



NATIONAL SCIENCE FOUNDATION
2415 Eisenhower Avenue • Alexandria, VA 22314

July 21, 2023

AGENCY: The National Science Foundation, Geosciences Directorate, Division of Ocean Sciences.

ACTION: Notice of Final Waiver: General Applicability Public Interest Waiver under the Build America, Buy America Act for the Vessels of the U.S. Academic Research Fleet.

WAIVER NUMBER: 20230001

(P.L. 117-58 §§ 70901-70927) (BABA)

SUMMARY: The National Science Foundation (NSF) is proposing this general applicability public interest waiver of the Build America, Buy America Act (BABA) requirements for iron, steel, construction materials, and manufactured products as applied to the U.S. Academic Research Fleet (ARF). The duration of the proposed waiver is one (1) year in the public interest as described below, including the safety of life and property, we invited comments for the statutory minimum of 15 days and considered revisions where possible that allow the ARF to maintain safe operational status.

The ARF is made up of the premiere U.S. ocean-going ships in support of a diverse range of scientific research. These ships provide the capabilities and instrumentation on which U.S. researchers depend to conduct critical and time sensitive studies. Presently the ARF consists of seventeen ships with ownership among multiple federal government agencies, nonprofit organizations, and universities. Although ownership varies, NSF financial assistance funding supports maintenance and servicing across the fleet in operations. Use of those funds is subject to BABA domestic content procurement preferences for all federal financial assistance obligated for infrastructure projects.

NSF is implementing a comprehensive, multi-stepped review of ARF components. Each ship of the fleet is distinct with respect to age, function, and design, and represents a complex and often interconnected configuration of components, some of which are of foreign origin. It is essential during the pendency of this review that operations continue. It is anticipated more targeted and time-limited waivers for the ARF will follow this initial request.

BABA OVERVIEW:

In his first week in office, President Biden signed Executive Order 14005, “Ensuring the Future is Made in America by All of America’s Workers,” launching a whole-of-government initiative to strengthen the use of federal procurement to support American manufacturing. The executive order established the Administration’s policy on domestic sourcing, required each agency to review their policies on domestic sourcing and suspend, revise, or rescind any policy inconsistent with the EO, and established the Made in America Office within OMB.

On Nov. 15, 2021, the “Infrastructure Investment and Jobs Act” was signed into law. Title IX is the Build America, Buy America Act (BABA), which focuses on maximizing the federal government’s use of services, goods, products and materials produced and offered in the United States. BABA requires that all iron, steel, manufactured products and construction materials used in federally funded projects must be produced in the United States.

When federal financial assistance funds are used to purchase goods, products, and materials for any form of construction, alteration, maintenance or repair of infrastructure, the awardee must follow the Act's provisions. When necessary, award recipients may apply for a waiver from these requirements. NSF may waive the application of the domestic content procurement preference in the case of one of three exceptions: (1) Public interest; (2) Nonavailability; and (3) Unreasonable cost.

Per OMB Memorandum M-22-11: Initial Implementation Guidance on Application of Buy America Preference in Federal Financial Assistance Programs for Infrastructure, a general applicability waiver is one that applies generally across multiple awards. Federal agencies issuing new general applicability waivers must review such waivers at least every five years from the date of issuance, although agencies are encouraged to review general applicability waivers more frequently, when appropriate. Review of a general applicability waiver requires publishing a notice in the Federal Register that, (i) describes the justification for a general applicability waiver; and (ii) requests public comments for a period of not less than 30 days on the continued need for a general applicability waiver. The agency must then consider the comments received in response to the initial notice and publish a determination in the Federal Register on whether to continue or discontinue the general applicability waiver.

NSF’S BABA IMPLEMENTATION: To implement the BABA provisions of the “Infrastructure Investment and Jobs Act” (IIJA; P.L. 117-58), NSF created a BABA Implementation Plan to provide a guide on how to implement the Act’s requirements. The BABA Implementation Plan outlined the NSF staff responsible for implementation, the policies needed, the process and steps NSF would take to achieve this objective, the design of the website, outreach and the training needed.

On May 13th, 2022, NSF issued a new BABA term and condition incorporating the requirements of the BABA Act for all financial assistance awards. New language was created for all Notice of Funding Opportunities to inform applicants who apply for NSF funding of these requirements. The updated funding notice was uploaded in NSF’s Program Information Management System and has been included in each solicitation, and funding opportunity issued after May 14, 2022.

On May 13, 2022, NSF launched the BABA webpage on the NSF website to provide information on the Act’s requirements. The page has a portal to publicly post all waivers, and guidance documents to assist the NSF award community in following the requirements. These documents include NSF's implementation of the Act; Frequently asked questions about the Act; Guidance on submission of an NSF waiver request; How to submit public comments; and, How do I know if the Act applies to my award.

