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EXAMINATION OF THE SAFETY AND SECURITY OF DRINKING WATER SUPPLIES FOLLOWING THE CENTRAL WEST VIRGINIA DRINKING WATER CRISIS

HEARING

BEFORE THE

SUBCOMMITTEE ON WATER AND WILDLIFE

OF THE

COMMITTEE ON
ENVIRONMENT AND PUBLIC WORKS
UNITED STATES SENATE

ONE HUNDRED THIRTEENTH CONGRESS

SECOND SESSION

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ADDITIONAL MATERIAL

EXAMINATION OF THE SAFETY AND SECURITY OF DRINKING WATER SUPPLIES FOLLOWING THE CENTRAL WEST VIRGINIA DRINKING WATER CRISIS

TUESDAY, FEBRUARY 4, 2014

U.S. SENATE,
COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS,
SUBCOMMITTEE ON WATER AND WILDLIFE,
Washington, DC.

The subcommittee met, pursuant to notice, at 10 a.m. in room 406, Dirksen Senate Building, Hon. Benjamin L. Cardin (chairman of the subcommittee) presiding.

Present: Senators Cardin, Carper, Boxer, Udall, Vitter and Boozman.

OPENING STATEMENT OF HON. BENJAMIN CARDIN, U.S. SENATOR FROM THE STATE OF MARYLAND

Senator CARDIN. The Subcommittee on Water and Wildlife will convene.

I want to thank Senator Boxer for her cooperation in allowing us to expedite this hearing. Senator Vitter, I want to also thank you for the manner in which the leadership of the EPW Committee facilitated a very quick and early hearing on what happened in West Virginia.

Americans have a right to expect that when they turn on their tap, the water they get is safe and is safe to drink. It is our responsibility to make sure that expectation is, in fact, carried out, both at the Federal, State and local government levels. It is a primary responsibility of government to protect the public safety of the people of our community.

The system did not work on January 9th in West Virginia. The system failed. Yes, the reckless conduct of a private company, Freedom Industries, was responsible for the spill and the failure to properly report but our system needs to be adequate to protect against all contingencies and it was not in this instance.

I think we need to look at how we can strengthen our laws to make sure the public indeed has safe drinking water.

I want to congratulate and thank Senators Boxer, Manchin and Senator Rockefeller in the Senate for quickly introducing legislation that deals with some of the fundamental issues with which we have to be concerned.

The current law requires a risk assessment of chemicals that may be in the area that could jeopardize safe drinking water but

does not require an update of that information, nor does it require that there be a plan for using that information to protect the safety of the people of our community. Our laws are just not strong enough to deal with the current situation.

Yes, we can take a look at the fact that there has been a risk assessment. However, the last risk assessment done in this area in West Virginia was done in 2002 and was done because of 9/11. We asked all communities to reassess their chemical vulnerabilities. In West Virginia, the State proper did a risk assessment in 2002.

There was a different owner of the company at that time and it did not list the risk of the chemical involved in this particular episode, so risk assessments need to be updated in a more timely way.

How do we use this information? First and foremost, we want to mitigate the risk factors to safe drinking water. In West Virginia, there would have been ways in which we could have had better retaining walls, better setbacks and a lot of different things could have been done if that information was available and if we acted on that information.

We want to be prepared for all contingencies. The public expects us to be able to act quickly.

I will put my full statement in the record because we will be holding people to time limits because we have a large panel here today.

[The prepared statement of Senator Cardin follows:]

STATEMENT OF HON. BENJAMIN L. CARDIN, U.S. SENATOR
FROM THE STATE OF MARYLAND

I want to thank our guest colleagues for coming before the subcommittee today to share their experiences and ideas. While I know this crisis in your State has been very trying for your constituents, my hope is that we may learn from this experience and find policy solutions to ensure that an incident like this never happens again in West Virginia or in any other state.

The Central West Virginia Water Crisis has shined a spotlight on the vulnerabilities and threats to the safety and security of our drinking water sources. The rapid response to the crisis, especially the speedy relief efforts delivered to the affected communities by FEMA and the National Guard are to be commended and we thank those who were there during the victims' times of need.

The gross negligence of Freedom Industries, the company operating the chemical storage and terminal facility on the banks of the Elk River on the North-Eastside of Charleston, should give us all pause about the potential threats to our water resources across the country.

Because the plain facts are: We don't know the extent of the contamination risks to our drinking water sources. Federal law requires the states to conduct risk assessments within the watersheds or boundaries of known drinking water sources. Federal law does not, however, require these surveys to be updated or provide any guidance on how this information is to be used. What we have is a patchwork of State data with varying degrees of reliability. This creates uncertainty of risks for water providers.

One of the most frightening, albeit fortunate, revelations about the West Virginia water crisis centers around one very distinct property of the chemical that spilled into Elk River infiltrating the West Virginia American Water works facility.

Methyl-Cycl-Oh-Hex-ane, commonly referred to as MCHM, has a very distinct odor that is described as smelling like black licorice. Residents across West Virginia America's service district noticed this unmistakable odor in their tap water on the morning of January 9th and immediately began reporting their discoveries to State environmental protection officials and the Water Works.

These calls to the authorities touched off the investigation and discovery of the spill at the Freedom Industries tank farm located one and half miles upriver from West Virginia American's intake pipe. Freedom Industries made no effort to report the spill, even though environmental investigators at the scene found that the Company had made a rudimentary attempt at containing the spill.

It was the odor of the MCHM that kept this crisis from being an all out public health catastrophe. But many chemicals are odorless, and would pass a literal "sniff test" while posing a serious threat to human health if they entered the water supply.

Another chemical, PPH, is reported to also have spilled from the Freedom Industries facility. While officials believe that West Virginia American's water treatment works may have removed the PPH from the drinking water supply, it went undetected for more than 2 weeks after the spill was reported. The only reason authorities knew to start looking for PPH is because, Freedom Industries admitted, 2 weeks later, that PPH also spilled.

EPA has only written Safe Drinking Water Act regulations for 90 contaminants. MCHM an PPH are not one of the 90. In fact there is very little known at all about the safety of these chemicals.

While the lack of information of the safety of these chemicals is concerning, what troubles me in my capacity as chairman of the Water of Subcommittee is the lack of information downstream drinking water provider had of these chemicals' presence being stored on the banks of the Elk River just 1.5 miles upstream.

The responsibility to provide safe drinking water to thousands of customers is enormous. There are standard industry procedures used to treat for common microbial contaminants and turbidity but not most chemicals. Treatment for chemicals, on the other hand, can be very complex. With more than 80,000 manufactured chemicals in commerce we can't expect every water provider to test and treat their water for every known chemical.

We can and should expect drinking water providers to test and treat for known potential contaminants within their watershed boundaries. But they need to know what potential threats are out there to do so effectively.

Section 1453 of the Safe Drinking Water Act required EPA to publish guidance for states to implement source water assessment programs that delineate boundaries of the areas from which systems receive water, and identify the origins of contaminants within those areas to determine systems' susceptibility to contamination. These assessments can be incredibly helpful if they are kept up to date. The law, however, has no update requirement.

If West Virginia American had accurate and up to date information on the chemicals being stored in the watershed it would have been better prepared to detect and treat for MCHM and the crisis could have been avoided or at least very least mitigated.

But the responsibility for preventing a health crisis resulting from an individual's or corporation's irresponsible actions that foul a source waters should not fall squarely on the shoulders on the water service provider at the expense of individual ratepayers. The law needs to place greater responsibility on the entities creating the risk and emphasize prevention at the potential source of contamination. It is entirely unfair to socialize the expense of recovering for the mistakes of a single entity.

We're seeing this playing out right now in West Virginia. West Virginia American continues to spend thousands if not millions of dollars to recover from this spill. These expenses will ultimately be passed along to their 300,000 customers. Some of these customers will likely to have to make personal investments to repair or replace damaged hardware and appliances caused by the spill. Meanwhile, Freedom Industries has filed for bankruptcy to protect their financial liability for damages from a incident that they are responsible for.

I want to believe that most companies that produce, store, ship and sell potentially hazardous chemicals are responsible actors. Its situations like this that clearly demonstrate that even if most actors are good, one bad actor can put at risk the health and safety of hundreds of thousands of people and that there is a very appropriate and essential role for government to play to protect those people from the potential negligence of others.

The Safe Drinking Water Act does not provide specific risk prevention enforcement measures for the State to implement on identified risks in the watershed assessment. That's not to say states can't pass such laws, but it is entirely appropriate, given how waters flow across State lines and in many instances establish State borders, for there to be better Federal enforcement mechanisms.

The West Virginia Senate recently passed legislation, with unanimous bi-partisan support, to improve the monitoring and spill prevention requirements of chemical facilities in the state.

I would like to think that there would be bi-partisan support in the U.S. Congress to make similar amendments to our Federal laws to better ensure the safety of all communities.

