

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT

1. CONTRACT ID CODE PAGE 1 OF PAGES 4

2. AMENDMENT/MODIFICATION NO. 50	3. EFFECTIVE DATE See block 15c below.	4. REQUISITION/PURCHASE REQ. NO. See block 14.	5. PROJECT NO. (If applicable)
6. ISSUED BY U.S. Nuclear Regulatory Commission Division of Contracts & Property Mgmt. Contract Management Branch No. 2 Mail Stop - T-712 Washington, DC 20555-0001		7. ADMINISTERED BY (If other than Item 6)	

8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and ZIP Code) SBA/SYTEL, Inc. 6430 Rockledge Drive, STE. 400 Bethesda, MD 20817 Principal Investigator: James C. Kronz Phone No. (301) 770-0386	(X)	9A. AMENDMENT OF SOLICITATION NO.
		9B. DATED (SEE ITEM 11)
		10A. MODIFICATION OF CONTRACT/ORDER NO. Con# NRC-33-96-194 SBA# 0353-96-006041
	X	10B. DATED (SEE ITEM 13) 04-08-1996

CODE TIN:52-1542248 FACILITY CODE

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers is extended, is not extended. Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods:
 (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment of each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. ACCOUNTING AND APPROPRIATION DATA (If required) See the attached pages.

13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS, IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.

(X)	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.
	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).
	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:
X	D. OTHER (Specify type of modification and authority) 52.243-2 CHANGES COST-REIMBURSEMENT (8/87) and mutual agreement of the parties.

E. IMPORTANT: Contractor is not, is required to sign this document and return 3 copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)
 Block 4 continued: RFP No.: IRM-96-194 dated 12/4/00, -FFS#-RQ-CFO-01304, and IRM-96-194 dated 12/19/00.
 See the attached continuation page.

Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER (Type or print) <i>Bargie Burnick</i> Sr. Manager	15B. CONTRACTOR/OFFEROR <i>Barnes</i> (Signature of person authorized to sign)	15C. DATE SIGNED 1/12/01	16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) Donald A. King Contracting Officer	16B. UNITED STATES OF AMERICA BY <i>Donald A. King</i> (Signature of Contracting Officer)	16C. DATE SIGNED 01-12-2001
--	--	-----------------------------	---	---	--------------------------------

Template-ADM-001

ADM-02

The purpose of this modification is to:

(1) revise subsection B.3 SCHEDULE OF COSTS by increasing the estimated cost, fixed fee and total CPFF for the contract period;

(2) revise subsection B.4 CONSIDERATION AND OBLIGATION -- COST PLUS FIXED FEE (JUN 1988) ALTERNATE I (JUN 1991) by (a) increasing the contract ceiling by \$93,993 from \$37,294,190 to \$37,388,183; and (b) providing incremental funding which increases the contract-obligated amount by \$93,993 from \$37,240,907.55 to \$37,334,900.55; and

(3) revise Appendix A to Attachment 4 of the contract to allow: (1) the purchase of a server in support of Starfire; and (2) provide on-site Nortel consultant engineer support services. The work shall be completed within the ceiling increase associated with the additional work of this modification. The NRC accepts and Sytel's proposal, dated 01/05/01, which is hereby incorporated by reference.

(4) authorize Sytel to bill the NRC twice-monthly, rather than the current once-a-month billing, in accordance with Sytel's request dated January 5, 2001.

Continuation of block number 12 Accounting and Appropriation Data:

<u>B&R</u>	<u>Job Code</u>	<u>CLIN</u>	<u>Boc</u>	<u>APPN NO.</u>	<u>Obligate</u>
17N15532125	J7005	2002	3131	31X0200.110	\$ 9,499
FFS #: RQCFO01304					
11015522120	J1004	2002	252A	31X0200.110	<u>\$84,494</u>
		TOTAL			<u>\$93,993</u>

Accordingly, the following section of the contract is hereby modified:

1. under Subsection B.3 SCHEDULE OF COSTS items (a) CLIN 2002 and (b) the Total of all CLINS, are deleted in their entirety and the following is substituted in lieu thereof:

CLIN		<u>ESTIMATED COST</u>	<u>FIXED FEE</u>	<u>TOTAL CPFF</u>
(a)				
2002	Provide option for additional services, equipment, and software for Option Year Two (forty-ninth month through the sixtieth month) of the contract.	\$ 3,495,173	\$ 110,069	\$ 3,605,242
(b)	TOTAL ALL CLINS	\$36,303,825	\$1,084,358	\$37,388,183

(2) Under subsection B.4 CONSIDERATION AND OBLIGATION--COST PLUS FIXED FEE (JUNE 1988) ALTERNATE I (JUN 1991) paragraphs (a) and (c) are deleted in their entirety and the following paragraphs are substituted in lieu thereof:

(a) The total estimated cost to the Government for full performance of this contract is \$37,388,183, of which the sum of \$36,303,825 represents estimated reimbursable costs, and of which \$1,084,358 represents the fixed fee

"(c) The amount currently obligated by the Government with respect to this contract is \$37,334,900.55, of which the sum of \$36,264,699.55 represents estimated reimbursable costs, and of which \$1,070,201.00 represents the fixed fee.

