Testimony of
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Good morning Mr. Chairman and fellow Committee members, I am Samuel J. Coleman, Acting Regional Administrator for EPA's Region 6, which covers Texas, New Mexico, Oklahoma, Arkansas and Louisiana. Thank you for the privilege of joining you today for this important conversation. I am here today to speak directly about EPA's response to the devastating impacts of Hurricane Harvey in Region 6 and our associated response activities.

HIGHLIGHTS:

As we have seen in just the past few months, every natural disaster presents unique challenges. Hurricane Harvey hit Corpus Christi Texas as a category 4 hurricane, then lingered over the Texas gulf coast dropping more than 50 inches of rain in Harris County, according to the National Weather Service, and affected over 7 million people. EPA worked with Texas and local officials to assess more than 2,200 drinking water systems and more than 1,700 waste water systems; retrieved over 950 loose containers and, according to FEMA, safely disposed of over 20 million cubic yards of debris. At one point, the Texas Commission on Environmental Quality had approximately 500 people and EPA had over 250 people assisting in response to this natural disaster.

LESSONS LEARNED:

One of the most noteworthy aspects of the response to Hurricane Harvey was the positive and collaborative relationship between EPA and the state of Texas. Because we worked very closely with the state agencies and the Governor's office, the collective strength of our efforts were greater than the sum. By augmenting state resources where they were needed and providing some specialized monitoring capabilities, together we were able to address the many challenges presented by Hurricane Harvey in a timely manner.

KEYS TO SUCCESS:

After 29 years working at EPA and experiencing the events that unfolded after Hurricane Katrina and the Deepwater Horizon Oil Spill, I have learned that there are some key aspects to ensuring a successful response, including:

Exercises: Federal agencies plan for such catastrophic events by conducting exercises to prepare. It is very apparent that these practices lead us to discover our weaknesses and hopefully have time to correct deficiencies before a real emergency occurs. It is difficult to prepare for an event as devastating as Hurricane Harvey, however, the state of Texas was as well prepared as I have ever seen and the integration of our organizations has been exceptional.

Prior Coordination: When the EPA has open communication and a long-standing cooperative relationship with our state counterparts and other emergency response agencies, it clears the path for success that benefits the citizens impacted by a disaster. When a storm is imminent, EPA begins coordination before landfall. As soon as the storm passes, teams are standing by to begin assessing drinking water and wastewater systems, evaluating the environmental integrity of

impacted businesses, investigating citizen complaints, responding to any reported spills or damaged areas, and sharing information.

Experienced Staff: An effective response infrastructure includes experienced first responders who are able to address unforeseen circumstances swiftly and effectively. Staff development during these times is of grave importance and should not be underestimated. Experienced responders should be the first "boots on the ground" to provide the most efficient assistance to our communities.

Right Equipment: EPA employed assets during the Hurricane Harvey response to assist with response efforts that were not available elsewhere. EPA often responds to reports of environmental impacts from plumes, or air emissions that may be dangerous to the community. In response to complaints of odors and fumes from petroleum plants following Hurricane Harvey, EPA deployed the Trace Atmospheric Gas Analyzer, or TAGA bus. This is a mobile air pollution detection vehicle that is able to provide air quality results quickly by collecting constant, real-time data for outdoor air quality. The TAGA lab monitored the ambient air in the vicinity of approximately 25 facilities and adjacent neighborhoods, covering over 640 miles. The results from this mechanism were able to detect actionable emissions, or confirm that there was nothing of concern.

There was widespread news coverage of the fires at the Arkema plant in Crosby, Texas, that housed volatile materials that had to be refrigerated to prevent them from self-igniting. The plant lost power, conditions deteriorated and the facility was evacuated. As fires took place, EPA used the ASPECT aircraft for air sampling above the plant and nearby areas. ASPECT stands for Airborne Spectral Photometric Environmental Collection Technology. While that is a mouthful, what that means is this plane was able to fly above the Arkema plant, before, during and after

these explosions to ascertain if there was any immediate danger to those downwind from the plant. The ASPECT also flew 28 flights and over 112 hours covering miles of pipelines, 134 Risk Management Plan facilities, 456 drinking water plants and 105 waste water plants in support of the Hurricane Harvey response. This data was invaluable in assessing risks quickly and responding appropriately to this emergency and the technology was not available through any other parties involved.

Another EPA asset used was a mobile laboratory called PHILIS. The technical name for PHILIS is the Portable High-Throughput Integrated Laboratory Identification System. This mobile lab is capable of providing sample results with a 48-hour turnaround and was used to test water samples for volatile organic compounds (VOCs) and semi-volatile organize compounds (SVOCs) associated with assessing Superfund sites and other response activities. This proved to be invaluable in an area that is devastated and lacking in basic infrastructure.

If EPA did not have access to these tools, our response and the dissemination of information on hazards to the public would have been much less informative and robust. I believe that EPA assets such as these are critical to effective preparedness and response.

LOOKING TO THE FUTURE:

EPA assets remain activated as the agency continues to respond to Hurricanes Maria and Irma. The agency taps resources from our sister regions to coordinate efforts during these times of great need. I have seen the agency continue to hone its capabilities, learn from each response, and apply the lessons learned as we are faced with new challenges. We are utilizing the tools available to us and are taking more steps to make data available to the public. An example of this is the story boards that the agency prepared that show sampling data by location, allowing the

public to see what is being measured in their own back yard. EPA continues to develop more methods of improving each response and working with our State, local and other Federal agencies.

While each response has its own unique challenges, we remain flexible to address individual needs. I am very proud of EPA and other responders when called to duty in these times of need. I am happy to answer any questions about the great work we have done and I look forward to continuing to serve.