The Federal role is clear. We need only look at the source of water for the U.S. Capitol to underscore this point. Our water in this building comes from high up in

the Potomac River Watershed from an Army Corps reservoir, named after U.S. Senator Jennings Randolph from West Virginia. That reservoir straddles the West Virginia and Maryland border, yet it provides water to DC and suburban Maryland. This is just one example of a clear interest we have in improving Federal statute.

I look forward to working with colleagues on these issues so that we may prevent the next crisis from occurring in each other's state.

Senator CARDIN. I want to thank the responders, the people at FEMA, the National Guard and many others who did incredible work to provide safety and information to the people of West Virginia and minimized the otherwise catastrophic impact of this episode.

I also want to point out that we need to look at the cost issues. The company involved has filed bankruptcy, trying to avoid the full financial impact, which means the ratepayers of West Virginia and many homeowners are going to be suffering. What do we do about that?

I also want to look at the issue of federalism. I know the Senate in West Virginia has acted on legislation. I know it is under consideration in both the House and the Senate in the State, but this is an issue of federalism.

The water we drink here, this tap water that came from the tap we hope is safe, comes from the Potomac River Watershed named after U.S. Senator Randolph Jennings from West Virginia. It comes from West Virginia and Maryland into D.C., so yes, federalism says the States need to act but the Federal Government also needs to act to make sure we have safe drinking water for all the people of our country.

I am very pleased to have our colleagues here from both the House and the Senate. We have many people on the next panel who are experts in this area. I hope we can move forward together. Like the legislature in West Virginia, I hope that the Congress can move forward in a bipartisan. My understanding in the Senate, it was a unanimous vote. I hope we can move forward in a bipartisan manner to change our laws and oversight to make sure we keep our people safe.

With that, let me turn to Senator Vitter.

OPENING STATEMENT OF HON. DAVID VITTER, U.S. SENATOR FROM THE STATE OF LOUISIANA

Senator VITTER. Thank you, Chairman Cardin and Chairman Boxer for convening this really important subcommittee hearing today on the West Virginia chemical spill.

My thoughts go out to the more than 300,000 individuals directly affected by this accident. I hope today's panel can better help us understand the circumstances surrounding this spill to enhance response and prevention in the future.

I certainly want to commend Senator Manchin, Representatives Capito and Rahall, and all those who have worked tirelessly in the wake of this unfortunate spill. On the Senate side, Senator Manchin, with others, has introduced legislation in response to the spill. While I have specific issues with it that we are working through, I am completely supportive of the effort and hope to come to a positive resolution of those specific issues very soon.

A crucial part of the legislative process is undertaken at the committee level where traditionally bills are brought to markup for an

open and transparent discussion. Members from both sides of the aisle are allowed to voice their opinions and offer amendments to be voted on.

I want to thank Chairman Boxer for agreeing to a markup later this week. I fully support that process, but I also want to encourage more of that, more markups where there is significant bipartisan work going on.

Senator Manchin's bill, along with other important pieces of legislation, like our Chemical Safety and Improvement Act, should be brought before this committee in a markup to allow the legislative process to play out. In an age where compromise is so rare, it is unfortunate that any bill which has significant support throughout the Senate would not move expeditiously. Multiple bipartisan bills in addition to the Chemical Safety and Improvement Act continue to wait for markup and I certainly support action in all of those areas.

In this instance, it is clear that important information was not readily available on certain chemicals which got into the Elk River, further highlighting the need for reforming our Nation's outdated law that assesses chemical risks, the 38 year old Toxic Substances Control Act.

I am certainly proud to have introduced the first ever bipartisan TSCA reform bill with the late Senator Lautenberg. As many of you know, that is currently sponsored by 25 Senators from both parties spanning the entire political spectrum.

For the last 6 months, Senator Udall and I, along with other members of the Senate, including Senator Manchin, have worked tirelessly to improve that already bipartisan agreement and have made significant strides in this regard. The bill we have now is not the bill we initially introduced because we have carefully listened to stakeholders and made significant and measurable improvements.

A vast majority of States, West Virginia included, have resource constraints and need the certainty of a strong Federal program that develops risk assessments and regulations based on sound science. It is important to quickly explain how CSIA would unequivocally help States and the American people with greater access to information aiding in the understanding and response to such an incident as this.

I guess the bottom line in that regard is that the lack of health and safety data on any of the chemical compounds which spilled in West Virginia would have been enough under our bill for EPA to have classified them as high priority, requiring a full and robust safety assessment and determination.

Our bill would have granted greater authority to EPA to ensure assessment and determination be informed by new studies ordered by EPA without having to go through the formal rulemaking process or find that the chemical may pose an unreasonable risk.

The bill would also reduce barriers for the agency that exist now and would also allow for greater sharing of confidential information between EPA, State and local governments, as well as first responders and health practitioners.

Finally, I want to welcome all of our witnesses today, in particular the members that I recognized, as we look to what hap-

pened in their State of West Virginia. I look forward to an important discussion.

Thank you.

Senator CARDIN. Senator Boxer.

OPENING STATEMENT OF HON. BARBARA BOXER, U.S. SENATOR FROM THE STATE OF CALIFORNIA

Senator BOXER. Thank you, Senator Cardin, for your great leadership. Thank you, Senators Vitter and Boozman for agreeing this and welcome to all.

I want to make a statement about TSCA but most of my statement will not be about TSCA. I want to enter into the record an article entitled, The Chemical Safety Improvement Act Will Not Solve the Problems Illustrated by the West Virginia Chemical Spill.

Senator CARDIN. Without objection.

[The referenced information follows:]

THE CHEMICAL SAFETY IMPROVEMENT ACT WILL NOT SOLVE THE PROBLEMS ILLUSTRATED BY THE WEST VIRGINIA CHEMICAL SPILL

POSTED JANUARY 15, 2014

Daniel Rosenberg, Senior Attorney, Washington DC

In the wake of the recent chemical spill into the Elk River and the drinking water supply of several hundred thousand West Virginians, a new call has been raised to quickly move bi-partisan legislation introduced in May 2013 to reform the Toxic Substances Control Act (TSCA). Unfortunately, it would be compounding one environmental disaster with another to move forward with that legislation, the Chemical Safety Improvement Act (S 1009), in its introduced form. While some individual provisions of S. 1009 are potential improvements over TSCA, other provisions would mute or erase their impact and the bill as a whole would leave the public with even less protection. That bill, as is, would leave EPA hamstrung and prevent states from taking action. TSCA, first passed in 1976 (and never updated) has largely been a failure. Intended to give EPA the authority to regulate the manufacture, use, distribution and disposal of chemicals "from the cradle to the grave" it has yielded virtually no meaningful regulation or protection, particularly from the tens of thousands of chemicals that were in commerce at the time the law was enacted. The law "grandfathered" in chemicals like the one that leaked in West Virginia, 4-methyl-cyclohexane-methanol(MCHM), meaning that they remained on the market unregulated even though virtually no information was available on any risks they might pose. The law "grandfathered" some 62,000 chemicals, and did not require that EPA test them for safety or ensure that they met a standard of safety.

The law also contained provisions making it difficult for EPA to require testing of chemicals, and saddled the agency with a requirement to prove that it had examined and done detailed analysis on virtually any possible means to regulate a chemical before settling on the appropriate set of restrictions. The impact of these provisions was fully revealed in 1991 when a Federal court overturned EPA's attempt to ban most uses of asbestos, which is known to cause disease, including cancer, after a 10-year effort. Since that time EPA has not regulated another chemical substance under TSCA. In total, the agency has regulated only six of the original 62,000 substances under the law.

Health, science, labor, consumer, justice and environmental organizations from across the country have been working toward reform of TSCA for years in an effort to ensure the existence of a strong Federal program for assessing the safety and regulating chemicals. Unfortunately, the Chemical Safety Improvement Act (CSIA), as introduced, would fail to ensure such a program, and at the same time would prevent State and local governments from taking action to protect their citizens—which is what has taken place in the absence of Federal action under TSCA. On balance, the CSIA would actually be worse than current law.

In the wake of the West Virginia spill, the outcry has been to ensure that information is available about risky chemicals and that those risk be limited. But the CSIA in its current form would require EPA to go through as much as a decade of preliminary steps before it could start regulating additional chemicals. Even after analysis began, it would continue to make it hard to get information on existing

chemicals and to use that information. The bill makes it easy, though, for the agency to decide that a chemical is a "low priority" and to never regulate it. And the bill blocks states from taking action on chemicals even if EPA has not acted or will never act.

Here are just a few of the many problems with the introduced version of the Chemical Safety Improvement Act:

The safety standard in the legislation is not protective of public health. It would not ensure the protection of vulnerable populations, including those more heavily exposed to toxic chemicals and those—like pregnant women, children and the elderly—more vulnerable to the toxic effects of chemicals. And the safety standard could still allow consideration of cost as a factor in determining whether a chemical was safe and could be regulated by the EPA, the same failure as under the existing law.

