.

4.3.5.2 Demonstration

A. The delivered capability shall demonstrate, subject to independent verification and validation, each functional requirement noted in APPENDIX A (and definitized at the end of the design phase) and each operational capability identified in Section 4.2.1 of this Statement of Work.

B. The demonstration suites will be structured so as to address the following:

1. Accessing EHD for both general docket collection materials and protective order file materials;
2. Selecting EHD candidate documents based on user selectable, table driven profile conditions, and performing processes necessary to make EHD bibliographic, text, image from EHD accessible from the DDMS without having an open ADAMS session;
3. Populating both a courtroom-accessible and a web-accessible DDMS document repository maintaining links between the bibliographic, text and image objects,

and placing them appropriately in the general access DDMS or the protective order section of the DDMS;

4. Routine unattended review of EHD for new candidates to be made available via DDMS;
5. Perform structured and full text search and retrieval from both the courtroom-accessible and, for the operational version delivered under Task 3, web-accessible environments against all collections and file types in the DDMS;
6. Perform structured and object file search and retrieval for audio and video files from both the courtroom-accessible and web-accessible environments against media collections and file types in the DDMS;
7. Case management for witness management, deposition management, exhibit management, issue management, and protective order file management. Stage all data for use in daily proceedings;
8. Administrative management, including: calendaring, scheduling, access to report generators, authoring tools, etc.;
9. Connect to external www and legal research tools;
10. Identify how remote access into DDMS for judges and attorneys will be provided in Module 3 (Task 3);
11. Demonstrate canned and custom report generation;
12. Scan documents;
13. Provide document cataloging/indexing input capability to manage documents introduced in court by use of scanning devices;
14. Mark up and store images of documents as new items;
15. Intake realtime court reporting files and store them;
16. Identify text transcripts with introduced exhibits and audio/video;
17. Imprint markings on all types of file formats;
18. Capture information about court room use, numbering, etc. in the database;
19. Compile daily case record incorporating text, image, voice, video, and structured data;
20. Provide user with ability to review the components of the daily record (text, image, voice, video, and structured data) seamlessly using a single interface;

21. Output stored files to display media;
22. Output stored files to recording/archiving media; and
23. Migrate stored files to ADAMS.

4.3.5.3 Assessment of Demonstration

In addition to determining whether the demonstration product meets functional requirements, and addresses issues identified by Vulnerability Assessments performed by NSA, the NRC will have an IV&V contractor and/or NSA Security experts assist in assessing the demonstration suite for future operational implementation. The contractor shall support the assessment of the demonstration capability that will be conducted by the separate (IV&V) contractor by ensuring that the delivered suite continues to be operational throughout the assessment effort, and by responding to requests for clarification or explanation that are submitted by the IV&V contractor, as directed by the government's technical representative.

4.3.5.4 Recommended Revisions for Implementation

The contractor shall provide a report containing its recommendations for changes to be made to the hardware and software designs developed during the detailed design phase of this task. The recommendations will respond to all items identified throughout the Pilot Phase, including but not limited to the IV&V contractor's assessment; feedback from the ASLBP Judges and/or Staff for changes and enhancements that improve the system's usability; "Lessons Learned" from the assessment; and Security enhancements suggested by independent evaluators such as NSA or the NRC IT Security Managers. In addition, the DDMS contractor shall identify changes required, if any, to each of the delivered products from the detailed design phase. The final operational system that is developed in Optional Task 3 will contain those revisions which the government approves from the Contractor's Recommended Revisions for Implementation Report. Therefore, the report shall include an estimate of the delta hardware, software, and labor effort required to implement the revised system, and a proposed schedule for incorporating those changes in the demonstration suite during Optional Task 3.

4.3.6 Task 1 Deliverables

The NRC uses a structured approach, to designing, developing, deploying, maintaining, and decommissioning information systems. Within this framework, the SDLCM, there are specific requirements for activities, products, tools and techniques. In addition, there are other factors that must be considered in determining the sequence for each deliverable, such as contractual requirements and agency checkpoints. After considering all of these factors, the government has determined the applicable deliverables and due dates for Task 1. These are shown in the table below.

Task 1 Deliverables	Estimated Date Due
1. Documentation: Project Definition and Analysis Document (PDAD)	Project Start (PS) + 34 workdays
2. Documentation: Project Action Plan (PAP)	PS + 34 workdays
3. Documentation: Risk Assessment	PS + 45 workdays
4. Documentation: Logical Design Document (LDD)	PS + 60 workdays
5. Documentation: Physical Design Document (PDD)	PS + 75 workdays
6. Documentation: System Security Plan (SSP)	PS + 100 workdays
7. Documentation: Contingency Plan	PS + 100 workdays
8. Documentation: Tactical Integration Plan (TIP)	PS + 105 workdays
9. Detailed Design Review	PS + 106 workdays
10. Hardware Required for Engineering the Solution: Server Workstations Laptop Scanner	Within 30 days following authorization from the Contracting Officer, which will be predicated upon successful completion of the Detailed Design Review identified in 4.1.5
11. Documentation: DDMS Test Plan	PS + 180 workdays
12. Documentation: Software Engineering Notebook	PS + 270 workdays
13. IT Software: Engineered Solution	TBD
14. Test of Requirements: Pre-final and Final	TBD
15. Documentation: DDMS Comprehensive Software & System Test Results	TBD
16. Readiness Review Assessment Demonstration	TBD
17. Documentation: Recommended Revisions for Implementation Report	PS + 342 workdays

The criteria for acceptance by the government for each deliverable, whether documentation or IT services, hardware or software, is specified in the applicable section of this Task description. If the product meets or exceeds the appropriate specifications, it will be deemed acceptable; if it does not meet the acceptable standard, then the government shall deduct according to the schedule contained in Appendix E.

4.4 Optional Task 2: Audio/Visual (A/V) Installation in Rockville Courtroom

*(NOTE: This is an **Optional Task**, subject to NRC exercising the option; and NRC reserves the right not to exercise this option. Option subject to availability of funds, management approval to proceed, and successful completion of prior task.)*

A. Background. This task addresses the A/V requirements for the DDMS. The A/V requirements were assessed originally in the ASPEN Study, the foundation for NRC's Business Case for DDMS, and served as the basis for the Detailed Design developed by the contractor in Task 1 of this SOW. That Detailed Design forms the basis for all work in this Task. Specifically, the relevant Detailed Design sections from Task 1 that must be implemented during this task are:

- 4.1.2.2 Detailed Design for Videoconferencing
- 4.1.2.3 Detailed Design for Real-time Transcription
- 4.1.2.4 Detailed Design for Video Capture/Playback
- 4.1.2.5 Detailed Design for Video Cassette Recorder
- 4.1.2.6 Detailed Design for Evidence and Argument Presentation
- 4.1.2.7 Detailed Design for Audio Translation
- 4.1.2.8 Detailed Design for Audio Support
- 4.1.2.9 Detailed Design for Audio/Video System Control
- 4.1.2.14 Detailed Design for Multimedia Management Component for Transcript Handling
- 4.1.2.15 Detailed Design for Multimedia Management Component for Video Handling
- 4.1.2.16 Detailed Design for Communications Component: Telecommunications
- 4.1.2.17 Detailed Design for Communications Component: Local Area Networking
- 4.1.2.18 Detailed Design for Data Storage Components
- 4.1.2.19 Detailed Design for Data Storage Component DVD

B. Task Statement: The contractor shall install a comprehensive A/V environment in the Rockville Hearing Room that supports a fully automated and integrated courtroom environment with multi-media input, output and re-use. The A/V environment components must address requirements identified in 4.1.2.22, as applicable. The A/V functionality include the following features which were identified in the Aspen Study's conceptual design:

- Videoconferencing that allows judges and/or others to participate fully in the proceedings from different locations, e.g., staff from the Department of Energy in Washington, DC
- Real-time transcription, both remote and on-site transcription support, that (1) supports the synchronization of transcripts with video information and (2) provides closed captioning to accommodate the hearing-impaired and meet the Section 508 requirements ("stand-alone mode" capability only required for this task)
- Cameras, both fixed and pan and tilt zoom cameras, that capture and broadcast the proceedings to the public hearing participants

(fixed cameras will be aimed at the Board position, the parties' table, the intervenors' tables, and witness positions; while the pan and tilt zoom cameras must be strategically mounted for wide-angle coverage of the well area)

- Video Cassette Recorders (VCRs) to capture the video images recorded by the various video cameras operating throughout the hearing room, and playback feature available
- Desktop Display/Monitors to present electronic evidence or exhibits to judges, litigants, clerks, witnesses, and the audience
- Projectors to display information overhead
- Screens for viewing information
- Digital Presentation Devices to present paper or physical exhibits that are not yet in an electronic format
- Video Markers connected between a video source and monitor that allow presenters to draw or point on video images as easily as you would use a pen
- Audio translation equipment that allows skilled interpreters to deliver simultaneous and consecutive interpreting for groups and individuals using telephone communications equipment.
- Audio System to broadcast and record the audio proceedings
- A/V System Control to manage and control the capture devices during the hearing and enable the judge or clerk to enable the capture devices as required

There are several courtrooms which have automated environments, and the NRC encourages the contractor to look at these "model" environments for ideas for DDMS. There are 3 primary sites: Courtroom 21, National Judicial College, and Courtroom 23. Information about Courtroom 21 in Williamsburg, Virginia, is available at: <http://www.courtroom21.net/>. Information regarding the National Judicial College, in Reno, Nevada, can be obtained at: <http://www.judges.org/>. And, information about Courtroom 23, in Osceola, Florida, is available at: http://www.ninja9.org/courtadmin/mis/courtroom_23.htm.

4.4.1 Audio/Visual (A/V) Components Currently in Rockville Courtroom

Several years ago, the NRC purchased a Dolman voice activated video recording system for the ASLBP Hearing Room in Rockville, which was later integrated with a PicTel Venue 2000 teleconferencing system. This system has been superseded by other state-of-the-art products, and cannot meet the HLW hearing requirements; but it can be enhanced or augmented with new A/V components. Additional information regarding the existing configuration is included in Appendix D. In addition, the NRC will schedule a Hearing Room "walk-thru" for contractors prior to bidding, in order to highlight specific areas where increased functionality must be provided with the DDMS.

