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***Remarks for the 2008 Workshop on Decontamination and Associated Issues for Sites Contaminated
with Chemical, Biological, or Radiological Materials
Chapel Hill, NC***

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I want to thank EPA's Office of Research and Development (ORD) for organizing this workshop and I appreciate the opportunity to address you this morning.

In looking at the agenda, and the list of speakers that you will hear over the next few days, I am impressed by the scope of the discussions and the breadth of involvement across the US government, state and local government, our colleagues from other countries, academia, and the private sector. For those of you who know me, you know that. I am very interested in the topic of decontamination, and I am not shy in expressing my serious concerns about the significant gaps that confront EPA and the Nation in this area.

My goal this morning is to drive home the point about the critical need to focus and prioritize our collective efforts and limited resources to close the significant gaps and be better prepared to respond to and recover from a terrorist attack involving chemical, biological or radiological agents.

I can tell you right now – this country is not prepared to respond to and recover from a terrorist attack involving an area-wide release of a chemical, biological or radiological agent. An event like this will make the issues surrounding Hurricane Katrina or Hurricane Ike look like child's play. The Federal government has provided approximately \$134 billion for recovery efforts following Hurricane Katrina and there are still significant problems remaining. If a terrorist attack involving an area-wide release of a chemical, biological or radiological agent happened today, we would fail – and fail miserably.

See, I told you I was not shy!

Looking back, it is understandable that we were not prepared for the anthrax attacks of 2001. In the anthrax attacks in the fall of 2001, no one was prepared for the technical and scientific issues that confronted the Nation in responding to the contamination of a relatively small number of affected buildings. At EPA, our emergency responders leveraged their 30+ years of experience in hazardous waste response. They improvised their technical and operational solutions to address an unprecedented event involving a biological agent that most knew almost nothing about. Our EPA scientists provided their best insights as to the scientific and technical questions that arose. In short, EPA stepped up to the challenge of a new role – responding to chemical, biological or radiological terrorist attacks. This new role has created problems within EPA, at OMB and the Hill with respect to competition for scarce resources. We are constantly defending why EPA is in the business of homeland security.

Since the attacks in 2001, EPA has made significant investments in decontamination preparedness. For example, in the area of operational readiness, EPA has created the National Decontamination Team: thirteen highly trained scientist and engineers focusing on decontamination of chemical, biological or radiological threat agents. Dr. Curtis Snook, Medical Officer for the National Decontamination Team, will be addressing this group later this morning. EPA has hired and trained an

additional 50 On-Scene Coordinators. EPA is working towards establishing an Agency-wide Response Support Corp comprised of approximately 1900 volunteers to support the Incident Command Structure and free up our On-Scene Coordinators to perform their highest value functions in the field.

In the area science and technology, EPA's Office of Research and Development stood up the National Homeland Security Research Center, headquartered in Cincinnati, OH. As many of you know a significant investment in decontamination science and technology is here in the Research Triangle Park area. In the next couple of days, you will hear from a number of EPA researchers on the status of their work in the area of decontamination.

Despite these significant investments, there are still significant gaps in our preparedness for decontamination. It is concerning to me that few people inside government have really thought about how complex the clean-up operations from an area-wide attack of a chemical, biological or radiological agent would be. Maybe this is why most national exercises stop when they get to the restoration and recovery phase!

I can say with some confidence that we have improved our ability to respond to and recover from a small attack based on collective experience gained during the 2001 anthrax events; more recent naturally occurring anthrax events in Scotland, New York and Connecticut; and significant planning workshops and guidance documents efforts. For example, EPA has actively participated in the three airport decontamination conferences sponsored by the Department of Homeland Security (DHS) addressing anthrax releases at San Francisco Airport and Dulles Airport near Washington DC., and a chemical attack at Los Angeles Airport. EPA's Region 5 On-Scene Coordinators are working with Chicago's Midway Airport and Chicago Department of Public Health to develop plans and procedures for an anthrax attack involving that airport.