The bill contains no enforceable deadlines for EPA to take action to assess or regulate chemicals, and establishes no minimum number of chemicals for the agency to assess each year. With thousands of chemicals never assessed for safety, and with industry and congressional opposition to most steps taken by EPA to assess or regulate chemicals to date, a failure to include enforceable deadlines and minimum requirements ensures that nothing would happen under this new "improved" TSCA.

In addition to the lack of enforceable deadlines, the bill contains pages of provisions that would tie the agency up in red tape, delaying potentially for years any effort by EPA to prioritize, test, assess and regulate chemicals. In addition, the bill is laced with provisions that would further hamper EPA, and put a thumb on the scale in favor of chemical industry-preferred methodologies for assessing chemicals over methods endorsed by the National Academy of Sciences.

The bill would prevent EPA from requiring testing of a chemical unless it has been classified as "high priority" which in many cases may be difficult without some additional testing—due to the lack of available health for thousands of chemicals in commerce—including MCHM. This is one of many provisions designed to ensure that ultimately the number of chemicals assessed and actually regulated are very low. As far as the lack of available health data for most chemicals in commerce, one of the reasons for that is the excessive protection for claims of Confidential Business Information (CBI) which have been abused over the years and resulted in protection of information that is not actually CBI. The bill would grandfather in all previous CBI claims, including the identity of some 16,000 chemicals.

Another problematic provision would allow EPA to designate a chemical as "low-priority" meaning "likely to meet the [unprotective] safety standard"—even when data to make an informed decision is lacking. In addition, once EPA made such a low-priority designation, states would be pre-empted from ever taking any action on the substance. Hundreds or thousands of substances could easily disappear down this memory hole, never to be thought of again unless perhaps they spill into somebody's drinking water supply.

As noted above, the bill would also widely preempt states from taking action on chemicals, including high-priority chemicals, even when action by EPA may be years away, or may never occur at all. The bill would also take away states' existing authority to enforce Federal provisions of the law within their state. And the bill would eliminate existing authority for EPA to take quick action to protect the public from dangerous chemicals when such a need arises.

Finally, the bill contains no provision to ensure that EPA has sufficient funding to run the type of program necessary to assess the safety of chemicals and ensure that those that remain in commerce are manufactured, processed, distributed, stored, used and disposed of with sufficient safety controls in place.

In short, the problems with TSCA that are illustrated by the chemical spill in West Virginia would not be fixed by the Chemical Safety Improvement Act, as introduced, and in some respects they would be made worse. The bill as currently written would provide the public with the illusion of an effective Federal program to regulate chemicals, while tying the EPA in knots and taking away existing State authorities. The chemical spill in West Virginia is an illustration why we need to strengthen the Toxic Substances Control Act (and certain other environmental laws); it is not a justification for enacting a flawed CSIA.

Senator BOXER. I wanted to note that TSCA is not designed to address inspection of chemical storage tanks. It deals with classifying 80,000 chemicals. I look forward to a strong TSCA bill.

The current bill, this is so important, my scientific experts say this particular chemical would be classified as low priority. Under the bill we have before us, the Vitter bill, the one we are working on, Senator Vitter, we will be giving you our response next week

to that bill, there would be no ability for the State to act once a chemical is classified low priority.

They would be precluded from acting and there would be no lawsuits allowed for the constituents of Senator Manchin and my colleagues here. Under the TSCA bill, no citizen could ever sue and the State would be preempted. We are going to work on a tough TSCA bill, one that is worthy of the name.

Here is where we are. We are going to focus on what happened in West Virginia and what we can do now, not some long classification time and preemption of State laws and preemption of lawsuits for those injured. We are not dealing with that today. We set that aside today and we are going to act on how to fix the problem.

I so appreciate all the electeds who are here today and those who have come today from the State because you have suffered from this. The impacts are ongoing. Residents are still concerned whether the water is safe to drink and businesses continue to feel the pain of the spill. You will tell me about the real impacts your families have been going through so I will not stress those here.

We know that the CDC has advised pregnant women to avoid drinking tap water until there are no longer detectible levels in the system. Some businesses closed forcing employees to go without paychecks for days and some restaurants are still buying bottled water according to my information.

Here is the situation. We had a tank filled with a chemical right near a drinking water supply. Because the risk assessment in the Safe Drinking Water Act was not used, no one knew what to do. The Manchin bill, which I am so proud to be a part of along with Senator Rockefeller, in the Senate what we say is this. If there is any type of storage facility that has a chemical in it which is near a drinking water supply, that particular tank, that facility must be inspected and we must know everything there is to know about the chemical regardless of any other laws which may be in place to help us.

We need to focus on what the real problems are. Remember, there are 80,000 chemicals out there. There are just a few in this tank and we need to know what they are. The sadness is, as Senator Cardin so rightly pointed out, there haven't been inspections since the early 2000's and we really missed this.

I am so sorry about that. I am unhappy about that. I want to work with my colleagues to fix it. This legislation, which we and our staffs worked hours on, puts in one place the tools necessary to protect our drinking water from chemical spills.

It establishes State programs which parties from both sides support that will provide for regular inspections of these facilities, set design standards for the tanks, establish emergency response plans and provide information and tools to drinking water utilities to respond to future disasters.

Senator Cardin, you are right. The current Clean Water Act does contain authority to deal with this but it is very loosey goosey. It is not clear and too much is left to the individuals. We need to make sure that in all of our States, if we have a chemical that could leak into a drinking water supply, we know everything about that chemical, we know what to do if something happens, we have the standards in place to make sure it is safely stored.

I am very happy you did this. We will have a further hearing with the Chemical Safety Board to continue to focus on this. This is not a 1-day approach. This is the first day approach.

I thank you all for being here.

Senator CARDIN. Senator Udall.

OPENING STATEMENT OF HON. TOM UDALL,
U.S. SENATOR FROM NEW MEXICO

Senator UDALL. Thank you, Senator Cardin.

Let me welcome everyone from West Virginia here today and in particular, my colleagues in the Senate and my former colleagues in the House, both of whom I very much enjoyed serving with. I am looking forward to hearing from you today.

Americans expect modern water services to be always available and if they are not, there are serious public health consequences. The West Virginia spill clearly highlights the huge impacts accidental releases of chemicals can have on our health and well being.

Our hearts go out to the citizens of West Virginia who have suffered enormous anxiety for weeks now in the face of uncertainties about the risks posed by contact with MCHM and the additional chemicals impacting the State.

All of us around the country should be paying close attention to this accident because it raises some key questions. How did a chemical storage company's accident manage to pollute drinking water for hundreds of thousands of people?

I understand the State of West Virginia is increasing standards for this type of storage. That should be a reminder to all of us that reasonable environmental standards are not about burdens on the industry, they are protections for people and for taxpayers.

This company has now declared bankruptcy. According to Business Week, the bankruptcy judge called it one of the most unusual cases he has seen and ownership changed hands 9 days before the spill. Are we assured this company will assume the liability here or will taxpayers, through Superfund, be forced to pick up the tab? We must be vigilant to ensure that these cleanup costs are met by the company. Corporate shell games should not be able to avoid responsibility.

Finally, why is the information about the chemicals leaked so limited and so secretive? OSHA says MCHM is hazardous. Why hasn't more testing been done about this chemical so that we know about its likely health effects from a spill like this? To me, this seems to be a key failure of our Nation's current chemical law, the Toxic Substances Control Act.

Americans should, but cannot under this old law, feel confident that the government is reviewing and regulating all chemicals. These chemicals are not only in industry but also in products that all of us, including children and pregnant women, come into contact with every day.

Members of this committee are well aware that the late Senator Lautenberg and Senator Vitter introduced the Chemical Safety Improvement Act. This is the first bipartisan bill to reform TSCA ever. I believe we should capitalize on that key development and finalize the bill that can have broad support in the Senate, including our chairman, Chairman Boxer.

Several Senators have been working earnestly with stakeholders have been engaged in serious discussions over the past 8 months to strengthen and improve this key bipartisan bill. I would like to take a moment to clear the air and say to everyone that regardless of where you stand on that bill, there are significant changes happening to it.

I believe that we are succeeding improvements, although we still have a ways to go. In particular, we need to understand in what ways TSCA reform could have lessened the impact of events like the spill in West Virginia. First and foremost, we need to ensure that reform addresses chemicals that lack sufficient information to determine their safety.

Furthermore, we need to ensure that safety and health officials have quick and easy access to any existing and available information when such tragedies as this happen.

These are all solvable and I think the solutions are near to us. I am not going to speak for anyone else besides myself but soon I hope we can publicly circulate an updated version addressing many of these issues so that we can move beyond talking about an outdated bill as introduced.

