

GAO Highlights

Highlights of [GAO-22-105432](#), a report to congressional committees

Why GAO Did This Study

Gas carrier ships that transport liquefied natural gas and other products overseas can pose safety and environmental risks because the cargo is highly combustible. Further, gas carrier vessel traffic in U.S. ports has increased from about 1,200 in 2011 to more than 3,200 in 2020. The Coast Guard is the principal federal agency responsible for marine safety and is required by statute to conduct gas carrier compliance exams annually.

The National Defense Authorization Act for Fiscal Year 2021 includes a provision for GAO to report on gas carrier compliance exam issues. This report addresses (1) Coast Guard marine inspector staffing levels and its ability to meet gas carrier compliance mission needs, (2) the extent to which the Coast Guard updates its gas carrier compliance exam policies and procedures, and (3) the extent to which the Coast Guard has assessed the efficiency of its policies and procedures in the context of risk. To address these objectives, GAO reviewed relevant laws and regulations; reviewed Coast Guard workforce planning documents, policies, and procedures; analyzed Coast Guard workforce and exam data from 2016 through 2020; and interviewed agency officials and a nongeneralizable sample of nine industry stakeholders.

What GAO Recommends

GAO recommends the Coast Guard conduct an assessment of adopting a risk-based approach to conducting gas carrier compliance exams and take actions, as appropriate and feasible. The Department of Homeland Security concurred with this recommendation.

View [GAO-22-105432](#). For more information, contact Heather MacLeod at (202) 512-8777 or MacLeodH@gao.gov.

January 2022

COAST GUARD

Assessment of a Risk-Based Approach for Conducting Gas Carrier Exams Is Needed

What GAO Found

The U.S. Coast Guard has an overall shortage of approximately 400 marine inspectors, according to its workforce modeling, which affects its ability to conduct gas carrier compliance exams. GAO analysis of the data shows that from 2016 through 2020 the Coast Guard staffed the key operational field units that conduct gas carrier exams at below 70 percent of their estimated need. Coast Guard officials stated they complete all required exams, but representatives from six of nine industry stakeholders told GAO they sometimes experienced costly delays because marine inspectors were not available. The Coast Guard has ongoing initiatives to address its marine inspection workforce challenges. Additionally, GAO, in a companion report, made a number of recommendations to strengthen the Coast Guard's workforce planning efforts.

Photo of Coast Guard Marine Inspectors Undergoing Gas Carrier Examiner Training



Source: U.S. Coast Guard. | [GAO-22-105432](#)

The Coast Guard regularly updates gas carrier exam policies and procedures to reflect industry changes. For example, according to Coast Guard officials, every 4 years they update the key guidance document for conducting the exams. Representatives from all nine gas carrier industry stakeholders stated marine inspectors are well trained and the exams are thorough.

The Coast Guard has not considered potential gas carrier exam efficiencies in the context of potential risks when assessing its policies and procedures. For example, it has not assessed the benefits and risks of adopting a risk-based inspections approach. GAO analysis of Coast Guard data shows that marine inspectors identified low instances of more serious deficiencies that pose a risk to the cargo, vessel, or crew during gas carrier compliance exams from fiscal years 2016 through 2020—about 12 percent (250 out of 2,075). Further, Coast Guard officials stated that gas carriers are generally well run. However, given the nature of their cargo, gas carriers present safety concerns. The Coast Guard previously considered developing legislative change proposals to reduce the annual exam requirement. However, it did not conduct a risk assessment for the potential legislative change. Conducting such an assessment and taking actions, as appropriate and feasible, would help ensure that the Coast Guard is efficiently and effectively using its marine inspection resources.