4.4.2 Performance Standards for Audio/Visual (A/V) Upgrades

The performance standards for A/V Operations are the core capabilities which must be satisfied in this task. The contractor must deliver the hardware and software necessary to meet the functional requirements for this task, install all components on-site in the Rockville hearing room, and demonstrate each system's full functionality.

4.4.2.1 Acceptance Criteria for Audio/Visual (A/V) Operations

A fully operational A/V environment installed at the Rockville court room is the deliverable under this Task. In order to be "Fully Acceptable" the contractor must provide an A/V Operations component that meets the following outcome-based performance criteria:

- Conforms with the Government's "Electronic and Information Technology Accessibility Standards" outlined in:
 - 36CFR1194.23 - Telecommunications Products
 - 36CFR1194.24 - Video and Multimedia Products
 - 36CFR1194.25 - Self contained, Closed Products
 - 36CFR1194.23 - Desktop and Portable Computers
 - 36CFR1194.31 - Functional Performance Criteria(Available online at: <http://lulu.law.cornell.edu>)
- Satisfies the Functional Requirements identified in Appendix A; and
- Complies with the SDLCM requirements for documentation

4.4.2.2 Quality Assurance (QA) Plan for Audio/Visual (A/V) Operations

The QA Plan for this task will follow the Plan outlined for Task 1.

4.4.2.3 Audio/Visual (A/V) Operations Assessment

The NRC will utilize third-party services to assist in completing the A/V operations assessment. Specifically, representatives from the National Security Agency (NSA), and an IV&V contractor will conduct independent tests designed to ensure that the A/V operations satisfy the stated requirements, and comply with all standards or specifications identified in this SOW. These assessments are a necessary component of the NRC's management control process, and a requirement for agency approval to proceed with the next task. Therefore, the contractor shall support these efforts by ensuring that the delivered A/V components are operational throughout the assessment effort, and by responding to requests for clarification or explanation that are submitted by the entities, as directed by the government's technical representative.

4.4.2.4 Recommended Revisions for Implementation Report Update

The contractor shall update the report containing its recommendations for changes to be made to the hardware and software designs, which originated the detailed design phase of this task. The recommendations will respond to all items identified throughout the A/V Installation Phase, including but not limited to the IV&V contractor's assessment; feedback from the ASLBP Judges and/or Staff for changes and enhancements, "Lessons Learned" from the A/V Operations Assessment and Security enhancements suggested by independent evaluators such as NSA or the NRC IT Security Managers. In addition, the DDMS contractor shall identify changes required, if any, to each of the delivered products. The final operational system that is developed in Optional Task 3 will contain those revisions which the government approves from the Contractor's Recommended Revisions for Implementation Report and this Update. For all new recommendations, the report shall include an estimate of the delta hardware, software, and labor effort required to implement the revised system, and a proposed schedule for incorporating those changes in the demonstration suite during Optional Task 3.

4.4.3 Project Schedule

Task 2 Deliverables	Date Due
1. Implement applicable sections of the Detailed Design from Task 1 and Install a comprehensive A/V environment in the Rockville Hearing Room	Task 2 Start (TS2) + 58 workdays
2. Documentation: User's Guide/Instructions	TS2 + 58 workdays
3. Documentation: Operations & Maintenance Guide	TS2 + 58 workdays
4. Audio/Visual (A/V) Operations Assessment Demonstration	TS2 + 58 workdays
5. Documentation: Recommended Revisions for Implementation Report Update	TS2 + 72 workdays

4.5 Optional Task 3: Completion of Integration and Operational Configuration for HQ

*(NOTE: This is an **Optional Task**, subject to NRC exercising the option; and NRC reserves the right not to exercise this option. Option subject to availability of funds, management approval to proceed, and successful completion of prior task(s).)*

A. Background. The ultimate goal of the DDMS system is to provide a seamless IT and A/V-enhanced electronic courtroom environment that: (1) provides online access to the electronic docket, and (2) improves the efficiency and effectiveness of the HLW hearings. To achieve this goal, the DDMS system must perform a wide range of technologic improvements, including, but not limited to the following: provide ready courtroom access to an Electronic Hearing Docket (EHD); capture and electronically record new exhibits that may be introduced at the hearing in paper form; permit judges and lawyers to annotate documents electronically and store those modifications on-line for subsequent review or retrieval; capture the audio and visual record of the HLW proceedings; provide a faster method of generating the transcript through voice-activation; and create a multi-media Case Record that captures every dimension of the hearing and fully integrates each medium so that the official record is available for review by the participants of the hearing the next day.

B. Task Statement. During this task, the contractor shall integrate the IT environment created during Task 1 with the Rockville, Maryland A/V environment created during Task 2. The contractor shall provide necessary enhancements to establish an operational hardware and software configuration by: providing an operational platform; upgrading the IT Demonstration Suite/Pilot software with the approved recommendations from the Contractor's Recommended Revisions for Implementation Report; establishing a secure remote web access interface to the web accessible version of the DDMS; updating the applicable documentation as outlined in the Recommended Revisions for Implementation Report; conducting Pre-final and Final Testing; and developing all of the training materials required to teach hearing participants how to use the DDMS system. The contractor additionally shall: conduct training for participants who will be involved in testing the Rockville site; "proof" the system through an extensive pre-operational testing phase that will consist of a "Mock HLW" Hearing designed to simulate the courtroom

hearings in Las Vegas and possibly other "live" ASLBP pre-hearing proceedings to enhance the user's familiarity with the system; provide ongoing assessment support by incorporating user feedback into the operational system; perform back-up and recovery operations; and conduct continuous security surveillance.

4.5.1 Rockville Courtroom Final Integration and Operational Configuration

The contractor shall deliver an operational installation version of the IT pilot environment created in Task 1 and integrate that environment with the A/V environment created during Task 2. The net result shall be an electronic hearing room environment in the existing NRC courtroom on the third floor of Two White Flint. This system shall represent the operational configuration that meets all of the functional requirements specified in Attachment A as definitized at the end of the design phase.

4.5.2 Coordination with SDLCM Mandated Design and Development Products

The following items are routinely required under NRC's SDLCM methodology before a system can become operational. Each of these items will be a mandatory deliverable under this Statement of Work. The following section identifies the implementation products and deliverables that will be completed during Task 3 efforts.

- a. **Operational Hardware and Software Suites.** Production environment to house the software promoted after completion of system development. This resulting product is the final result of a series of distinct tasks, which began with the "Pilot" during Task 1, progressed through implementing the A/V environment in Task 2, and culminates now in this task which integrates the two environments and incorporates the recommendations for revision which the government approved during each prior task.
- b. **Training Plan.** 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 deliverable for this task will be a **Final DDMS Training Plan (Technical and End User)**.
- c. **On-line Help System and Tutorials.** To augment the Help features already incorporated in core software and desktop products, the contractor will perform software development and integration of tailored on-line help and off-line tutorial products. The scope of these help features is intended to augment existing features that may already come with software packages and new features shall only be developed for features of the DDMS which result from code development and extensions beyond those found in the native products. The deliverables for this task will be a **DDMS Tutorial** and multiple copies of a **DDMS Tutorial CD**.
- d. **Deployment Preparation.** The contractor will develop a **DDMS Operational Support Guide** which covers the key areas of Operations of the system. This documentation will be provided to the system operators during the Operations and Maintenance phase of this contract.

- e. **Rollout Plan.** The contractor will address key decisions reached during the design reviews and assessments and the results of the initial pilots and develop a comprehensive rollout strategy identifying contingencies to systems integration, labor and other resources, timing, sequence and schedules, and any other contingencies and ensure these items are incorporated in the rollout plan. The deliverable for this effort will be a **DDMS Rollout Plan**.
- f. **User Guide.** The contractor will develop instructional materials included in the CD-ROM tutorial, noted elsewhere in this Statement of Work, and deliver a comprehensive **DDMS User Guide**.
- g. **Install.** The contractor will be responsible for accomplishing tasks necessary to provide operational hardware and software components, install the hardware and software, and establish connectivity to make the system operational.
- h. **Update All Documentation.** The contractor will update the previously created documentation by incorporating the approved recommendations from the Contractor's Recommended Revisions for Implementation Report, which was the final product developed under Task 1 and subsequently revised in the final stage of Task 2. The contractor's revisions to previously-developed documentation should incorporate all approved changes or recommendations which are the result of feedback by NRC staff, and assessments by outside consultants such as the IV&V contractor and NSA, as well as any "lessons learned" collected during the prior two phases.
- i. **Operational Readiness Review.** The contractor will prepare a design review program and present the results of all activities, findings, and products developed during the implementation phase of the DDMS effort.
- j. **Operations and Maintenance.** Under this task area, the contractor will transition the implemented "Pilot" system to an operational mode and will provide general (release-based and emergency) maintenance support of the DDMS application software, files and databases, and all associated backup and recovery subsystems, as defined by the NRC's System Development and Life-Cycle Management Methodology (SDLCM).

4.5.2.1 Documentation Deliverables

An integral part of the effort to create an operational configuration is developing the documentation. Therefore, the contractor shall update all previously-prepared documents, as applicable, and create the documentation required to support the transition from a "Pilot" to a fully operational and integrated system. Specifically, after completing all integration efforts, the contractor will develop a **DDMS Operational Support Guide**, **DDMS Training Plan**, **DDMS Tutorials**, and a **DDMS Transition/Rollout Plan**.

The **DDMS Operational Support Guide** shall be comprehensive and comprised of four volumes organized as follows:

Volume I:	DDMS Operations Guide & Procedures
Volume II:	DDMS Software Management Guide

Volume III: DDMS Hardware Management Guide
Volume IV: DDMS Performance Management Guide

The **DDMS Training Plan** shall be comprised of two volumes targeted to two different audiences:

Volume I: DDMS Technical Training
Volume II: DDMS End User Training

The **DDMS Tutorials** should be in CD format covering key areas of the system for both Technical Users and End Users. The Technical User audience includes individuals who will maintain and operate the hardware, software, and A/V equipment. The End User community includes individuals who will use DDMS as a tool in hearings, such as judges, lawyers, legal clerks, and transcribers.