We need to remind ourselves that every American comes in contact with chemicals on a daily basis, not just during times of accidents. I am confident that the ongoing discussions on TSCA reform are headed in a positive direction and can allow Americans to know that consumer products they invite into their homes on a daily basis are safe.

If we can do that and help protect communities at risk from spills like this, I think all of our constituents will thank you very much.

Thank you, Senator Cardin. I appreciate you and Chairman Boxer doing this.

Senator CARDIN. Let me thank my colleagues who are here for their participation.

This is the Subcommittee on Water and Wildlife. We are going to concentrate on the Safe Drinking Water Act. That is the responsibility of this committee, to make sure that we have safe drinking water.

Obviously it affects how we handle chemicals in America but I would hope that we will focus on the adequacy of the Safety Drinking Water Act, particularly legislation that has been suggested by our colleagues.

Also, just as a matter of reference, my staff has a chart that shows the aerial view just so we know the Elk River and where the West Virginia Intake Facility is located there on the left. Freedom Industries, where the spill occurred, is an hour and a half upstream from the intake. You can see how close all this is to the areas involved. I thought that would be helpful so we have a visual of the two particular areas involved.

With that, I am going to turn to our colleagues. I want to than our two Senate colleagues, Senator Rockefeller and Senator Manchin for their extraordinary leadership on this issue, for their help to this committee and working with us to get today's hearing.

It is nice to have Congressmen Rahall and Capito here with us, two of my former colleagues with whom I served in the House of

Representatives. When I got to the House, I was appointed to the Transportation Committee and there was Congressman Rahall to help me understand the importance of what we do in the Congress as it relates to the infrastructure of this country.

It is a pleasure to have all four of our colleagues here. Your full statements will be made a part of the record. We will start with Senator Rockefeller.

OPENING STATEMENT OF HON. JAY ROCKEFELLER, U.S. SENATOR FROM THE STATE OF WEST VIRGINIA

Senator ROCKEFELLER. Thank you very much, Mr. Chairman and Chairman Boxer.

We have just referred to this as drinking water. Drinking is just one very small part of what this toxic water does. It causes people who have money enough to have a vacation home somewhere to get out of that nine county area and go there so they can take a bath.

I know several people who commute on a daily basis just to be able to do that. Those people do not have those second homes, so they are left to deal with the horror of what this is.

I can tell you, Mr. Chairman, there are a number of people I could but will not name to you who have said they are considering moving out of West Virginia because they have young children and have no confidence in the future, no confidence in our regulatory scheme either at the State or Federal level, and they are not taking any chances because they don't know what that water is going to be like in the future, and neither do I.

West Virginians want to know four things. How did this happen? Is the water now safe? There are various views on that. What are the long term health consequences? Senator Udall mentioned that and it is enormously important. If cancer goes into remission, does that mean it is gone? No. You wake up every day thinking it might come back, not being sure. That is a horrible feeling for bringing up a family and settling in. Finally, how do we make sure this never happens again?

Right after this happened, I called the Chemical Safety Board and they are investigating this bill. They are very good at it. In addition, the State is addressing this and criminal investigation is going on. Senator Udall mentioned the fact that Freedom had taken bankruptcy. That certainly was convenient for them, wasn't it? They want to get out of paying any kind of fine.

Senator Schatz and I have a bill, which will no doubt be beaten by corporate interests in this Congress, saying they should be fined and pay every single nickel to clean up the mess they made, not just in peoples' lives but literally in situ. It is a good bill. Will it pass in this money trumps all world that we live in? I am not sure.

Despite the government's insurance that the water is safe, doubt does linger. It is in the nature of people. There are too many unanswered questions. State and Federal officials are working very hard but deficiencies are replete in our regulatory structure.

A word here. I happen to be something called a Democrat. I believe in spending money on infrastructure. I think it is important that we do that. That is not the mood of this Congress or at least enough of the Congress to stop anything from happening.

Invest in schools, invest in clean water, invest in roads, invest in all of those things which are part of safety for either imbibing of water or anything else you might do, that costs money. There might be some user taxes or a little bit more taxes. No, that will never happen. This has never been a part of the 30 years I have been in the Senate but it sure is now.

People say let the industry take care of it. That is an Appalachian myth. I came from that side of Appalachia so sometimes I see Appalachian ways that are different than others but the idea that somehow God has it in his plan to make sure that industry is going to make life safe for you, not true.

Industry does everything they can and gets away with it almost all the time, whether it is the coal industry, not the subject of your hearing, or water or whatever. They will cut corners and they will get away with it. Regulation is soft in West Virginia. It has always been soft, frankly, when you put that together with sequestration and government shutdowns and the whole theology of don't cause anybody to do anything in this country which would cause water to be cleaner, bridges to be safer and all the rest of that.

That is the story as I see right now. I am astounded, Senator Udall, that Freedom, as you say, timely 9 days before, is getting away with this unusual bankruptcy. All they want to do is say we don't want to pay, somebody else has to pay.

Appalachian culture, a little bit of it, I am sorry to say that. Scotch-Irish culture, a little bit, I am sorry to say. Fatalism, the world is as it is, we accept the world as it is and the point is, no, you don't accept the world as it is. You accept the world as it should be and then you make it conform to that posture.

I am here angry, upset, shocked, embarrassed that this would happen to 300,000 absolutely wonderful people who work in coal mines—don't get me into that subject. They are depending on the fruit of the land wherever it may be for survival. They are making it but barely.

I think I will stop there for my own good.

Senator CARDIN. Thank you, Senator Rockefeller. We always appreciate your passion on these issues.

Senator Manchin.

OPENING STATEMENT OF HON. JOE MANCHIN, U.S. SENATOR FROM THE STATE OF WEST VIRGINIA

Senator MANCHIN. Thank you, Chairman Cardin and Ranking Member Boozman, for holding the hearing today. I really appreciate your finally bringing national attention to this issue as only we here in Congress can do.

I want to thank Chairman Boxer who has worked tirelessly. She jumped right in there with me in the immediate aftermath of this spill. She never hesitated, never blinked and her staff went around the clock until we had a piece of legislation we thought would not only help cure the problem in West Virginia, would have prevented the problem in West Virginia, and would definitely prevent this from happening anywhere in the country. That is our goal.

On January 9, less than 4 weeks ago, thousands of gallon crude, MCHM, leaked from a storage tank into the Elk River. We all

know that. It contaminated the drinking water of 300,000 West Virginia residents, which is unconscionable.

In our State, we have always worked hard. We have really worked hard to produce the energy and chemicals we use every day and take for granted. We are proud of the work we have done for this great country. That cannot come at a cost of access to safe and clean drinking water or to the safety and confidence of the people of West Virginia.

This spill should never have happened and it is our responsibility in Congress, working with the States to do everything we can to keep it from happening again, not just in West Virginia but anywhere in America.

That is why I worked with Chairwoman Boxer to develop the Chemical Safety and Drinking Water Protection Act. I thank Senator Rockefeller, my colleague from West Virginia, for being so instrumental in this. I appreciate that.

Our bill would require State inspections of all above ground chemical storage facilities and more frequent inspections of those facilities located near drinking water sources. It sets minimum Federal standards that chemical facilities must meet including construction and leak detection requirements, failsafe containment standards, the development of emergency response plans and financial responsibility requirements which we see all too lax.

Additionally, companies must inform the State, the Federal EPA and local water systems of chemicals they store. That information is only so helpful when we don't have adequate health and safety data on these chemicals. That is why I am also a co-sponsor and totally committed to the Chemical Safety Improvement Act, which I know everyone is working in the best interest they can. I appreciate that.

Under the Chemical Safety and Improvement Act, states could request that the EPA prioritize the testing of specific chemicals even if they aren't detected or determined to be of high concern, including those held near waterways which specifically we should know everything near a waterway that is anything other than drinking water.

For chemicals like MCHM, the overwhelming lack of health and safety data is one of the criteria for designing and designating a chemical as a high priority.

The bottom line is that no West Virginian or American should have to worry about the contamination of their water supply from a chemical spill and I will do everything in my power to enact legislation to protect safe drinking water. These two bills will go a long way to ensure that every American has access to safe drinking water and that, God forbid, if an incident like this occurs again, we have the tools to respond as quickly and effectively as possible.

Today, I am asking all West Virginians, the EPA, the CDC, the West Virginia DEP, and all those involved to join me in pledging to make sure the water in the Kanawha Valley is the cleanest and safest in America. That should be our goal here today.

I want to also thank the CDC and EPA. As I understand, they are in our State today working with all of our State officials and basically restoring confidence in the water we have, making sure

we are all on the same page and that it is safe for human consumption.

I just pray to God that no one goes through this. If it is wake-up call for all of us, then let it be a wake-up call and let us act.

Thank you for having me.

