#	Doc	Pg	Para #	Line#	Comment	Recommendation	Rationale	Res	Government Response	SPS Section Changed
1	_Main	14	3.2.2.1	186	Referenced document is not in Section 2	Remove the text referencing the document	Reference adds no value		References to a rationale doc have now been removed. Relevant information from the rationale doc has been embedded in the SPS.	N/A
2	_Main	21	3.2.3.1.5	301	BE-CDL has no LPD waveform or Forward Link	Remove BE-CDL reference	BE-CDL has no concept of a Forward Link and is silent on LPD		CDL force protection section was removed since the vendor is required to meet Std-CDL H-1 spec requirements which includes the LPI/LPD waveform from STD-CDL.	N/A
3	_Main	24	3.2.3.2	382	The term "open source" is probably not what was intended. Open standard is probably the intent.	Remove the word "source".	Open Source connotes publically available software source code. Such code is discussed in Para 3.5.2.1.1.		Changed the SPS and it now reads: "...open networking waveform standards."	3.2.3.2.1
4	_Main	25	3.2.3.2.3	404	Probably should not specify how data is routed internal to the NTCDL system	Remove this sentence.	It seems the OSI layer at which NTCDL internal routing is performed is a design decision.		To clarify the intent of the requirement, the Government removed "...internal to NTCDL."	3.2.3.2.4

#	Doc	Pg	Para #	Line#	Comment	Recommendation	Rationale	Res	Government Response	SPS Section Changed
5	_Main	25	3.2.3.2.3	406	NTCDL should interface with external network entities at OSI layer 3.	Change layer 2 to layer 3	Networks interface via routers at Layer 3.		NTCDL's Radio Terminal Subsystem interface will occur at the layer 2 level. It is intended that NTCDL's systems data interface to external systems (such as ADNS) occur at Layer 2 through the EDUI subsystem. The vendor delivered portion of the system connects to the EDUI at Layer 2. If Layer 3 connections are required (i.e. Layer 3 direct connection) the implementation of this will occur within the EDUI subsystem. Note that Layer 3, internal to the NTCDL system, will be required per the waveform specifications (CDL Capstone, NRW).	N/A
6	_Main	25	3.2.3.2.4	408	It appears this paragraph does not apply to the NRW	Remove 3.2.3.2.4	The CDL Capstone does not apply to the NRW and is largely a duplicate of paragraph 3.2.3.2.3		Removed this paragraph and retained the "3.2.3.2.3 NRW Radio Mobile Ad-Hoc Network (MANET)" paragraph.	3.2.3.2.4
7	_Main	29	3.3	502	The figure is difficult to read	Increase font size	Make the figure labels more readable		When generating the PDF, the images contained within get compressed. Final version of the SPS will include full resolution images.	N/A

#	Doc	Pg	Para #	Line#	Comment	Recommendation	Rationale	Res	Government Response	SPS Section Changed
8	_Main	31	3.3.1.1.1.1	550, 556	It is not clear to what reference the 45 degree elevation scan angle is measured.	Decide whether the measurement is taken at the horizon and whether the scan angle is relative to boresight or the horizon when installed at the required tilt.	If relative to the horizon, the 45 degree elevation scan is changed due to the 15 degree mounting tilt. For example, with an upward tilt, a 45 degree scan relative to the horizon is a 30 degree scan relative to bore sight.		The requirement has been clarified in SPS Section 3.3.1.1.	3.3.1.1
9	_Main	34	3.3.1.2.1.2	657	Probably a typo. 3 dB/K is too low while 13 dB/K is too high	10 dB/K	X-band G/T should be no higher than current CDL-S 1.0m dish G/T		The G/T values have been updated.	3.3.1.4.1.2
10	_Main	34	3.3.1.2.1.2	660	14 dB/K is too high	12 dB/K	Over specifying G/T drives system cost.		The G/T values have been updated.	3.3.1.4.1.2

#	Doc	Pg	Para #	Line#	Comment	Recommendation	Rationale	Res	Government Response	SPS Section Changed
11	_Main	34	3.3.1.2.1.3	662	9 dB/K is too high	7.5 dB/K	Specify G/T same as CRUDES LAMPS System. Over specifying G/T drives system cost.		The G/T values have been updated.	3.3.1.4.1.2
12	_Main	36	3.3.1.2.2	737	Conflicting specification with G/T.	Delete	When G/T is specified, do not specify antenna Gain since it confuses and conflicts with the G/T spec.		Concur. SPS has been updated to ensure that gain and G/T match in all bands.	3.3.1
13	_Main	37	3.3.1.2.2	752	Conflicting specification with G/T.	Delete	When G/T is specified, do not specify antenna Gain since it confuses and conflicts with the G/T spec.		Concur. SPS has been updated to ensure that gain and G/T match in all bands.	3.3.1
14	_Main	37	3.3.1.2.2	754	Conflicting specification with G/T.	Delete	When G/T is specified, do not specify antenna Gain since it confuses and conflicts with the G/T spec.		Concur. SPS has been updated to ensure that gain and G/T match in all bands.	3.3.1

#	Doc	Pg	Para #	Line#	Comment	Recommendation	Rationale	Res	Government Response	SPS Section Changed
15	_Main	40	3.3.1.6.1.3	856	Meaning of sentence is unclear.	Clarify	Intent and meaning is not clear		Revised the search window section of the SPS to address confusion.	3.3.1.7.1.3
16	_Main	42	3.3.2	917	Requirements on aircraft should not be in this spec	Rewrite the requirement to say the "NTCDL shall…"	Requirement is written such that it is imposed on the aircraft.		The requirement was rewritten to: "NTCDL [shall] be capable of transitioning from an airborne link to an on-deck link in accordance with the requirements listed in Section 3.3.5.6.[T]"	3.3.2
17	_Main	42	3.3.3	935	Misspelling	Change "Susbystem" to "Subsystem"			Corrected spelling	3.3.3
18	_Main	42	3.3.3	939	Missing reference	Provide valid reference			Reference citation was fixed.	3.3.3
19	_Main	42	3.3.3	942	Revise requirement to include the word "Subsystem"	The Radio Terminal Subsystem [shall] convert the serial data (SND, RNG, Discretes, etc) channels to Ethernet packets.[T] This conversion may be accomplished external or internal to the radio terminal.	If the data can be converted internally or externally to the radio terminal, then it is not a requirement on the radio terminal.		The SPS was revised to include the word "Subsystem" in the sentence.	3.3.3

#	Doc	Pg	Para #	Line#	Comment	Recommendation	Rationale	Res	Government Response	SPS Section Changed
20	_Main	46	3.3.5.3	1076, 1077	Is there a conflict between this and 3.3.1.6.1.3?	Reconcile the time to establish a new connection with the acquisition time in 3.3.1.6.1.3	If link acquisition time is not included, then, then so state. Alternatively, state that the start of Link Inititation begins after antenna acquisition.		There is not a conflict between the section because the location of the remote platform is known, there is no need to enter into a search window.	N/A

#	Doc	Pg	Para #	Line#	Comment	Recommendation	Rationale	Res	Government Response	SPS Section Changed
21	_Main	47	3.3.5.3.1	1095	Does this requirement imply that the system be capable of tracking a remote platform, whose link has been preempted, without an active link to provide platform NAV data?	Determine intent and revise accordingly	This requirement could imply a much more extensive tracking capability. Also, if a link is prempted due to resource competition, then presumably there are no resources available to maintain track using the remote platform's NAV data.		No, the requirement is that the preempted platform will continue to be tracked using shipboard generated track data - not track/nav data from the airborne platform. Changed requirement to: "Upon link pre-emption, the LCS [shall] temporarily suspend lower priority links while continuing to receive track data updates for pre-empted link platforms from the LMS.[T]"	3.3.5.2.1
22	_Main	49	3.3.5.7	1183-1188	Does this include the antenna acquisition time as defined in 3.3.1.6.1.3?	If so, so state	Antenna acquisition times may exceed the time allowed to change link connectivity as defined in this paragraph		The antenna acquisition time is included in this requirement for known platform locations. For platforms with an unknown location, search time will be in addition to time allotted for link connectivity transitions.	N/A

#	Doc	Pg	Para #	Line#	Comment	Recommendation	Rationale	Res	Government Response	SPS Section Changed
23	_Main	50	3.3.5.7.2	1211-1213	This is an untestable requirement	Consider including an outage duration	Needs to be a testable requirement		The SPS was modified, please see section 3.3.5.6.2	3.3.5.6.2
24	_Main	60	3.4.2.2	1604-1605	Requirement is too restrictive	Suggest wording be "If cooling is required..."	This does not allow for antenna solutions that do not need to be cooled.		The SPS was modified in section 3.4.2.2. Requirement was modified to begin with "If an alternate method of cooling is proposed…"	3.4.2.2
25	_Main	70	3.5.2	1629	This requirement is not one that the NTCDL system can satisfy	Perhaps the "NTCDL system [shall] be capable of being located…"	This requirement seems to be one that must be satisfied by the Navy by designating where the NTCDL system will be installed. The contractor can recommend and support.		The SPS was modified, to state that "NTCDL classified subsystem components [shall] be capable of being located in a secure, classified space. [T]	3.5.2

#	Doc	Pg	Para #	Line#	Comment	Recommendation	Rationale	Res	Government Response	SPS Section Changed
26	_Main	70	3.5.2	1643-1646	This requirement is not one that the NTCDL system can satisfy	Perhaps this requirements could be restated as the Navy's intent. A requirement could be needed to require the NTCDL system to be able to separate the portions containing COMSEC or red data from the other portions.	This requirement seems to be one that must be satisfied by the Navy by designating where the NTCDL system will be installed.		The SPS was modified to state the requirement differently.	3.5.2
27	_Main	72	3.5.3.1	1689-1690	Confusing or self contradictory	Additional cabling [shall] be allowed and not excluded BY the cabinet and chassis modification requirement.[T]	I read this sentence as allowing additional cables to be installed. However, the second phrase of the sentence seems to say additional cabling is INCLUDED in the requirement prohibiting cabinet and chassis modification		The SPS was modified.	3.5.3.1

#	Doc	Pg	Para #	Line#	Comment	Recommendation	Rationale	Res	Government Response	SPS Section Changed
28	_Main	78	3.6.2.1	1877-1890	Requirement unduly constrains solutions	Suggest that the space allocated for separate Tx and Rx units also be allowed to include combination Tx/Rx units that fit the SWaP allocations.	If there is space available for two separate units (in this case Tx only and Rx only) then that same space could contain combination Tx/Rx units. Space allocations for Rx or Tx only units and different allocation for combination Tx/Rx units unduly constrains solutions.		The requirement has been clarified to allow the SWaP configurations to include Tx and/or Rx antennas in any configuration. Note, for the SWaP configurations under Flat Panel (or Similar) Antenna Configuration only one of the four options is allowed.	3.6.2.1

#	Doc	Pg	Para #	Line#	Comment	Recommendation	Rationale	Res	Government Response	SPS Section Changed
29	_Main	78	3.6.2.1	1877-1890	Flat panel dimensions too restrictive	Update: Receive W= 62 in. Receive H= 62 in. Receive L= 30 in.	1. The recently increased G/T spec necessitates a larger area. 2. An array of small dishes requires a larger footprint. This approach may result in 2 orders of magnitude lower cost		The SPS was amended to reflect revised SWaP values.	3.6.2.1

#	Doc	Pg	Para #	Line#	Comment	Recommendation	Rationale	Res	Government Response	SPS Section Changed
30	_Main	24	3.2.3.2.1.1	390-391	Per DoD 4630.09, new waveforms need to only be accepted for prototype waveform assessment prior to Milestone B. After program of record operational assessment testing, "DoD CIO will add the waveform to the approved DoD waveform list with a note indicating interim approval."	Change "should be listed on the approved DoD CIO 390 Waveform list found in DoDI 4630.09" - to "accepted as a prototype waveform per the DoDI 4630.09."	DoD CIO waveform list only includes legacy waveforms. The DoDI 4630.09 recognizes the need of new technology to meet new program requirements not met by legacy waveforms.		The waveform requirement is enforced upon delivery (acceptance testing). The Government is looking for NRW solutions which satisfy the characteristics listed in Section 3.2.3.2 of the SPS.	N/A