NSF developed an internal Build America, Buy America Waiver Process Guide to educate NSF staff on the waiver process and provide an efficient system for processing waivers. The goal of

the Process Guide is to ensure all BABA waivers are processed in a timely manner, reviewed by NSF leadership, and to maintain consistency and transparency throughout. This 10-step process tracks waivers from submission by NSF recipients to a dedicated mailbox, through internal tracking, review and analysis, submission to OMB, and documentation on the NSF website.

NSF has updated several internal policy documents (ex: Research Infrastructure Guide, Business Systems Review, and Proposal and Awards Policies and Procedures Guide) with BABA information and requirements. In the lead up to May 14, 2022, NSF issued a “BFA Update” email to all NSF staff with BABA general info, posted to the NSF LinkedIn and Twitter accounts, issued a notice to the Research Infrastructure Community, presented on BABA implementation to the Deputy Assistant Directors, Office of Inspector General Stewardship Group, Program Officers Forum, at the NSF FY22 Grants Conference, and an NSF wide email blast on the internal waiver process. NSF offered training on BABA and the waiver process to its staff, and the Senior Accountable Official presented on BABA at the 2022 Research Infrastructure Workshop.

ARF OVERVIEW: The current 17 ships in the ARF are a sub-fleet of the U.S. Federal Oceanographic Fleet, with the NSF as the cognizant Federal Agency. Two ships are owned by the NSF, five are owned by the Office of Naval Research (ONR), and the remaining ships are owned by private and public research institutions of higher learning. An additional three NSF-owned ships are currently under construction and anticipated to become an operational part of the ARF between 2024-2025. The ships are operated by U.S. universities and laboratories with home ports in 12 states and one U.S. laboratory in Bermuda. All the ships are U.S.-flagged, and those vessels over 300 gross tons operate under a Certificates of Inspection issued by the United States Coast Guard (USCG). These ships went into service as early as 1976 and as recently as 2017 with a median age of about 25 years. Construction costs of the five global class and five ocean class ships alone exceeded a non-inflation adjusted \$500 million, with an additional \$180 million in retrofit efforts on three of the older ships. Major servicing and other repair costs in CY 2022 was nearly \$16 million, not unusual for any given year, and general operation costs for CY 2022 across the ARF was more than \$108 million. Each ship represents a distinct and complex configuration of components. The estimated number of components per ship range from hundreds of thousands to over one million. These ships serve as the primary platforms for ocean-based science, with more than \$60 million spent annually on scientific research funding. The federal government has and continues to make significant financial investments in this infrastructure and the science it supports.

The University National Oceanographic Laboratory System coordinates the ARF ship operators. Each ship’s day-to-day operations and maintenance, including their respective procurement systems, are overseen by universities and laboratories. These operations are predominantly supported by NSF-issued federal financial assistance funding, and any use of those funds for purchases of iron, steel, construction materials, and manufactured products are subject to the applicability of BABA terms and conditions.

These ships are subject to an array of international, federal, regional, and local regulatory oversight. U.S.-flag ships subject to USCG certification are inspected annually and are issued regulatory certificates ranging from one to five years in duration. Each ship is required to enter drydock for detailed preservation, maintenance, overhaul, and engineering and safety inspections twice in every five-year period, with considerable advanced planning required for long-lead component purchases which can include investigation for appropriately certified domestic

equivalents. Marine classification societies, such as the American Bureau of Shipping (ABS), also certify stages of design, construction, repair, and modification. At times and depending on the systems impacted by changed components, additional regional or local regulatory reviews may be required; for example, if the change may relate to pollution control requirements. Changes to existing components would trigger consideration and review by these oversight entities. Although an exact time frame to complete these reviews is unknowable, we anticipate that it will be lengthy and further compounded by the breadth of potentially impacted components and the total number of ships.

PUBLIC INTEREST WAIVER: It is in the public interest to keep the ARF deployed and conducting crucial science, during the components review. Approaching waiver considerations on a case-by-case, ship or component basis is not feasible within the timing required to maintain the ARF in safe and effective operation with available resources. Ships would be held back from starting operations of research campaigns during the review of a one-off waiver request any time a foreign component is needed.

A delay in ship operations has a monetary impact on not only the logistics costs, but also on the supported science. Operations expenses ensue even during ship idle time and can be up to \$100,000/day regardless of whether the ship is at sea. The cumulative scientific investment in ARF has been about \$60 million annually on average over the last five years. The ships service remote observatories with ongoing projects, providing years or even decades-long measurements, and are used to study isolated events such as volcanic eruptions, hurricanes, and other extreme events. Any interruption in ship availability may force scientific projects to be delayed or aborted completely, with the resultant lost investment in those projects, both financially as well as in scientific discovery.

