

Amendment 0004

Solicitation Number: ONRBAA 13-013

Gas Turbine Upgrades for Reduced Total Ownership Cost (TOC) and Improved Ship Impact

Date: 01 August 2013

The purpose of Amendment 0004 under ONRBAA 13-013 is the following:

A. to answer additional questions submitted after Industry Day:

(Q&A numbering continued from Amendment 003)

28. Q. Regarding the engines of interest listed in ONR BAA13-013, Amendment 3 lists the MT5 (and any derivatives of the MT5).

A. There is no interest in the 501K-17. There may be an interest only in the 501-K34, but likely little interest for an older engine.

29. Q. Table 1 of the BAA and its note are unclear. Power turbine and free turbine can be the same thing, referring to the free-running power turbine downstream of HP and IP turbine stages. It is believed you are referring to the HP turbine inlet temperature. Meanwhile the note about free turbine inlet gas temperature is confusing. Could you please re-word the table and note making explicit the part of the engine and whether gas or material temperature.

A. Amendment 3 corrected Table 1 to say it was the high temperature turbine. If there is still some confusion refer to ISO 2314 Figure 2, item E, Power Turbine.

30. Q. Should power turbine inlet temperatures and corresponding % time be taken against the 25,000 hour life requirement along with gas to metal temperature corrections as applicable to determine material capability requirements?

A. The operating profile projected for other engines is not specifically known but would be elevated versus traditional Navy practice, but that the Table 1 profile did reduce engine component life from 25K hours down to 6K hours. If they had another profile this should be included in the submitted whitepapers.

31. Q. Wanted to know about how many cycles RR should consider for materials testing.

A. In burner rig mono-temperature test consider 40 cycles for 1000 hours. The multi-modal test had not been determined and would depend on the time of test apparatus to

change from 1300 to 1650 to 1800 to ambient temperature (of specimens). That has not been determined.

In my visit to GE aviation two weeks ago, GE does have rigs that can change to the different temperatures in about 15 seconds, but they burn lots of fuel quickly (no heater assistance) See ASTM E1049 for cycle definition.

32. Q. Is the Navy interested in the 501K?

A. The Navy is not interested in 501-K17 as it is soon to be retired or already is. There likely will be limited interest in the 501-K34.

B. to revise the white paper due date. Accordingly, Section IV. 3. is hereby revised as follows:

3. Significant Dates and Times

Event	Date	Time
Pre-Proposal Conference / Industry Day	6/17/2013	Sign-In 8:00 AM – 8:30 AM; 8:30 AM – 4:00 PM Eastern Standard Time
White Paper Due Date	8/19/2013	2:00 PM Eastern Standard Time
Notification of White Paper Evaluation*	9/13/2013	
Full Proposal Due Date	11/15/2013	2:00 PM Eastern Standard Time
Notification of Selection: Full Proposals*	12/16/2013	
Awards*	6/30/2014	