#	Doc	Pg	Para #	Line#	Comment	Recommendation	Rationale	Res	Government Response	SPS Section Changed
31	_Main	24	3.2.3.2.1.1	392	Unrestricted data rights would imply use of the waveform for non-US Government applications. Government Purpose Rights seem more appropriate to a PMW/A-170 acquisition and fielding including foreign military sales.	Change "unrestricted data rights" to "government purpose data rights".	Unrestricted data rights would imply use of the waveform for non-US Government applications. Government Purpose Rights seem more appropriate to a PMW/A-170 acquisition and fielding including foreign military sales.		Language updated and removed from SPS. DFARS 252.227-7017 Data Rights Assertions must be complete by each vendor.	Section 3.2.3.2.1

#	Doc	Pg	Para #	Line#	Comment	Recommendation	Rationale	Res	Government Response	SPS Section Changed
32	_Main	25	3.2.3.2.1.2	395,396	"continue to fully operate in GPS denied environment" requires clarification with respect to number of NRW platforms and duration of operation in denied environments	Provide more context to characterize the size & geographic extent of the GPS denied environment to permit offerors to scope and scale the mitigation approaches. Provide clarification why this is not being addressed at the ship platform level.	The number of platforms and the time each spends in the GPS denied environment has a significant impact on mitigation solutions. If the duration is less than 24-48 hours then INUs and local oscillators could maintain PNT accuracies. If only one or two nodes of the network are in the denied region then TDMA based waveforms could provide TOA data		The Government is looking for NRW solutions which satisfy the characteristics listed in Section 3.2.3.2 of the SPS.	N/A
33	_Main	25	3.2.3.2.3 & 3.2.3.2.4	402-415	Sect 3.2.3.2.4 appears to be duplicative of Sect 3.2.3.2.3.	Remove one of the sections.			The duplicative section has been removed (3.2.3.2.4)	N/A

#	Doc	Pg	Para #	Line#	Comment	Recommendation	Rationale	Res	Government Response	SPS Section Changed
34	_Main	25	3.2.3.2.4	409-415	This is the only subsection of the NRW requirements sect 3.2.3.2 that uses the formal "shall" call out. It also labels the requirements as threshold [T] apparently contradicting the statement in sect 3.2.3.2.1 that NRW is an objective requirement of this SPS	Clarify if the requirements in section 3.2.3.2.4 are threshold and objective. Re-examine the use of the informal will call out in the other NRW subsections.	Use of the word will on a requirement does not engender formal verification testing which would have a significant cost implication.		This section (Section 3.2.3.2.4) has been removed since it was duplicative of Section 3.2.3.2.3.	N/A

#	Doc	Pg	Para #	Line#	Comment	Recommendation	Rationale	Res	Government Response	SPS Section Changed
35	_Main	25	3.2.3.2.5	417	NRW Range Requirement as specified is incomplete.	Provide additional information on the off-board antenna characteristics and off-board platform altitude as well as "Rain Region" and the associated availability.	Determination of the maximum range of a single hop NRW link requires information on the Tx & Rx antenna characteristics as well as horizon elevation angle to determine atmospheric absorption and multipath induced aberration.		The Government desires to have the max modulation burst rate (55 Mbps) at max range (50nm). The Government is looking for NRW solutions which satisfy the characteristics listed in Section 3.2.3.2 of the SPS.	N/A
36	_Main	25		422	Throughput is hard to define without other factors such as range so it probably best to just specify a burst modulation rate.	Change section title from "NRW Throughput" to "NRW Burst Modulation Rate"	Burst data rate does not mean throughput. Maybe the title of this section should be changed?		The Government desires to have the max modulation burst rate (55 Mbps) at max range (50nm). The Government is looking for NRW solutions which satisfy the characteristics listed in Section 3.2.3.2 of the SPS.	N/A

#	Doc	Pg	Para #	Line#	Comment	Recommendation	Rationale	Res	Government Response	SPS Section Changed
37	_Main	25	3.2.3.2.7	423	NRW Throughput requirement as specified does not enable an evaluation of spectrum efficiency.	Provide constraints or objective values on spectrum bandwidth or instruct offeror to provide minimum channel bandwidth required to meet the two burst rates.	Modulation burst rates are directly proportional to channel bandwidth, so minimum bandwidth required to meet the burst rate is needed to properly assess the operational impact		The Government desires to have the maximum amount of spectrum efficiency. The Government is looking for NRW solutions which satisfy the characteristics listed in Section 3.2.3.2 of the SPS.	N/A

#	Doc	Pg	Para #	Line#	Comment	Recommendation	Rationale	Res	Government Response	SPS Section Changed
38	_Main	25	3.2.3.8	425,426	NRW Network Re-entry requirement as specified is incomplete.	Provide conditions (e.g. outage time duration and positional change) that differentiate a re-entry from an initial entry.	Recovery from some connection drops can be quick but are not practical for all drop conditions. For example high endurance UAV platforms that could start in range early in their mission but be out or range for hours or days before returning.		Revised SPS section 3.2.3.2.8 to clarify that the re-entry time is "when the platform is within range." Further, in the UAV example: When a platform goes outside the range of the NRW, and returns to the network; this is an example of entry, not re-entry.	Section 3.2.3.2.8
39	_Main	25	3.2.3.8	425,426	NRW Network Re-entry requirement as specified is not verifiable.	Change maximum to mean or provide a probability (e.g. 90%) and reference to signal strength event (i.e. after line-of-sight re-established).	Finding the maximum requires enumeration of all possible conditions which is not realizable under finite test conditions.		NRW is an objective requirement of the SPS and will not drive other threshold system requirements. The Government is looking for NRW solutions which satisfy the characteristics listed in Section 3.2.3.2 of the SPS.	N/A

#	Doc	Pg	Para #	Line#	Comment	Recommendation	Rationale	Res	Government Response	SPS Section Changed
40	_Main	26	3.2.3.2.10	438	How is this (i.e. provide a standardized based networking interface?) different than the other requirements in sect 3.2.3.2.10 specifically the previously called out SNMP v3 standards (lines 434-438) or the support for IPv4, IPv6 & GIG protocols in 3.2.3.2.13.b (line 446)?	Clarify difference between previous SNMP v3 standards or remove.			Section 3.2.3.2.10 refers to NRW control, and 3.2.3.2.13 refers to NRW data.	N/A
41	_Main	26	3.2.3.2.13	448	Interface for support of legacy users	Please clarify.			Deleted interface for support to legacy users from the SPS.	Section 3.2.3.2.13

#	Doc	Pg	Para #	Line#	Comment	Recommendation	Rationale	Res	Government Response	SPS Section Changed
42	_Main	26	3.2.3.2.15	464, 465	The NRW latency will not exceed 10 msec per hop when using adjacent slot allocations appears to restrict the slot size to less than 10 msecs.	Change requirement to be that egress message will be in the adjacent slot.	TDMA waveforms suffer inefficiencies when the propagation delay from long range links is a substantial percentage of the slot duration. This requirement as stated would limit a mitigation approach of varying the slot size		The 10 milliseconds is within the radio system.	N/A
43	_Main	26	3.2.3.2.15	465, 466	Do not understand the relationship why latency can be relaxed with frame sizes greater than 960 msec.	Provide definition of frame.			The 10 extra milliseconds are granted to allow for the preparation and processing of larger frames.	N/A

#	Doc	Pg	Para #	Line#	Comment	Recommendation	Rationale	Res	Government Response	SPS Section Changed
44	_Main	38	3.3	499	Line 500 contradicts line 499	Change "No unprotected data [shall] pass between subsystems of differing classifications." to "No unprotected data [shall] pass between subsystems of differing classifications except through specified trusted guards [T]	For a directional system some level of protected data must pass to the physical layer to sustain connectivity.		The SPS language pertaining to data integrity and CDS solutions was clarified and moved to Section 3.5.2, System Security Design Criteria	Section 3.5.2

#	Doc	Pg	Para #	Line#	Comment	Recommendation	Rationale	Res	Government Response	SPS Section Changed
45	_Main	107	4.3.2.3.2	2767, 2768	The second sentence, "If not proposed, the white paper or design documentation will be inspected and validated." appears to indicate that some NRW artifacts are required even if the offeror does not offer a complete solution. The SOW does not call out any specific NRW deliverable.	Remove the second sentence from 4.3.2.3.2 or clarify in the SOW NRW design artifacts that are required even if a complete solution is not proposed.			Test criteria for NRW will depend on the final CDR approved NRW design. The SPS was modified to reflect this. The SOW was not modified.	Section 4.3.2.3.2

#	Doc	Pg	Para #	Line#	Comment	Recommendation	Rationale	Res	Government Response	SPS Section Changed
							including NRW in the acquisition is a good stepping stone to the future enabling the advantages of a Mobile Ad hoc Network (MANET); however the lack of firm Wideband Access waveform specification of the emerging Joint Aerial Layer Network engenders a difficult implementation. The Draft SPS attempts to alleviate this by identifying all of the		NRW is an objective requirement of the SPS and will not drive other threshold system requirements. The Government is looking for NRW solutions which satisfy the characteristics listed in Section 3.2.3.2 of the SPS.	N/A

#	Doc	Pg	Para #	Line#	Comment	Recommendation	Rationale	Res	Government Response	SPS Section Changed
46	Main	24	3.2.3.2.1	386	Having NRW be an objective requirement has	Make NRW enabling apertures and associated infrastructure a Threshold requirement while keeping NRW system performance as an Objective requirement. These only need to be applied to the wideband designated X-band & Ku-band antennas and their associated radio terminals.	This an objective, if proposed" approach is fraught with potential problems. Firstly, all of the offerors may decline to propose an NRW solution in attempt to be the lowest cost bidder. This could then lead to an expensive rework in the above deck antenna system or the addition of new antennas in order to host the High Capacity Backbone component of the JALN-M program		NRW is an objective requirement of the SPS and will not drive other threshold system requirements. The Government is looking for NRW solutions which satisfy the characteristics listed in Section 3.2.3.2 of the SPS.	N/A

#	Doc	Pg	Para #	Line#	Comment	Recommendation	Rationale	Res	Government Response	SPS Section Changed
46	_Main	24	3.2.3.2.1	366	requirement has several disadvantages.		Implementation of this set of infrastructure requirements will enable any TDMA or CDMA based NRW waveform to be added as a software upgrade avoiding expensive hardware retrofit modifications or additions. This provides the Navy with the flexibility to quickly include NRW solutions from other non selected bids and/or waiting for the JALN-M HCR		NRW is an objective requirement of the SPS and will not drive other threshold system requirements. The Government is looking for NRW solutions which satisfy the characteristics listed in Section 3.2.3.2 of the SPS.	N/A

#	Doc	Pg	Para #	Line#	Comment	Recommendation	Rationale	Res	Government Response	SPS Section Changed
						The following items 18-35 identify the suggested threshold requirements. The spreadsheet format is somewhat awkward so we have also provided them with the rationale in a separate white for improved comprehension and clarity.for suggested threshold requirements.	As these requirements are meant to be provided with the CDL threshold, we have organized using the system architecture construct and aligned with the paragraph numbering scheme within section 3.3 rather than create new paragraphs in 3.2.3.2. The radio terminal has been expanded to include a synchronizati on unit. The above deck requirements and the cross subsystem		NRW is an objective requirement of the SPS and will not drive other threshold system requirements. The Government is looking for NRW solutions which satisfy the characteristics listed in Section 3.2.3.2 of the SPS.	N/A

#	Doc	Pg	Para #	Line#	Comment	Recommendation	Rationale	Res	Government Response	SPS Section Changed
47	_Main		3.3.1		Suggested new antenna subsystem performance requirement to provide NRW enabling infrastructure as threshold.		The Draft SPS indicates that while CDL authorized bands are acceptable for NRW, it is preferred to operate outside these; the implication being simultaneous operation. Phase array antennas have bounds as to size of the bandwidth due to MMIC and dielectric material limits. These are broad enough to incorporate the forward link minimum and the return		NRW is an objective requirement of the SPS and will not drive other threshold system requirements. The Government is looking for NRW solutions which satisfy the characteristics listed in Section 3.2.3.2 of the SPS.	N/A