The government anticipates awarding a separate contract to implement the DDMS in Las Vegas, Nevada, and support the DDMS System in Rockville, Maryland, during the HLW Hearings. The **DDMS Transition/Rollout Plan** will address the steps and procedures which the contractor will employ to transition to this contractor, and steps for the new contractor to take to rollout the completed system to Las Vegas, Nevada, to support the HLW Hearings. For planning purposes, the contractor should assume that the rollout starts within the first **30 days** after the NRC awards the contract, and transition occurs approximately **270 Days** after the pre-operational hearing/HLW Mock Hearing in Rockville.

4.5.2.2 Pre-operational Support for Ongoing Assessment

The contractor shall provide ongoing Data Base and Troubleshooting support for the DDMS during the initial break-in period, and conduct an on-going assessment. This support will last for approximately **270 days** following the pre-operational, "Mock" HLW Hearing in Rockville, and the purpose of this support is to allow the NRC to use DDMS in other hearings, and evaluate and fine-tune the system before the HLW Hearings commence in Yucca Mountain, Nevada.

4.5.3 Performance Standards for Rockville Operations

The performance standards for this task are detailed in Appendix A, Requirements

- 1.118
- 1.119
- 1.120
- 1.139
- 1.141
- 1.142
- 1.143

4.5.3.1 Acceptance Criteria for Rockville Operations

The deliverable under this Task is a fully operational electronic courtroom at the NRC in Rockville, Maryland, that integrates both IT and A/V. The contractor shall provide a fully operational capability for Rockville that can be duplicated in the Las Vegas, Nevada hearing room. Acceptance criteria are essentially the same as those of the pilot except that they will be applied to the final operational configuration. The contractor will provide all of the A/V components integrated with the IT system and any enhancements required to satisfy the functional requirements of an operational electronic courtroom.

In order to be "Fully Acceptable" the contractor must provide all documentation required by the SDLCM Methodology, deliver IT that meets the applicable requirements outlined in Section 4.1.2, and fully integrate the IT component with an A/V Operations component that meets the following outcome-based performance criteria:

- Conforms to the Government's "Electronic and Information Technology Accessibility Standards" outlined in:
 - 36CFR1194.23 - Telecommunications Products
 - 36CFR1194.24 - Video and Multimedia Products
 - 36CFR1194.25 - Self contained, Closed Products
 - 36CFR1194.26 - Desktop and Portable Computers
 - 36CFR1194.31 - Functional Performance Criteria(Available online at: <http://lulu.law.cornell.edu>);
- Satisfies the applicable Functional Requirements identified in Appendix A;
- Complies with the SDLCM requirements for documentation; and
- Outputs a complete Case Record from the pre-operational hearing at Rockville.

4.5.3.2 Quality Assurance (QA) Plan for Rockville Operations

The QA Plan for this task will follow the Plan outlined for Task 1.0.

4.5.3.3 Rockville Operations Assessment

The NRC will utilize third-party services to assist in performing an assessment of the completed Rockville Operations. As with the previous phases of DDMS development, representatives from the NSA, an IV&V contractor, and an agency-approved "red team" contractor, will conduct independent tests. Specifically, a team of security experts from NSA will be looking to ensure that the contractor's delivered system incorporates robust security methods and products to ensure that the final, operational system is well-protected from hackers and other attacks which would cripple the hearings. The IV&V contractor and the "red team" contractor will be responsible for ensuring that the fully integrated system performs those functions it was designed to perform and meets the agency's functional requirements. These assessments are a necessary component of the NRC's management control process. Therefore, the contractor shall support these efforts by ensuring that the delivered system and all training materials are available throughout the assessment effort, and by responding to requests for clarification or explanation that are submitted by the entities, as directed by the government's technical representative.

4.5.4 Project Schedule

Task 3 Deliverables	Date Due
1. Revise Documentation: Project Definition and Analysis Document (PDAD)	Task 3 Start (TS3) + 20 workdays
2. Revise Documentation: Project Action Plan (PAP)	TS3 + 20 workdays
3. Revise Documentation: Risk Assessment	TS3 + 20 workdays
4. Revise Documentation: System Security Plan (SSP)	TS3 + 40 workdays
5. Revise Documentation: Contingency Plan	TS3 + 40 workdays
6. Revise Documentation: Logical Design Document (LDD)	TS3 + 60 workdays
7. Revise Documentation: Physical Design Document (PDD)	TS3 + 60 workdays
8. Revise Documentation: Tactical Integration Plan (TIP)	TS3 + 75 workdays
9. "Mini" Detailed Design Review	TS3 + 75 workdays
10. Revise Documentation: DDMS Test Plan	TS3 + 90 workdays
11. Documentation: DDMS Transition/Rollout Plan	TS3 + 184 workdays
12. Test of Requirements: Pre-final and Final	TS3 + 200 workdays
13. Documentation: DDMS Training Plan	TS3 + 200 workdays
14. Documentation: DDMS Tutorials	TS3 + 200 workdays
15. Documentation: Software Engineering Notebook	TS3 + 216 workdays
16. Deliver operational installation version of the IT Pilot: Integrate and upgrade the IT and A/V environments	TS3 + 216 workdays
17. Training	TS3 + 217 workdays thru TS3 + 257 workdays
18. Assessment Demonstration: "Mock" HLW Hearing	TS3 + 217 workdays thru TS3 + 257 workdays

Task 3 Deliverables	Date Due
19. Revise Documentation: DDMS Comprehensive Software & System Test Results	TS3 + 257 workdays
20. Revise Documentation: DDMS Operational Support Guide	TS3 + 240 workdays
21. Revise Documentation: User's Guide/Instructions	TS3 + 240 workdays
22. Revise Documentation: Operations & Maintenance Guide	TS3 + 240 workdays
23. Ongoing Assessment: Support DDMS through the pre-operational Hearing at Rockville	TS3 + 257+ workdays

D ORDER TERMS, CONDITIONS, AND REQUIREMENTS

D.1 PERFORMANCE REQUIREMENTS

The deliverables required under this order must conform to the standards contained, or referenced, in the statement of work. The Performance Requirements Summary (Appendix E) outlines the performance requirements, deliverables, acceptable standards, surveillance method, and incentives and deductions applicable to this order.

D.2 PLACE OF PERFORMANCE

Place of performance shall be: at contractor site and NRC Headquarters offices during Task 1; and, at NRC Headquarters for Optional Tasks 2 and 3. The government will provide on-site office space for two employees in an office within the secure ASLBP office suites. Government-furnished equipment shall include a desktop configuration for each on-site employee, as required for general office use, but this equipment is not part of the DDMS configuration. Access to the development suite housed in the technical center on the second floor will be provided during project performance.

D.3 PERSONNEL

(a) The following individuals are considered to be essential to the successful performance of the work hereunder:



The contractor agrees that personnel may not be removed from the contract work or replaced without compliance with paragraphs (b) and (c) of this section.

(b) If one or more of the key personnel, for whatever reason, becomes, or is expected to become, unavailable for work under this contract for a continuous period exceeding 30 work days, or is expected to devote substantially less effort to the work than indicated in the proposal or initially anticipated, the contractor shall immediately notify the contracting officer and shall, subject to the concurrence of the contracting officer, promptly replace the personnel with personnel of at least substantially equal ability and qualifications.

(c) Each request for approval of substitutions must be in writing and contain a detailed explanation of the circumstances necessitating the proposed substitutions. The request must also contain a complete resume for the proposed substitute and other information requested or needed by the contracting officer to evaluate the proposed substitution. The contracting officer and the project officer shall evaluate the contractor's request and the contracting officer shall promptly notify the contractor of his or her decision in writing.

(d) If the contracting officer determines that suitable and timely replacement of key personnel who have been reassigned, terminated, or have otherwise become unavailable for the contract

work is not reasonably forthcoming, or that the resultant reduction of productive effort would be so substantial as to impair the successful completion of the contract or the service order, the contract may be terminated by the contracting officer for default or for the convenience of the Government, as appropriate. If the contracting officer finds the contractor at fault for the condition, the contract price or fixed fee may be equitably adjusted downward to compensate the Government for any resultant delay, loss, or damage.

D.4 TRAVEL

Travel shall be limited to Local Travel ONLY.

D.5 REPORTING REQUIREMENTS

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.

Project Management Plan

The contractor shall submit a detailed Project Management Plan to cover 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. The Project Management Plan will also include dollars by labor category/assigned personnel which will support the contractor's estimate for each task executed under this contract.

Monthly Reports

The contractor shall provide a Monthly Status Report to the NRC Project Officer and the Contracting Officer by the 15th of each month. Each monthly report 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 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. The report shall also contain the BPA number, order number, and task; the period covered by the report; a summary of work performed during the reporting period for each task, including appropriate statistics and plans for the next reporting period; a discussion of project plans, hardware problems, current operational problems, and the proposed corrective action, and analysis of the impact on other tasks within the scope of the SOW; and a status of expenditures under the order

for the reporting period, cumulative expenditures to date, funds obligated to date, and balance of funds required to complete the order.

D.6 SECURITY

- a. Security/Classification Requirements Form. The NRC Form 187 (See Appendix G) furnishes the basis for providing security and classification requirements to prime contractors, subcontractors, or others (e.g., bidders) who have or may have an NRC contractual relationship that requires access to classified information or matter, access on a continuing basis (in excess of 30 or more days) to NRC Headquarters controlled buildings, or otherwise requires NRC photo identification or card-key badges.
- b. It is the contractor's duty to safeguard National Security Information, Restricted Data, and Formerly Restricted Data. The contractor shall, in accordance with the Commission's security regulations and requirements, be responsible for safeguarding National Security Information, Restricted Data, and Formerly Restricted Data, and for protecting against sabotage, espionage, loss, and theft, the classified documents and material in the contractor's possession in connection with the performance of work under this contract. Except as otherwise expressly provided in this contract, the contractor shall, upon completion or termination of this contract, transmit to the Commission any classified matter in the possession of the contractor or any person under the contractor's control in connection with performance of this contract. If retention by the contractor of any classified matter is required after the completion or termination of the delivery order and the retention is approved by the contracting officer, the contractor shall complete a certificate of possession to be furnished to the Commission specifying the classified matter to be retained. The certification must identify the items and types or categories of matter retained, the conditions governing the retention of the matter and their period of retention, if known. If the retention is approved by the contracting officer, the security provisions of the delivery order continue to be applicable to the matter retained.
- c. In connection with the performance of the work under this contract, the contractor may be furnished, or may develop or acquire, proprietary data (trade secrets) or confidential or privileged technical, business, or financial information, including Commission plans, policies, reports, financial plans, internal data protected by the Privacy Act of 1974 (Pub. L. 93-579), or other information which has not been released to the public or has been determined by the Commission to be otherwise exempt from disclosure to the public. The contractor agrees to hold the information in confidence and not to directly or indirectly duplicate, disseminate, or disclose the information in whole or in part to any other person or organization except as may be necessary to perform the work under this contract. The contractor agrees to return the information to the Commission or otherwise dispose of it at the direction of the contracting officer. Failure to comply with this clause is grounds for termination of this contract.

