

Enhancing Chemical Plant Security and Safety

The ABC's of Implementing IST (Inherently Safer Technology)

ACC's members are committed to mitigating risks and enhancing chemical safety and security. We recognize IST as one of many important tools to achieve this goal. The concept of IST was developed by the chemical industry and employed to enhance the safety of our employees, our facilities and the communities where we operate.

Inherent safety requires a holistic approach that considers four strategies for reducing and/or managing risks: **1) minimize** the amount of hazardous material in a particular usage, **2) substitute** with a less-hazardous material, **3) moderate** the conditions in which hazardous chemicals are produced (less heat, lower pressures) and **4) simplify** the process to reduce opportunities for errors that can lead to unwanted exposure. The early stages of process design and development are the most effective and feasible stages to implement process safety improvements.

While DHS cannot require specific process changes under the Chemical Facility Anti-terrorism Standards (CFATS), these performance-based standards necessitate consideration of such methods to enhance security and provide incentive to implement such improvements. In addition, New Jersey's chemical security regulations require consideration of IST, and state that any IST decisions must be site-specific, feasible and avoid shifting risk. ACC members strongly believe the risk-based performance standards of CFATS, the feasibility requirements of the New Jersey system and common sense must be incorporated into any future federal policy on IST regarding chemical security.

The ABC's of Implementing IST

A. Federal Approach - Performance

Under the CFATS, DHS has identified and prioritized more than 35,000 sites and selected more than 7,000 high-risk chemical facilities for mandatory security enhancement. CFATS:

- Sets tough risk-based performance standards.
- Drives consideration and adoption of IST as a risk reduction tool.
- Requires site-specific layers of security.
- Protects economic criticality of facilities while reducing their risk as terror targets.
- Provides tough enforcement including fines or shutdown.

B. New Jersey Approach - Feasibility

Along with physical security measures, NJ requires facilities to assess whether IST is feasible, taking into account and documenting several factors:

- Environmental - will the IST solution harm the environment?
- Public health and safety - will IST increase overall risk, or shift risk to another location?
- Legal - will IST conflict with existing federal, state, or local laws or violate a license agreement?
- Technological - will IST be compatible with product or process integrity?
- Economic - will IST eliminate or severely harm the economic viability of the facility or process?

C. Common Sense Approach - Balance

Any effort to integrate inherently safe technology in federal security policy must:

- Recognize that IST is one component of a comprehensive risk reduction strategy.
- Consider all IST options equally – minimization, moderation, simplification and substitution (see above).
- Avoid the “law of unintended consequences” by recognizing that mandatory product substitution can result in greater harm to the public.
- Recognize and utilize the expertise of the private sector.