

Even for these adjusted goals, the Agency's performance is still substantially less than perfect. Noted Grumm in 1983:

*In the late 1970s, the quantitative goals set by the Agency could be attained only in the case of a rather small number of facilities. However, over the past four years the number of inspected facilities has increased by over 50% and the cases where the IAEA has fully attained its inspection goals have increased from 17% for the facilities inspected and from 45% to 70% with respect to the direct-use nuclear material in these facilities. In many more cases the goals were partially attained, covering the more attractive diversion paths.<sup>3</sup>*

Resource limitations likely account for some of this gap between standards and performance. The Agency, for example, has determined Maximum Routine Inspection Efforts (MRIE) for various facility types, and sets Actual Routine Inspection Efforts (ARIE), at a lower level; however, it is unable to generate the required ARIE with its available personnel.<sup>4</sup> Quite clearly, however, other technical factors are also at work. Merely increasing Agency resources would not result in technical perfection.

Scheinman also points to another problem: measures of safeguards efforts, in terms of ARIE or actual inspection efforts, are not the same as measures of safeguards effectiveness, even though it might be tempting to confuse the two.<sup>5</sup>

Given the various limitations on the Agency's safeguards systems, even defining, let alone assessing, what one means by "Agency effectiveness" becomes difficult. Every year the Agency detects a number of anomalies (on the order of a hundred or more). These may arise from causes other than diversion, and the Agency regularly states that it has no reason to suspect that diversion has occurred.<sup>6</sup> Given the limitations of the Agency's systems, should this number be reassuring or troubling in its size, and how much assurance should states derive from Agency statements?

The limited functioning of the Agency's systems points to an important lesson: a safeguards system need not be complete in its coverage or "perfect" in its technical performance to be adequate. This may be true for two reasons. First, states may be satisfied with a level of performance commensurate with the perceived risks within the area covered by the safeguards. Second, a potential proliferator may be deterred by a less than perfect risk of detection. These reasons in turn suggest a more complex explanation. One could argue that the Agency's efforts are useful in three specific ways.

First, Agency activities may reduce "background noise." For most states with nuclear technology, the likelihood of "going nuclear" is probably quite small despite the concerns which others might have. Factors other than technological capability are at work, so such states present low or moderate risks despite the very threatening nature of nuclear weapons. In the case of these states, even limited or imperfect assurances may be sufficient. Moreover, safeguards provide an approved and standardized mechanism by which these states can express