- d. Regulations. The contractor agrees to conform to all security regulations and requirements of the Commission which are subject to change as directed by the NRC Division of Facilities and Security and the Contracting Officer. These changes will be under the authority of the FAR Changes clause referenced in this document.
- e. Definition of National Security Information. The term National Security Information, as used in this clause, means information that has been determined pursuant to Executive Order 12958 or any predecessor order to require protection against unauthorized disclosure and that is so designated.
- f. Definition of Restricted Data. The term Restricted Data, as used in this clause, means all data concerning design, manufacture, or utilization of atomic weapons; the production of special nuclear material; or the use of special nuclear material in the production of energy, but does not include data declassified or removed from the Restricted Data category pursuant to Section 142 of the Atomic Energy Act of 1954, as amended.
- g. Definition of Formerly Restricted Data. The term Formerly Restricted Data, as used in this clause, means all data removed from the Restricted Data category under Section 142-d of the Atomic Energy Act of 1954, as amended.
- h. Security Clearance Personnel. The contractor may not permit any individual to have access to Restricted Data, Formerly Restricted Data, or other classified information, except in accordance with the Atomic Energy Act of 1954, as amended, and the Commission's regulations or requirements applicable to the particular type or category of classified information to which access is required. The contractor shall also execute a Standard Form 312, Classified Information Nondisclosure Agreement, when access to classified information is required.
- i. Criminal Liabilities. It is understood that disclosure of National Security Information, Restricted Data, and Formerly Restricted Data relating to the work or services ordered hereunder to any person not entitled to receive it, or failure to safeguard any Restricted Data, Formerly Restricted Data, or any other classified matter that may come to the contractor or any person under the contractor's control in connection with work under this contract, may subject the contractor, its agents, employees, or subcontractors to criminal liability under the laws of the United States. (See the Atomic Energy Act of 1954, as amended, 42 U.S.C. 2011 et seq.; 18 U.S.C. 793 and 794; and Executive Order 12958.)
- j. Subcontracts and Purchase Orders. Except as otherwise authorized in writing by the contracting officer, the contractor shall insert provisions similar to the foregoing in all subcontracts and purchase orders under this contract.
- k. In performing the delivery order work, the contractor shall classify all documents, material, and equipment originated or generated by the contractor in accordance with guidance issued by the Commission. Every subcontract and purchase order issued hereunder involving the origination or generation of classified documents, material, and equipment must provide that the subcontractor or supplier assign

classification to all documents, material, and equipment in accordance with guidance furnished by the contractor.

- l. **Site Access Badge Requirements.** During the life of this contract, the rights of ingress and egress for contractor personnel must be made available, as required, provided that a badge is issued after favorable adjudication from the Personnel Security Branch, Division of Facilities and Security (PERSEC/DFS). In this regard, all contractor personnel whose duties under this delivery order require their presence on-site shall be clearly identifiable by a distinctive badge furnished by the Government. The Project Officer shall assist the contractor in obtaining the badges for the contractor personnel. It is the sole responsibility of the contractor to ensure that each employee has a proper Government-issued identification/badge at all times. All prescribed identification must be immediately (no later than three days) delivered to PERSEC/DFS for cancellation or disposition upon the termination of employment of any contractor personnel. Contractor personnel must have this identification in their possession during on-site performance under this contract. It is the contractor's duty to assure that contractor personnel enter only those work areas necessary for performance of delivery order work, and to assure the safeguarding of any Government records or data that contractor personnel may come into contact with.
- m. **Security Requirements for Information Technology Services.** The proposer/contractor must identify all individuals and propose the level of Information Technology (IT) approval for each, using the following guidance. The NRC sponsoring office shall make the final determination of the level, if any, of IT approval required for all individuals working under this contract.

The Government shall have and exercise full and complete control over granting, denying, withholding, or terminating building access approvals for individuals performing work under this contract.

Contractor Security Requirements for Level I

Performance under this delivery order will involve prime contractor personnel, subcontractors or others who perform services requiring direct access to or operate agency sensitive information technology systems or data (IT Level I).

The IT Level I involves responsibility for the planning, direction, and implementation of a computer security program; major responsibility for the direction, planning, and design of a computer system, including hardware and software; or the capability to access a computer system during its operation or maintenance in such a way that could cause or that has a relatively high risk of causing grave damage; or the capability to realize a significant personal gain from computer access. Such contractor personnel shall be subject to the NRC contractor personnel security requirements of NRC Management Directive (MD) 12.3, Part I and will require a favorably adjudicated Limited Background Investigation (LBI).

A contractor employee shall not have access to NRC facilities, sensitive information technology systems or data until he/she is approved by Personnel Security Branch,

Division of Facilities and Security (PERSEC/DFS) first for temporary access (based on a favorable adjudication of their security forms and checks) and final access (based on a favorably adjudicated LBI) in accordance with the procedures found in NRC MD 12.3, Part I. The individual will be subject to a reinvestigation every 10 years. Timely receipt of properly completed security applications is a delivery order requirement. Failure of the contractor to comply with this condition within the ten work-day period may be a basis to void the notice of selection. In that event, the Government may select another firm for award.

The contractor shall submit a completed security forms packet, including the SF-86, "Questionnaire for National Security Positions," and fingerprint charts, through the Project Officer to PERSEC/DFS for review and favorable adjudication, prior to the individual performing work under this contract. The contractor shall assure that all forms are accurate, complete, and legible (except for Part 2 of the questionnaire, which is required to be completed in private and submitted by the individual to the contractor in a sealed envelope), as set forth in MD 12.3 which is incorporated into this delivery order by reference as though fully set forth herein. Based on PERSEC review of the applicant's security forms and/or the receipt of adverse information by NRC, the individual may be denied access to NRC facilities, sensitive information technology systems or data until a final determination is made of his/her eligibility under the provisions of MD 12.3. Any questions regarding the individual's eligibility for IT Level I approval will be resolved in accordance with the due process procedures set forth in MD 12.3 Exhibit 1 and E. O. 12968.

In accordance with NRCAR 2052.204-70 "Security," IT Level I contractors shall be subject to the attached NRC Form 187 which furnishes the basis for providing security requirements to prime contractors, subcontractors or others (e.g., bidders) who have or may have an NRC contractual relationship which requires access to or operation of agency sensitive information technology systems or remote development and/or analysis of sensitive information technology systems and data or other access to such systems and data; access on a continuing basis (in excess of 30 days) to NRC Headquarters controlled buildings; or otherwise requires NRC photo identification or card-key badges.

Contractor Security Requirements for Level II

Performance under this delivery order will involve contractor personnel that develop and/or analyze sensitive information technology systems or data or otherwise have access to such systems and data (IT Level II).

The IT Level II involves responsibility for the planning, design, operation, or maintenance of a computer system and all other computer or IT positions. Such contractor personnel shall be subject to the NRC contractor personnel requirements of MD 12.3, Part I, which is hereby incorporated by reference and made a part of this delivery order as though fully set forth herein, and will require a favorably adjudicated Access National Agency Check with Inquiries (ANACI).

A contractor employee shall not have access to NRC facilities, sensitive information technology systems or data until he/she is approved by PERSEC/DFS first for

temporary access (based on a favorable review of their security forms and checks) and final access (based on a favorably adjudicated ANACI) in accordance with the procedures found in MD 12.3, Part I. The individual will be subject to a reinvestigation every 10 years. Timely receipt of properly completed security applications is a delivery order requirement. Failure of the contractor to comply with this condition within the ten work-day period may be a basis to void the notice of selection. In that event, the Government may select another firm for award.

The contractor shall submit a completed security forms packet, including the SF-86, "Questionnaire for National Security Positions," and fingerprint charts, through the Project Officer to the NRC PERSEC/DFS for review and favorable adjudication, prior to the individual performing work under this contract. The contractor shall assure that all forms are accurate, complete, and legible (except for Part 2 of the questionnaire, which is required to be completed in private and submitted by the individual to the contractor in a sealed envelope), as set forth in MD 12.3. Based on PERSEC review of the applicant's security forms and/or the receipt of adverse information by NRC, the individual may be denied access to NRC facilities, sensitive information technology systems or data until a final determination is made of his/her eligibility under the provisions of MD 12.3. Any questions regarding the individual's eligibility for IT Level II approval will be resolved in accordance with the due process procedures set forth in MD 12.3 Exhibit 1 and E. O. 12968.

In accordance with NRCAR 2052.204-70 "Security," IT Level II contractors shall be subject to the attached NRC Form 187 which furnishes the basis for providing security requirements to prime contractors, subcontractors or others (e.g. bidders) who have or may have an NRC contractual relationship which requires access to or operation of agency sensitive information technology systems or remote development and/or analysis of sensitive information technology systems and data or other access to such systems and data; access on a continuing basis (in excess of 30 days) to NRC Headquarters controlled buildings; or otherwise requires NRC photo identification or card-key badges.

- n. Cancellation or Termination of IT Access/Request. When a request for investigation is to be withdrawn or canceled, the contractor shall immediately notify the Project Officer by telephone in order that he/she will contact the PERSEC/DFS so that the investigation may be promptly discontinued. The notification shall contain the full name of the individual, and the date of the request. Telephone notifications must be promptly confirmed in writing to the Project Officer who will forward the confirmation to the PERSEC/DFS. Additionally, PERSEC/DFS must be immediately notified when an individual no longer requires access to NRC sensitive automated information technology systems or data, including the voluntary or involuntary separation of employment of an individual who has been approved for or is being processed for access under the NRC Personnel Security Program.

D.7 BILLING INSTRUCTIONS

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 and Property Management - 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 \$5,000 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:

U.S. Nuclear Regulatory Commission
Division of Accounting and Finance GOV/COMM
Mail Stop T-9H4
Washington, DC 20555

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

Preparation and Itemization of the Voucher/Invoice: To be considered a proper voucher/invoice, all of the following elements must be included:

1. BPA/Contract number and delivery order 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, total amount, and cumulative amount.

