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— INSIDE HIGHLIGHTS —

REP. BENNIE THOMPSON (D-MISS.) ON CHEMICAL PLANT SECURITY . . . . . Pg. 12

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amendment (8-10) offered by Rep. James Langevin (D-R.I.) that would have allowed state law to preempt federal law if the state enacts tougher regulations. Notably, however, the Senate committee included language identical to the Langevin amendment in its version of the bill.

New Jersey Governor and former Rep. Jon Corzine (D) attempted to lobby his former colleagues to support preemption in a July 11 letter to Lungren. "We need federal standards, but they must be a floor ensuring a base level of adequate protection, not a ceiling that constrains our ability to protect our citizens, as well as our neighbors," Corzine wrote, going on to argue that the language that eventually passed "actually could have the effect of weakening chemical security and leaving New Jersey and its neighbors—including New York City—more vulnerable to devastation from a terrorist attack on our chemical facilities."

'Inherently Safer Technologies' Rejected

The committee also rejected on party lines (8-10) an amendment introduced by Rep. Edward Markey (D-Mass.) that would have required facilities to use inherently safer technologies (IST). Proponents claim the requirement would greatly reduce the risk posed by a terror attack, but opponents deem the regulation a costly provision that should not be federally mandated. Markey said his provision would require only that the highest risk facilities implement IST if doing so would be realistic. "Only when it is technologically and economically feasible," Markey said. "Only high risk facilities would have to change their methods … these methods do no need to be a redressing of the chemical process." Markey objected to arguments against the approach based on cost, saying that "the reality is that mich of the time, it doesn't cost much at all." In his letter, Corzine also endorsed IST, as New Jersey has enacted staunch legislation mandating its use that would likely face court battles if the Congressional bill doesn't follow suit—as neither the House nor Senate bill currently does. Markey voted against final passage of the bill, along with Rep. Norman Dicks (D-Wash.).■

UC-DAVIS SCIENTISTS DEVELOP METHOD TO REDUCE COST OF NUKE DETECTORS

Researchers at the University of California, Davis working on a prototype gamma ray detector are incorporating flat screen technology used in televisions that they believe could reduce the cost of such detectors 100-fold and enable their use in a variety of homeland security applications. The flat-screen technology is a replacement for the photo multiplier tubes (PMT) in gamma ray detectors, which detect light emitted from scintilator-based detectors. The researchers began work on the flat screen replacements six years ago, and they are nearing completion of a five-inch prototype with the support of a three-year, $750,000 grant from the Dept. of Energy's National Nuclear Security Administration awarded in 2005. Their approach involves coating a mass-producible flat screen panel with a "thin, photosensitive semiconductor layer" that emits electrons which combine to form a detectable signature on the other side of the monitor, according to UC-Davis Assistant Professor Daniel Ferenc. "They can be made in huge quantities—why can't we use the same technology, the same strategy, production … to make something for detection of light to replace photo multiplier tubes?" Ferenc told *HD&S Monitor*.

Mass Production Possible

PMTs, in use since the 1960s, are a key component in detectors using scinitilators such as Sodium-Iodide and plastics, and Ferenc said that because they have been in use for so long many researchers saw them as a component of detectors that simply could not be altered. Due to their extremely fragile nature, though, PMTs must be hand-made as opposed to mass-produced in a factory setting, a step that is directly at odds with the increasing demand for detection technology. "The process is everything but industrial. It's very slow and it's a real bottleneck." Ferenc said. The manufacturing limitation causes the price of the detectors to remain high, even as demand continues to rise. "All other technologies have changed … there has never been a high demand on quantity and quality and people were just willing to pay the high price," Ferenc said. "Now we are in a different situation, particularly with homeland security, because we want to be very sensitive and we need a high abundance of these devices and these devices must be extremely robust."

