

engaged in towing barges that are subject to 46 CFR subchapter I on an international voyage.

The N-RAT results indicate that the following vessel types are at a lower risk of a transportation security incident and are therefore subject to parts 101 through 103 of subchapter H:

- Uninspected vessels, unless otherwise noted;
- Domestic small passenger vessels certificated under 46 CFR subchapter T;
- Barges subject to 46 CFR subchapter I engaged exclusively on domestic voyages;
- Towing vessels engaged in towing 46 CFR subchapter I barges not on international voyages;
- Vessels certificated under 46 CFR subchapter I engaged exclusively on domestic voyages;
- Fleeting tugs or harbor tugs; and

- Other vessels not specifically addressed in part 104 (as an example, recreational vessels).

The inclusion of towing vessels (traditionally included with other uninspected vessels) was done because these vessels interface with and are responsible for the movement of barges that carry higher consequence cargoes, such as Certain Dangerous Cargoes (CDCs). When scored on the N-RAT, the high consequence of the barge cargoes significantly adds to the risk of a transportation security incident for the towing vessel.

The N-RAT was not able to provide the sensitivity needed to assess certain elements of the definition of a transportation security incident. For example, the transportation security incident calls for a determination of what the term "significant loss of life" should be or where the threshold for an "economic disruption in a particular

area" should be placed. In order to determine these elements of a transportation security incident, the Coast Guard used the N-RAT model itself as a guide along with a comparison with other transportation modes. We also used the preliminary intermodal comparison work of the other agencies of the DHS (*e.g.*, TSA).

First, using the N-RAT, we assessed what consequences or combination of consequences would result given a vessel, facility, or port structure that had a high baseline vulnerability. Recalling from the previous N-RAT explanation that the consequence assessment portion of the N-RAT evaluation was based on six categories and five levels (as shown in Table 2), we looked at the numerical results of a scenario when given some vulnerability benefits assumed for implemented AMS Plans, and other general security measures in place for a port.

TABLE 2.—CONSEQUENCE

| Consequence category—Level | Death/injury | Economic impact | Environmental impact | National defense | Symbolic effect | Follow-on HLS threat |
|----------------------------|--------------|-----------------|----------------------|------------------|-----------------|----------------------|
| Catastrophic | | | | | | |
| High | | | | | | |
| Medium | | | | | | |
| Moderate | | | | | | |
| Low | | | | | | |

The results showed that a score of at least one consequence factor at the "Catastrophic" level or a combination of two "High" scores could not be offset by the vulnerability reduction achieved by the AMS Plan or general port security efforts. The risk to these types of vessels, facilities, or port structures would need further vulnerability reduction to get out of the potentially "Catastrophic" or "High" consequence arena. This then, is the threshold that the Coast Guard determined could be considered a transportation security incident.

To further determine the thresholds of a transportation security incident with respect to the "loss for life" category, the Coast Guard compared the potential loss of life between various transportation modes and various operations. To look at the "economic disruption" category of transportation security incident as well as its other elements, we looked at damage and casualty data to determine if comparisons between modes could be used to formulate thresholds based on vessel size.

Passenger Vessel Threshold Determination

To compare potential loss of life between transportation modes, we examined probable fatalities given an accident to the air, rail, or maritime mode. The first step in this process included a comparison of the current regulatory and operational thresholds that currently exist in each industry.

In aviation, regulations cover aircraft carrying 20 or more passengers as a commuter airline (14 CFR part 125). Most commercial aircraft are larger than this smaller commuter, with 69 percent of the U.S. market dominated by an aircraft with a capacity of 189 passengers.

In rail, we considered transit service (light, heavy, or commuter) and long-haul rail travel. Light rail can carry up to 150 passengers in each car of the train. Heavy rail cars typically carry 100 passengers, though they can carry twice that many during periods of peak traffic. Commuter rail cars carry an average of 125 passengers, with peak capacities of over 200 passengers per car for certain

seating configurations. Inter-city rail passenger coaches typically carry about 80 passengers per car depending on the configuration. The average train length is reported to be 6 to 8 cars.

In the maritime passenger trade, we have small passenger vessels, commuter ferries of all sizes, large passenger vessels, and cruise ships. The average passenger capacity on small passenger vessels is 49. The average capacity for commuter ferries is 587 and for large passenger vessels the average capacity is 1154 passengers.

Looking at casualty statistics for these three modes and different passenger operations, we estimated the probable fatalities given a successful transportation security incident occurred. We assume that, in general, a transportation security incident would have a higher fatality rate than that of an accident because of the hostile motivation behind perpetrators' actions deliberately produce more severe consequences. For aircraft, the more severe airline crashes were used to estimate the transportation security incident fatality rate. The hostile intent