For labor-hour delivery orders with a ceiling, provide a breakdown by task of labor hours by labor category, hours, fixed rate, current period dollars, and cumulative hours and dollars billed to date as authorized under the delivery order. For example:

Category	Current Hours	Fixed Rate	Current Billed	Cumulative	
				Hours	Total Billed
Sr. Scientist	100	35.00	\$3,500.00	500	\$ 17,500.00
Engineer	100	25.00	\$2,500.00	100	\$ 2,500.00
Totals:			\$6,000.00		\$ 20,000.00

Invoices for the order shall be broken down by task. You must also provide a consolidated summary (cover sheet) of the total amount billed inclusive of all tasks. The summary must contain the cumulative amount invoiced to date.

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. Travel Reimbursement (if applicable)

The contractor shall submit claims for travel reimbursement as a separate item on its fixed-price invoice/voucher in accordance with the following:

Travel reimbursement. Total costs associated with each trip must be shown in the following format:

<u>Start Date</u>	<u>Destination</u>	<u>Costs</u>
From:	From:	
To:	To:	\$

Provide supporting documentation (receipts) for travel expenditures in excess of \$75.00 in an attachment to the invoice/voucher.

Billing of Cost After Expiration of Order: If costs are incurred during the delivery order period and claimed after the order has expired, the period during which these costs were incurred must be cited. To be considered a proper expiration voucher/invoice, the contractor shall clearly mark it "EXPIRATION VOUCHER" or "EXPIRATION 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 order may not exceed the total U.S. dollars authorized under the order.

Supersession: These instructions supersede any previous billing instructions.

D.8 PROJECT OFFICER

The Contracting Officer's authorized technical representative hereinafter referred to as the project officer for this order is:

Name: Pat Smith

Address: U.S. Nuclear Regulatory Commission
Atomic Safety and Licensing Board Panel
Mailstop T-3F23
Washington, DC 20555

Telephone Number: (301) 415-7352

a. Performance of the work under this order is subject to the technical direction of the NRC project officer. The term "technical direction" is defined to include the following:

1. Technical direction to the contractor which shifts work emphasis between areas of work or tasks, authorizes travel which was unanticipated in the Schedule (i.e., travel not contemplated in the Statement of Work or changes to specific travel identified in the Statement of Work), fills in details, or otherwise serves to accomplish the contractual statement of work.
2. Provide advice and guidance to the contractor in the preparation of drawings, specifications, or technical portions of the work description.
3. Review and, where required by the order, approval of technical reports, drawings, specifications, and technical information to be delivered by the contractor to the Government under the order.

b. Technical direction must be within the general statement of work stated in the order. The project officer does not have the authority to and may not issue any technical direction which:

1. Constitutes an assignment of work outside the general scope of the order or associated BPA.
2. Constitutes a change as defined in the "Changes" clause of the GSA contract.
3. In any way causes an increase or decrease in the total fixed price or the time required for performance of any orders.
4. Changes any of the expressed terms, conditions, or specifications of the order or associated BPA.
5. Terminates the order, settles any claim or dispute arising under the order, or issues any unilateral directive whatever.

c. All technical directions must be issued in writing by the project officer or must be confirmed by the project officer in writing within ten (10) working days after verbal issuance. A copy of the written direction must be furnished to the CO. A copy of NRC Form 445, Request for Approval of Official Foreign Travel, which has received final approval from the NRC must be furnished to the CO.

d. The contractor shall proceed promptly with the performance of technical directions duly issued by the project officer in the manner prescribed by this clause and within the project officer's authority under the provisions of this clause.

e. If, in the opinion of the contractor, any instruction or direction issued by the project officer is within one of the categories as defined in paragraph (c) of this section, the contractor may not proceed but shall notify the CO in writing within five (5) working days after the receipt of any instruction or direction and shall request the CO to modify the order or associated BPA accordingly. Upon receiving the notification from the

contractor, the CO shall issue an appropriate modification or advise the contractor in writing that, in the CO's opinion, the technical direction is within the scope of this article and does not constitute a change under the "Changes" clause.

- f. Any unauthorized commitment or direction issued by the project officer may result in an unnecessary delay in the contractor's performance and may even result in the contractor expending funds for unallowable costs under the order or associated BPA.
- g. A failure of the parties to agree upon the nature of the instruction or direction or upon the contract action to be taken with respect thereto is subject to 52.233-1 - Disputes.
- h. In addition to providing technical direction as defined in paragraph (b) of the section, the project officer shall:
 - 1. Monitor the contractor's technical progress, including surveillance and assessment of performance, and recommend to the CO changes in requirements.
 - 2. Assist the contractor in the resolution of technical problems encountered during performance.
 - 3. Review all costs requested for reimbursement by the contractor and submit to the CO recommendations for approval, disapproval, or suspension of payment for supplies and services required under orders.
 - 4. Assist the contractor in obtaining the badges for the contractor personnel.
 - 5. Immediately notify the Personnel Security Branch, Division of Facilities and Security (PERSEC/DFS) (via e-mail) when a contractor employee no longer requires access authorization and return the individual's badge to PERSEC/DFS within three days after their termination.

D.9 PERIOD OF PERFORMANCE

This order shall be effective from August 26, 2002, through June 30, 2005.

D.10 CONSIDERATION AND OBLIGATION

The total estimated amount (ceiling) of this order is \$1,464,213.45.

In the event that the option to extend services to include Optional Task 2 is exercised, the total estimated amount for Optional Task 2 is \$355,640.14.

In the event that the option to extend services to include Optional Task 3 is exercised, the total estimated amount for Optional Task 3 is \$1,006,778.64.

The amount presently obligated with respect to this order is \$1,464,213.45. The Contracting Officer may increase this amount from time to time by unilateral modification to the order. The obligated amount shall, at no time, exceed the order ceiling. When and if

the amount(s) paid and payable to the Contractor hereunder shall equal the obligated amount, the Contractor shall not be obligated to continue performance of the work unless and until the Contracting Officer shall increase the amount obligated. Any work undertaken by the Contractor in excess of the obligated amount specified above is done so at the Contractor's sole risk.

It is estimated that the amount currently allotted will cover performance of the effort through September 30, 2003.

D.11 FAR 52.232-7, "PAYMENTS UNDER TIME-AND-MATERIAL AND LABOR-HOUR CONTRACTS"

FAR 52.232-7 is applicable and hereby incorporated by reference into this order.

D.12 FAR 52.227-14, "Rights in Data-General (June 1987)"

FAR 52.227-14 is applicable and hereby incorporated by reference into this order, with the addition of the following terms:

"However and in addition thereto, the contractor understands and agrees that copyright of data first developed or produced in the performance of this order(s) shall be subject to obtaining permission and approval from the government contracting officer and is further subject to granting the government with a free paid up, world wide, irrevocable license to use, copy, release, duplicate, distribute, and disseminate the data for governmental purposes and to further allow the government the right to use, copy, release, duplicate, distribute, and disseminate the data to participants, interested parties, litigants and members of the public that the government deems necessary to fulfill its statutory, regulatory and policy obligations."

D.13 FAR 52.227-19, "Commercial Computer Software-Restricted Rights (June 1987)"

FAR 52.227-19 is applicable and hereby incorporated by reference into this order, with the addition of the following terms:

"However and in addition thereto, the contractor understands and agrees that copyright of computer software first developed or produced in the performance of this order(s) shall be subject to obtaining permission and approval from the government contracting officer and is further subject to granting the government with a free paid up, world wide, irrevocable license to use, copy, release, duplicate, distribute, and disseminate the computer software for governmental purposes and to further allow the government the right to use, copy, release, duplicate, distribute, and disseminate the computer software to participants, interested parties, litigants and members of the public that the government deems necessary to fulfill its statutory, regulatory and policy obligations."

**D.14 APPROPRIATE USE OF GOVERNMENT FURNISHED INFORMATION
TECHNOLOGY (IT) EQUIPMENT AND/ OR IT SERVICES/ ACCESS (MARCH 2002)**

As part of contract performance the NRC may provide the contractor with information technology (IT) equipment and IT services or IT access as identified in the solicitation or subsequently as identified in the contract or delivery order. Government furnished IT equipment, or IT services, or IT access may include but is not limited to computers, copiers, facsimile machines, printers, pagers, software, phones, Internet access and use, and email access and use. The contractor (including the contractor's employees, consultants and subcontractors) shall use the government furnished IT equipment, and / or IT provided services, and/ or IT access solely to perform the necessary efforts required under the contract. The contractor (including the contractor's employees, consultants and subcontractors) are prohibited from engaging or using the government IT equipment and government provided IT services or IT access for any personal use, misuse, abuses or any other unauthorized usage.

The contractor is responsible for monitoring its employees, consultants and subcontractors to ensure that government furnished IT equipment and/ or IT services, and/ or IT access are not being used for personal use, misused or abused. The government reserves the right to withdraw or suspend the use of its government furnished IT equipment, IT services and/ or IT access arising from contractor personal usage, or misuse or abuse; and/ or to disallow any payments associated with contractor (including the contractor's employees, consultants and subcontractors) personal usage, misuses or abuses of IT equipment, IT services and/ or IT access; and/ or to terminate for cause the contract or delivery order arising from violation of this provision.

D.15 2052.209-72 CONTRACTOR ORGANIZATIONAL CONFLICTS OF INTEREST (JAN 1993)

(a) Purpose. The primary purpose of this clause is to aid in ensuring that the contractor:

(1) Is not placed in a conflicting role because of current or planned interests (financial, contractual, organizational, or otherwise) which relate to the work under this contract; and

(2) Does not obtain an unfair competitive advantage over other parties by virtue of its performance of this contract.

(b) Scope. The restrictions described apply to performance or participation by the contractor, as defined in 48 CFR 2009.570-2 in the activities covered by this clause.

(c) Work for others.

(1) Notwithstanding any other provision of this contract, during the term of this contract, the contractor agrees to forego entering into consulting or other contractual arrangements with any firm or organization the result of which may give rise to a conflict of interest with respect to the work being performed under this contract. The contractor shall ensure that all employees under this contract abide by the provision of this clause. If the contractor has reason to believe, with respect to itself or any employee, that any proposed consultant or other contractual arrangement with any firm or organization may involve a potential conflict of interest, the

contractor shall obtain the written approval of the contracting officer before the execution of such contractual arrangement.