Broader Potential Use

The dramatic reduction in cost that would result from mass production would allow for the implementation of the technology for a variety of homeland security applications, Ferenc asserted. Currently, detectors must rest adjacent to a potential radiation source in order to detect gamma particles, as detectors only capture a small amount of radiation emitted in multiple directions. "If you surround the container from all sides… then your chances are maximized," Ferenc said. Further, by creating chambers of the flat screen panels or increasing the size of the panels, the detection potential would increase and allow instruments to detect low-emitting radioactive sources or spontaneous and irregular emissions that hand-held and back-pack devices would not be able to identify, he added. Ferenc also claimed that DHS could implement the

technology for detecting nuclear materials inside ships still at sea. "You can protect every possible bridge, every possible city, every possible entry point, and scatter these things because they will be about 100 times cheaper than the same devices we have now," he said, positing that with the right detector configuration, the technology could even be able to detect the specific location of nuclear material within a ship.■

DHS UNVEILS GRANT GUIDANCE FOR INFRASTRUCTURE PROTECTION

The Dept. of Homeland Security released guidance July 6 for nearly $400 million in grants available in FY06 to protect critical infrastructure sites across the country, including transit systems, seaports and chemical facilities. The guidance, for grants through the Infrastructure Protection Grant Program, arrives on the heels of strong criticism the Department has received in recent weeks regarding its allocation of grant funding, as critics have faulted its approach to the Urban Area Security Initiative, where it reduced money to New York City and Washington, D.C. by 40 percent and relied on a widely questioned outside peer review process. Further, a bipartisan group of senators contended last month that the delay in issuing the guidance for infrastructure would limit the amount of time infrastructure operators would have to prepare applications (*HD&S Monitor*, Vol. 8 Nos. 12&13). DHS Under Secretary for Preparedness George Foresman said the criticism did not impact the Department's approach, stressing at an event announcing the grants that "this is not an issue of who got what. This is an issue about where are we targeting the dollars to absolutely do the best that we can do to measurably reduce America's risk from terrorism."

Same Schedule as Previous Years

Foresman said that the delay in issuing the guidance stemmed from the Department's desire to fully integrate intelligence and risk assessments. "We have chosen to ensure that we put a premium on making sure that the grants reflect the lessons from things like London, lessons from what our risk analysis is telling us. So we wanted to make sure these were right, these were accurate and that we fully engaged our stakeholder constituencies," Foresman said. According to Tracy Henke, DHS Assistant Secretary for the Office of Grants and Training, the Department will allow the same 30-day proposal preparation period as it has in previous years. The guidance distribution marked the beginning of the application preparation period, with final submissions due Aug. 4, leaving the Department with slightly less than two months to review and determine grant allocations by the end of the fiscal year Sept. 30. "Applicants will know the results, potentially much earlier than they would have in the past because these awards will be made by Sept. 30," Henke said.

No Outside Review

Notably, the Department will not employ the approach it took to determining awards for the UASI grants, where it employed Peer Review Panels comprised of state and local officials. "We would not anticipate for this round of grant activities to bring in, if you will, the outside peer review group." Foresman said. "Given the unique nature of what were doing here … that won't be necessary." Some of the grants, such as the port security grants, will be determined based on the findings of review panels comprised of personnel from a variety of federal agencies, such as the Transportation Security Administration (TSA) and Customs and Border Patrol (CBP), as well as DHS personnel.

$168M for Port Security

The grants, which amount to roughly the same total as last year, include $168 million for port security, to be distributed to 101 eligible seaports that account for 95 percent of foreign cargo entering the United States. The guidance stresses that inclusion on the eligibility list does not ensure funding, and the ports will have to submit plans with up to five specific project areas to obtain funding. DHS will distribute the awards based on the effectiveness of the projects through a tiered system, with the highest risk ports eligible for a specific amount and lower-risks ports eligible for a lower level. According to officials, grant evaluators will inspect the plans for its ability to detect improvised explosive devices launched from small watercraft, in vehicles mounted inside ferries, and in underwater operations. Operators of publicly managed ports must match 25 percent of project costs, with private sector entities required to support 50 percent of the overall security budgetary needs.

Roughly $150M Total for Transit Systems

The grants also include roughly $136 million to secure a variety of transit systems, including rail systems, ferries, and intracity bus services. Of the total:

— $5 million is allocated for ferry systems;
— $103 million for "Tier I" rail transit, in the highest-risk areas;
— $7 million for Tier II rail transit;
— $15 million for Tier I bus transit; and
— $6 million for Tier II bus transit.