#	Doc	Pg	Para #	Line#	Comment	Recommendation	Rationale	Res	Government Response	SPS Section Changed
48	_Main		3.3.1		Providing rationale why existing CDL EIRP, G/T & beam width requirements sufficient to enable future NRW.	No change required	The Draft SPS sets requirements on antenna Beam width, EIRP & G/T that appear to be more than sufficient to enable a NRW to meet its threshold range and throughput requirements. Current state-of-art modulation and forward error correction capabilities provide the ability to balance spectrum efficiency (bits per Hz) with power efficiency (Eb/No). It is near certain		NRW is an objective requirement of the SPS and will not drive other threshold system requirements. The Government is looking for NRW solutions which satisfy the characteristics listed in Section 3.2.3.2 of the SPS.	N/A

#	Doc	Pg	Para #	Line#	Comment	Recommendation	Rationale	Res	Government Response	SPS Section Changed
49	_Main		3.3.1		Suggested new antenna subsystem performance requirement to provide NRW enabling infrastructure as threshold.	These components will serve a variety of functions; phased array beam pointing, transmit and receive RF gain control, antenna switching, etc. These components should be specified to have switching and settling times that are reflective of solid state devices (microseconds or less), as opposed to electromechanical relays (10's of milliseconds), and better support a future NRW implementation.	To minimize, or possibly preclude, future hardware re-design and retrofit of the NTCDL Antenna Subsystem, its performance specifications should be established with a TDMA-based NRW solution in mind. One area in which this is particularly so, is with the selection of RF components (switches, attenuators, phase shifters, etc.).		NRW is an objective requirement of the SPS and will not drive other threshold system requirements. The Government is looking for NRW solutions which satisfy the characteristics listed in Section 3.2.3.2 of the SPS.	N/A

#	Doc	Pg	Para #	Line#	Comment	Recommendation	Rationale	Res	Government Response	SPS Section Changed
50	_Main		3.3.1		Suggested new antenna subsystem performance requirement to provide NRW enabling infrastructure as threshold.	It is anticipated that synchronization requirement of 1 microsecond or less will be sufficient to enable a TDMA-based NRW.	It is anticipated that the Above Deck equipment will also be required to operate synchronously with the Below Deck equipment, from both a timing and frequency reference perspective. Provisions incorporated into the NTCDL architecture that synchronize the groups of equipments via discrete signaling (RS-422, etc.) or virtual discrete methods		NRW is an objective requirement of the SPS and will not drive other threshold system requirements. The Government is looking for NRW solutions which satisfy the characteristics listed in Section 3.2.3.2 of the SPS.	N/A

#	Doc	Pg	Para #	Line#	Comment	Recommendation	Rationale	Res	Government Response	SPS Section Changed
51	_Main		3.3.1.5		Providing rationale why existing CDL requirements sufficient to enable future NRW.	No change required	NTCDL's ship motion compensation requirements specified in SPS Section 3.3.1.5 are sufficient to support NRW, assuming that the compensation is enabled and active on all the active antennas supporting NRW operation. NRW's [multiple] neighbors tracking and discovery algorithms will issue beam pointing commands in the Earth (and not ship)		NRW is an objective requirement of the SPS and will not drive other threshold system requirements. The Government is looking for NRW solutions which satisfy the characteristics listed in Section 3.2.3.2 of the SPS.	N/A

#	Doc	Pg	Para #	Line#	Comment	Recommendation	Rationale	Res	Government Response	SPS Section Changed
52	_Main		3.3.1.5		Suggested new NRW infrastructure enabling requirement to provide NRW enabling infrastructure as threshold.	To maintain accurate NRW antenna pointing of the Inc 1 platforms, the LCS should receive own-ship real-time location data frequently enough (typically at 1Hz or higher).	With the ship motion compensation supported at each antenna sector, a synchronized operation of Link Control and Radio Terminal subsystems will assure both on-deck to off-ship and antenna to antenna off-ship transitions.		NRW is an objective requirement of the SPS and will not drive other threshold system requirements. The Government is looking for NRW solutions which satisfy the characteristics listed in Section 3.2.3.2 of the SPS.	N/A

#	Doc	Pg	Para #	Line#	Comment	Recommendation	Rationale	Res	Government Response	SPS Section Changed
53	_Main		3.3.3		Suggested new Radio Terminal modem requirement to provide NRW enabling infrastructure as threshold.	To support a potential NRW that has high throughput and/or jamming requirements, the NTCDL should be specified with the capability of generating and receiving RF signals with bandwidths of greater than 400 MHz (consistent with the widest contiguous Ku-band segments).	By requiring the NTCDL to support the STD-CDL BR-274 and the BE-CDL 64APSK 900 modes, the Draft SPS drives several architecture aspects of the implementation. The BR-274 mode is the highest bandwidth waveform mode between the STD- and BE-CDL standards. Not only will it drive maximum DAC and ADC sampling requirements, but potentially		NRW is an objective requirement of the SPS and will not drive other threshold system requirements. The Government is looking for NRW solutions which satisfy the characteristics listed in Section 3.2.3.2 of the SPS.	N/A

#	Doc	Pg	Para #	Line#	Comment	Recommendation	Rationale	Res	Government Response	SPS Section Changed
54	_Main		3.3.3		Providing rationale why existing CDL modem requirements sufficient to enable future NRW.	From an NRW perspective, the FPGA signal processing resources required of this BE mode should be sufficient to drive capability to support the NRW	From an FPGA resource perspective, the modem's signal processing capability will likely be driven by the Draft SPS requirement (see Table 3-10) to support BE-CDL 64APSK-LDPC 274-900. This BE mode employs a rate 7/8 low density parity check (LDPC) code at a maximum rate of 900 Mbps. Its implementation will require significant		NRW is an objective requirement of the SPS and will not drive other threshold system requirements. The Government is looking for NRW solutions which satisfy the characteristics listed in Section 3.2.3.2 of the SPS.	N/A

#	Doc	Pg	Para #	Line#	Comment	Recommendation	Rationale	Res	Government Response	SPS Section Changed
55	_Main		3.3.3		Suggested new Radio Terminal synchronization requirement to provide NRW enabling infrastructure as threshold.	To perform burst waveform acquisition, the NRW modem will require a low latency control (< 1 microsecond) path between it and the receiver and transmitter RF/IF gain attenuators. Lastly, distribution of a common frequency reference (typically 10 MHz) would ensure frequency generation requirements are met at all levels.	It is anticipated that the Above Deck equipment will be required to operate synchronously with the Below Deck equipment, from both a timing and frequency reference perspective. Provisions incorporated into the NTCDL architecture that synchronize the groups of equipments via discrete signaling (RS-422, etc.) or virtual discrete methods		NRW is an objective requirement of the SPS and will not drive other threshold system requirements. The Government is looking for NRW solutions which satisfy the characteristics listed in Section 3.2.3.2 of the SPS.	N/A

#	Doc	Pg	Para #	Line#	Comment	Recommendation	Rationale	Res	Government Response	SPS Section Changed
56	_Main		3.3.3		Providing rationale why existing CDL GPP processing requirements sufficient to enable future NRW.	As such, the processing characteristics - CPU, memory, IO – of the selected LCS HW will be sufficient to host the link, routing and forwarding layers of the NRW (or can be upgraded at a later point).	GPP Processing Resources – NTCDL terminal partitioning into Radio Terminal and Link Control subsystems supports well NRW's processing needs. In the data plane, NRW's objective channel rates of 300 Mbps are comparable with the high datarate CDL modes specified as an NTCDL Inc 1 threshold requirement. In the control plane, NRW is required to		NRW is an objective requirement of the SPS and will not drive other threshold system requirements. The Government is looking for NRW solutions which satisfy the characteristics listed in Section 3.2.3.2 of the SPS.	N/A

#	Doc	Pg	Para #	Line#	Comment	Recommendation	Rationale	Res	Government Response	SPS Section Changed
57	_Main		3.3.4		Providing rationale why existing CDL COMSEC requirements sufficient to enable future NRW.	No change required	Consistent with the ADNS architecture, NRW's user data encryption is envisioned to be provided by in-line networking encryptors (INEs) – e.g., HAIPEs – external to the NTCDL system. Over-the-air encryption of the NRW control data (and additional protection of user data) inside the NTCDL Radio Terminals will be implemented as a key		NRW is an objective requirement of the SPS and will not drive other threshold system requirements. The Government is looking for NRW solutions which satisfy the characteristics listed in Section 3.2.3.2 of the SPS.	N/A

#	Doc	Pg	Para #	Line#	Comment	Recommendation	Rationale	Res	Government Response	SPS Section Changed
58	_Main		3.3.4		Potential COMSEC key requirement change to provide NRW enabling infrastructure as threshold.	The current requirement of “loading 10 individual crypto keys” (Section 3.3.4) for the COMSEC Subsystem may need to be further analyzed.	A larger number of keys (for current and future use) may be required to scale to the number of NRW links. Alternatives of putting an entire NRW subnet on the same key (versus having a unique key for each link) will need to be traded		NRW is an objective requirement of the SPS and will not drive other threshold system requirements. The Government is looking for NRW solutions which satisfy the characteristics listed in Section 3.2.3.2 of the SPS.	N/A

#	Doc	Pg	Para #	Line#	Comment	Recommendation	Rationale	Res	Government Response	SPS Section Changed
59	_Main		3.3.5		Providing rationale why existing CDL LCS requirements sufficient to enable future NRW.	Being a modern general purpose computer, the LCS HW is not anticipated to have issues hosting the NRW link and routing layers.	As discussed earlier, the NTCDL LCS will host the NRW non-real time protocols. Those include in-band neighbor discovery, peer tracking, link control (automatic power and rate adaptation), topology management (traffic optimization and interference mitigation), TDMA slot allocation, subnet routing and performance monitoring. [The real		NRW is an objective requirement of the SPS and will not drive other threshold system requirements. The Government is looking for NRW solutions which satisfy the characteristics listed in Section 3.2.3.2 of the SPS.	N/A

#	Doc	Pg	Para #	Line#	Comment	Recommendation	Rationale	Res	Government Response	SPS Section Changed
60	_Main		3.3.5		Potential CDL LCS requirement change to provide NRW enabling infrastructure as threshold.	As the ship motion compensation is performed by the on-deck antenna subsystem, the update rate to the LCS (for the NTCDL Inc 1 platforms) can be relatively low (e.g., 1Hz).	For 360° neighbor discovery and tracking purposes (antenna beam pointing and antenna-to-antenna hand-off), the LCS will require both real-time own-ship location and orientation information.		The LCS will receive PNT data from the LMS. The Government will provide the PNT parameters and timing values to the vendor after award. Attitude information will not be provided to the LCS.	N/A

#	Doc	Pg	Para #	Line#	Comment	Recommendation	Rationale	Res	Government Response	SPS Section Changed
61	_Main		3.3.5		Potential CDL LCS requirement change to provide NRW enabling infrastructure as threshold.	[We believe that the exact red-black separation of the CDL control plane across the Radio Terminal, Link Controller (and potentially Antenna & RF Interfaces) has to be further analyzed and defined.]	As the ship location and orientation data can be classified, the LCS functionality supporting NRW is envisioned to be a red-side process. This is consistent with the functional partitioning of the NTCDL's baseline STD- and BE-CDL waveforms.		The vendor will need to account for red/black separation in their design per the requirements listed in SPS section 3.5.2, System Security Design Criteria.	N/A

#	Doc	Pg	Para #	Line#	Comment	Recommendation	Rationale	Res	Government Response	SPS Section Changed
62	_Main		3.3.5.2		Providing rationale why existing CDL LCS to LMS message exchange requirements do not need modification at this time to enable future NRW.	No change required	The SPS specified LMS to LCS ICD should support a generic mechanism for such operation policies. At the same time, as the LMS will be developed by the Government as GFS, the LMS SW functionality can be developed incrementally without adding risk to the Inc 1 terminal procurement.		If the Link Control Interface (LCI) messages require updating due to a proposed NRW solution, then yes, the messages will be updated. In accordance with the SOW the Software IPT will meet to discuss changes to the LCI.	N/A