Senator CARDIN. Thank you, Senator Manchin.

Congressman Rahall.

OPENING STATEMENT OF HON. NICK RAHALL, U.S. REPRESENTATIVE FROM THE STATE OF WEST VIRGINIA

Mr. RAHALL. Thank you, Chairman Cardin. I appreciate your having this hearing and allowing myself and our colleagues to speak to you and to full committee Chairman Boxer about the recent events in West Virginia.

I am going to be very brief because I know you have a panel of experts following our panel. I want to thank both Senators Rockefeller and Manchin, along with Chairman Boxer and Chairman Cardin for the tremendous work you have done on legislation to bring forward to the Congress.

I want to particularly thank Senator Rockefeller. He mentioned, while not from Appalachia, this gentleman has dedicated his entire career to the public health and safety of the people of Appalachia. Words would never be adequate enough to say thank you to our senior Senator for what he has done for the people of West Virginia. I want to publicly express that appreciation today.

The recent chemical spill in our State has caused not only much well founded concern but also deeply felt anxiety. You have already heard that today. There is certainly a great deal of mistrust in the air as much as suspicion about what is in the water.

Factual information in the wake of that spill is critical to all of us. There are too many unanswered questions for which we all need answers. The recent information that has come to light after the spill has only exacerbated the tremendous mistrust people already had for government. That certainly has gotten worse since this spill.

I think it is proper that Congress conduct these hearings to understand the facts as well as the limits of congressional action before rushing headlong into something that we won't regret but is going to need much work later on.

On the day of the spill when State authorities arrived at the Freedom Industries site, they encountered a company that was either unaware of the leaking chemical or unwilling to admit they had a problem. When told to follow protocol and report the leak, the company dragged its feet and when it finally did report it, company officials mischaracterized the seriousness of the situation and the threat it posed to our people.

Certainly Congress can require a better understanding of the risks of chemicals, it can help states improve emergency response and preparedness but I am not sure that Congress can ever completely legislate away the irresponsibility and the disregard for public welfare recently exhibited by Freedom Industries and whatever other shell operations were set up.

West Virginians do care about the health and safety of our families and neighbors. Our State legislature, as you referenced, Mr.

Chairman, is working on bills to fix the legal loopholes and regulate chemical storage tanks but legislation alone will not repair the damage done to the public's trust, mistrust of government and the public's trust in the policies that emanate from this city and oversight at all levels where they feel they have been let down.

To so many in my State, for example, the EPA has become the agency of no, an agency that only tells us what cannot be done rather than helping us to discern how we can do those things we need to do better. We are poorly served as a result.

My hope is that the Federal Government, rather than acting from on high and imposing broad solutions will listen to our concerns as you will hear today from this panel and tailor the response accordingly.

As I conclude, Mr. Chairman, I again thank you for this hearing. I ask that this committee work with myself and our committee on the House side, the Transportation and Infrastructure Committee that will be conducting a hearing in Charleston, West Virginia next Monday and together we hope to find a better way to protect or people and keep this from happening again.

Thank you, Mr. Chairman.

Senator CARDIN. Thank you, Representative Rahall.

Representative Capito.

OPENING STATEMENT OF HON. SHELLEY CAPITO, U.S. REPRESENTATIVE FROM THE STATE OF WEST VIRGINIA

Ms. CAPITO. Thank you, Chairman Cardin, Chairman Boxer, Senator Vitter and Senator Udall. It is wonderful to be on a panel with my colleagues.

I think it is important for you to know that in West Virginia we have always been very proud of our water. It is one of our stars in our quiver. This has really rocked us.

I live in the Kanawha Valley. I represent the Kanawha Valley and this affects my home and my family as well. It affects restaurants like Mr. Huey in Hurricane. It affects people who work for him who were not able to work during this time and the long term health effects of the January 9 spill I think are still under question.

As Senator Rockefeller said, I think we want people to be held accountable for what has happened here. We want to prevent such accidents from happening again. At the baseline, we want to know that the water we are drinking is safe.

Many questions about the spill still linger. We are having a hearing on Monday in Charleston to try to help answer some of these questions and examine not just State but most importantly, the Federal laws and strengthening our laws.

One of the things that really rocked me is when the CDC came in, they had an all clear, you can drink water and then 2 days later, the CDC says if you are a pregnant woman, we recommend that you probably don't drink the water. What kind of signal does that send to anybody, particularly young families?

Senator Manchin and I wrote a letter to the CDC asking for their testing protocols, how they were making decisions and what involvement might be tightened and made better so if you give assur-

ances you can drink water that you actually are assured that it is safe.

The other thing is the slow bleed of misinformation. It first comes out that you can drink the water, maybe not. Then a week later, it might have been more than a week later, it comes out there was not just one chemical in the water of MCHM, there was another chemical in the water at the same time that was leaked into the Kanawha Valley.

That does nothing for the confidence of anybody living there, any family living there that this situation is under control. It is very disheartening.

The company obviously did not accurately report. They did not report in timely fashion. We had to wait for somebody to smell something close by before they called emergency officials and then and only then did the company say something is leaking. Then it comes out later that maybe it has been leaking for 10 hours before anyone was actually notified as to what was going on.

It has rocked our confidence. It absolutely unacceptable that freedom did not immediately notify and there was not better information with our first responders.

As has been said, the State legislature is moving quickly toward passing a new law. I congratulate them and I support State level efforts but I think we need to continue to examine changes we have talked about today at the Federal level.

I am a mother and a grandmother. I live in the Kanawha Valley. I understand the fear and trepidation and anger the people feel because I feel it too. We have to get to the bottom of this where people are trusting that their tap water is safe and it will not happen again.

We have this responsibility. I congratulate the Senate committee and look forward to our House hearing next week in Charleston.

I thank you for your interest in the impact of this bill.

Thank you.

Senator CARDIN. Let me thank all four of our colleagues.

I particularly want to underscore the point that Congressman Rahall made about our colleague, Senator Rockefeller. He has been a real treasure for us in the U.S. Senate. We know we still have him for another year. We are not rushing his term but he has been an incredible voice on behalf of the people of our country not just West Virginia. I appreciate your comments.

We are going to move on to our second panel.

Let me welcome our second panel. We are pleased to have the experts from West Virginia today who can help us sort out what happened earlier this year.

We welcome: Hon. Natalie E. Tennant, Secretary of State of West Virginia; Hon. Randy C. Huffman, Cabinet Secretary, West Virginia Department of Environmental Protection; Erik D. Olson, Senior Strategic Director for Health and Food, Natural Resources Defense Council; Mr. Brent Fewell, Vice President of Environmental Compliance, United Water; Mr. Michael W. McNulty, General Manager, Putnam Public Service District, West Virginia; Mr. Richard O. Faulk, Partner, Hollingworth, LLP; and Mr. R. Peter Weaver, Vice President of Government Affairs, International Liquid Terminals Association.

We will start with Hon. Natalie Tennant.

Senator CARPER. Mr. Chairman.

Senator CARDIN. Senator Carper.

Senator CARPER. Could I ask a favor? I am a native West Virginian. I have a lot of family and relatives in West Virginia, some of whom have been adversely affected by this tragedy.

I just want to say I am going to be in and out of the hearing but I want to say when I leave, please do not think I am not interested. It is especially great to see the Secretary of State who is not an old friend but a friend of long standing. I am delighted you could be here with us to speak.

We look forward to hearing from all these witnesses.

Thank you.

Senator CARDIN. As I think is obvious to members of the Senate, there are many committee hearings going on. Senator Carper has responsibility as Chair of one of the most important committees in the Senate. We certainly understand that.

For our witnesses, all of your testimony will be made a part of our record. Your written testimony will be made a part of the record. You may proceed as you wish. Because we have such a large panel, we would ask you try to keep your comments to the 5-minutes that is allotted.

With that, we will start with Hon. Natalie Tennant.

STATEMENT OF NATALIE E. TENNANT,
SECRETARY OF STATE, WEST VIRGINIA

Ms. TENNANT. Thank you so much, Chairman Cardin, Ranking Member Vitter, Chairman Boxer, Senator Carper, it is good to see you again, also, and to all the members of the committee who will be reading this report.

Thank you for holding this hearing. Thank you for inviting me to share the challenges that West Virginia families and businesses have been facing and continue to face.

I also want to especially thank you, Madam Chair, and our West Virginia Senators who so much was said about Jay Rockefeller and Joe Manchin for introducing the Chemical Safety and Drinking Water Protection Act of 2014.

Lack of information has been our greatest challenge in West Virginia. That piece of legislation will go a long way toward providing the much needed transparency that we will have in the future.

I must say now, Senator, at this time, West Virginians need answers now. The water ban has been lifted but too many West Virginians are still wondering if their water is really safe. First, we hear it is one chemical. Then we hear it is two chemicals. First, we hear it is 7,500 gallons. Then we hear it is 10,000 gallons. One day we are told the water is safe. The next day we hear that pregnant women should not drink it.

