JUSTIFICATION FOR SOLE SOURCE/BRAND NAME SOLE SOURCE <$150K

PLEASE FILL IN ALL APPLICABLE BLOCKS BELOW.
A NARRATIVE MUST BE ADDED TO ALL APPLICABLE SECTIONS.

PO Number:				
The effort listed on this form is for: (please mark one):	X	Supply		Service
The material and/or service listed on this form is (please mark one):	X	Sole Source		Brand Name

Restricted to the following source or manufacturer:

- Manufacturer/Source: Hydroid, Inc.

[redacted]

Description of the item(s) or service(s) required and the estimated cost(s):

Item#	MFG Name	MFG Part#	Description	Qty	U/I	[redacted]	
1	Hydroid	102610-1-1	ASSY; TRANSPONDER; WHITE; DT4A	1			
2	Hydroid	102610-1-1	ASSY; TRANSPONDER; WHITE; DT4A	1			
3	Hydroid	102610-1-1	ASSY; TRANSPONDER; WHITE; DT4A	1			
4	Hydroid	102610-1-1	ASSY; TRANSPONDER; WHITE; DT4A	1			

*** If additional items are required, please provide on a separate spreadsheet

1. List the Required Delivery Date (RDD) or Period of Performance (POP):

   We require delivery no later than 10 June, 2016. If possible, we request delivery prior to REMUS experiments scheduled to begin on 23 May, 2016.

*** If additional space is required, please attach a continuation sheet.

2. Specify characteristics of the material or service that limit the availability to a sole source/brand product (unique features, function of the item, etc.). Describe in detail why only this source/brand can furnish the requirements to the exclusion of other sources/brands.

   The requested materials are acoustic transponders used as external navigation aids by the REMUS 100 AUV, a proprietary vehicle system manufactured by Hydroid, Inc. As such, these transponders must be capable of listening for a specific acoustic signal from one or more REMUS 100 vehicles and immediately sending an acoustic reply. The set of four transponders shall comprise a REMUS long baseline (LBL) "group" with four distinct frequencies in the 20-30 kHz frequency range, designated DT4A, DT4B, DT4C, and DT4D. This requirement will allow CAVR's REMUS 100 vehicles and support equipment to interrogate all four transponders with a single command from an acoustic modem. It will also allow multiple REMUS vehicles to operate simultaneously from a single LBL baseline created from two georeferenced transponders. Most importantly, this requirement will maintain 100% compatibility with all REMUS AUV hardware and software, including the handheld Ranger towfish transducer used during all REMUS deployments. To our knowledge, there are no commercially-available acoustic transponders which offer 100% compatibility with Hydroid's REMUS 100 hardware and navigation software.

3. Indicate if the requested material or service represents the minimum requirements of the Government.

   The requested materials represent the minimum requirements of the Government to continue REMUS 100 operations in fulfillment of CAVR's research and education mission at NPS.

4. Indicate if the material or service must be compatible in all aspects (form, fit, and function) with existing systems presently installed/performing. Describe the equipment/function you have now and how the new item/service must coordinate, connect or interface with the existing system.

   As stated above, the requested REMUS 100 navigation transponders must be 100% compatible with the three existing REMUS 100 systems in use at the NPS Center for Autonomous Vehicle Research. Without modifying the REMUS vehicle's hardware or navigation software, the requested transponders must be able to listen to a specific acoustic signal from the REMUS 100 transducer and reply with the appropriate acoustic signal. This is required so that REMUS can compute the range from each transponder location in order to localize its own position. In addition, the transponders must be able to form a "group" with four distinct frequencies which can be interrogated by a single acoustic modem, or by multiple REMUS vehicles operating simultaneously. Finally, each REMUS 100 system consists of a handheld Ranger which is used to verify the acoustic ranges to the AUV and its LBL transponders during pre-deployment and mission operations. This device has a manual frequency selector switch to choose among the available REMUS-specific frequencies. Purchasing a different transponder would require costly modifications to the three Rangers and three REMUS vehicles.

5. Does a patent, copyright or proprietary data limit competition?

Yes. Hydroid, Inc. is the only manufacturer licensed to produce and sell the REMUS 100 AUV.

*** If additional space is required, please attach a continuation sheet.

6. Are the items "direct replacement" parts/components for existing equipment? If so, provide the information about the Next Higher Assembly (NHA)/equipment which the replacement parts are going into (e.g., description, model, part number, Original Equipment Manufacturer (OEM), etc.).

   Yes. This requisition is needed for direct replacement of four REMUS 100 LBL transponders that were destroyed and/or unrecoverable during Ice Exercise (ICEX) 2016 in the Arctic Ocean. These transponders are discrete end items, but are an integral part of each REMUS 100 system, valued at over $500,000.

7. Provide any additional information to support a sole source/brand name sole source procurement. The rationale must justify "either" substantial duplication of cost to the Government that is not recovered through competition or unacceptable delays in fulfilling the mission of the agency.

   This requisition is for a brand name sole source procurement of four REMUS 100 navigation transponders to replace four units which were damaged and/or lost in the field. CAVR has a requirement to conduct REMUS operations in a joint experiment with NASA in Summer 2016. Purchasing alternative transponders would require subsequent system modifications to achieve full compatibility with the REMUS components. This would incur unacceptable delays in fulfilling CAVR's research and education mission. Moreover, due to proprietary hardware and software considerations, this alternative may not even be feasible.

*** If additional space is required, please attach a continuation sheet.

TECHNICAL *OR* REQUIREMENTS CERTIFICATION

I CERTIFY THAT THE STATEMENTS CHECKED, AND INFORMATION PROVIDED ABOVE ARE COMPLETE AND CORRECT TO THE BEST OF MY KNOWLEDGE. I UNDERSTAND THAT THE PROCESSING OF THIS SOLE SOURCE/BRAND NAME SOLE SOURCE JUSTIFICATION PRECLUDES THE USE OF FULL AND OPENT COMPETITION.

[redacted]

CONTRACTING OFFICER APPROVAL:

[redacted]