#	Doc	Pg	Para #	Line#	Comment	Recommendation	Rationale	Res	Government Response	SPS Section Changed
63	_Main		3.3.6		Providing rationale why existing CDL EDUI requirements sufficient to enable future NRW.	No change required	Specified as a packet based waveform – required to support IP traffic over Ethernet – the NRW is compatible with and shall be supported by the NTCDL Radio Terminal's specified "network interface panel". The network interface panel contains Gigabit Ethernet 1000BaseTX interface suitable to carry NRW user traffic and to interface with		NRW is an objective requirement of the SPS and will not drive other threshold system requirements. The Government is looking for NRW solutions which satisfy the characteristics listed in Section 3.2.3.2 of the SPS.	N/A

#	Doc	Pg	Para #	Line#	Comment	Recommendation	Rationale	Res	Government Response	SPS Section Changed
64	_Main		3.3.7		Suggested new LMS requirement to provide NRW enabling infrastructure as threshold.	To fully benefit from the adaptive networked nature of the NRW, in addition to this explicit (i.e., operator driven) link configuration and monitoring the LMS should be capable of defining the NRW "end-to-end performance policies". These policies are typically specified in terms of the required end-to-end (as the opposite to per-link) performance "envelope": min/max user throughput, relative priorities of different flows, timeliness and jitter requirements, acceptable completion/loss	Many functions of the NTCDL Link Management application – link and mission planning, configuration and monitoring – are directly applicable to the NRW operation. Based on these end-to-end "QoS performance margins" from LMS, the NRW will automatically adjust link characteristics – e.g., transmit power, modulation mode, TDMA slot		NRW is an objective requirement of the SPS and will not drive other threshold system requirements. The Government is looking for NRW solutions which satisfy the characteristics listed in Section 3.2.3.2 of the SPS.	N/A

#	Doc	Pg	Para #	Line#	Comment	Recommendation	Rationale	Res	Government Response	SPS Section Changed
65	_Main	12	3.2.1	144	It is not clear in the Radio Frequency (RF) bands description if the Wideband antenna will operate on Ku/X only and the Narrowband antenna on C/S bands.	Identify specific RF bands required for Wideband and Narrowband antennas.	Industry requires further guidance to develop the Antenna Sub-system.		The SPS has been modified to make wideband/narrowband and high gain/medium gain capabilities more clear.	3.2.2.1
66	_Main	30	3.3.1	504	Is the intent of the system that the Wideband link category uses fixed parabolic antennas while the narrowband and rely/symmetric link categories use the phase-array antennas?	Clarify relationship between antennas and link categories.	If the intent of the specification is that the wideband links use parabolic antennas and the narrowband links use phase-array antennas, this should be made clear.		The SPS has been modified to make wideband/narrowband and high gain/medium gain antenna capabilities more clear.	3.2.2.1

#	Doc	Pg	Para #	Line#	Comment	Recommendation	Rationale	Res	Government Response	SPS Section Changed
67	_Main	44	3.3.4	1019	The crypto subsystem architecture is difficult to understand without additional information.	Request include availability of Cryptographic Core Modernization (CCM) device for this effort as well as the embedment manual and NSA embedment requirements as typically detailed in a Tailored Information Assurance Security Requirements Directive (IASRD).	Industry requires further guidance to develop an NSA approved crypto for NTCDL if not provided GFE.		The Government recommends the vendors interact with NSA directly to include attending NSA CCM industry days to obtain more information. Further, the vendor is responsible for designing to the CCM specifications referenced in the SPS.	3.3.4
68	_Main	102	3.13	2576	The description of the Installation Test Support Device (ITSD) is difficult to understand and amplifying information would be helpful.	Suggest include an ITSD diagram with individual components labeled to provide a valid solution.	Industry requires further guidance to develop the ITSD.		The SPS provides the functional requirements for the ITSD. The vendor should propose a design/implementation that meets the ITSD functional requirements.	N/A

#	Doc	Pg	Para #	Line#	Comment	Recommendation	Rationale	Res	Government Response	SPS Section Changed
69	_Gen	20	B-2	N/A	The example relating to combined buys within a 30-day window is not clear. It seems to contradict the maximum quantity of 10 per period.	Clarify that the maximum quantity per reporting period is 10, regardless of combined awards within a 30-day period.	The current as-written wording is not clear.		Agreed and revised language.	B-2
70	_Gen	29	52.211-8 Time of Delivery	N/A	The delivery requirement is "12 months from option exercised (at a rate of 2 per month)". It is unclear whether all awarded units need to be delivered by the end of the 12th month, or just the first 2 of the units.	Change to "Initial units 12 months from option exercised (at a rate of 2 per month thereafter)".	Clarification of delivery requirement.		The Government requires 2 systems per month. For example, if the Government buys 3 systems, two shall be delivered at 12 months, then the third system delivered the following month. Each offer may propose an alternate rate of production if they can accommodate more.	N/A

#	Doc	Pg	Para #	Line#	Comment	Recommendation	Rationale	Res	Government Response	SPS Section Changed
71	_Gen	50	Clauses 52.209-3 & 52.209-4	NA	Subparagraph c) of each of these clauses requires that all costs related to retesting are to be borne by the Contractor, including any and all costs for additional tests following a disapproval.	Delete clauses	Per Section B page 2 of the RFP, First Article Testing of the EDM is part of the scope for development under CLIN 0001. This is a cost reimbursable CLIN.		Clause 52.209-3 Alt II was included, but Clause 52.209-4 was deleted.	N/A
72	_Gen	90	Subfactor 1.4 - Design	N/A	Allow KG-135A, with growth to Common Core Modernization Program	Recommend allowing use of the KG-135A device with growth to the Common Core Modernization Program	The common core crypto schedule and roadmap does not support the NTCDL schedule. The legacy 135A device may offer a low risk option.		The Government recommends the vendors interact with NSA directly to include attending NSA CCM industry days to obtain more information. Further, the vendor is responsible for designing to the CCM specifications referenced in the SPS.	3.3.4
73	_Gen	104	M-307	N/A	The relative importance of factors and subfactors is discussed in general terms.	Provide specific evaluation weighting factors and subfactors.	Bidders can optimize proposed solution to best match customer's priority requirements.		As stated in Section M-307 of the RFP, the factors and subfactors are listed in descending order of importance. There is no weighting of factors and subfactors.	N/A

#	Doc	Pg	Para #	Line#	Comment	Recommendation	Rationale	Res	Government Response	SPS Section Changed
74	_Gen	3 & 24	Table 2.2 & 3.1.10 Information Assurance	N/A	The IA requirements and referenced governing documents appear to be very limited, compared to the requirements for the Risk Management Framework (RMF). Has the NTCDL program been "grandfathered in" under DIACAP for IA?	Ensure that the appropriate IA governing documentation and requirements are included in the SOW.	Implementing RMF is required for all DoD Information Systems per DoD 8510.01, which cancels 8500.2, effective 12 Mar 2014. RMF supersedes DIACAP.		The Government updated the IA/Cybersecurity references and sections. We now reference DOD 8500.01.	Section 2.1 & Section 3.5.2.1

#	Doc	Pg	Para #	Line#	Comment	Recommendation	Rationale	Res	Government Response	SPS Section Changed
75	_Gen	90 & 105	Sect L & M, Vol 1, Subfactor 1.1 - Waveforms	NA	The evaluation criteria with respect to meeting objective requirements is not clear, given the language "should one be included in the proposal".	Please clarify how bidders' technical proposals will be evaluated with respect to meeting objective requirements. If no additional technical merit can be given for proposals that meet objectives, recommend that all objective requirements be removed from the SPS.	As written, Section L requirements for addressing waveforms allow bidders to be graded equally on technical merit, regardless of whether an objective requirement is included. Their costs may differ significantly due to the inclusion of the objectives.		For objective requirements the Government may give strengths.	Section M

#	Doc	Pg	Para #	Line#	Comment	Recommendation	Rationale	Res	Government Response	SPS Section Changed
76	_Main	1	1.2	14	Will the Government make the existing AN/USQ-167 system available to the NTCDL prime contractor?	Add the following statement: Bidders are encouraged to leverage the existing AN/USQ-167 system to meet NTCDL requirements for ships that are equipped with AN/USQ-167.	The AN/USQ-167 is planned for operational use beyond 2025. Leveraging the existing system on NTCDL offers lowest overall installation and logistics sustainment cost (spares, training, …) to the Navy.		No. The intent of NTCDL is to replace the existing system and provide systems to platforms that do not currently have AN/USQ-167.	N/A

#	Doc	Pg	Para #	Line#	Comment	Recommendation	Rationale	Res	Government Response	SPS Section Changed
77	_Main	18	3.2.3.1.1	243	The stated BE-CDL Rev B modes and data rates do not fit in the specified spectrum.	Leave STD-CDL and BE-CDL Rev A Requirements as is. Change BE-CDL Rev B requirements to match SUAS TFR which are modes 101-103, <45 Mbps. Delete BE-CDL Rev B modes 104-108 and 103 >45 Mbps.	The stated BE-CDL Rev B modes and data rates do not fit in the specified spectrum. The requirement for simultaneous links can only be met if adequate spectrum is available. The beam-to-beam isolation as stated does not allow spectrum reuse. Also, there are no validated platform requirements for BE-CDL Rev B modes 104-108 and 103 >45 Mbps. Higher		The Government modified the requirements for BE-CDL, please see section 3.2.3.1.1.	3.2.3.1.1

#	Doc	Pg	Para #	Line#	Comment	Recommendation	Rationale	Res	Government Response	SPS Section Changed
78	_Main	25	3.2.3.2.2	400	Quantity of 1-hop links is not specified	Specify how many 1-hop links a node must support using NRW	Requirement will drive network design		The number of nodes in the network requirement should guide this determination. The Government is looking for NRW solutions which satisfy the characteristics listed in Section 3.2.3.2 of the SPS.	N/A
79	_Main	25	3.2.3.2.3	406	Requires user data routing but specifies using OSI layer 2	Change "layer two" to "layer three"	Please clarify as routing functions are generally accomplished at layer 3		Within the NRW network the Government allowed user data routing using Layer 3 protocols, within the shipboard system which NRW interfaces to, we require Layer 2 interfaces as the routing on-ship will be performed by other systems (e.g. ADNS, other).	N/A
80	_Main	25	3.2.3.2.4	408	Paragraph may not belong in NRW section	Move paragraph to 3.3.6	Paragraph refers to routing user data to/from CDL		Paragraph has been removed.	Section removed

#	Doc	Pg	Para #	Line#	Comment	Recommendation	Rationale	Res	Government Response	SPS Section Changed
81	_Main	26	3.2.3.2.9	427	Adjusting data rate automatically based on traffic volume may be inefficient if traffic volume varies. Additionally, it requires traffic volume monitoring and prediction models.	Recommend automatic data rate adjustments based on link quality (SNR) only. Remove automatic data rate adjustment based on traffic volume. Allow operators the ability to set maximum data rates and the ability to monitor if link is being overloaded.	Adjusting data rate automatically based on traffic volume may be inefficient if traffic volume varies. Additionally, it requires traffic volume monitoring and prediction models		The Government included both SNR and traffic volume as metrics to determine data rate adjustments. We would like to preclude a scenario where SNR allows for a high data rate but traffic volume doesn't justify the higher data rate. The Government is looking for NRW solutions which satisfy the characteristics listed in Section 3.2.3.2 of the SPS.	N/A
82	_Main	26	3.2.3.2.10	433	GIG protocols	Specify GIG protocols to be supported	Need to specify GIG protocols to be supported.		References to GIG have been removed. The Government's intention is for NRW to externally interface to systems via Layer 2. This does not preclude Layer 3 protocols within the NRW network.	3.2.3.2.10 & 3.2.3.2.13
83	_Main	26	3.2.3.2.10	438	Need further definition of "standardized networking interface"	Clarify if a network interface is desired from an existing list of standards	Will affect costing		Clarified to state that the Governement intended the control interface to be Ethernet 1000BaseTx and that this interface should be separate from the data interface.	3.2.3.2.10
84	_Main	26	3.2.3.2.11	440	Bit error requirement might be a typo	Change "…bit error rate not less than…" to "…bit error rate not worse than…"	Typo		Recommended change accepted.	3.2.3.2.11