It does not add up. Either it is safe or it is not safe. Quite frankly, people are fed up, they are angry and they are scared. I have families telling me that they are melting snow just to be able to give their children baths. As the mother of an 11 year old daughter, living in Kanawha County, I share those same concerns.

As Secretary of State for them, I demand answers. I ask this committee to help me get those answers. I have called on the Cen-

ters for Disease Control and Prevention to explain to West Virginians how they determined what levels of MCHM are safe. On Friday, I launched a petition for West Virginians to join in my call for those answers. As of this morning, we had 1,264 people who have signed on to that.

Each of these signatures is a mom, is a dad, is a friend, is a neighbor and they deserve to know what is coming out of their faucets isn't going to hurt their families.

Just this weekend I met with Dr. Rahul Gupta of the Kanawha-Charleston Health Department. Dr. Gupta is proposing a 10-year study to monitor the long term health impact to the people who have been exposed to MCHM. I am asking this committee to work with us to provide those resources we need to begin that study right away.

As one father wrote to me last week, "We are accountable to our children's health and future." I agree. We owe it to our children to start this study today.

As Secretary of State, my office is on the front lines with businesses every day in West Virginia, businesses like Bridge Road Bistro, which is famous in Charleston for its Sunday breakfast buffet. Bridge Road's manager, Sandy Call, told my office that they lost $40,000 during the do not use ban. They are continuing to spend an extra $500 a day to bring in bottled water because customers don't trust what is coming out of the tap.

This mistrust is costing our restaurants money and time and they should be spending that time and money growing their business and hiring new employees and new workers. It is also jeopardizing our tourism industry. We cannot attract new businesses to create jobs in West Virginia if people don't believe that our water is safe.

Our economy cannot fully recover until we regain the public confidence in our water supply. Quite simply, we need answers that we can trust.

On behalf of all West Virginians, I thank you for holding this hearing and again ask your help in getting this information and resources that we need to restore the public confidence in our water and to protect against long term health risks.

Thank you again, Mr. Chairman, for allowing me to be here and to speak for West Virginia.

[The prepared statement of Ms. Tennant follows:]

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Testimony of West Virginia Secretary of State Natalie E. Tennant

U.S. Senate Committee on Environment and Public Works

Subcommittee on Water and Wildlife hearing entitled, "Examination of the Safety and Security of Drinking Water Supplies Following the Central West Virginia Drinking Water Crisis"

Tuesday, February 4, 2014

Thank you Chairman Boxer, Ranking Member Vitter, Subcommittee Chair Cardin, Ranking Member Boozman, and all members of the committee for holding this hearing and inviting me to share the challenges West Virginia families and businesses are facing in the aftermath of the water crisis that left 300,000 residents of nine West Virginia counties without access to clean, safe water.

Thank you Madam Chair, and our West Virginia Senators, Jay Rockefeller and Joe Manchin for your swift response in introducing *The Chemical Safety and Drinking Water Protection Act of 2014*. In particular, I appreciate the provisions in the bill aimed at providing greater transparency and public information.

I also encourage you to consider developing measures to ensure that when existing safety standards are unavailable (as was the case with MCHM), individuals from local health departments, county governments and members of the public are included in the development of safety thresholds.

Lack of consistent, trustworthy information has been among our greatest challenges and frustrations in the aftermath of the Elk River chemical spill. Your legislation will go a long way toward providing the public with better resources and information in the future.

Call for Answers

At the same time, West Virginians need answers now.

The water ban has been lifted, but inconsistent information has left many West Virginians still wondering whether their water is safe.

First we were told one chemical leaked into our water. Then we were told about another.

First we were told 7,500 gallons. Then it was raised to 10,000.

One day we were told the water was safe after flushing, and days later, we were told pregnant women should not drink the water. That just doesn't add up. Either our water is safe or it is not.

As recently as Friday, disturbing reports showed detectable levels of MCHM still present in the water of at least five West Virginia schools.

People are fed up. They are angry, and they are scared.

Several people showed up at a town hall in Charleston last week with rashes they believe are connected to their water. Others have complained of headaches, nausea and vomiting. Families are melting snow to give their kids baths.

As the mother of an 11-year-old daughter living in Kanawha County, I share their concerns.

As their Secretary of State, I demand answers, and I ask this Committee to help me get them.

I've called on the Center for Disease Control to release its testing and methodology and explain to West Virginians how it determined what levels of MCHM are safe in our water.

On Friday, I launched a petition for West Virginians to join my call for answers. More than 100 people signed on in the first hour alone.

"The truth is all I ask for," one signer wrote.

Each one of those signatures is a mom, dad, friend or neighbor. They deserve to know with 100 percent certainty that what's coming out of their faucets will not harm them and their families.

Long-term Study Needed

This weekend I met with Dr. Rahul Gupta, Executive Director at Kanawha-Charleston Health Department.

According to Dr. Gupta, the Kanawha-Charleston Health Department has not received any valid, scientific knowledge about the possibilities of long-term symptoms, including cancer or birth defects, that exposure to MCHM may cause over the long-term.

Dr. Gupta is proposing a 10-year study to monitor the long-tem health and well-being of community members affected by exposure to MCHM.

I urge this Committee to work with my office, Dr. Gupta, the Health Department, and state and local officials to provide the resources we need to begin this study right away.

As one father wrote to me last week, "we are accountable for our children's health and future."

We owe it to them to conduct this study.

Economy Cannot Recover Until Public Trust is Earned

As Secretary of State, my office is on the front lines working with West Virginia businesses every day – businesses like Bridge Road Bistro, famous in Charleston for its Sunday breakfast buffet and live music on Wednesday nights.

Bridge Road's manager Sandy Call told my office they lost $40,000 during the do-not-use ban. Reopening cost another $3,000, and Bridge Road Bistro has spent another $36,000 on bagged ice, bottled water and canned soda to reassure customers who are still uneasy about tap water. Sandy estimates this will continue to cost an extra $500 a day indefinitely until public trust in the water is regained.

And, it is not just our businesses that took a hit during the ban. Sandy estimates her workers lost $30,000 in wages and tips.

The day after the spill, I went up to Riverside High School in Quincy to help hand out water. The school, which should have been filled with children learning, sat empty with a giant tanker truck out front and lines of people holding on to every container they could find, waiting for the chance to fill them with water.

I met the manager of a local Shoney's and an Arby's worker there in line, both forced off work because of the water ban. These folks work hard to make ends meet on minimum wage and tips. Every hour on the clock goes toward a bill that needs paid, gas for the car, or food for their families. After as many as 10 days forced out of work, too many workers just like them are left fearful, wondering how they will make this month's mortgage or pay the daycare bill.

Tiffany, an employee at a local hotel told me she wasn't quite sure how she would make up the income she lost. But she was giving away her shifts to co-workers, because they had families to support and needed the extra time more than she did.

That is just the kind of people we West Virginians are.

Thanks to the generosity of folks from around West Virginia and all across the country, the United Way has raised more than $70,000 to help our workers who lost shifts.

My office is working with the West Virginia State Legislature and the Governor's office to pass legislation that will provide much-needed support to our businesses.

And I thank the Small Business Administration for providing Economic Injury Disaster Loans to help small businesses impacted by the disaster. My office stands ready to assist with any information and paperwork that may be needed to complete those loans and get our businesses the help they need.

But our work is far from over. Calculating the loss to West Virginia's economy has been difficult. We may never be able to put a price on things like the time our children were not learning in the classrooms.

But the Charleston Visitors Bureau (CVB) says it has calculated about $1 million in losses from a survey of 12 businesses so far. The CVB estimates that $1 million would need to be multiplied by hundreds to get an overall estimate.

One thing is certain: our economy cannot recover until we regain public trust and confidence in our water supply.

Bringing in bottled water is costing our restaurants money and time that they should be spending growing their businesses and hiring new workers. Concerns over public health and safety jeopardize the tourism, on which, West Virginia relies. And our ability to attract new businesses and jobs to West Virginia is weakened as long as people do not trust the water.

We need answers we can trust.

On behalf of all West Virginians I thank you for holding this hearing, and again ask for your help in getting the information we need to restore public confidence in our water and protect against long-term health risks resulting from this crisis.

Attached:

January 17, 2014 Letter from the West Virginia Secretary of State Natalie Tennant to the Centers for Disease Control

Natalie E. Tennant
Secretary of State
State of West Virginia

January 17, 2014

Thomas Frieden, MD, MPH
Director, Centers for Disease Control and Prevention
1600 Clifton Road
Atlanta, GA 30333

Dear Dr. Frieden:

I write today to request your immediate attention and assistance regarding the public need for transparent information in the case of the chemical spill that contaminated the water supply for thousands of West Virginians last week.