(3) Appendix A of the contract, Attachment 4, is revised by allowing (1) the purchase of a server in support of Starfire in accordance with the attached description; and (2) provide on-site Nortel consultant engineer support services in accordance with the attached SOW. The work shall be completed within the ceiling increase associated with the additional work of this modification. The NRC accepts and Sytel's proposal, dated 01/05/01, which is hereby incorporated by reference. Appendix A of the contract, Attachment 4 is revised to allow the purchase of the following items:

<u>ITEM</u>	Description	<u>QUANTITY</u>
019	Dell PowEdge 4400 server	1

A summary of obligations under this contract, from date of the award through this modification, is given below:

Total FY 96 obligations	\$ 7,185,877.40
Total FY 97 obligations	\$ 6,816,453.00
Total FY 98 obligations	\$ 5,964,494.00
Total FY 99 obligations	\$ 7,807,720.15
Total FY 00 obligations	\$ 6,832,741.00
Total FY 01 obligations	\$ 2,727,615.00
 Cumulative Total of NRC Obligations	 \$37,334,900.55

All other terms and conditions remain the same. However, the contract ceiling amount is changed to \$37,388,183.

description	quantity	unit price	item total
1 PowerEdge 4400 Pentium III 933MHz w/256K Cache ☐ delete this item	1		NRC-33-96-194 Mod No. 50 ATTACHMENT NO. 1

Date:	Thursday, November 02, 2000 2:38:43 PM CST
Catalog Number:	16 RC956934
PowerEdge 4400:	PowerEdge 4400 Pentium III 933MHz w/256K Cache G44933 - [220-1014]
Web Tracking Code:	Web Tracking Code for Internal Use WWW - [460-9052]
Additional Processors:	Dual Processor Pentium III 933MHz w/256K Cache 2P933 - [311-1185]
Memory (133MHz SDRAM):	2 GB SDRAM - 8 DIMMs 2GB8D - [311-4034]
Hard Drive Backplane:	1X6 Hard Drive Backplane forDell PowerEdge 4400,Factory Install 1X6BKPL - [311-0485]
Primary Controller (for internal hard drives):	PERC2-Dual Channel RAID Card with 128MB Cache, 1 int. / 1 ext. P2D128I - [340-9008]
Hard Drive Configuration:	Onboard Ultra3 (U160) SCSI Controller MSN - [340-7735]
1st Hard Drive (all drives must match for RAID):	9GB U160M SCSI 7200 RPM Hard Drive 9GB - [340-6644]
2nd Hard Drive (all drives must match for RAID):	9GB U160M SCSI 7200 RPM Hard Drive 9GB - [340-6644]
3rd Hard Drive (all drives must match for RAID):	9GB U160M SCSI 7200 RPM Hard Drive 9GB - [340-6644]
First Network Adapter:	On-Board NIC Only OBNIC - [460-6604]
Operating System:	No Operating System Selected (Customer will supply and install Microsoft NT/ENT software.) NOOS/M - [420-4101]
Diskette Drive:	3.5" 1.44MB Floppy Drive FD - [340-0608]
Mouse:	Logitech 2-Button System Mouse LDN - [310-0016]
CD-ROM Drive:	17/40X SCSI CD-ROM Drive CD40X1 - [313-7008]
Keyboard:	QuietKey 104-Key, 6 Pin Keyboard S - [310-4100]
Monitor:	No Monitor Option

IN - [320-0058]

Chassis Style:	Inside & Outside Rapid Rails w/Cable Management Arm RACKFUL - [310-0516]
Power Supply:	Redundant Power Supply REDPWR - [310-3561]
Service:	5 Yrs. Next Business Day On-Site Parts & Labor, IGS [5OS - [902-3710][902-3714]
Installation Services:	No Installation Service NOINSTL - [900-9997]
Documentation:	Electronic Documentation EDOCS - [310-0438]

NRC-33-96-194

Mod No. 50

ATTACHMENT NO. 2

TASK LIST FOR NORTEL CONSULTANT

The NGN contract team has several major projects on-going and/or up-coming, which must be completed before the NGN contract end on April 7, 2001. To ensure this work is accomplished, and to provide needed technical support from NORTEL, the original equipment manufacturer of the NRC infrastructure equipment, a NORTEL consultant is required. The consultant will be assigned to assist the NGN contractor to complete the following task:

1. STANDARDIZE OPERATIONAL TROUBLESHOOTING PROCESS. In order to satisfy enhanced service requirements of agency business applications the NRC has directed the NGN contractor to review its operational procedures and troubleshooting processes to determine and implement improvements to minimize downtime and operational impact to the user community.

