BAE SYSTEMS

Maritime Australia

Non-PFAS Alternative Firefighting Foams

Request for Information

Hunter Class Frigate Program

[February 2021]

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Maritime Australia
Approvals and Authorisations

Role / Title	Name
Senior Mechanical Engineer	Daniel Bettcher
Engineering Manager	Ed Cox
Project Manager	James Bossard

Amendment History

Version	Date	Remarks
1	02/2021	Initial Release

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Acronyms and Abbreviations

Acronym	Description
AFFF	Aqueous Film Forming Foam
BAEs	BAE Systems Maritime Australia
EPA	Environmental Protection Agency
FW	Freshwater
HP	High Pressure
LP	Low Pressure
PFAS	Per- and poly-fluoroalkyl substances
RFI	Request for Information
RFP	Request for Proposal
SW	Seawater

Definitions

Term	Definition
Class A	Fires in ordinary combustible materials such as wood, cloth, paper, rubber and many plastics are classified under this. In general fires involving solid materials, usually of an organic nature, in which combustion normally takes place with the formation of glowing embers.
Class B	Fires that involve flammable, combustible liquids such as petrol, kerosene, oil, tar, paint, wax, cleaning spirits or alcohol are known as Class B.
ASC Shipbuilding Pty Ltd	ASC Shipbuilding Pty Ltd trading as BAE Systems Maritime

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1. Executive overview

The release of Per- and poly-fluoroalkyl substances (PFAS) into the environment is of on-going concern to Australia due to their tendency to be highly persistent, to bio-accumulate and their links to adverse health impacts in humans, flora and fauna.

As a way of complying with the Stockholm Convention to phase out these persistent organic chemicals, a ban on fluorinated firefighting foams in South Australia came into effect in January 2020 following an amendment of the Environment Protection (Water Quality) Policy 2015 (the Policy) under the Environment Protection Act 1993 (EP Act).

In response, BAE Systems Maritime Australia (BAEs) is issuing a request for information (RFI) from Australian industry for the identification of alternative non-PFAS firefighting additives usable in a marine environment.

It is expected that the supplier's product will be capable of meeting and/or exceeding the required performance characteristics provided by current PFAS firefighting additives while also providing a safe and environmentally friendly product.

Supplier responses to the RFI are to be submitted to BAEs via ICN Gateway.

Suppliers please note that the closing date and time for response to this RFI is midnight on the Friday 12th March 2021

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2. General information

BAE Systems Maritime Australia seeks information specific to this RFI from Australian industry for the purpose of understanding potential future availability of a product suitable for marine environment firefighting.

Upon receipt and review of the submissions to this RFI, and subsequently, where BAEs determines the need for a product, a Request for Proposal (RFP) will be issued to those down-selected supplier/s. Therefore, the quality and accuracy of your response to this RFI will be used by BAEs to evaluate and inform business decisions.

In consideration of your response to this RFI, BAEs will base its evaluation of your response on the functional, technical or other express requirements stated in this RFI.

It is the suppliers responsibility to ask questions or request clarification if any aspect of the RFI is unclear.

BAEs reserves the right to withdraw this RFI and discontinue the process at its own discretion.

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3. Request for Information

The purpose of this RFI is to identify what, if any, non-PFAS firefighting additives are available within the Australian market for use in a Marine/Offshore environment. The product should ideally be Australian made or at the least, distributed, and be safe for use and environmentally friendly.

The objective of this RFI is to identify the key products and suppliers that can meet, or work to meet, the needs of BAEs in supporting marine platform firefighting capabilities in a safe and environmentally friendly manner while not degrading performance.

In supplying a response to this RFI, suppliers are requested to provide in their response the following:

- Proposed qualification effort on certifying or gaining accreditation for any additive where appropriate.
- Testing evidence where appropriate that shows methodology used to qualify their product.
- Product support information related to the supplier, the manufacturer and distribution ability for the product within Australia.

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4. RFI specifications

The following attributes are required of the supplier to enable BAEs to further consider your response to the RFI. Any proposed additive submission that is capable of satisfying IMO MSC 1./Circ 1132 and 670 would be highly regarded by BAEs.

4.1. Functional requirements

- Supplier must be accredited to or able to achieve ISO 9001:2015.
- Proposed additive must be compatible with, but not limited to, Copper Nickel 90/10 and Stainless Steel pipework and fittings as appropriate.
- Awareness of proposed additive firefighting performance compared to PFAS additives.
- Compatible with;
  - Low Pressure (< 10 bar) or High Pressure (50-90 bar) firefighting systems.
  - Sprinkler nozzles used in LP and HP firefighting systems.
  - Fresh (FW) and seawater (SW) firefighting systems.
- Proven performance in dealing with Class A (Wood, Paper and Plastic) and Class B (Fuel) fire types.

4.2. Technical requirements

- Additive compliance to or at the least, the ability to conform to the requirements of IMO MSC.1/Circ.1312 and IMO MSC.1/Circ.670.
- Additive should satisfy the requirements of MIL-F-24885F or be capable of being qualified to the standard by test.
- Performance shall be comparable to current standard products (6% MILSPEC AFFF concentrate) for extinguishment and burn back times.
- Appropriate Environmental certification or approval from the EPA for use of the chemical, or ability to achieve compliance.

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5. Response format

BAEs requests that supplier responses to this RFI be presented in a brief technical report format. The content of the report should include the presentation of the product, its key features and a technical response to the suitability of the additive such that it details how the item meets the requirements referred to in Section 4.

Where direct correlation of the requirements is not yet possible through lack of empirical evidence, a proposal should be added to discuss how this could be achieved.

Where appropriate, responses should be accompanied by a Technical Data Sheet (TDS) and an MSDS (Material Safety Data Sheet).

All responses should be submitted to the ICN portal.

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6. Required supplier information

I. Provide full details of previous major defence, maritime or commercial projects in which your company has delivered castings.
II. Do you have previous experience supplying castings?
III. What State/s do you have these capabilities in?
IV. Have you worked on defence contracts before?
V. Provide details of the company's management organisation structure.
VI. Are you an Australian-owned company?
VII. Are you an Indigenous company?
VIII. Please provide the number of Indigenous/Aboriginal/Torres Strait Islander employees your organisation has? (Stipulate Full Time and Part Time)
IX. State acquired company certification and accreditations.
X. Stipulate any further competitive discriminators that have not been identified in the answers to previous questions.
XI. Have you updated your ICN company profile with the your trading name, contact details, website, ABN, number of employees, annual turnover, export details (if applicable) and ANZSIC codes? This information will be used in assessing this RFI.
XII. Do you have quality system accreditation under ISO 9001:2015?

7. Closing date for RFI

This RFI will close midnight on the Friday 12th March 2021

8. Contact details

Please direct any questions or further clarifications you may have to Daniel Bettcher (Senior Mechanical Engineer) daniel.bettcher@baesystems.com 08 8480 7420