

avoided through enhanced requirements. By reviewing incident trends over time and the costs to society imposed by these incidents, the Coast Guard could determine if changes to the status quo were justified.

Consequently, our environmental protection and marine safety regulations were generally accompanied by estimates of reduced injuries, fatalities, and pollution attributable to a specific regulation. For example, the recently promulgated Final Rule titled *Tank Level or Pressure Monitoring Devices* (published September 17, 2002) [67 FR 58515] estimated a benefit to society of approximately 900 barrels of oil not spilled into the environment over the period of assessment, though the regulation was not expected to prevent injuries or fatalities.

Estimating the benefits of new security requirements, however, is more challenging. Incident causation probabilities, based on historic trends and analysis, can be estimated in a manner that terrorist activities cannot. Currently, we believe it is virtually impossible to estimate benefits for security regulations in the way benefits are estimated for non-security regulations. We do not believe we can state with any degree of certainty that a specific security regulation would save a number or a range of fatalities, as no viable baseline exists from which to project these benefits. We realize though, that the burden on the regulated public of bearing the costs of new security regulations will be high, and we must balance the benefits of these regulations with their associated costs. We must also consider the consequences of taking no action.

We do not assume the benefits of the interim rules automatically offset their costs simply because these rules are security related. By using RBDM, however, we have measured the relative risk reduction resulting from these security measures, permitting us to estimate the “value” these regulations will have. In considering the applicability of the interim rules, we have strived to apply requirements to

those maritime entities that pose the greatest risk, and the N-RAT was an important and powerful tool in our Risk-Based Decision Making process. We believe that through better-informed judgments that came, in part, from the results of the N-RAT, we are appropriately balancing the benefits of the interim rules with their costs.

#### *Results of the N-RAT Based Assessment*

The expert review and scoring process was complex and challenging. The fundamental principles of the N-RAT, however, are relatively simple to understand. For each applicable entity in the interim rules, we assigned an annual “baseline” risk score. We then considered the requirements of the six interim rules described herein and assigned an annual post-regulation risk score. The benefits attributable to part 101—General Provisions—were not considered separately because it is an overarching section for all the subparts. The benefits for part 101 are represented in each of the remaining security subparts. The difference between the baseline risk score and the post-regulation risk score is the quantified benefit of the remaining five interim rules.

Besides the complex procedure to assign risk scores to the applicable maritime entities, we were faced with the further complication that rules will have multiple benefits; thus, we have the potential to double-count the risk reduced. For example, if the owner or operator of a petroleum tanker enhances his vessel’s security, this will also benefit the receiving facility where this vessel transfers its cargo. The reverse is also true: If the owner or operator of the facility enhances his facility’s security, this will benefit the vessels that arrive there. We recognize that the interim rules are a “family” of rulemakings that will reinforce and support one another in their implementation. We must ensure, however, that risk reduction that is credited in one rulemaking is not also credited in another.

To avoid double-counting risk reduced, we first determined the

“universe” of total benefits of all security measures recently implemented, about to be implemented, or planned for future rulemakings. Examples of other rules that were considered in the “universal” risk points are the Coast Guard’s Notice of Arrival (96-Hour Rule), Custom’s rulemaking regarding cargo manifests (24-Hour Rule), and a future rulemaking for transportation security cards. We then apportioned the total benefits to specific regulations. By approaching the benefits assessment in this manner, we were able to address the limitations of the N-RAT. The threat, vulnerability, and consequence scores are whole numbers between 1 and 5. The N-RAT did not allow us to score a relatively minor security initiative only 0.1 or 0.5 of a risk point, even though the initiative contributes to risk reduction. When we considered the rules as a group, however, security initiatives that could not be scored individually due to the limited granularity of the N-RAT can be scored when considered with the rest of the rules because of their cumulative risk reduction benefits.

Once we determined the total risk reduction benefits of the all the applicable rules, we “apportioned” the total risk points back to each individual regulation. We avoided double-counting benefits among the rulemakings as each risk point was counted only once. While there was subjectivity in this apportionment of risk points back to the individual rulemakings, we believe this methodology’s strength of allowing a systematic quantification of risk reduction for each regulation outweighs its subjectivity.

#### *Results of the N-RAT*

We determined annual risk points reduced for each of the six interim rules using the N-RAT. Table 7 presents the annual risk points reduced by the rules. As shown, the interim rule for vessel security plans reduces the most risk points annually. The interim rule for AIS reduces the least.

TABLE 7.—ANNUAL RISK POINTS REDUCED BY THE INTERIM RULES

Maritime entity	Annual risk points reduced by rulemaking				
	Vessel security plans	Facility security plans	OCS facility security plans	AMS plans	AIS
Vessels .....	778,633	3,385	3,385	3,385	1,448
Facilities .....	2,025	469,686	.....	2,025	.....
OCS Facilities .....	41	.....	9,903	.....	.....
Port Areas .....	587	587	.....	129,792	105
Total .....	781,285	473,659	13,288	135,202	1,553