(2) The contractor may not represent, assist, or otherwise support an NRC licensee or applicant undergoing an NRC audit, inspection, or review where the activities that are the subject of the audit, inspection, or review are the same as or substantially similar to the services within the scope of this contract (or task order as appropriate) except where the NRC licensee or applicant requires the contractor's support to explain or defend the contractor's prior work for the utility or other entity which NRC questions.

(3) When the contractor performs work for the NRC under this contract at any NRC licensee or applicant site, the contractor shall neither solicit nor perform work in the same or similar technical area for that licensee or applicant organization for a period commencing with the award of the task order or beginning of work on the site (if not a task order contract) and ending one year after completion of all work under the associated task order, or last time at the site (if not a task order contract).

(4) When the contractor performs work for the NRC under this contract at any NRC licensee or applicant site,

(i) The contractor may not solicit work at that site for that licensee or applicant during the period of performance of the task order or the contract, as appropriate.

(ii) The contractor may not perform work at that site for that licensee or applicant during the period of performance of the task order or the contract, as appropriate, and for one year thereafter.

(iii) Notwithstanding the foregoing, the contracting officer may authorize the contractor to solicit or perform this type of work (except work in the same or similar technical area) if the contracting officer determines that the situation will not pose a potential for technical bias or unfair competitive advantage.

(d) Disclosure after award.

(1) The contractor warrants that to the best of its knowledge and belief, and except as otherwise set forth in this contract, that it does not have any organizational conflicts of interest as defined in 48 CFR 2009.570-2.

(2) The contractor agrees that if, after award, it discovers organizational conflicts of interest with respect to this contract, it shall make an immediate and full disclosure in writing to the contracting officer. This statement must include a description of the action which the contractor has taken or proposes to take to avoid or mitigate such conflicts. The NRC may, however, terminate the contract if termination is in the best interest of the Government.

(3) It is recognized that the scope of work of a task-order-type contract necessarily encompasses a broad spectrum of activities. Consequently, if this is a task-order-type contract, the contractor agrees that it will disclose all proposed new work involving NRC licensees or applicants which comes within the scope of work of the underlying contract. Further, if this contract involves work at a licensee or applicant site, the contractor agrees to exercise diligence

to discover and disclose any new work at that licensee or applicant site. This disclosure must be made before the submission of a bid or proposal to the utility or other regulated entity and must be received by the NRC at least 15 days before the proposed award date in any event, unless a written justification demonstrating urgency and due diligence to discover and disclose is provided by the contractor and approved by the contracting officer. The disclosure must include the statement of work, the dollar value of the proposed contract, and any other documents that are needed to fully describe the proposed work for the regulated utility or other regulated entity. NRC may deny approval of the disclosed work only when the NRC has issued a task order which includes the technical area and, if site-specific, the site, or has plans to issue a task order which includes the technical area and, if site-specific, the site, or when the work violates paragraphs (c)(2), (c)(3) or (c)(4) of this section.

(e) Access to and use of information.

(1) If in the performance of this contract, the contractor obtains access to information, such as NRC plans, policies, reports, studies, financial plans, internal data protected by the Privacy Act of 1974 (5 U.S.C. Section 552a(1988)), or the Freedom of Information Act (5 U.S.C. Section 552 (1986)), the contractor agrees not to:

(i) Use this information for any private purpose until the information has been released to the public;

(ii) Compete for work for the Commission based on the information for a period of six months after either the completion of this contract or the release of the information to the public, whichever is first;

(iii) Submit an unsolicited proposal to the Government based on the information until one year after the release of the information to the public; or

(iv) Release the information without prior written approval by the contracting officer unless the information has previously been released to the public by the NRC.

(2) In addition, the contractor agrees that, to the extent it receives or is given access to proprietary data, data protected by the Privacy Act of 1974 (5 U.S.C. Section 552a (1988)), or the Freedom of Information Act (5 U.S.C. Section 552 (1986)), or other confidential or privileged technical, business, or financial information under this contract, the contractor shall treat the information in accordance with restrictions placed on use of the information.

(3) Subject to patent and security provisions of this contract, the contractor shall have the right to use technical data it produces under this contract for private purposes provided that all requirements of this contract have been met.

(f) Subcontracts. Except as provided in 48 CFR 209.570-2, the contractor shall include this clause, including this paragraph, in subcontracts of any tier. The terms contract, contractor, and contracting officer, must be appropriately modified to preserve the Government's rights.

(g) Remedies. For breach of any of the above restrictions, or for intentional non-disclosure or misrepresentation of any relevant interest required to be disclosed concerning this contract or for such erroneous representations that necessarily imply bad faith, the Government may

terminate the contract for default, disqualify the contractor from subsequent contractual efforts, and pursue other remedies permitted by law or this contract.

(h) Waiver. A request for waiver under this clause must be directed in writing to the contracting officer in accordance with the procedures outlined in 48 CFR 2009.570-9.

(i) Follow-on effort. The contractor shall be ineligible to participate in NRC contracts, subcontracts, or proposals therefor (solicited or unsolicited), which stem directly from the contractor's performance of work under this contract. Furthermore, unless so directed in writing by the contracting officer, the contractor may not perform any technical consulting or management support services work or evaluation activities under this contract on any of its products or services or the products or services of another firm if the contractor has been substantially involved in the development or marketing of the products or services.

(1) If the contractor, under this contract, prepares a complete or essentially complete statement of work or specifications, the contractor is not eligible to perform or participate in the initial contractual effort which is based on the statement of work or specifications. The contractor may not incorporate its products or services in the statement of work or specifications unless so directed in writing by the contracting officer, in which case the restrictions in this paragraph do not apply.

(2) Nothing in this paragraph precludes the contractor from offering or selling its standard commercial items to the Government.

APPENDIX A

Detailed Requirements

1. FUNCTIONAL REQUIREMENTS

- 1.1 The DDMS shall provide access to electronically available copies of the rules, policies, and procedures that govern the hearing.
- 1.2 The DDMS shall provide a chronological listing of all FRNs, pleadings, and pre-filed information that support the hearing.
- 1.3 The DDMS shall provide access to the EHD to support review of the current electronic docket.
- 1.4 The DDMS shall support the generation of an ordered list of witnesses (witness list) that are scheduled to support the hearing.
- 1.5 The DDMS shall support the management of the witness list and support changes to the witness list.
- 1.6 The DDMS shall support the control of evidence presentation during the hearing. This shall include the capability to control the display and presentation of information to specific monitor(s), microphones or any input or output source.
- 1.7 The DDMS shall support the electronic marking of evidence/exhibits to be presented. The system shall be capable of marking evidence such as Identified, Received, Rejected, Withdrawn, etc.
- 1.8 The DDMS shall support sealing portions of the record, temporarily stored on the DDMS.
- 1.9 The DDMS shall support independent or private retrieving and viewing of hearing or record information by the judges.
- 1.10 The DDMS shall support the management of multiple hearings, in one or more locations. This management shall include a capability to uniquely identify and correlate information captured and presented at each hearing.
- 1.11 The DDMS shall support the aggregation of information across multiple hearings, allowing search and retrieval across all hearing information with a single request.
- 1.12 The DDMS shall support electronic notifications or instructions to participating hearing personnel, e.g., judges and court reporter.
- 1.13 The DDMS shall accommodate input information needed to support the presiding officer in administering the hearing, including such items as:
 - Rules
 - Procedures
 - Policies

- Pleadings
- Evidence
- Parties
- Witness List
- Precedents
- Schedule
- Transcripts

1.14 The DDMS shall accommodate output information needed to support the presiding officer in administering the hearing, including such items as:

- Instructions
- Schedules
- Computer generated reports
- Process flows
- Selected portions of transcripts
- Public announcements

1.15 The DDMS shall retrieve pre-filed documents from information filed with SECY.

1.16 The DDMS shall support capturing pre-filed documents from electronic and paper formats.

1.17 The DDMS shall support storing references to non-electronic exhibits as descriptive profile information.

1.18 The DDMS shall support capturing multimedia electronic information in their original format.

1.19 The DDMS shall support the searching of pre-filed electronic and non-electronic information using the metadata or full-text index information.

1.20 The DDMS shall support the retrieval and display or printing of all pre-filed electronic information.

1.21 The DDMS shall support the selective retrieval and capture of electronic pleading(s) from the EHD.

1.22 The DDMS shall support the electronic document formats supported by the EHD.

1.23 The DDMS shall support the indexing of pre-filed documents with metadata (descriptive information), including descriptive information used in the EHD such as docket number, accession number, etc.

1.24 The DDMS shall support the generation of a full-text index for each pre-filed document.

1.25 The DDMS shall support the tracking and identification of multiple versions or revisions of pre-filed documents. The latest version of a pre-filed document shall be presented when a retrieval request is issued.

- 1.26 The DDMS shall support the retrieval and display of pre-filed documents, retaining the original presentation fidelity of the information.
- 1.27 The DDMS shall support the printing of pre-filed documents to selectable page sizes specified by the user, including but not limited to 8 ½" x 11" and legal size paper.
- 1.28 The DDMS shall support the retention of the access control privileges originally assigned by the EHD for using the pre-filed documents by NRC personnel.
- 1.29 The DDMS shall accommodate input information needed to support the presiding officer in administering the pre-hearing conferences and evidentiary hearings, including such items as:
- Motions
 - Briefs
 - Petitions
 - Electronic Records (e.g., LSN, EHD)
 - Testimony
 - Witness Lists
 - Exhibits
 - References to models, video, and other information
 - Responses
 - Contentions
- 1.30 The DDMS shall accommodate output information needed to support the presiding officer in administering the pre-hearing conferences and evidentiary hearings, including such items as:
- Computer generated reports
 - Acknowledgments
 - Issuances
- 1.31 The DDMS shall provide direct access to external databases and subscription services for the purpose of providing research support to the ASLBP:
- Electronic Records (e.g., LSN, EHD)
 - LEXIS™
 - Westlaw™
 - Premise™
- 1.32 The DDMS shall provide web access to research tools to support litigant research.
- 1.33 The DDMS shall allow research participants to use the native search and retrieval capabilities to request information from the identified repositories.
- 1.34 The DDMS shall support the retention of the access control privileges originally assigned by the EHD for using documents by authorized personnel.
- 1.35 The DDMS shall support the display of all evidence in electronic form on display monitors or workstations distributed inside and outside of the hearing room.