EPA is co-chairing efforts by the interagency National Response Team to update the Anthrax Technical Assistance Document to assist response and recovery efforts. EPA is also co-chairing the Office of Science and Technology Policy (OSTP) led clean-up decision-making frameworks for chemical, biological and radiological attacks. EPA's Regional Offices are currently engaged in planning efforts for response using the DHS planning scenarios involving chemical, biological and radiological agents.

Despite these efforts, we have NO experience or comprehension of the challenges we would face after a wide-area terrorist attack using chemical, biological or radiological agents. In May 2008 in Portland, Oregon, I convened a group of EPA response personnel, scientists and engineers to further examine the response and recovery aspects of a dirty bomb event as presented in TOPOFF 4. As many of you know, most of the large exercises like the TOPOFF series, do not continue play through response and recovery. So, for several days, we discussed in detail the key aspects of a dirty bomb event. What I can tell you is that there are many unanswered technical and scientific questions – we simply do not know a lot, and we are a long way away from being prepared for such an incident.

Over the past year, I have told various audiences that this country is not prepared to respond to and recover from a wide-area chemical, biological or radiological terrorist attack. I have made presentations to the White House Homeland Security Council, I have testified before Congress, and I have made speeches like this one to public and private sector audiences.

What I have said is that we have significant gaps in three areas: decontamination capacity; laboratory analysis capability and capacity, and disposal capability and capacity. In the area decontamination

capacity, the Federal government has limited capability and we would need to rely on private companies to do the majority of the actual clean-up, like we did in 2001. Given the limited decontamination capability currently available, the decontamination of just the interior areas of buildings following a wide-area urban anthrax attack could take over 15 years based on our estimates from the DHS scenario. We are still working on technical approaches to outdoor decontamination – we do not know how long outdoor decontamination will require.

In the area of laboratory capability and capacity, we lack some of the basic sampling methodologies and the current lab capacity for environmental samples is grossly insufficient. There could easily be hundreds of thousands of environmental samples that will need to be collected and analyzed – there will be a significant backlog

In the area of disposal capability and capacity – we have struggled to deal with the waste issue for the small events. Disposal facilities have been reluctant to accept waste associated with a terrorist event - - “Not in My Back Yard.” Imagine the waste that would be generated in a wide-area RDD attack and the problems with disposal.

As I mentioned earlier, I have pointed out these three major gaps to senior officials at the White House Homeland Security Council, OMB and the Congress. What really bothers me is that I do not think they get it - - I do not think they understand that decontamination is absolutely critical to the recovery of an urban area attacked by a chemical, biological or radiological agent. I attend weekly meetings of the White House Homeland Security Council’s Domestic Readiness Group – even they do not understand this fact.

Two weeks ago, DHS presented some interesting findings to the White House Homeland Security Council concerning a wide-area urban anthrax attack. DHS formed a focus group of large property owners, businesses and critical infrastructure owners from the Seattle area to discuss their views on recovery after a wide-area anthrax attack. One of the findings was shocking – large building owners would “walk away” from properties (default on loans) as soon as 6 months following an attack, if decontamination was not complete and occupants could return and pay rent/mortgages within 6 months! Remember, I said it could take us 15+ years with our current capacity limitations.

Take home message – you cannot have a successful recovery without adequate decontamination capability and capacity. We have been working for about 9 months to obtain \$35 million in additional FY 09 funding to close these critical gaps. We do not think that \$35 million is nearly enough to close the gaps as quickly as needed. Even so, we cannot convince our appropriations sub committee that these funds are necessary. We cannot seem to get senior-level support for something as critical as this

We need to be ready for multiple attacks. The gaps mentioned above become even more problematic if you consider the possibility of wide-area attacks that occur at the same time in multiple cities. Recent events around the world have shown that terrorists like to use multiple, simultaneous attacks as a way to maximize physical damage and economic loss, and increase their psychological impact.