#	Doc	Pg	Para #	Line#	Comment	Recommendation	Rationale	Res	Government Response	SPS Section Changed
85	_Main	27	3.2.3.2.15	464	Frame size is too large to satisfy latency requirement	Delete frame size requirement	This requirement will drive network time slot architecture. Frame size is too large to satisfy latency requirement		Frame size is not a requirement. This statement refers to the time allocated to process a frame internal to the radio system. If the frame size proposed by the vendor requires more than 960 ms to transmit/receive over-the-air then the Government allocated an additional 10 ms for the radio to process/prepare the frame for transmission/reception.	N/A
86	_Main	27	3.2.3.2.17	479	No protocols required for routing across the network	Add requirement to specify protocols to route across the network	Ship network routing protocols must be specified		This objective requirement applies to NRW network routing protocols only. The Government is looking for NRW solutions which satisfy the characteristics listed in Section 3.2.3.2 of the SPS.	N/A
87	_Main	32	3.3.1.1.2	603	Change sidelobe requirement	Change requirement to "… 13dB ..."	Increasing sidelobe rejection improves the ability to discriminate against unwanted signals that near the main beam (eg multipath and both intentional and unintentional jammers).		The sidelobe requirements were modified to include objective requirements that increase sidelobe rejection.	3.3.1.3.2 and 3.3.1.4.2

#	Doc	Pg	Para #	Line#	Comment	Recommendation	Rationale	Res	Government Response	SPS Section Changed
88	_Main	32	3.3.1.1.2	605	Change sidelobe requirement	Change requirement to "… 20dB ..."	Increasing sidelobe rejection improves the ability to discriminate against unwanted signals that near the main beam (eg multipath and both intentional and unintentional jammers).		The sidelobe requirements were modified to include objective requirements that increase sidelobe rejection.	3.3.1.3.2 and 3.3.1.4.2
89	_Main	34	3.3.1.2.1.3	666	Need receiver sensitivity specification to include waveform parameters	The receiver sensitivity shall be specified at a specific waveform, BER, and data rate.	Current requirement is untestable.		The Government has specified the receiver sensitivity in bandwidth agnostic terms (dBm/Hz) such that all waveform parameters (i.e. BW, data rates, etc.) shall meet the requirement. As part of the testing procedures in the SOW, the Government requires the vendors propose test(s) to verify requirements.	3.3.1.4.1.3
90	_Main	35	3.3.1.2.1.6	684	Add testable out-of-band suppression requirement.	Change requirement to "… shall be suppressed to at least 75dB for SCE …"	Allows cross SCE / PCE operation without self-interference.		Requirement updated.	3.3.1.4.1.5

#	Doc	Pg	Para #	Line#	Comment	Recommendation	Rationale	Res	Government Response	SPS Section Changed
91	_Main	35	3.3.1.2.1.7	687	The maximum absolute jamming signal level is not specified	Specify the maximum absolute signal level	The maximum absolute jamming signal level must be specified to determine if the receiver headroom is sufficient		The maximum absolute jamming signal level is provided by the maximum of the levels in section 3.3.1.4.1.1.	3.3.1.4.1.1 & 3.3.1.4.1.6
92	_Main	35	3.3.1.2.1.7	698	If the jamming or undesired signal conforms to the STD or BE-CDL spectral mask, the mask's -40dB point extends out (in the frequency domain) greater than 1.06 x symbol rate which is 0.5 x bandwidth.	Decrease the jamming signal from 40dB to 20dB above the desired signal	According to the waveform mask, the transmit power roll off at -40dB is flat extending out in the frequency domain		The J level is measured from the peak of the jamming signal to the peak of the desired signal. The Government does not assume that all jamming signals will be CDL complaint. The requirement states that any jamming signal up to 40 dB above the desired signal, and at least two jamming signal bandwidths away from the desired signal shall not impact demodulation of the desired signal.	3.3.1.4.1.1 & 3.3.1.4.1.6
93	_Main	35	3.3.1.2.1.7	699	The text and figure frequency separation between the desired signal and the jamming signal are inconsistent	Correct the text to read "is to or greater than twice the jamming signal's waveform bandwidth…"	The text and figure frequency separation between the desired signal and the jamming signal are inconsistent		Fixed the text to state greater than twice the jammer signal bandwidth.	3.3.1.4.1.6

#	Doc	Pg	Para #	Line#	Comment	Recommendation	Rationale	Res	Government Response	SPS Section Changed
94	_Main	36	3.3.1.2.2	715	The S-band antenna gain is required to be 7dBi	Lowering this gain requirement to 4 dBi would allow the use of omni antennas	Using omni antennas would have lower complexity, higher reliability, lower risk and lower cost.		The gain requirement has been removed and the G/T and EIRP requirements are now stated as profiles.	3.3.1.4.2
95	_Main	36	3.3.1.2.2	719	Threshold polarization requirements are different for antenna overall and antenna receive.	Change receive antenna polarization to Vertical Linear Polarization, the same as the threshold requirement.	To avoid a complex and expensive antenna, polarization should be the same for transmit and receive.		Fixed in the SPS to be consistent.	3.3.1.3.2 & 3.3.1.4.2
96	_Main	36	3.3.1.2.2	730	Threshold polarization requirements are different for antenna overall and antenna receive.	Change receive antenna polarization to Vertical Linear Polarization, the same as the threshold requirement.	To avoid a complex and expensive antenna, polarization should be the same for transmit and receive.		Fixed in the SPS to be consistent.	3.3.1.3.2 & 3.3.1.4.2

#	Doc	Pg	Para #	Line#	Comment	Recommendation	Rationale	Res	Government Response	SPS Section Changed
97	_Main	36	3.3.1.2.2	737	X-band antenna gain requirement is not achievable with existing CDLS aperture.	Change X-band antenna gain requirement to "… no less than 35.0 dBi including Radome…"	It is advantageous to the Navy to have the option of using the existing CDLS X-/Ku-band antenna system. This antenna is fully shipboard qualified and mission-proven. Use of the existing antenna would reduce installation and ILS support (spares, training, ...) cost. However, it does not meet this requirement as stated. This antenna		Antenna G/T and EIRP values have been revised.	3.3.1

#	Doc	Pg	Para #	Line#	Comment	Recommendation	Rationale	Res	Government Response	SPS Section Changed
98	_Main	36	3.3.1.2.2	751	Ku-band antenna gain requirement is not achievable with existing CDLS aperture.	Change Ku-band antenna gain requirement to "… no less than 38.5 dBi including Radome…"	It is advantageous to the Navy to have the option of using the existing CDLS X-/Ku-band antenna system. This antenna is fully shipboard qualified and mission-proven. Use of the existing antenna would reduce installation and ILS support (spares, training, ...) cost. However, it does not meet this requirement as stated. This antenna		Antenna G/T and EIRP values have been revised.	3.3.1

#	Doc	Pg	Para #	Line#	Comment	Recommendation	Rationale	Res	Government Response	SPS Section Changed
99	_Main	36	3.3.1.2.2	726	The C-band antenna gain is required to be 7dBi	Lowering this gain requirement to 4 dBi would allow the use of COTS omni antennas	Using an omni antennas would have lower complexity, higher reliability, lower risk and lower cost.		The gain requirement has been removed and the G/T and EIRP requirements are now stated as profiles.	3.3.1.4.2
100	_Main	37	3.3.1.3.1.1	777	The NTCDL EIRP requirements are greater than allowed by the ITU radio regulation article 21 limits for transmissions in the 14.5 to 14.8 GHz band (effective WRC 2000)	Reduce the EIRP limits to be within the ITU radio regulations	Compliance with the ITU radio regulation		Antenna G/T and EIRP values have been revised. Note, ITU regulations do not apply in International waters.	3.3.1

#	Doc	Pg	Para #	Line#	Comment	Recommendation	Rationale	Res	Government Response	SPS Section Changed
101	_Main	37	3.3.1.2.2	755	Change sidelobe requirement	Change requirement to "… 13dB ..."	Increasing sidelobe rejection improves the ability to discriminate against unwanted signals that near the main beam (eg multipath and both intentional and unintentional jammers).		The sidelobe requirements were modified to include objective requirements that increase sidelobe rejection.	3.3.1.3.2 & 3.3.1.4.2
102	_Main	37	3.3.1.2.2	757	Change sidelobe requirement	Change requirement to "… 20dB ..."	Increasing sidelobe rejection improves the ability to discriminate against unwanted signals that near the main beam (eg multipath and both intentional and unintentional jammers).		The sidelobe requirements were modified to include objective requirements that increase sidelobe rejection.	3.3.1

#	Doc	Pg	Para #	Line#	Comment	Recommendation	Rationale	Res	Government Response	SPS Section Changed
103	_Main	37	3.3.1.2.2	764	Change beam-to-beam isolation requirement	Change requirement to "… no less than 50dB for narrowband and wideband ..."	Increasing beam-to-beam isolation reduces the risk of self-jamming and increases the ability to work multiple targets within a beam.		The beam-to-beam isolation requirement has been removed. It has been replaced with a verification test that will be performed to verify that all antenna performance requirements are not affected on any beam while other beams are exercised. For example, verification that all antenna performance requirements still meet the requirements on Beam A, while exercising Beams B, C, and D.	4.3.3.1
104	_Main	39	3.3.1.6.1.1	833	Testing receiver acquisition time for all waveforms/modes is impractical	Narrow down requirement for worst case (lowest data rate)	Verifying the requirement as written will add unnecessary cost		As part of JITC certification all waveforms/modes will be tested and verified. As part of the testing procedures in the SOW it states that the Government requires the vendors to propose a series of tests to verify requirement.	N/A

#	Doc	Pg	Para #	Line#	Comment	Recommendation	Rationale	Res	Government Response	SPS Section Changed
105	_Main	44	3.3.3.1.2.1	999	ATM can be provided over Ethernet to reduce complexity and cost.	Delete requirement for OC-12 ATM interfaces. The system could provide ATM over Ethernet (preferable) or limit rate to two OC-3 interfaces	Legacy platforms that still use ATM run a maximum rate of 274 Mbps split into two OC-3 channels. ATM interfaces, especially high-rate interfaces, unnecessarily drive cost.		OC-12 has been replaced with 2x OC-3 interfaces to interface with the SkyLynx box as part of the LEAN specification section.	3.3.3.1.1

#	Doc	Pg	Para #	Line#	Comment	Recommendation	Rationale	Res	Government Response	SPS Section Changed
106	_Main	44	3.3.4	1018	The current requirements prohibit use of legacy KG-135A-based devices	Change number of required stored keys to 8. Extend COMSEC removal time to 30 minutes. Increase the COMSEC size and weight to <46 lbs. and 7" H x 19" L x 24" D.	The common core crypto schedule and roadmap does not support data rates above 274Mbps in accordance with the NTCDL schedule. Allow the use of legacy KG-135A-based devices which reduces cost and risk. Only 8 keys needed per mission.		The Government recommends the vendors interact with NSA directly to include attending NSA CCM industry days to obtain more information. Further, the vendor is responsible for designing to the CCM specifications referenced in the SPS.	N/A
107	_Main	45	3.3.5	1049	Will the Government make the existing AN/USQ-167 CCP software available to the NTCDL prime contractor?	Add the following statement: The legacy CCP software source code will be available to support NTCDL development.	This will reduce the risk and development cost of the NTCDL Link Control Software.		The AN/USQ-167 CCP software will be made available. However, vendors should know the software is hardware specific to AN/USQ-167 and most of the functions performed that are not hardware specific will be handled by the GFS and would be outside the scope of the contractor for NTCDL.	N/A

#	Doc	Pg	Para #	Line#	Comment	Recommendation	Rationale	Res	Government Response	SPS Section Changed
108	_Main	69	3.4.2.2	1604	The current requirement calls for chilled water cooling.	Change the cooling method to air cooled.	Use of air cooled systems reduces installation and maintenance costs.		Updated to reflect "if water cooling is required…"	3.4.2.2
109	_Main	71	3.5.3.1	1685	Requiring 50% reserve capacity in FPGAs will significantly drive cost and SWaP	Exclude FPGAs from requirement	Requirement will significantly drive cost and SWaP		Updated section to state "At least 25 percent processing resource reserve capacity [shall] exist for special purpose processing resources (such as Field Programmable Gate Arrays (FPGA), which run software or firmware developed by the Contractor). [T] Note, the supporting/external resources (such as flash memory, RAM) associated with special purpose processing resources are covered by the 50% reserve capacity requirement."	3.5.3.1
110	_Main	78	3.6.2.1.2	1889	The combined surface area of a separate Tx plus Rx unit is greater than the integrated Rx/Tx unit.	Increase height allowance to 60" for a Combined Rx/Tx Unit.	In the current SWaP requirements, the bidder is penalized for using a combined Rx/Tx unit.		SWAP requirements were clarified to not restrict to Tx or Rx units.	3.6.2.1