Each ship is distinct and represents a complex configuration of varying components. Ships are highly integrated systems, some of which may consist of both domestic and foreign components. Changes to a seemingly simple component may lead to consequences that are not immediately knowable. The highly specialized and technical ships of today are the result of improvements in naval architecture, in part based on the hard learned experiences of maritime disasters. We anticipate that most component changes will require careful review by naval architects and other subject matter experts, as well as the USCG and/or ABS regulatory oversight, review, and approval.

At times, ARF ships require unplanned repairs to continue safe operations and are regularly subject to routine and periodic maintenance requirements, any of which may require consideration of replacing a foreign-origin component. Without this immediately effective general applicability waiver, BABA would prohibit any repair or maintenance that involves the purchase of even one foreign component until consideration of safe domestic alternatives and the pendency of any situational waiver. The resulting delay would keep the ship out of operational service at least for weeks and likely for many months. This delay would be required even if the ship were out at sea. The associated delays would lead to cascading and significant lost research opportunities and financial waste. Moreover, these delays may involve considerable concerns for the safety of property and most importantly the lives of those on the ships.

NSF shares the administration's goal to ensure that the federal government is investing taxpayer dollars in American businesses—both small and large. All ARF vessels are maintained in US

shipyards and create and support well-paid American jobs over the life of the vessel. NSF is conscious of their commitment to these US operators, many of whom submitted comments in support of this waiver, and who represent those who depend on the operation of the ships in the Fleet for their livelihood. Absent this waiver, that will allow the planned annual maintenance and repairs to proceed on-schedule, this American workforce could see negative effects.

NSF is implementing a comprehensive, multi-stepped review of foreign components to address viability of domestic substitutes in the ARF. An exhaustive cataloging of ship components is required to identify foreign components. As mentioned above, the estimated number of manufactured products on a ship is significant. When a foreign product is identified, an analysis of domestic alternatives will ensue. Where those alternatives are not available in the current market, notice will be provided to the Hollings Manufacturing Extension Partnership. Where alternatives are available, engagement with the regulatorily required review bodies, including but not limited to design safety, must be coordinated. Additional steps include, assessing impacts associated with any existing warranties, the availability of repair service providers after the introduction of substitute components, ownership considerations, and length of anticipated remaining service time, as well as other ancillary and related considerations. NSF expects the intricacies of these steps will require a lengthy period to complete across the ARF. Yet, we are committed to iteratively and as available remove components from the umbrella of this waiver when safe alternatives are present to allow uninterrupted ship operations.

CONCLUSION: It is in the public interest to conduct a comprehensive analysis of component replacements to ensure ARF ships are able to continue their valuable service as platforms for the scientific research community, making good on the substantial federal investments associated with their build and operation. The complexity of integrated components on oceanographic research ships makes it crucial that the NSF, the ship operators, and other stakeholders carefully consider any possible changes to components including the primary issue of safety, as well as related considerations of the type described above. Given that most ships include multiple integrated systems, the ramifications of potential changes require sufficient time to be evaluated and vetted by ship's engineers and appropriate subject matter experts, as well as the USCG and/or the ABS, to ensure full seaworthiness, and compliance with both federal regulation and as applicable other relevant U.S. state oversight. The continued and safe operation of the ARF is of primary concern.

ASSESSMENT OF COST ADVANTAGE OF A FOREIGN SOURCED PRODUCT: Under OMB Memorandum M-22-11, agencies are expected to assess "whether a significant portion of any cost advantage of a foreign-sourced product is the result of the use of dumped steel, iron, or manufactured products or the use of injuriously subsidized steel, iron, or manufactured products" as appropriate before granting a public interest waiver. NSF's analysis has concluded that this assessment is not applicable to this waiver, as this waiver is not based in the cost of foreign-sourced products.

SUMMARY OF COMMENTS AND AGENCY RESPONSE: The notice of the proposed waiver was posted on May 16, 2023, and closed on May 31, 2023. The NSF received thirty-two comments from ARF vessel operators and one comment from an industry partner, all in strong support of the proposed waiver. The NSF has reviewed and considered each comment. Twenty-four of the commenters specifically addressed the non-availability of U.S.-made products to meet the immediate need for maintenance and repairs to continue safe operation of the fleet and urged the agency to consider longer-term solutions. The NSF is issuing this one-year waiver to address the Fleet's immediate need to perform annual maintenance and repairs. In response to the

comments received requesting a longer-term strategy, NSF will develop additional targeted and time limited waivers, thereafter for the ARF.

EFFECTIVE DATES OF THE WAIVER: This waiver is effective July 21, 2023, through July 20, 2024.