Consider these facts:

U.S., September 2001: 4 planes, plus one more aircraft may not have gotten off the ground.

U.S., September and October 2001: At least 4 anthrax letters mailed and 4 contaminated sites in Florida, New York, Washington, DC and Connecticut.

Madrid, Spain, March 2004: 10 explosive devices on trains.

London, England, July 2005: 4 explosive devices on subway cars and a bus.

London, England, July 2005: 5 explosive devices, 4 activated, all malfunctioned.

Mumbai, India, July 2006: 8 explosive devices on trains.

London, England to U.S., August 2006: British Intelligence disrupted a planned attack targeting 10 planes bound for the U.S.

Jaipur, India, May 2008: 7 bombs throughout the city.

See the pattern? The likelihood of multiple, simultaneous events is a very reasonable planning assumption. At EPA, we are planning towards a goal of being able to respond to five simultaneous chemical, biological or radiological attacks – each similar in scope to the attack on the World Trade Center towers.

Do I think an event such as a wide-area anthrax attack is imminent? I do know that the recent disclosures on the Amerithrax case involving a scientist at Ft. Dietrich and the proliferation of biological labs around the US and the world makes me think such an event is more likely. Some of you may listen to Randall Larsen's "Homeland Security: Inside and Out" on public radio. Larsen is a retired Air Force Colonel, Director of the Institute for Homeland Security, and author of a compelling book, *Our Own Worst Enemy: Asking the Right Questions About Security to Protect You, Your Family, And America*. According to Larsen, a biological weapon can be made using open source information with equipment bought off the internet for less than what people pay for a luxury car

Our ability to continue to make the necessary investments to fill these critical gaps will become increasingly difficult due to two reasons: 1) fading interest in public opinion and 2) increasing competition for scarce resources to address other national issues.

Have you noticed – as time goes on – our memories of 9/11 are starting to fade? The Nation is becoming complacent with respect to terrorism. Despite all the warnings about the motivation of fanatics, the majority of the public does not think another attack could happen soon. America seems to be falling asleep again. Exit polling during the 2004 elections showed that 19% of the voters said terrorism was their top concern. Today that number is around 4%. A CNN poll last summer showed 41% thought a terrorist attack on the homeland was forthcoming. That number continues to decline and is now 35%.

As we approach the transition to a new Administration, there are many high profile issues that will compete with homeland security for resource investments: the security situation in Iraq and Afghanistan, soaring energy prices, health care, social security concerns, the sagging economy, and the devastated housing market, and now the meltdown of investment banks on Wall Street. I think it is very unlikely – unless we are attacked again – that we will see the level of resource investments that we have seen over the past few years

What is the solution? Now more than ever we need to prioritize our resource investments, leverage existing efforts in order to increase our level of preparedness for the most significant events, and hold ourselves accountable for making progress and closing the critical gaps.

First, we have a number of initiatives underway at EPA to prioritize investments of our limited resources. We are going to focus our investments on priority scenarios. Last year, EPA's Administrator identified homeland security as one of his top priorities. As a result, I led a cross-Agency effort to develop a work plan identifying our homeland security priorities and synchronizing EPA program investments to achieve our desired end states. Decontamination is one of the four priorities identified in the work plan. We just recently completed our first update to the work plan and I specifically required the decontamination section to focus on two specific scenarios – a wide-area anthrax release and a RDD attack.

Why focus on these two scenarios? First, I believe (and so do many others at the Homeland Security Council and DHS) that these two scenarios carry significant risks to the Nation. Second, if you try to work on everything, you will not be ready for anything. Let's get the necessary work done on these two scenarios and we will be much better prepared for others as well.

Secondly, we are going to make our investments operationally focused. I mentioned at the beginning of my remarks this morning that I was impressed by the scope of the discussions and the breadth of involvement. I am simultaneously impressed and concerned. Given the limited resources we have to work with and the tremendous gaps in our knowledge and capability, we cannot afford to work on everything. We must focus on specific scenarios and have an operational focus.