#	Doc	Pg	Para #	Line#	Comment	Recommendation	Rationale	Res	Government Response	SPS Section Changed
111	_Main	81	3.6.4	1929	Reduce Link Power Consumption requirement.	Change Link Power Consumption requirement to "… shall be less than 1500 watts."	Ships chilled water cooling is not required. This reduces installation and maintenance cost.		Link power consumption is a KPP and will not be changed. Note, lower power consumption levels would be taken into consideration under the minimize SWAP, as part of the evaluation factors.	N/A
112	_Gen	20-23	B-2		Based on the B-2 Pricing Tables and referenced instructions in this section and pricing references on pg 101, how will the Government calculate the Total Evaluated Price?	Clarify.	As currently stated, it is difficult to understand how the government will evaluate the total price of all CLINs in the context of the table structures.		Using the completed table at Section L as determined by multiplying the Quantity Column A with Unit Price Column B to arrive at a Total Evaluated Price for that CLIN, and then adding all of those evaluated prices for all CLINs (in so doing the Government will also verify that the unit price for that given quantity in table is also the same price for that quantity in Section B),	B-2
113	_Gen	6	3.1.2	N/A	SOW: A "Government program WBS" is called out. When does the government anticipate the release of a WBS, or Draft WBS.	Provide draft copy of the Gov WBS prior to the Final RFP.			The Government will provide the WBS at RFP release.	N/A

#	Doc	Pg	Para #	Line#	Comment	Recommendation	Rationale	Res	Government Response	SPS Section Changed
114	_Gen	52	3.2.8.3.6	N/A	SOW Question: Define "system." At what hardware level is Reliability Qual Testing (RQT) to be performed? Is this to be performed at the subsystem level or at the system level, or both? RQT is exhaustive and possibly destructive (i.e., may require dedicated hardware).	Requires clarification in terms of definition of the level at which testing will be performed.	This is a cost driver depending on how the vendor plans the RQT.		As part of the testing procedures in the SOW it states that the Government requires the vendors to propose a series of tests to verify requirements at the system level.	N/A
115	_Gen	66	3.3.5	N/A	SOW: 180 days to deliver spares after CLIN is awarded. This may be short form some deliverables that contain long lead ordering parts.	Define contract award vs. delivery timeline.	Long lead materials may not be available in 180 days		This will be handled on an independent basis after contract award.	N/A

#	Doc	Pg	Para #	Line#	Comment	Recommendation	Rationale	Res	Government Response	SPS Section Changed
116	_Main	6	2.1	102	DODD 8500.01 (14 March 2014): Presume you mean DODI 8500.01 (same date) which superseded DODD 8500.01	Did you mean DODI 8500.01 from same date?	Clarification / correct reference.		Reference updated.	2.1

#	Doc	Pg	Para #	Line#	Comment	Recommendation	Rationale	Res	Government Response	SPS Section Changed
117	_Main	19	3.2.3.1.1	246	Table 3-10 includes BE-CDL modes 101 through 108 with data rates up to 900 Mbps.	Eliminate Modes 107 and 108. Limit data rates in Modes 103 through 106 to 274.176 Mbps	Modes 107 and 108 drive the terminal cost and are highly impacted by atmospheric conditions, resulting in limited use. Data rates above 274.176 Mbps also drive the cost of the system and are not applicable to deployed communication systems. In addition, these data rates severely limit available spectrum.		Table 3-10 has been renumbered to Table 3-6 and has been updated to limit the throughput of 103-105 to 274 Mbps [T], 622 Mbps [O]. Modes 106-108 are objective modes with the highest feasible data rate.	3.2.3.1.1

#	Doc	Pg	Para #	Line#	Comment	Recommendation	Rationale	Res	Government Response	SPS Section Changed
118	_Main	31	3.3.1.1.1.1	536	X and Ku-Band scan loss is specified at 3 dB at 45 degrees. If system meets EIRP requirements over scan, is not required	Remove this scan loss requirement associated with azimuth scan and modify to allow for 3 dB of scan loss in elevation below EIRP.	Scan loss is not relevant in azimuth plane as the EIRP is the driving requirement that must be meet at horizon. Reducing EIRP in elevation would match reduced range and atmospheric losses with the geometry of the link.		The scan loss requirement has been replaced with antenna performance requirements over the antenna coverage specified in the SPS.	3.3.1.1

#	Doc	Pg	Para #	Line#	Comment	Recommendation	Rationale	Res	Government Response	SPS Section Changed
119	_Main	31	3.3.1.1.2	562	The required 3dB beamwidths are not consistent with the aperture gain requirement (X-band 3dB BW = 3 degrees (T) Ku-band 3dB BW = 4 degrees (T))	Reduce requirement to incorporate the natural operation of a phased array where the beam broadens at scan.	Since a phased array beam width will broaden at scan, to achieve the 3 degree beam width at maximum scan, the array would have to be significant in size and would have a very narrow beam width at bore sight, making it difficult to point and track. (i.e. BW of 5 degrees at 45 degree scan would be 3.5 degree at bore sight.		The beamwidth sections of the SPS have been modified to allow for beam broadening at scan should a scanning aperture be proposed. The Government's response is independent of the antenna technology proposed (e.g. phased arrays).	3.3.1

#	Doc	Pg	Para #	Line#	Comment	Recommendation	Rationale	Res	Government Response	SPS Section Changed
120	_Main	34	3.3.1.2.1.3	664	Survivability requirement. Consistent requirements across multiple spec paragraphs: 3.3.1.2.1.3, 3.3.1.2.1.5, 3.10.1	Remove from 3.3.1.2.1.3	Remove inconsistency		These sections have been modified to be consistent.	3.3.1

#	Doc	Pg	Para #	Line#	Comment	Recommendation	Rationale	Res	Government Response	SPS Section Changed
121	_Main	35	3.3.1.2.1.5	680	Required to operate through average MIL-STD-464C Table 1 which includes a 200V/m in-band requirement. This is an extreme amount of power and does not appear to be realistic based on shipboard operations. This specification is also in contradiction with 3.3.1.2.1.1 SCE RL Minimum and Maximum Power Density: max power density: -38dBW/m^2	Re-evaluate the in-band and near-band requirement (10 - 20 GHz band) by reviewing the MIL-STD-HDBK-235 which provides significant insight into how this specification was generated and provide opportunity to apply physical constraints to reduce maximum values.	MIL-STD-464C was developed as a guideline, based on close proximity to a emitter. These values are not realistic as for example a helicopter cannot get close enough to an antenna to generate this power level without hitting the rotor blades on the superstructure. This would be applicable for something physically on the deck that could get that close.		The requirements reflect the EMI/EMC environments for all ship classes within NTCDL Increment 1. Was relocated to section 3.10.2	3.10.2

#	Doc	Pg	Para #	Line#	Comment	Recommendation	Rationale	Res	Government Response	SPS Section Changed
122	_Main	35	3.3.1.2.1.7	707	System is required operate with a J/S = 40 dB over the full dynamic range with a Jamming signal only 2 BW away.	Modify the Requirement to operate with a J/S = 40 dB with a Jamming signal of 4 BW away or J/S = 20 dB with a Jamming signal of 2 BW away	Requirement drives up the cost of the Receiver		The requirement correctly reflects the Government's intention.	N/A
123	_Main	36	3.3.1.2.2	711	Each band defines an antenna gain which is redundant given the requirement for G/T for each band..	Remove gain requirement.	Remove redundancy.		The RF performance requirements have been reviewed and/or revised. The overlapping of requirements (e.g., antenna gain and G/T) is intentional and remains in the SPS.	N/A

#	Doc	Pg	Para #	Line#	Comment	Recommendation	Rationale	Res	Government Response	SPS Section Changed
124	_Main	37	3.3.1.2.2	764	The Ku-antenna characteristics defines beam to beam isolation no less than 30dB, but does not provide any further definition.	Define the isolation in a manner in which antenna patterns (e.g.: sidelobes) are not the dominant driver on isolation. i.e.: beam #1 sidelobes are minimum at the main beam of beam #2	The beam to beam isolation can be dominated by the beam pattern if a phased array is implemented. If two pointing angles that are close or allow for the first side lobe to overlap, this could dominate the measurement.		The beam-to-beam isolation requirement has been removed. It has been replaced with a verification test that will be performed to verify that all antenna performance requirements are not affected on any beam while other beams are exercised. For example, verification that all antenna performance requirements still meet the requirements on Beam A, while exercising Beams B, C, and D. The Government's response is independent of the antenna technology proposed (e.g. phased arrays).	4.3.3.1
125	_Main	39	3.3.1.5	813	Section states that the primary elevation scan regions are plus/minus 3 degrees with ship motion compensation, but does not define how this is relevant to the coverage requirement.	Either remove this or provide better definition on how this is relevant to the coverage. Does this indicate there is performance relief for the coverage outside the 3 degree region.	Remove redundancy or provide clarification.		The antenna coverage section of the SPS as well as the G/T and EIRP sections have been revised to clarify the Government's intent.	3.3.1

#	Doc	Pg	Para #	Line#	Comment	Recommendation	Rationale	Res	Government Response	SPS Section Changed
126	_Main	42	3.3.3.1	945	A CDL Radio terminal Egress panel drives cost and SWAP and is unnessary.	A CDL Radio terminal Egress panel should be optional to allow other System architectures that provide the functionality without the size and cost. For example the CIB could be imbedded in the terminal.	Allowing an equivalent functionality without an EGRESS panel saves SWAP and cost.		The radio terminal egress panel requirements are tailored to NTCDL needs. The updated requirements include the provision of hotel services for the SkyLynx box (the CIB replacement) as well as requirements to provide the interfaces to support SkyLynx operations.	3.3.3.1.1
127	_Main	46	3.3.5.2	1061	Does the 100 ms/10 ms time constraints apply to the certificate authentication process, or to message response subsequent to creation of a secure tunnel?	Specify which is meant.	Clarification.		This requirement has been moved to the LCI IDD which is incorporated by reference. The requirement is intended to apply to the message response subsequent to the establishment of an authenticated communication path.	N/A
128	_Main	53	3.3.5.10	1323	The definition of the function as a spectrum analyzer is vague.	Remover or provide more information about required spectrum to evaluate, output data and its quality.	It is unclear what the desired function is.		The requirement has been made clear. The purpose of the requirement is to provide the user a continuous, real-time video stream of a spectrum analyzer display of any of the signals from any of the NTCDL antennas.	3.3.5.9

#	Doc	Pg	Para #	Line#	Comment	Recommendation	Rationale	Res	Government Response	SPS Section Changed
129	_Main	70	3.5.2.1	1648	Department of Defense (DoD) Directive (DoDD) 8500.01E superseded by DODI 8500.01, March 14 2014 and DoD Instruction (DoDI) 8500.2 (cancelled by DODI 8500.01, March 14 2014).	Presume you mean DODI 8500.01 (same date) which superseded DODD 8500.01	Clarification / correct reference.		The references have been updated.	3.5.2.1 and 2.1
130	_Main	70-71	3.5.2.1	1649-1653	This is a reference to DODI 8500.2, not used by the Risk Management Framework (via FIPS 199) required by DODI 8500.01, which categorizes Confidentiality, Integrity, Availability as Low, Medium, or High.	Presume the CNSSI No. 1253 classified controls overlay apply instead.	Clarification / correct reference.		The references have been updated.	3.5.2.1 and 2.1