1.36 The DDMS shall support the display presentation of litigator case information from:

- Laptops
- CD or DVD
- Video
- Audio

1.37 The DDMS shall support the presentation of physical evidence or exhibits to monitors or workstations inside and outside the hearing room. A variable zoom capability shall be provided to selectively view specific details of the information being examined.

1.38 The DDMS shall support the presentation of hearing information to remote locations via video conference.

1.39 The DDMS shall provide a capability to highlight or annotate, and then optionally capture and store, specific portions of displayed still images presented on monitor or workstations, in order to provide clarity or emphasis.

1.40 The DDMS shall provide a capability to support the Americans with Disabilities Act requirements as applicable. This shall include a capability to provide enhancements for the hearing impaired and closed caption or real-time reporting for the deaf.

1.41 The DDMS shall support the translation of languages to and from U.S. English for non-English speaking participants.

1.42 The DDMS shall provide a capability to play back selected portions of the testimony presented. This shall include the audio, video, and any transcript created during the hearing.

1.43 The DDMS shall support the selective display of information from all input sources in the hearing room, including computers, projectors, cameras, etc.

1.44 The DDMS shall support the simultaneous display of information from multiple input sources in multiple windows or viewing partitions on monitors or workstations.

1.45 The DDMS shall accommodate input information needed to support evidence and argument presentation at pre-hearing conferences and hearings, including such items as:

- Documents (images, text, paper, etc.)
- Video Clips
- Laptops/computer inputs
- Computer Models
- Physical Evidence
- Oral presentation/report/testimony
- Depositions
- Video Conference
- CD/DVD
- Reference to Pre-filed court information
- Projectors

- 1.46 The DDMS shall accommodate output information needed to support evidence and argument presentation at pre-hearing conferences and hearings, including such items as:
- Screens or display units
 - Printers
 - Reports
 - Hearing record
 - Remote hearing site - video conference
- 1.47 The DDMS shall support the capability to update information previously stored in the record.
- 1.48 The DDMS shall support the capability to insert or append information into the record, e.g., mark evidence as accepted, rejected, or withdrawn.
- 1.49 The DDMS shall support the deletion of electronic information or references to exhibits from the record.
- 1.50 The DDMS shall support modifying existing portions of the record as directed by the judge(s).
- 1.51 The DDMS shall support the creation and capture of documents used to promulgate orders, directives, etc., to SECY and other parties.
- 1.52 Issuance documents shall be stored in their native formats.
- 1.53 The DDMS shall support scanning and conversion of paper documents, e.g., to capture required written signature pages.
- 1.54 The DDMS shall support the physical marking of electronic documents with a user selectable/customizable electronic marker, e.g., an image stamp.
- 1.55 The DDMS shall accommodate input information needed to support records management at pre-hearing conferences and hearings, including such items as:
- Record
 - Judge Instructions
 - Requests from Litigants
- 1.56 The DDMS shall accommodate output information needed to support records management at pre-hearing conferences and hearings, including such items as:
- Reports
 - Insertion of information
 - Update of information
 - Index

- 1.57 The DDMS shall support the integration of evidentiary, transcription, and research information to assist the judges in making a decision. This includes synchronizing transcripts with video proceedings and links to electronic documents.
- 1.58 The DDMS shall support advanced search methods to assist judges in finding evidentiary information.
- 1.59 The DDMS shall provide access to the record from the judges' chambers.
- 1.60 The DDMS shall support integration with Open Document Management Architecture (ODMA) compliant products such as Word, Excel, and WordPerfect. This integration is required to allow issuance documents to incorporate text information from the existing record without retyping the existing information.
- 1.61 The DDMS shall support the indexing of the video records to assist in the review of video information.
- 1.62 The DDMS shall support the creation of customized or ad hoc reports to assist the judges in reviewing the record captured during the hearing.
- 1.63 The DDMS shall support the capture of any decision issued by a licensing board at or after each pre-hearing conference or hearing.
- 1.64 The DDMS shall accommodate input information needed to assist judges with developing and documenting decisions, including such items as:
- Record
 - Other Proceeding Information
 - Research
- 1.65 The DDMS shall accommodate output information needed to assist judges with developing and documenting decisions, including such items as:
- Issuances
- 1.66 The DDMS shall support the capture of documents used to promulgate orders, directives, etc., to SECY and other parties.
- 1.67 Issuance documents shall be stored in their native format
- 1.68 The DDMS shall support scanning and conversion of paper documents, e.g., to capture required written signature pages
- 1.69 The DDMS shall accommodate input information needed to assist judges with the generation and storage of orders, directives, etc., promulgated by the presiding officer, including such items as:
- Decision

- 1.70 The DDMS shall accommodate output information needed to assist judges with the generation and storage of orders, directives, etc., promulgated by the presiding officer, including such items as:
- Orders
 - Notices
- 1.71 The DDMS shall support the capture of a video and audio record of specific activities and information presented in the hearing.
- 1.72 The DDMS shall automate the capture process using a voice-activated mechanism to trigger the recording process, subject to over-ride by the clerk or presiding officer.
- 1.73 The DDMS shall capture the presentation of information at local and remote sites when video conferencing technology is used.
- 1.74 The DDMS shall support playback of selected portions or time slots of the proceeding recording.
- 1.75 The DDMS shall support video capture for the judges, litigants, and individuals at the witness box.
- 1.76 The DDMS shall support playback of proceeding recordings.
- 1.77 The DDMS shall record evidence presented during the hearing that is displayed on projectors or other monitors in the hearing room.
- 1.78 The DDMS shall provide a capability for the proceeding recording to be indexed and linked with relevant hearing transcripts.
- 1.79 The DDMS shall accommodate input information needed to assist with the capturing of all information presented and discussed during a hearing, including such items as:
- Evidence
 - Decision
 - Administrative Management information
 - Pleadings
 - Transcription
 - Video
- 1.80 The DDMS shall accommodate output information needed to assist with the capturing of all information presented and discussed during a hearing, including such items as:
- Metadata
 - Electronic Information
 - DVD/CD records
- 1.81 The DDMS shall support the real-time creation of a record of pre-hearing conferences and hearings.

- 1.82 The DDMS shall include all pleadings, orders, transcripts of pre-hearing conferences and hearings, pre-filed testimony, and exhibits as a part of the record.
- 1.83 The DDMS shall provide for the creation of an index (metadata) for each piece of information or each exhibit that is part of the record.
- 1.84 The DDMS shall store all electronic documents or multimedia files to be included in the record.
- 1.85 The DDMS shall maintain a reference to physical items that need to be included in the record.
- 1.86 The DDMS shall maintain an index that includes the unique LSN identifier for each entity (document, files, etc.) originally stored in the LSN.
- 1.87 The DDMS shall provide a capability to seal a portion of the record.
- 1.88 The DDMS shall provide a capability to correlate types of multimedia information, to facilitate an easy retrieval process.
- 1.89 The DDMS shall support the creation of an electronic document from a paper document accepted into evidence during the hearing; to be stored as a part of the record.
- 1.90 The DDMS shall accommodate input information needed to assist with the creation of the hearing record, including such items as:
- Evidence electronic and physical)
 - Decision
 - Pre-filed Testimony
 - Pleadings
 - Transcription
- 1.91 The DDMS shall accommodate output information needed to assist with the creation of the hearing record, including such items as:
- Metadata
 - Electronic Information
 - Links or references
 - Physical Evidence
 - CD/DVD
- 1.92 The DDMS shall support searching of the DDMS record using one or more metadata fields.
- 1.93 The DDMS shall support the searching of the DDMS record using a full-text index.
- 1.94 The DDMS shall support the searching of the DDMS record using a combination of metadata and full-text searches.

- 1.95 The DDMS shall support the retrieval of the DDMS record from an internet based user using a web browser.
- 1.96 The DDMS shall support the display of metadata or a profile for each entity stored in the DDMS record.
- 1.97 The DDMS shall support the display of each type of electronic information stored in the record, including documents, video files, images, etc.
- 1.98 The DDMS shall support the production of a result list for information matching the specified search criteria.
- 1.99 The DDMS shall support retrieval of the DDMS record from:
- Judge's bench
 - Litigant desk locations
 - Clerk of Court
 - Court Reporter
 - Judge's chambers
 - Judge's conference room(s)
 - Litigant support conference rooms at the hearing
- 1.100 The DDMS shall support local and remote access to DDMS data for a scheduled 21 hours per day, 7 days per week.
- 1.101 The DDMS shall accommodate input information needed to assist with interactive search and retrieval of record information, including such items as:
- Request from Judges
 - Request from Parties
 - Request from Court Reporter
- 1.102 The DDMS shall accommodate output information needed to assist with interactive search and retrieval of record information, including such items as:
- Results from Judges
 - Results from Parties
 - Results from Court Reporter
 - Removable media
- 1.103 The DDMS shall support the generation of a time-sequenced audio and/or video record of pre-hearing conferences and hearings.
- 1.104 The DDMS shall support a real-time transcription of pre-hearing conferences and hearings.
- 1.105 The DDMS shall support the active linking of transcribed information with electronic information referenced by the transcript.
- 1.106 The DDMS shall support the capture and storage of transcribed textual information.