Although I commend ORD for moving out quickly, I believe that too many research projects were initiated before priorities were established by our response personnel – this has to change. At EPA, we are now using our On-Scene Coordinators to provide direction and guidance to our researchers to focus their efforts on science and technology that has the most immediate application to the field. The name of this effort is complicated, the Taskforce on Research to Inform and Optimize CBR Response (TRIO), but the intent is straight forward – focus research and development on operational readiness.

Last week, senior managers from EPA's emergency management and research and development offices met to prioritize near term research activities. We are continuing to have internal discussions concerning the proper mix of high tech decontamination technologies, like fumigation, and low tech approaches, like bleach and water, to address the very challenging problem of a wide-area urban anthrax release.

As we make important investment decisions on equipment and training, I want to be sure we take advantage of expert viewpoints outside of EPA. For example, I am pursuing the idea of using an outside experts group or think tank to provide a "reality check."

Our investments are going to be based on solid analyses of gaps and priorities. We have undertaken several analyses within EPA to identify and prioritize our gaps in the area of decontamination. Several years ago, we initiated a cross Agency effort to identify the scientific and technical information, as well as the policies and procedures necessary to perform decontamination. Last summer, EPA along with DHS, HHS and DoD participated in a White House Homeland Security Council–led effort to identify gaps in our ability to address a wide-area anthrax attack.

Based on this effort, EPA has a description of the most significant gaps in our ability to respond to a wide-area anthrax attack and estimates of what will be required to address those gaps. Although as I previously mentioned, we have been unsuccessful at obtaining any significant additional funding to address these gaps.

We are currently working on a cross-Agency analysis of disposal issues related to response and recovery after a chemical, biological or radiological event. This effort will result in a list of prioritized actions to help address this major problem.

We are leveraging existing efforts in order to increase our level of preparedness for the most significant events. EPA is pleased to be working collaboratively with DHS and others on projects working towards improving our preparedness for decontamination. For example, EPA is participating in the DHS/DoD's Interagency Biological Restoration Demonstration (IBRD) project. IBRD is working on the continuum of prevention, response and recovery activities and responsibilities for a wide-area anthrax attack. Local, State and Federal Departments and Agencies (DHS, DoD, DOJ and EPA) are working together on IBRD to identify critical operations and gaps in our preparedness. Another example of leveraging is our collaborative work with DHS and DoD on the Tri-Agency Committee for coordination of Homeland Security Science & Technology.

Finally, we must hold ourselves accountable for making progress and closing the critical gaps. As other high priority issues compete with funding for Homeland Security, it will be critical to effectively demonstrate to our Departments/Agencies, OMB and the Hill, that resources are being wisely invested and real progress is being achieved. At EPA, we have established a goal for our decontamination preparedness within the Agency – wide work plan that I mentioned earlier. This “Desired End State” for decontamination clearly articulates what needs to be achieved. We have also included an estimate of where we are today in achieving that goal.

Standing before you this morning, I wish I could tell you that we are ready to respond and recover from a wide-area chemical, biological or radiological attack – we are not. In fact, at the current rate of progress it will be a long time until we will have achieved our “Desired End State” for decontamination. In my view this is unacceptable, we cannot fail. We must make every effort to maximize our return on investment of precious resources we have been given. We must work together – collectively, the US government, our colleagues from other countries, academia, and the private sector to coordinate on the highest priority actions.

I mentioned earlier that I am simultaneously impressed and concerned by the scope of the presentations in the next few days. Given the magnitude of the problem and significance of the gap in our preparedness – we cannot afford a shotgun approach to filling these gaps. We need a rifle shot.

I will be very interested to hear the discussions in the next few days following each presentation. I challenge all of you to think about the most effective way to focus our collective efforts, prioritize our investments, leverage each others work, and hold ourselves accountable to making significant progress towards addressing the most important gaps. We cannot afford to do anything less.