#	Doc	Pg	Para #	Line#	Comment	Recommendation	Rationale	Res	Government Response	SPS Section Changed
131	_Main	78	3.6.2.1	1877	This defines a required antenna tilt back for flat panel antenna.	Requirement should be deleted	The volume coverage requirement should be the driving requirement, where tilt back is design specific. (design derived)		The tilt back requirement is needed to meet RCS concerns and can not be deleted. The revised RF performance requirements effectively eliminate the need to be concerned about the tilt back from an RF perspective. The SWaP requirements do not include the space/volume lost by the need to provide the tilt back.	N/A
132	_Main	89	3.10.1	2158	The application of MIL-STD-464 Table 1 and 2 is not consistent with Para. 3.3.1.2.1.5	Make consistent with the in-band isolation requirement.			The references to MIL-STD-464 have been revised to make them clear and consistent.	3.10.1
133	_Main	91	3.10.1.7	2209	The RE103 requirements to operate without performance degradation for 200V/m average above deck and survive 833 V/m in the 14-18 GHz band is extremely difficult.	This requirement should be tailored to 20V/m aveerage above deck near the desired band of operation.	This requirement is not consistant with the RE103 requirements in similar radio systems and will create a major cost impact.		The requirements reflect the EMI/EMC environments for all ship classes within NTCDL Increment 1.	N/A

#	Doc	Pg	Para #	Line#	Comment	Recommendation	Rationale	Res	Government Response	SPS Section Changed
134	_Main	94	3.11.1.1	2304	Requirement described as the quantitative reliability of any part of the antenna exterior to the hull shall have a MTBF no less that 6000 hours. This is confusing as there is no definition of a failure of the antenna.	Require reliability analysis at the system level and the specific system design will dictate the exterior reliability.	Requirement does not provide any definition of antenna failures.		The MTBF hours have been modified to 3000 [T], 6570 [O] hours. A failure definition has also been added to 3.11.1.1 Quantitative Reliability Requirement.	3.11.1.1
135	_Main	95	3.11.2.1	2358	This requirement describes a 45 minute MTTR. Since the installation locations of the sub-systems is not provided this is difficult to evaluate.	Update language to include "repair time only includes time required to access the hardware described in this SPS once any barrier has been removed or hardware required to access it has been put into place.	As an example, the antenna sub-system may be mounted in a position that is not easily accessed without harnesses and/or man lifts. This could not be done within the 45 minute time window.		The vendors must design a system which provides reliable (and thus repairable) communications in the Navy's shipboard environment. The design should reflect an understanding of the impact that "accessibility" could have on repairability, and design the system accordingly.	N/A

#	Doc	Pg	Para #	Line#	Comment	Recommendation	Rationale	Res	Government Response	SPS Section Changed
136	_Main	98	3.11.2.3.7	2452	Test Instrumentation Points requires access to the "IF" (baseband)	Remove design specific implementation requirements out of specification	Depending on the desired design implementation, this may not be easily accessible and other information may available and meet the test need		The phrase "if IF down conversion used" was intended to limit the applicability of the "IF" to only systems which use it as a means of communicating between LRUs. The statement was changed to: "if IF is used to communicate between LRUs".	3.11.2.3.7
137	_Main	112	4.3.4.2	2918-2920	DOD transitioned from DIACAP to the RMF.	Should this be DODI 8500.01, 14 March 2014, A&A Process (for classified)?	Clarification / correct reference.		Section updated to reflect transition to DoDI 8500.01.	4.3.5.2
138	_Main	118	4.3.11.1	3137	This type of testing is very long, requiring weeks of vibration, humidity, temperature, etc. testing that will be very costly. Could require additional hardware to be fabricated specifically for this testing.	Allow a mixture of testing and analysis.	Given the timeline of the program, this will likely be a schedule driver and will most certainly be a non-trivial expense		The testing requirements are as the Government intends. During the development of test procedures the Government will work with the vendor to implement a reasonable approach for the testing.	N/A

#	Doc	Pg	Para #	Line#	Comment	Recommendation	Rationale	Res	Government Response	SPS Section Changed
139	_Main	122	4.3.12.1	3228	The number of temperature cycles is not specified.	Specify number of cycles.	If significant quantity is required, will drive cost.		A procedure satisfying the requirements of the cited section of MIL-STD-810G is what is required. MIL-STD-810G provides cycle requirements.	N/A
140	_Main	122	4.3.12.2	3236	The number of temperature cycles is not specified.	Specify number of cycles.	If significant quantity is required, will drive cost.		A procedure satisfying the requirements of the cited section of MIL-STD-810G is what is required. MIL-STD-810G provides cycle requirements.	N/A
141	_Main	123	4.3.12.5	3260	Solar radiation testing will take a significant amount of time.	Allow completion by analysis	Given the timeline of the program, this will likely be a schedule driver.		The testing requirements are as the Government intends. During the development of test procedures the Government will work with the vendor to implement a reasonable approach for the testing.	N/A
142	_Main	123	4.3.12.6	3264	Rain testing will take a significant amount of time.	Allow completion by analysis	Given the timeline of the program, this will likely be a schedule driver.		The testing requirements are as the Government intends. During the development of test procedures the Government will work with the vendor to implement a reasonable approach for the testing.	N/A
143	_Main	123	4.3.12.7	3267	Fungus testing will take a significant amount of time, a typical duration is 84 day.	Allow completion by analysis	Given the timeline of the program, this will likely be a schedule driver.		The testing requirements are as the Government intends. During the development of test procedures the Government will work with the vendor to implement a reasonable approach for the testing.	N/A

#	Doc	Pg	Para #	Line#	Comment	Recommendation	Rationale	Res	Government Response	SPS Section Changed
144	App B	5	2.4	154-155	Annex 2: DODD 8500.01 superseded by DODI 8500.01, DODI 8500.2 cancelled.	Presume you mean DODI 8500.01 (same date) which superseded DODD 8500.01	Clarification / correct reference.		Appendices have been removed. However, all documents have been updated with the latest DoDI instruction.	N/A
145	App B	5	2.4	156-157	Annex 2: This is a reference to DODI 8500.2, not used by the Risk Management Framework (via FIPS 199), which categorizes Confidentiality, Integrity, Availability as Low, Medium, or High.	Presume the CNSSI No. 1253 classified controls overlay apply instead.	Clarification / correct reference.		Appendices have been removed. However, all documents have been updated with the latest DoDI instruction. The CNSSI also applies.	N/A
146	_Gen	1-17	Section B CLINs	Various	All of the Section B CLINs are FOB: Destination	Would SPAWAR consider changing the FOB point to Origin, for all CLINs under the contract?	This would minimize the Government's shipping expenses.		No.	N/A

#	Doc	Pg	Para #	Line#	Comment	Recommendation	Rationale	Res	Government Response	SPS Section Changed
147	_Gen	17	B-1 Data Rights Table	11	Request clarification of the following: "A $0 (zero) indicates that the rights associated with that CDRL are available to the Government, as the Government has funded or partially funded the development of the CDRL deliverable under this contract."	Recommend deletion or modification of this line.	If an effort is partially funded with Government funding then GPR may be claimed, but the inclusion of $0 in this table might indicate that the contractor is giving up rights that could otherwise be claimed and should not be construed as an indicator of the source of the funding.		The purpose of this table is to allow contractors to provide GPR at a minimum. The column for cost allows for the contractors to price the item such that the Government may buy at least GPR data rights should the Government not already possess those rights.	N/A

#	Doc	Pg	Para #	Line#	Comment	Recommendation	Rationale	Res	Government Response	SPS Section Changed
148	_Gen	25	Section H Clause 5252.228-9200	All	Only a small amount of work is required on Government installations for performance of this contract, and liability will revert to the Government following DD250 of the systems prior to installation.	Recommend deletion of this clause as the prescription is not met.	Industry already carries substantial and required insurances at the corporate level and do not take out individual policies for individual programs.		This Section C, 5252.228-9200 Liability Insurance - Fixed Price Contracts is a required clause for FFP CLINs.	N/A
149	_Gen	26	Section H Clause 5252.232-9400	All	Only a small amount of work is required on Government installations for performance of this contract, and liability will revert to the Government following DD250 of the systems prior to installation.	We recommend deletion of this clause as the prescription is not met.	Industry already carries substantial and required insurances at the corporate level and do not take out individual policies for individual programs.		This is Section C, 5252.232-9400 Limitation of Liability - Incremental Funding is required for contracts providing incremental funding.	N/A

#	Doc	Pg	Para #	Line#	Comment	Recommendation	Rationale	Res	Government Response	SPS Section Changed
150	_Gen	34	Section H Clause 5252.232-9206	All	Clarification is requested to ensure that cost reporting during the contract performance will be requested to the same level as proposed in accordance with the RFP.	Recommend appending this clause to tie the proposed level of cost segregation to performance during the contract.	Note per Section L Cost Proposal Format, Attachment 7 is a product-oriented WBS and will identify breakout between non-recurring and recurring costs, and, "the Offeror shall populate the cost templates to at least WBS level 5 for hardware and software, and level 3 for all other elements."		This is Section G, 5252.232-9206 Segregation of Costs is a required clause for all cost reimbursable contracts, which this contract has some CLINs that fall into this category.	N/A

#	Doc	Pg	Para #	Line#	Comment	Recommendation	Rationale	Res	Government Response	SPS Section Changed
151	_Gen	37	Section H Clause PGI 245-103-70	All	Will SPAWAR entertain the addition of any other items to this list, such as GFI, GFE, or GFM that might be required in the performance of this contract? Will the addition of any items adversely affect the evaluation of our proposal?	Delete the word "only" in the first line of the clause; request allowing the addition of other items.	Use of existing property or items will reduce the cost of the proposal to the Government.		The clause will not be revised after contract award. If the contractor needs a test system, then they should procure/develop one for themselves.	N/A
152	_Gen	37	Section H Clause 252.204-7012	All	The prescription for this clause is for all solicitations and contracts, including solicitations and contracts using FAR part 12 procedures, for the acquisition of commercial items.	We recommend deletion of this clause, as the prescription is not met.	This is not a commercial acquisition.		DFARS prescription states use in ALL solicitations and contracts, INCLUDING solicitations and contracts using FAR part 12 procedures for the acquisition of commercial items.	N/A

#	Doc	Pg	Para #	Line#	Comment	Recommendation	Rationale	Res	Government Response	SPS Section Changed
153	_Gen	41	Section H Clause 5252.217-9203	3	It reads that the written notice will be sent "prior to the option exercise dates listed below," but the dates given are a range. Is the range the dates during which the option(s) may be exercised and if so, how far in advance of the date would the notice be sent? For example, for Item 0002: if the Government desires to exercise the item in May of 2016, when would the notice be sent?	Would the Government provide clarification of this clause to define the earliest option exercise date, and the latest option exercise date for each option CLIN. Also, please clarify the possible quantities and that the CLINs must be exercised in sequence.	Clarification will allow more accurate pricing.		The range of dates is the when the Government can exercise the option unilaterally. The Government reserves the right to exercise none, one, or all of the CLINs in any given option year.	N/A

#	Doc	Pg	Para #	Line#	Comment	Recommendation	Rationale	Res	Government Response	SPS Section Changed
154	_Gen	41	Section H Clause 5252.219-9201	All	This clause requires preparation of a Small Business Subcontracting Plan for the contract.	Would SPAWAR consider adding DFARS 252.219-7004 Small Business Subcontracting Plan (Test Program) to the RFP in lieu of all other small business subcontracting plan requirements?	We understand the test program may be extended for another one to three years. We have been a successful participant in the comprehensive plan program and continued participation will reduce contract costs while meeting the Government's objectives		PGI 219.7—THE SMALL BUSINESS SUBCONTRACTING PROGRAM (See DFARS 219.7, DFARS/PGI view) This requires plans to be negotiated. The Government is awarding a competitive acquisition, which would not allow the Government to negotiate the plan before the award. Therefore, this would not work in our environment.	N/A

#	Doc	Pg	Para #	Line#	Comment	Recommendation	Rationale	Res	Government Response	SPS Section Changed
155	_Gen	42	Section H Clause 5252.231-9200	3	This clause states that any travel under this contract must be specifically requested in writing, by the contractor prior to incurring any travel costs.		It will add unnecessary cost and possible schedule impact to wait for approval of travel for any travel under any CLIN.		Prior to award of the contract, vendors would have planned travel for the effort in their proposal (administrative costs or otherwise). Receiving approval for travel is a condition of the contract. If travel is not authorized, it could cause the contractor to be responsible for incurred costs, not previously approved. The CLIN allows for the payment to be made but if there is a term and condition in the clauses of the contract that require prerequisites to be met prior to use, then the contractor must comply.	N/A
156	_Gen	49	Section I Clause 52.223-16	7	The prescription of this clause is for when personal computer products will be-- (i) Delivered; (ii) Acquired by the contractor for use in performing services at a Federally controlled facility; or (iii) Furnished by the contractor for use by the Government.	We recommend deletion of this clause, as the prescription is not met.	There are no such requirements.		Government does not agree with recommendation because the below deck equipment requirements include personal computer products including keyboards, mice, and monitors.	N/A