I have spent days on water lines, talking with West Virginians who are justifiably concerned about the safety of the public water service. They deserve easily accessible information that will help restore their confidence in the water supply.

I request that the Centers for Disease Control and Prevention take the lead in creating a website that provides clear and accessible answers to the many questions West Virginians have in one accessible and easy to use location.

As you know this is a multi-agency response involving federal, state, and local jurisdictions. A single source of public information would make it easier for concerned West Virginians to quickly find the answers they need to restore public confidence.

The website should provide information including a comprehensive timeline of events, color-coded maps of areas that have been deemed safe to use the water and those that have not, information about MCHM, and water test results.

Most importantly, the site should provide information about the methodology used to determine "safe" levels of MCHM in the water supply. In order for the public to regain confidence in the water supply, it is incumbent upon the responsible agencies to provide as much information as possible in an easily accessible and understandable format.

I await your response to this urgent request and thank you for your consideration.

Sincerely,

Natalie E. Tennant
West Virginia Secretary of State

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March 19, 2014

The Honorable Barbara Boxer, Chairman
The Honorable David Vitter, Ranking Member
United States Senate
Committee on Environment and Public Works
Washington, DC 20510-6175

Dear Chairman Boxer and Ranking Member Vitter:

Thank you for giving me the opportunity to speak to the Committee on Environment and Public Works on February 4, 2014, at the hearing entitled, "Examination of the Safety and Security of Drinking Water Supplies Following the Central West Virginia Drinking Water Crisis." It was an honor to be able to speak on behalf of West Virginians after this difficult time with the water crisis.

Enclosed are my responses to the questions submitted by Senators Boxer, Vitter and Cardin. Should you need additional information, please do not hesitate to contact me or my Deputy Secretary of State, Sheryl Webb at 304-558-6000 or swebb@wvsos.com.

Sincerely,

Natalie E. Tennant
West Virginia Secretary of State

Environment and Public Works Committee Hearing
February 4, 2014
Follow up Questions and Answers

Senator Boxer

1. Ms. Tennant, do you agree that giving your State additional tools to protect your water supply from above-ground chemical storage facilities would help restore public confidence in your drinking water?

We have a responsibility to do whatever it takes to make sure this never happens again. West Virginians deserve to know that what's coming out of their taps is not going to hurt their families.

1,378 West Virginians signed a petition through my office calling for answers. They are scared, and they have a right to know they can trust the safety of their water.

I applaud legislative efforts in both the West Virginia Statehouse and the Congress. I hope there will be continued cooperation at all levels to address West Virginia's ongoing needs, including long-term medical monitoring and support for small businesses that were forced to close down during the crisis.

In the more immediate-term, West Virginia has requested additional assistance from the Federal Emergency Management Agency (FEMA), and I strongly urge Administrator W. Craig Fugate to reconsider the agency's recent decision to deny much-needed assistance. I would be very appreciative of anything the Committee can do to encourage FEMA to reconsider.

2. Would the business community and residents of Charleston and surrounding communities affected by this spill support the changes to the Safe Drinking Water Act proposed by Senators Manchin, Rockefeller, and myself, and the changes to State law proposed by Governor Tomblin?

I applaud legislative efforts in both the West Virginia Statehouse and the Congress. I particularly support provisions in the Chemical Safety and Drinking Water Protection Act of 2014 aimed at increasing transparency and availability of public information, including emergency response plans.

Lack of consistent, trustworthy information has been among our greatest challenges in West Virginia. While, our number one goal must be to prevent something like this from ever happening again, we also need to do more to make sure people have immediate access to the answers they deserve if it does.

Local and public input is also critical. I encourage the Senate to consider developing measures to ensure that when existing safety standards are not immediately available (as was the case with MCHM), individuals from local health departments, county governments and members of the public are included in the development of safety thresholds. West Virginians would have had much more confidence in the "parts per million" threshold recommendations we were given, had we been more directly informed and involved in the development of those safety standards from the beginning.

Senator Vitter:

1. At the hearing earlier this month, there was some discussion about a so-called "Appalachian myth." As I understand it from Senator Rockefeller's testimony, the Appalachian myth suggests that West Virginians and other Appalachian states have lax regulations based on a culture that allows industry and others to harm the environment without fear of consequences. Is my understanding of the Appalachian myth correct? And do you believe that an Appalachian myth actually exists? Or, instead, is Senator Rockefeller wrong, meaning that West Virginians and other Appalachian states are fully capable of developing and conducting an effective approach to environmental regulation?

Everyone agrees that more should have been done to prevent this crisis. The people of West Virginia deserve better. We all have a responsibility to do whatever it takes to make sure this never happens again, which is why I applaud legislative efforts in both the West Virginia Statehouse and the Congress. I hope there will be continued cooperation at all levels to address West Virginia's ongoing needs, including long-term medical monitoring and support for small businesses that were forced to close down during the crisis.

West Virginia has also requested additional assistance from the Federal Emergency Management Agency (FEMA), and I strongly urge Administrator W. Craig Fugate to reconsider the agency's recent decision to deny much-needed assistance. I would be very appreciative of anything the Committee can do to encourage FEMA to reconsider.

Senator Cardin

1. Is the state assisting victims recover damages from Freedom Industries?

My top priority from the very beginning of this crisis was making sure West Virginians are taken care of - from handing out water on the water lines -to providing support for our businesses who were forced to close their doors, and their workers who lost shifts - to making sure we have the resources to conduct long-term medical testing on those impacted.

West Virginia is working hard to take care of our communities. Recently, we successfully passed state legislation to provide emergency loans for small businesses and conduct medical

monitoring. And people across West Virginia and the country have stepped up to support our workers through charity organizations like the United Way. That's something to be proud of.

Still, we have to make sure Freedom Industries is held accountable. That is why I strongly support provisions in the Chemical Safety and Drinking Water Protection Act of 2014 that would ensure states like West Virginia can recoup costs from offenders like Freedom Industries and take care of our communities.

2. What actions is the state taking to restore public confidence in the safety of their drinking water?

The state has hired independent researchers to conduct in-home water testing and performed additional testing in schools.

However, there is no doubt that lack of consistent, transparent and trustworthy information from the beginning has left many West Virginians still skeptical about the safety of their water.

That is why, in February, I asked the Centers for Disease Control and Prevention (CDC) to make representatives available directly to the people of West Virginia to explain data and answer outstanding questions. I committed to use all resources of the Secretary of State's Office to facilitate the dialogue if the CDC agrees, and suggested a number of options, including an online chat forum, a telephone hotline, or mobile office hours in each of the nine counties impacted.

Long-term medical monitoring is also critical to restoring public confidence. I fought very hard to ensure it was passed by our state legislature, so West Virginians can know what, if any, long-term health impacts this crisis has had on our families.

3. Given the circumstances, and the absence of a legal requirement for Freedom Industries to make timely disclosures, did the Water Company act swiftly and appropriately to protect public health?

The Chemical Safety Board has opened an investigation and is still ongoing. I look forward to reviewing their findings, and if necessary advocating for additional measures to make sure more is done to prevent something like this from ever happening again.

I strongly support provisions in the Chemical Safety and Drinking Water Protection Act of 2014 that require industry to develop emergency response plans and make them available to the public.

Senator CARDIN. Thank you very much for your leadership on this issue.

Secretary Huffman.

STATEMENT OF RANDY C. HUFFMAN, CABINET SECRETARY, WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION

Mr. HUFFMAN. Thank you, Chairman Cardin and Chairman Boxer.

The State of West Virginia and its Department of Environmental Protection appreciate and welcome the opportunity to address this committee.

I am hopeful that by sharing West Virginia's experience from the perspective of an environmental regulator and not as a public health official, I can provide insight to you and other States as we week to provide a more comprehensive regulation of the pollutants stored in above ground storage tanks so as to better protect human health and the environment and minimize the risks associated with this industrial activity.

On January 9, 2014, DEP received a complaint concerning an odor around a tank farm owned by Freedom Industries. At 12:05 p.m., a Freedom Industries employee reported the spill to DEP's Emergency Response Spill Hotline and stated that the facility had discovered a hole in one of the tanks containing 4-Methylcyclohexane Methanol, MCHM.

DEP officials shut down the site and instructed Freedom to immediately take all necessary measures to contain, recover and remediate the material that had escaped from the above ground storage tank and the secondary containment structure.

This incident highlights an issue that exists not only in just West Virginia but all over the country. While all states have substantially similar regulations for underground storage tanks based on regulations promulgated by the EPA, the same is not true for their surface situated counterparts.

EPA does not have regulations pertaining to all above ground storage tanks. The states that do regulate them do so in a myriad of different ways. One similarity is most states that have above ground storage tank regulations have them as a result of an event similar to what has just happened in West Virginia.