2. REVIEW THE INFRASTRUCTURE DESIGN AND ARCHITECTURE. As a result of enhanced service requirements of agency business applications (ADAMS, STARFIRE, RPS and others), the NRC has directed the NGN contractor to review the design and architecture to determine what changes might be needed to support current and future business requirements. This will include the following:

a. **REDUCE OPERATIONAL SUPPORT COSTS AND ENHANCE LEVEL OF SERVICE/MANAGEABILITY.** Review of the architecture to determine methods of reducing operational support costs. This should include a review of ATM and whether to convert to Gigabit Ethernet.

b. **VIRTUAL ROUTE REDUNDANCY PROTOCOL (VRRP)** In support of the connectivity reliability requirements of STARFIRE, the NRC has directed the NGN contractor to install this protocol on the two NRC HQ routers. This configuration change to the router software code will enable either router (one in OWFN and one in TWFN) to direct to and receive traffic from all switches in either building. Now the OWFN switches can only be addressed by the OWFN router and the TWFN switches can only be addressed by the TWFN router.

c. **EQUAL COST MULTI-PATH (ECMP)** The segment of the NRC firewall demilitarized zone (DMZ) from the internal router (NGN_WNR1) the DMZ hub (DMZE1) is over-subscribed causing congestion and lost packets, which requires packet retransmission. A physical layer (hardware) change and an application layer (software) change is needed to relieve this situation. A second circuit (cable path) will be installed between WNR1 and DMZE1, and the software in the router and hub will be reconfigured for ECMP. This will allow for dual paths, load balanced between these devices, reducing the load on the existing circuit, and providing added redundancy.

d. **PRIVATE NETWORK TO NETWORK INTERFACE (PNNI)** The 112 switches in the NRC wide-area network (WAN) are currently configured with static routes from switch to switch. The new switch code recently installed by the NGN contractor allows for the implementation of PNNI. Implementing PNNI on all of the switches will allow the switches to dynamically select the best route to the switch to which a data packet is addressed. This dynamic routing will improve transmission speed, and provide greater redundancy. A switch will always look for the path with the least traffic on it, and will rejust routes around switches that are unavailable.

e. **BOARDER GATEWAY PROTOCOL (BGP)** The National Institute of Health (NIH) provides the NRC with mainframe computer support and with access to the Internet. The NRC's connection to NIH is via a 10 MB FNS link. NIH provides the router on the NRC end of this link, but they want to reclaim this equipment. To facilitate this, NIH has requested that the NRC configure the firewall router (FWR1) to communicate through the FNS link to the NIH campus backbone infrastructure using BGP. The BGP protocol will have to be incorporated into the software configuration of the firewall router to facilitate this. Additionally, the NRC Continuity of Operations Plan (COOP) calls for the use of BGP to support the COOP alternate connection to the Internet.

f. **OUT OF BAND ACCESS** This capability is inherent in the NORTEL routers used in the NRC WAN. It is often possible to remotely reset a non-functional router, if communications to the device can be established. When the route is non-functional, communication via the regular DS-3 or frame relay circuit is not possible. Out of band access is built into the routers, and allows for access to the router via a standard telephone line and a modem. Using out of band access it will be possible for the technicians in the NRC Network Operations Center (NOC) to reset the router at any of the remote sites (for example the San Onofre, CA resident inspector site) once this capability is implemented.

6. **FTS 2001** The NRC is converting all telecommunication circuits from the FTS2000 (AT&T) contract to the FTS2001 (MCIW) contract. This requires that all of the data lines between NRC HQ and the regional offices and TTC (4 DS-3 and 1 Frame Relay) must be converted. Also, the data lines to all of the Resident Inspector sites and to the NRC contractor facilities must also be converted. At each end of each of these circuits is a router. Each of these routers must be reconfigured. For the DS-3 circuits a second connection must be installed to allow for concurrent path operation while the frame relay circuits to the Resident Inspector sites are converted. There is a substantial amount of highly technical work and coordination with the sites, telecommunications companies and remote offices involved in this conversion.

7. **VIDEO CONVERGENCE** The NRC currently leases T-1 circuits to the regional offices to support video teleconferencing (VTC). This project will converge this video traffic onto the DS-3 (ATM) circuits which the agency leases to support data communications to the regional offices. This convergence will allow the agency to more completely utilize the bandwidth we are already paying for on the DS-3 circuits and to discontinue leasing the T-1 circuits, thus saving these lease charges. Installation of this VTC equipment into the NRC WAN will be a technically challenging undertaking.