#	Doc	Pg	Para #	Line#	Comment	Recommendation	Rationale	Res	Government Response	SPS Section Changed
157	_Gen	50	Section I Clause 252.246-7001	17	Acceptance of data items is already done by the Government to comply with the data requirements in accordance with the terms of the CDRLs / DIDs.	We recommend deletion of this clause.	Inclusion of this clause will increase the cost of data to the Government. Its deletion will reduce the price.		Government does not agree with recommendation.	N/A
158	_Gen	50	Section I Clause 52.209-3	All	In accordance with FAR 9.304, this clause is not required when products are covered by complete and detailed technical specifications.	We recommend deletion of this clause.	The contract contains a complete and detailed specification.		Kept and added Alternate II.	52.209
159	_Gen	51	Section I Clause 52.209-4	All	In accordance with FAR 9.304, this clause is not required when products are covered by complete and detailed technical specifications.	We recommend deletion of this clause.	The contract contains a complete and detailed specification.		Deleted.	52.209

#	Doc	Pg	Para #	Line#	Comment	Recommendation	Rationale	Res	Government Response	SPS Section Changed
160	_Gen	92	Section L Subfactor 2.3 - Data Rights	7	This clause states that the Government desires the commercial equivalent of Government Purpose Rights for all commercial TD/CS deliverables.	Would SPAWAR consider excepting commercial items from this direction?	Generally, commercial software is provided to all parties with the same non-negotiable licenses whether a private individual, company, or Government agency.		Subfactor 2.3 - Data rights has been updated to clarify the government's position.	Section L Subfactor 2.3
161	_Gen	37	PGI 245.130-70	14	The Government will provide only the property set forth below (1) NTCDL External Data User Interface (EDUI) Software and (2) NTCDL Link Management Software 18 Mos after Contract Award	Request that GFE provide these two items prior to 18 Mos after Contract Award	Will facilitate early system testing prior to the Risk Reduction Demonstration (RRD)		Final delivery of GFS will be at 18 months after contract award. However, there will be opportunities to interact with the Government during the development of GFS prior to the 18 month final delivery.	N/A

#	Doc	Pg	Para #	Line#	Comment	Recommendation	Rationale	Res	Government Response	SPS Section Changed
162	_Main	24	3.2.3.2	379	The term "NRW Single:" is interpretive	We request a clarification with respect to "single NRW" in frequency or sets of frequency or a communication channels net that involves many aspects of time, space and frequency	We understand that "the NRW is an objective requirement of this SPS"(line 386), if this is a single channel as defined and a channel supports 12 simultaneous users then how many channels are required		The phrase "single NRW" refers to the usage of a single waveform. Further, the Government's interpretation of the 12 simultaneous CDL links objective requirement has been clarified to indicate that NRW can count as no more than one link.	3.2.3.2 & 3.2.2.2
163	_Main	25	3.2.3.2.3	401-407	With the NTCDL NRW performing layer 3 routing is there an expectation that routing protocols (IGMP / PIM / OSPF) will work between the aircraft and the EDUI?	We request a clarification of the anticipated routing connections and traffic to existing and anticipated network systems within the OSI concept	Clarification will help define extent of network connectivity within NRW MANET, specifically with non-NTCDL systems.		The operation of NRW at Layer 3 is intended to be limited to within a NRW network. The operation of the NRW with systems external to NTCDL will be handled by the EDUI. The NRW interfaces with the EDUI at Layer 2.	N/A

#	Doc	Pg	Para #	Line#	Comment	Recommendation	Rationale	Res	Government Response	SPS Section Changed
164	_Main	43	3.3.3.1.1.a	958-959	With two links per Ethernet connection, will the NTCDL be required to guarantee duplicate packets will not be transmitted over the link or will this function be handled through the EDUIs?	We request a definition of the separation of EDUI and NTCDL roles in handling duplicate packet transmissions	Clarification will help define EDUI and NTCDL data management functions		The requirement has been revised to require only a single Ethernet link.	3.3.3.1

#	Doc	Pg	Para #	Line#	Comment	Recommendation	Rationale	Res	Government Response	SPS Section Changed
165	_Main	43	3.3.3.1.1.2	972-974	What layer-3 routing / Network Address Translation (NAT) functions will be performed by the EDUI? Will the EDUI expect to implement a simple Ethernet switch, leaving the NTCDL responsible for any aircraft isolating NAT layers such as currently required in CV-TSC for communications with the MH-60R?	We request a clarification to the extent of EDUI and NTCDL Ethernet switching	Clarification will help define the extent of Ethernet switching amongst EDUI and NTCDL components		Each link operates independently and is delivered to the end user. A system level approach involving the airborne platform, transport mechanism, and the end user will be required to address issues such as the use of duplicate IP addresses.	N/A

#	Doc	Pg	Para #	Line#	Comment	Recommendation	Rationale	Res	Government Response	SPS Section Changed
166	_Main	40	3.3.1.6.2	879	0.25 dB for a fixed pointing system creates significant complexity and cost based on coordinates from off board platform in all cases and not within the NTCDL's ship side control in this mode.	Based upon our comms experience we recommend the requirement be increased to be commensurate with platform navigation and SND 16 bit resolution.	Design complexity and may not be achievable under all close range conditions of SND navigation accuracy resolution		The requirement has been changed to 0.5 dB. The requirement refers to losses associated with RF tracking - the section has been revised to make this clearer by adding: "The tracking function [shall] include both RF and Point-at-Nav tracking. [T]"	3.3.1.7.2
167	_Main	76	3.6.1.1	1831	Equipment rack dimensions are for a standard 38U militarized rack however the text indicates that shock mounting is included in the dimensions.	We request that more space be allocated for the Link Control Rack or make shock mounting separate	Given the amount of functions that the link control rack must perform having less than 38U would impact cost and complexity		Section 3.6.3 (BDE SWaP) has been rewritten to allow the vendor more flexibility in how the BDE is racked and stacked. The vendor is encouraged to minimize SWaP across the entire system.	3.6.3
168	_Main	31-34	3.3.1.1 / 3.3.1.2	550	Does the G/T and EIRP required to be achieved include the worst case ship roll/pitch and scan angle?	We recommend specifying where roll/pitch/and scan margin should be included	Necessary to determine antenna gain requirements		The G/T and EIRP requirements have been revised and now address this consideration. Additionally, the antenna coverage section.	3.3.1 & 3.3.1.1

#	Doc	Pg	Para #	Line#	Comment	Recommendation	Rationale	Res	Government Response	SPS Section Changed
169	_Main	37	3.3.1.3	772	Are PCE/SCE intended to be implemented with the same equipment?	We request clarification of the PCE requirements are meant to be implemented by CDL radio FL/RL swaps and not separate equipment			The Government does not require a specific implementation. However, no additional SWaP is allocated to support the use of separate equipment.	N/A
170	_Main	32	3.3.1.1.2	597	The VSWR [shall] be no greater than 2.5:1.[T]	This type of requirement is typically a design detail that could limit the trade space that can be performed. Is there clarifying data the government could provide as to the driving force behind this requirement			VSWR requirement has been removed from the SPS.	N/A

#	Doc	Pg	Para #	Line#	Comment	Recommendation	Rationale	Res	Government Response	SPS Section Changed
171	_Main	36	3.3.1.2.2	723	The VSWR [shall] be no greater than 2:1.[T]	This type of requirement is typically a design detail that could limit the trade space that can be performed. Is there clarifying data the government could provide as to the driving force behind this requirement			VSWR requirement has been removed from the SPS.	N/A
172	_Main	36	3.3.1.2.2	734	The VSWR [shall] be no greater than 2:1.[T]	This type of requirement is typically a design detail that could limit the trade space that can be performed. Is there clarifying data the government could provide as to the driving force behind this requirement			VSWR requirement has been removed from the SPS.	N/A

#	Doc	Pg	Para #	Line#	Comment	Recommendation	Rationale	Res	Government Response	SPS Section Changed
173	_Main	37	3.3.1.2.2	748	The VSWR [shall] be no greater than 2.5:1.[T]	This type of requirement is typically a design detail that could limit the trade space that can be performed. Is there clarifying data the government could provide as to the driving force behind this requirement			VSWR requirement has been removed from the SPS.	N/A
174	_Main	37	3.3.1.2.2	768	The VSWR [shall] be no greater than 2.5:1.[T]	This type of requirement is typically a design detail that could limit the trade space that can be performed. Is there clarifying data the government could provide as to the driving force behind this requirement			VSWR requirement has been removed from the SPS.	N/A

#	Doc	Pg	Para #	Line#	Comment	Recommendation	Rationale	Res	Government Response	SPS Section Changed
175	_Main	33	3.3.1.1.2.1	620	Is Ship motion is included in these antenna coverage values.	We request clarification with respect to the values in preceding this section include ship motion or not. This may result in a larger area coverage for the array.			The revised approach to evaluating antenna RF performance as minimum values over the antenna coverage specified reduces the importance of ship motions. Ship's motion continues to be relevant for various tracking and search functions.	3.3.1.1
176	_Main	41	3.3.2	895	a. The on-deck link hardwire [shall] be a ruggedized Tactical Fiber Optic Cable Assembly (TFOCA).[T]	We request a clarification on whether there be Government Furnished Data (and/or be provided GFE) for the TFOCA and its interface to the aircraft?			The reference to the TFOCA has been replaced by specific requirements for the on-deck link subsystem.	3.3.2

#	Doc	Pg	Para #	Line#	Comment	Recommendation	Rationale	Res	Government Response	SPS Section Changed
177	_Main	70	3.5	621	The primary elevation scan region for the antenna is plus/minus 3 degrees, plus compensation for ship's motion as specified in Section 3.3.1.5.	We request a clarification on what specifically should be used this primary scan region for in optimizing scan performance? As the shall in 3.3.1.1.2.1 is minimum performance over a larger scan region, is there an objective requirement for additional performance in the primary scan region?			The statement has been removed.	N/A
178	_Gen	8	3.1.4.2	31	SOW: Projected tasks for next 2 fiscal years for each quarterly PMR Review	Detailed planning for next 12 months	Planning packages for 1 to 2 years out allows flexibility to adjust to changes with reduced cost		Refer to the DD Form 1423 which will contain delivery dates.	N/A

#	Doc	Pg	Para #	Line#	Comment	Recommendation	Rationale	Res	Government Response	SPS Section Changed
179	_Gen	39	3.2.6.1.1	2	SOW: Contractor shall submit the CDRL documents listed prior to the SRR	Recommend definition of time required for CDRLs submittal prior to SRR	Allows the contractor to plan accordingly to complete required CDRLs prior to the System Requirements Review (SRR)		Refer to the DD Form 1423 which will contain delivery dates.	N/A
180	_Gen	40	3.2.6.1.2	29	SOW: Contractor shall submit the CDRL documents listed prior to the PDR	Recommend definition of time required for CDRLs submittal prior to PDR	Allows the contractor to plan accordingly to complete required CDRLs prior to the Preliminary Design Review (PDR)		Refer to the DD Form 1423 which will contain delivery dates.	N/A
181	_Gen	42	3.2.6.1.3	12	SOW: Contractor shall submit the CDRL documents listed prior to the CDR	Recommend definition of time required for CDRLs submittal prior to CDR	Allows the contractor to plan accordingly to complete required CDRLs prior to the Critical Design Review (CDR)		Refer to the DD Form 1423 which will contain delivery dates.	N/A

#	Doc	Pg	Para #	Line#	Comment	Recommendation	Rationale	Res	Government Response	SPS Section Changed
182	_Gen	48	3.2.8.2	30	SOW: Contractor shall submit the CDRL documents listed prior to the TRR	Recommend definition of time required for CDRLs submittal prior to TRR	Allows the contractor to plan accordingly to complete required CDRLs prior to the Test Readiness Review (TRR)		Refer to the DD Form 1423 which will contain delivery dates.	N/A