

NNL13ZB1001R

Radiation Budget Instrument (RBI)

Industry Questions/Comments and Government Response

May 15, 2013

	<b>Contract/SOW Reference/Topic</b>	<b>Industry Question/Comment</b>	<b>Government Response</b>
1	General	Does the Government still anticipate a June 6, 2013 release of the final RFP?	The Government anticipates adhering to the current tentative schedule, which includes release of the final RFP on or before June 6, 2013.
2	RFP, Section L	Will the total evaluated price be a sum of CLIN 001 and CLIN 002?	Provision L.18, Factor 2 – CLIN 001 Cost/Price applies only to CLIN 001. There is no requirement for pricing on CLIN 002 since requirements have not been defined at this time.
3	General dRFP	Regarding the proposal due date with a 45 day turnaround period - is it possible to extend the RFP due date?	Yes. The proposal due date will be revised from July 26, 2013 to August 15, 2013 in the final RFP. Past performance volumes are requested to be submitted by August 1, 2013.
4	RFP, Section B, CLIN 002	Is it NASA's plan to negotiate both cost and fee structure on each IDIQ task order in CLIN 002?	Yes.
5	RFP, Section B, CLIN 002	Will the Government consider increasing the number of days for the submission of task order proposals?	Yes, the Government intends to increase the number of days for the submission of task order proposals to 15 days.
6	RFP, Section L.12	Page limits for the Past Performance volumes are 20 pages prime and 10 pages for each significant subcontractor. Could this be changed to 20 pages for both the	Yes. We intend to update the page limits for Past Performance volumes in the final RFP to 20 pages for the prime and each significant subcontractor.

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7	IPRD-0015	Each measurement channel of the instrument shall have a yearly rate of change in response of less than 0.4% of the average radiance magnitude of that channel described in Section 4.2.1. However, Section 4.2.1 only describes ranges, not average radiance. Should we assume that average radiance is the mean of the ranges (i.e. 250, 90, 212.5)?	The IPRD is being revised and is expected to include the following: “Each measurement channel of the instrument shall have a yearly rate of change in response of less than 0.2% of that channel’s maximum value of radiance given in section 4.2.1.”
8	IPRD-0020 and IPRD-0023	The Type A uncertainty appears to exceed the Type B uncertainty for the range 0 to 100 W/m2-sr. Is that correct?	The IPRD is being revised and is expected to include the following: “The instrument shall have type B standard uncertainty of +/- the larger of 0.75 W/m2-sr or 0.5% of LE in the LW channel for all Earth-viewing radiances as shown in Figure 4.2.4-2.” Further, figure 4.2.4-2 is being updated to reflect these changes.
9	dRFP, Sect. H.5	The clause requires the contractor and its subcontractors performing software engineering to have a non-expired rating at CMMI for Development Maturity Level 2 or higher for software, or Capability Level 2 or higher as measured by a SEI appraiser. Please clarify that firmware development and testing will not be subject to CMMI standards.	CMMI certification is required for software that will execute as firmware, but not for Field Programmable Gate Arrays (FPGAs) or other Programmable Logic Devices (PLDs) with logic developed using VHDL. NASA Handbook 8739.23 provides definitions and guidance for firmware and Programmable Logic Devices including FPGAs. NASA 8739.23 – Figure 1 identifies “firmware” as software residing in non-volatile memory on a hardware device, whereas most PLDs – including FPGAs – are considered hardware devices. Therefore, software that will execute as firmware does require CMMI certification, but FPGA development does not.
10	IPRD, Sect. 4.1	Please clarify in the RFP text: The 'measurement of radiance' referred to in the requirements RBPRD-0004, 5 and 6 are these 'filtered' radiances. Is it radiance as	Instrument Science Performance Requirements pertain only to filtered (as measured, which includes the instrument relative spectral response) radiance measurements. Unfiltering is the responsibility of the