- 1.107 The DDMS shall support the indexing of the transcribed record with metadata and a full-text index.
- 1.108 The DDMS shall accommodate input information needed to capture and retrieve transcribed testimony, including such items as:
- Audio Tape
 - Video Tape
 - Arguments
- 1.109 The DDMS shall accommodate output information needed to capture and retrieve transcribed testimony, including such items as:
- Searchable Text
 - Linked transcripts and associated exhibits
- 1.110 The DDMS shall support the identification of DDMS records that need to be filed as a part of the official record with SECY.
- 1.111 The DDMS shall identify DDMS hearing records to be filed with SECY on a daily basis.
- 1.112 The DDMS shall identify those DDMS records required to be filed with SECY at the end of the hearing, including any records of related hearings.
- 1.113 The DDMS shall support the packaging and export of records to be stored on the ADAMS systems with SECY. The exported records shall include the electronic documents and related metadata required for indexing the records and referencing physical evidence.
- 1.114 The DDMS shall support the generation of CD or DVD media with the exported data.
- 1.115 The DDMS record forwarded to SECY shall be retrievable from remote locations including:
- Litigant Offices
 - Sites with Web access
- 1.116 The DDMS shall accommodate input information needed to support the transmission of all record information to SECY, including such items as:
- Record
 - Index
 - Proceeding Information
- 1.117 The DDMS shall accommodate output information needed to support the transmission of all record information to SECY, including such items as:
- Metadata
 - Electronic Documents
 - Physical Evidence

SYSTEM REQUIREMENTS

- 1.118 The DDMS shall provide capacity to store 10% of the high-end estimates for HLW repository document storage in the LSN:
- The LSN is estimated to store a total of 15,766,000 pages by 2004, the expected time frame for the HLW repository proceeding.
 - At 50 KB/page, this results in approximately 79 GB to store electronic images in the DDMS at its inception.
 - Full text of the images (at 5 KB/page) requires an additional 8 GB of storage.
 - Metadata storage is estimated to require an additional 4 GB of storage based on an average of 10 pages/document and 2.5 KB of metadata information/document.
- 1.119 The DDMS shall provide a capacity to store video and other forms of multimedia data, based on the following criteria:
- Hearing proceedings will be digitized and compressed for storage and distribution via video streaming technologies.
 - Hearing video will be retained online for 2 days, and stored on removable media (near-line) for future retrieval.
 - Analog video clips or recordings presented as exhibits in the hearing will be digitized and compressed for storage in a digital format. This digitized information will be stored online in the DDMS database.
 - Video recordings are estimated to be stored in a MPEG format at 1.5 Mbps. For the total of 150 days, the total estimated recording requirement is 1215 GB.
- 1.120 The DDMS shall provide a capability to display evidence on each monitor or display in the hearing room, within 10 seconds of the request to display the document, for 90% of all requests.
- 1.121 The DDMS shall display a result list within 10 seconds of the search request to find the information, for 90% of all requests.
- 1.122 The DDMS shall utilize an open architecture that will accommodate integration with legacy systems (ADAMS).
- 1.123 The DDMS shall support the migration to newer information and A/V technologies.
- 1.124 The DDMS shall use product components that are based on industry accepted standards. This shall include but not be limited to hardware interfaces, Application Programming Interface (API), Relational Database technology, Communications Protocol, and Operating Systems technology.
- 1.125 The DDMS shall support the hearing room environments for Rockville, a remote location in the Las Vegas area, as well as other sites in remote locations.
- 1.126 The DDMS shall use tailored user interfaces that are consistent with industry standards for information presentation.

- 1.127 The DDMS shall provide an interface that allows the professional user (e.g., judge, attorneys) to easily search, retrieve and display information. A seamless interface shall be provided to allow the professional user to focus on the hearing and not the DDMS system, i.e., do not detract from the operations of the hearing.
- 1.128 The DDMS shall provide a capability to easily highlight subsections of the document or information being presented, for emphasis or focus.
- 1.129 The DDMS shall provide pre-defined search methods; tailored for the DDMS user to mitigate the need to enter many keystrokes when searching for information.
- 1.130 The DDMS shall support the casual, infrequent user that needs to search and retrieve information from the DDMS.
- 1.131 The DDMS shall support the technically proficient user that needs to use advanced tools to find and manipulate information in the DDMS.
- 1.132 The DDMS shall use touch sensitive or equivalent data entry devices to assist in the control and manipulation of the DDMS systems by the Judge and Clerk of Court.
- 1.133 The DDMS shall use accepted industry icons to represent the format of the information being reviewed, i.e., audio, video, image, Word, etc.
- 1.134 The DDMS shall provide a basic entry level manual as a training and reference tool.
- 1.135 The DDMS shall integrate with the existing NRC enterprise infrastructure.
- 1.136 The DDMS shall make optimal use of existing communications infrastructure including but not limited to the LANs, WAN and telecommunications.
- 1.137 The DDMS shall use existing client desktop computers, enhancing the technology to meet requirements not currently supported.
- 1.138 The DDMS shall use, as far as possible, server technology that is consistent with NRC procurement standards for similar technology including but not limited to hardware vendor, machine type, and operating systems.
- 1.139 The DDMS shall be scheduled to be available to support conducting the HLW repository hearing 21 hours per day, 7 days per week.
- 1.140 The DDMS shall be capable of supporting multiple concurrent hearings conducted at multiple locations and in multiple time zones.
- 1.141 The DDMS shall support intercommunications with the EHD in Rockville, Maryland to obtain EHD updates and to transfer hearing record updates to the SECY organization. This interface shall be available 5 days per week, for a minimum of 1 hour each day.
- 1.142 The DDMS shall be available 7 days per week, a minimum of 1 hour each day, to support ongoing or required maintenance activities.

- 1.143 The Mean Time to Repair (MTTR) the DDMS shall be no more than 1 hour, during the 7 day/week operating time frame.
- 1.144 The DDMS shall support the creation of various levels of user privileges to access or manage information in the DDMS.
- 1.145 The DDMS shall provide a capability to restrict some users from accessing specific information stored in the DDMS, e.g., a Protective Order File.
- 1.146 The DDMS shall restrict all users, except the System Administrator, from deleting information stored in the DDMS.
- 1.147 The DDMS shall allow only authorized users, like the Court Clerk, to update or modify information stored in the DDMS system.
- 1.148 The DDMS shall support the display of more than one output simultaneously.

APPENDIX B

Full DDMS Solution as Presented to Elicit Project Authorization (Selected Sections Extracted from Original)

ADAMS Accession Number for the ASPEN STUDY is:

ML012070122

APPENDIX C
NRC System Development Life Cycle Management (SDLCM)
METHODOLOGY

ADAMS Accession Number for the SDLCM Methodology is:

ML013440472

APPENDIX D
Information about A/V Components Currently Installed at the NRC
(Omitted from order, previously provided.)

APPENDIX E

Performance Requirements Summary

Task 1 - PERFORMANCE REQUIREMENTS SUMMARY

Performance Requirement & Deliverables	Standard	QA Method	Incentive/Deduction
<p>4.1 Design the DDMS</p> <p>Deliver supporting documentation</p> <p>Walk-through review of design</p>	<p>Design and supporting documentation (and any subsequent updates) address all functional requirements identified, were prepared in accordance with, and conform to the NRC SDLCM and the SOW, were on time (received no later than 7 calendar days after delivery due date), and contained no inaccuracies.</p> <p>Design review walk-through is held in accordance with the schedule and demonstrates that all functional requirements have been addressed.</p>	<p>100% inspection and review</p> <p>IV&V</p>	<p>Full payment for 100% compliance.</p> <p>Non-conformance is unacceptable. Re-performance will be required at Contractor's expense.</p>

Performance Requirement & Deliverables	Standard	QA Method	Incentive/Deduction
<p>4.3 Implement and demonstrate the pilot system.</p> <p>Deliver pre-production software, demonstration hardware, test plan, test report.</p> <p>Perform system test and demonstration.</p> <p>Compile recommendations for enhancements and improvements</p> <p>Deliver updated documentation.</p>	<p>System conforms to all functional, operational, and performance requirements identified; was prepared in accordance with, and conforms to the NRC SDLCM and the SOW; was delivered, installed, and demonstrated on time, and passes acceptance tests.</p> <p>Hardware components must conform to all functional, operational, and performance requirements identified in the SOW or approved for use in the operational phase.</p> <p>Documentation was prepared in accordance with, and conforms to the NRC SDLCM and the SOW, was on time, and contained no inaccuracies.</p> <p>Tests were performed in accordance with plans, demonstrate all requirements have been met and no latent system errors are present</p>	<p>100% inspection and review</p> <p>IV&V of products</p>	<p>Full payment for 100% compliance.</p> <p>Non-conformance to system requirements is unacceptable. Re-performance at Contractor's expense will be required without impact to the schedule for delivery of the system.</p>

OPTIONAL TASK 2 PERFORMANCE REQUIREMENTS SUMMARY

Performance Requirement & Deliverables	Standard	QA Method	Incentive/Deduction
<p>4.4 Provision and installation of fully functional A/V hardware and software to support DDMS.</p> <p>Perform A/V system test and demonstration.</p> <p>Deliver updated documentation.</p>	<p>Hardware components conform to all functional, operational, and performance requirements identified in the SOW or approved for use in the operational phase; and were delivered, installed, and tested on time.</p> <p>Hardware passes operational assessments.</p> <p>Documentation was prepared in accordance with, and conforms to the NRC SDLCM and the SOW, was on time, and contained no inaccuracies.</p>	<p>100% inspection and review</p> <p>IV&V</p>	<p>Full payment for 100% compliance.</p> <p>Non-conforming hardware and, or, related software must be replaced at Contractor's expense.</p>

OPTIONAL TASK 3 PERFORMANCE REQUIREMENTS SUMMARY

Performance Requirement & Deliverables	Standard	QA Method	Incentive/Deduction
<p>4.5 Full seamless integration of IT and A/V components of the DDMS into the ASLBP Hearing Room.</p> <p>Upgrade previous IT and A/V components to incorporate improvements.</p> <p>Perform system test.</p> <p>Deliver hardware and software suites, training plan, user guides, operational support guide, and updated documentation.</p>	<p>Fully integrated and upgraded system performs all functional, operational, and performance requirements identified; incorporates enhancements and improvements; was prepared in accordance with, and conforms to the NRC SDLCM and the SOW; was delivered, installed, and passes acceptance tests.</p> <p>Hardware components must conform to all functional, operational, and performance requirements identified in the SOW or approved for use in the operational phase; and was delivered, installed, and tested on time.</p> <p>Documentation was prepared in accordance with, and conforms to the NRC SDLCM and the SOW, was on time, and contained no inaccuracies.</p> <p>Tests were performed in accordance with plans, demonstrates all requirements have been met and no latent system errors are present.</p>	<p>100% inspection</p> <p>IV&V</p> <p>Agency testing</p>	<p>Full payment for 100% compliance.</p> <p>Non-compliance to system requirements is unacceptable. Re-performance will be required at Contractor's expense.</p>

APPENDIX F
NRC Management Directive 12.5

(Omitted from order, previously provided.)

APPENDIX G
NRC Form 187