

IARPA-BAA-16-01

MAEGLIN BAA QUESTIONS & ANSWERS 1 through 7

Q1: Is this a follow-on requirement? If so, could you please provide the incumbent contract number for this opportunity? If not, is this a new requirement?

A1: IARPA-BAA-16-01 is a new solicitation, not a follow-on to an existing program or solicitation.

Q2: The Power metric/requirement for system components listed in the 11 March 2016 BAA is the most noticeable difference from what was discussed during the MAEGLIN Industry Day meeting. Specifically, Chart 28 as shown during MAEGLIN Industry Day indicated a Power requirement of less than 5W per component without a run-time constraint. The BAA now lists "Power" of less than 7.5 J (Energy) per component step as listed in Figure 4 on page 16, which imposes a defacto run-time constraint that potentially limits both options and capabilities. Are Power and Energy figures related within the context that IARPA requires fast analysis operations with a not to exceed 1.5 seconds at 5 watts Power per component step for a total Energy of less than 7.5 Joules per component run? Would you please explain the relationship between Power requirements (Watts) and Energy numbers (Joules)? Is it your intent to impose fast component run times during continuous remote operations through the "less than the 7.5 J per component step" requirement? As the BAA is the most current IARPA directive, should the "Power" metric (Watts) in Figure 4 on page 16 within the BAA be changed to "Energy" (Joules)?

A2: It is not IARPA's intent to impose any sort of run-time constraint on the potential MAEGLIN technologies, other than the sampling time (minimum 30 minutes, maximum 24 hours). However, since a primary goal of the MAEGLIN program is long-term unattended operation of a compact device, total energy usage per analysis cycle is an important system parameter. This is why the decision was made in the final BAA to use a pure energy measure (Joules per analysis cycle) instead of an implicitly time-based measure of expended energy (power in Watts). The reference to Power in the left column in Figure 4, on page 16, should be to Energy (See Amendment 0001). The corresponding energy units in the right column of this same table, and in the metrics tables on pages 17, 20, 21, and 22 (in J) are all correct.

Q3: In the BAA, it states: "Other Government Agencies, Federally Funded Research and Development Centers (FFRDCs), University Affiliated Research Centers (UARCs), Government-Owned, Contractor-Operated (GOCO) facilities, Government Military Academies, and any other similar type of organization that has a special relationship with the Government, that gives them access to privileged and/or proprietary information or access to Government equipment or real property, are not eligible to submit proposals under this BAA or participate as team members under proposals submitted by eligible entities." Our question is: can proposers utilize the agencies listed above in a proposal on a fee-per-use basis in order to access a special capability, without any requirement of exclusivity (i.e. this capability would remain available to all performers)?

A3: In instances where Other Government Agencies, Federally Funded Research and Development Centers (FFRDCs), University Affiliated Research Centers (UARCs), Government-Owned, Contractor-Operated (GOCO) facilities, Government Military Academies, and any other similar type of organization that has a special relationship with the Government make their resources publicly available to universities and industry on a fee-per-use basis, fee for service arrangements are permitted. Within proposal responses, Offerors should clearly identify planned use of such arrangements and certify that the government affiliated organization will execute work to the Offeror's specification; no input or consultation from the government affiliated organization is permitted. The Offeror may only propose use of such resources that are currently available to the public; IARPA should be able to independently verify that fee for service arrangements are offered by the proposed resource. No member of an organization that has a special relationship with the Government is permitted to be a team member, or provide consultation or input.

Q4: Statement in IARPA-BAA-16-01: "Polar, non-polar, volatile, semi-volatile compounds. In Phase 1 compounds of interest will not be permanent gases at standard temperature and pressure (STP)." Please define what this means? Does this mean that you are looking for just available headspace available from a sample that would be in the liquid state at STP.

A4: All compounds in the Phase 1 MAEGLIN library will be either liquids or solids at standard temperature and pressure (STP). Performers will not be expected to trap and concentrate compounds that are pure gases at STP. All Phase 1 library compounds will have sufficient vapor pressure at STP to allow sampling of headspace concentrations in the 50 pg/cm³ to 500 µg/cm³ range, per the listed metric in Figure 4 (page 17, 20, 22) of the BAA "single compound concentration range that can be effectively sampled".

Q5: Statement in IARPA-BAA-16-01: "The fluidic interface of the collector device to the separation device should be taken into account. For fluidic considerations, offerors may use as guidance either the cross-sectional area from a survey of typical capillary gas chromatographic columns or, for combined Collection/Separation systems, should take into account the actual interface between their Collection and Separation subsystems." Why? If a pre-concentrator has a larger cross-sectional area than a capillary GC column, but can desorb into a small area acceptable by the detector is this cross sectional dimension guidance and constraint important?

A5: This statement does not constrain the cross sectional area of the collector, but requests that the proposer consider the effect of fluidic transport from the collector to the separation device in their proposal. If an offeror is proposing to build both the collector and the separation device, then fluidics between these two components should be considered, as appropriate. If the offeror is only proposing to build the collector, then transport into a typical gas chromatographic column should be considered as an appropriate generic separation device.

Q6: Figure 4, Page 17 in IARPA-BAA-16-01: The output from the continued collection thrust area metric is listed as "Each gas aliquot must pass through the output orifice of the collector at <.25 seconds." We do not understand, what is the difference if this time interval is one second, and the volume is minimized to match the requirement of the detector flow?

A6: If an offeror is proposing to build both the collector and the separation device in their proposal, then it is assumed that the separation device will be optimized to accommodate the temporal width of the desorbed pulse of gas from the collector, so this requirement is not included in the combined collector/separator thrust. However, if the offeror is only building the collector, then the width of the desorbed pulse of gas must be narrow enough to not cause undue retention time uncertainty if a typical gas chromatograph column is considered as an appropriate generic separation device.

Q7: In Figure 4 of IARPA-BAA-16-01, the Number of Compounds is listed as: 50 Targets, 100 background compounds, 5 unknowns. Would it be possible to get information on this list? Is there a list or sub set list of these that could be provided?

A7: The specific list of compounds that will comprise the MAEGLIN Phase 1 library will not be published during the solicitation phase. Per section 1.B.4 of the BAA, this list will be provided upon program kickoff. The list will comprise a variety of different compounds, including polar, non-polar, volatile, and semi-volatile compounds, as well as compounds with varying functional groups such as alcohols, ketones, amines, and saturated and unsaturated hydrocarbons, to provide a set of non-inclusive examples. The precise list of Phase 1 library compounds will be judiciously chosen after source selection is completed in order to fairly test all of the selected MAEGLIN technology approaches. Offerors are encouraged to provide information in their proposal as to the types of compounds their technology will, and will not, be able to detect.