		measured which includes the instrument relative spectral response, or is it unfiltered radiance, which requires extra ground processing step of removal of relative spectral response (unfiltering)?	Government after data is downloaded and archived.
11	Exhibit C, IPRD Sect. 5.5.2.5.2	Is there a similar heritage sample requirement for the ADM mode as there is for the Swath Mode?	The PSF requirements of Section 4.3.2 apply to all modes. Although the ADM mode includes azimuth angle rotation, the azimuth rotation rates are small at 0.5 to 6.0 degrees per second (draft IPRD, RBPRD-0063) and have negligible effect on the shape of the sensor point spread function.
12	IPRD	Why does RBI have a 7-year reliability requirement?	The JPSS-2 Mission will have a 7-year mission life in contrast to the NASA Earth Observing System and Suomi NPP 5-year mission life. The RBI reliability requirement of $P_s = 0.85$ at 7 years is necessary to mitigate the risk of gaps in Earth Radiation Budget measurements. JPSS Observatory launches are planned nominally every 5 years (JPSS-1 launch planned December 2016, JPSS-2 launch planned November 2021), and 1-year of instrument overlap is required for measurement continuity. The RBI reliability design requirement is consistent with other JPSS instruments and spacecraft and has been agreed upon among stakeholders.
13	Sect. M	Change to the RFP	In the final RFP, MSEPA 3.3 will be updated to include evaluation of a minimum of one level of tasks and logic supporting 1) instrument subsystem development, test, and integration 2) instrument level qualification and 3) calibration activities. Additionally, MSEPA 3.3 will be updated to evaluate the schedule duration to SAR to be within 54 months, and not equal to 54 months.
14	CDRL/DRD	Change to the RFP	In the final RFP, the CDRL/DRD will be revised to clarify use of previously existing data items. The anticipated text is: Previously existing data items, updated as needed to meet RBI DRD requirements, may be used to fulfill a DRD submission. For the Government to consider acceptance

			of the data item the contractor shall have thoroughly reviewed and evaluated the existing data item against RBI requirements and contemporary standards, processes, best practices and analytical approaches, and have updated the data item specifically for RBI prior to submission.
15	IPRD, Sect. 4, Table 4.1.1.1-1 and Fig. 4.1.1.1-1	Change to the RFP	Table 4.1.1.1-1 and Fig. 4.1.1.1-1 will be updated in the final RFP to restrict the SW upper bounds to 50um.
16	IPRD, Sect. 4.1.2.1, LW Measurement Bandpass	Change to the RFP	The final IPRD will be revised to modify the LW spectral response such that the requirement ends at 50um in the final RFP.
17	dRFP Sect. H.8, Special Clause for Contract Changes	Change to the RFP	In Section H.8 in the final RFP, the cumulative value will be revised from \$1,000,000 to \$500,000.
18	SOW	Change to the RFP	The SOW will be revised in the final RFP such that NASA will accept ESA Workmanship standards in lieu of NASA Workmanship Standards, with the exception that IPC 6012 Rev B, with the 3-A appendix will be mandatory. Although a formal, documented gap analysis between NASA and ESA workmanship standards does not exist, prior work has established general equivalence between NASA and ESA workmanship standards. See Dunn, B.D., "Workmanship standards and their application on ESA projects", Soldering & Surface Mount Technology, Volume 20, Number 4, 2008, pages 37-44.
19	dRFP, Sect. L, URTA 1.5		Sections L and M, URTA 1.5 will be revised in the final RFP. The anticipated text for the second bullet is: The scope and technical risk of modifications, the plan and schedule for completion of the modifications,

		Change to the RFP	<p>and any analysis, life test, or other testing required to use the hardware design/software for RBI.</p> <p>Note: Life testing is required for any mechanism of new design, mechanisms that must incur design or manufacturing changes to enable use for RBI where the changes invalidate any prior demonstrated performance, or mechanisms that have been used in a substantially different operational manner or environment than RBI whereby prior life testing or demonstrated performance is not directly applicable. See SOW 3.8-04, DRD MA-26, SOW 4.1-04 and SOW 4.1-05 and URTA 1.5.</p>
20	IPRD Section 4.3.2 (RBPRD-0042)	Change to the RFP	The IPRD Section 4.3.2 is being revised in the final RFP and is expected to specify the overlap "at nadir."