Also, most states focus primarily on tanks containing petroleum products or hazardous waste or materials regulated by CERCLA. This leaves virtually unregulated an entire universe of pollutants stored in above ground tanks. With hindsight, it is easy to see a potential threat existed on the Elk River and that clarity sharpens our focus looking forward.

According to the EPA TSCA Chemical Inventory, there are approximately 84,000 known industrial chemicals being used in this country today. About 20,000 of those have been added to the list in the last 30 years with little change in the list of regulated chemicals.

While most of these materials are not currently classified as hazardous, the truth is, we simply do not know enough about them. The material that leaked into the Elk River on January 9 is one of those chemicals.

The West Virginia legislature is considering legislation that would help to fill the void that currently exists in the regulation of above ground storage tanks. The bill being discussed in the legislature today requires some things that are very important from DEP's perspective.

One of the most important is to have a registered professional engineer or other qualified individual inspect and test the tanks and secondary containment annually and certify their integrity.

On the Federal side, we also support the Manchin-Boxer proposed legislation to tighten the standards in the Safe Drinking Water Act. By requiring EPA to establish minimum acceptable standards by which the states will be held accountable, we can significantly reduce the risk of similar problems in the future.

West Virginia's proposed above ground storage tank program has been modeled after the very successful underground storage tank program DEP has operated for more than two decades. The UST program was developed in the late 1980's because environmental regulators recognized that over 2 million UST systems, estimated to be located at over 700,000 facilities nationwide, existed with little or no oversight and that over 75 percent of the existing systems were made of unprotected steel, a type of tank system proven to be the most likely to leak and thus, create the greatest potential for health and environmental damage. The success of this program nationally is indisputable.

The above ground storage tank universe is not nearly as well known. Many of these facilities are regulated by registering under a general NPDES stormwater permit, because the only environmental impact these tanks were thought to have was stormwater runoff. Above ground storage tanks can also be found at facilities covered by individual permits but that permit does not require integrity testing or leak detection monitoring either.

The registration requirement in the current legislation is the key to our getting a handle on the universal structures that are currently under regulated. We are optimistic that the legislation currently pending in West Virginia will greatly reduce the risk that we will suffer a repeat of this type of incident and that we can serve as an example to other states to be more proactive in their regulation of these structures so they do not find themselves in the situation with which we are currently dealing.

Thank you for the opportunity to be here and speak to you about the water crisis in West Virginia. This crisis reminds us of how basic and fundamental clean water is to a stable society and how vulnerable our water supplies are, not only in West Virginia, but across the Country.

Thank you.

[The prepared statement of Mr. Huffman follows:]

United States Senate

Committee on Environment and Public Works

Subcommittee on Water and Wildlife

February 4, 2014

Randy C. Huffman, Cabinet Secretary

West Virginia Department of Environmental Protection

The State of West Virginia and its Department of Environmental Protection (DEP) appreciate and welcome the opportunity to address this committee. I am hopeful that, by sharing West Virginia's experience from the perspective of an environmental regulator, not as a public health official, I can provide insight to you and other states as we seek to provide more comprehensive regulation of the pollutants stored in aboveground storage tanks, so as to better protect human health and the environment and minimize the risks associated with this industrial activity.

On January 9, 2014, DEP received a complaint concerning an odor around a tank farm owned by Freedom Industries, Inc. Freedom Industries operated a bulk storage distribution center located in Charleston along the Elk River. Upon investigation, DEP personnel observed free product in secondary containment units surrounding aboveground storage tanks holding a chemical known as 4-Methylcyclohexane Methanol (MCHM). DEP personnel also observed that this material appeared to have escaped the secondary containment and entered the Elk River approximately 1.5 miles above a public water supply intake. At 12:05 p.m. a

Freedom Industries employee reported the spill to DEP's Emergency Response Spill Hotline, and stated that the facility had discovered a hole in one of the tanks.

DEP officials shut down the site and instructed Freedom Industries to immediately take all necessary measures to contain, recover, and remediate the material that had escaped the aboveground storage tank and the secondary containment structure. DEP officials further instructed Freedom Industries to empty the three tanks that were identified as containing MCHM and move that material to a separate site that had appropriate secondary containment structures, and to identify the contents of the 11 other tanks located on the site. DEP has had a continuous presence on the site since January 9, and is directing the containment and remediation measures with the assistance of officials from Homeland Security, the Coast Guard, EPA, and the Chemical Safety Board.

This incident highlights an issue that exists not just in West Virginia, but all over the country. While all states have substantially similar regulations for underground storage tanks, based on regulations promulgated by the EPA, the same is not true for their surface-situated counterparts. EPA does not have regulations pertaining to all ASTs, and the states that do regulate them do so a myriad of different ways. One similarity - most states that have AST regulations have them as a result of an event similar to what has just happened in West Virginia. Also, most states focus primarily on tanks containing petroleum products or hazardous waste or materials regulated by CERCLA. This leaves virtually unregulated an entire universe of pollutants stored in aboveground tanks. It is easy with hindsight to see a potential threat existed on the Elk River, and that clarity also sharpens our focus looking forward. According to the EPA TSCA Chemical Inventory, there are approximately 84,000 known industrial chemicals being used

in this country today; about 20,000 of those have been added to the list in the last 30 years with little change in the list of regulated chemicals. While most of these materials are not currently classified as hazardous, the truth is we simply do not know enough about them. The material that leaked into the Elk River on January 9th is one of those chemicals.

The West Virginia Legislature is considering legislation that would help to fill the void that currently exists in the regulation of aboveground storage tanks. The bill being discussed in the West Virginia Legislature today requires some things that are very important from DEP's perspective: it requires the owner or operator of an AST with a capacity of 1,100 gallons or more to register with DEP, identifying the tank's contents, age, and location; to have a registered professional engineer inspect the tanks annually and certify their integrity; to develop spill prevention and emergency response plans; and to construct and maintain adequate secondary containment. Our Legislative Session is not even half way over yet, so it remains to be seen how the law will look upon passage, but these are important environmental and public health protections that DEP will strongly support throughout the debate. On the federal side, we also support Senator Manchin's proposed legislation to tighten up the standards in the Safe Drinking Water Act. By requiring EPA to establish minimum acceptable standards by which the states will be held accountable, we can significantly reduce the risk of similar problems in the future.

West Virginia's proposed AST program has been modeled after the very successful underground storage tank (UST) program DEP has operated for more than two decades. The UST program was developed in the late 1980s, because environmental regulators recognized that over 2 million UST systems, estimated to be located at over 700,000 facilities nationwide, existed with little or no oversight,

and that over 75 percent of the existing systems were made of unprotected steel, a type of tank system proven to be the most likely to leak and thus create the greatest potential for health and environmental damage. The success of this program nationally is indisputable. Currently, West Virginia has about 1600 facilities with 4300 tanks registered in the UST program.

The AST universe is not nearly as well known. Many of these facilities are regulated by registering under a general NPDES stormwater permit, because the only environmental impact these tanks were thought to have was stormwater runoff; they were not supposed to discharge, leak or otherwise emit pollutants into the environment. ASTs can also be found at facilities covered by individual NPDES permits, but that permit does not require integrity testing or leak detection monitoring, either. The registration requirement in the current legislation is the key to us getting a handle on the universe of structures that are currently under-regulated.

But until such time as we have that requirement in law, we have undertaken our own investigation into the number of ASTs in the State. We started by looking at the 1063 registrations under the Multi Sector General Stormwater Permit, as well as the 204 individual NPDES permits, to try to determine what facilities have aboveground tanks on site. This investigation is still in its early stages, but so far, it has yielded an estimate of about 600 facilities housing approximately 3500 tanks across the State. Further investigation has determined that more than 100 of these - with as many as 1000 ASTs - may exist within an area that could impact a public drinking water source. Many of these tanks contain petroleum or other materials that may be regulated under different programs, in which case they would not pose the risk that the Freedom Industries site and others like it pose, but these numbers clearly raise concerns that this incident could be repeated in other areas of the

State. We are optimistic that the legislation currently pending in West Virginia will greatly reduce the risk that we will suffer a repeat of this type of incident, and that we can serve as an example to other states to be more proactive in their regulation of these structures so they do not find themselves in the situation with which we are currently dealing.

Thank you for the opportunity to be here and speak to you about the water crisis in West Virginia. This crisis reminds us all of how basic and fundamental clean water is to a stable society and how vulnerable our water supplies are, not only in West Virginia, but nationwide.

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Earl Ray Tomblin, Governor
Randy C. Huffman, Cabinet Secretary
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March 17, 2014

The Honorable Barbara Boxer
The Honorable David Vitter
U.S. Senate Committee on Environment & Public Works
112 Hart Senate Office Building
Washington, DC 20510

Dear Senators Boxer & Vitter:

In response to your letter of March 5, 2014, submitting questions related to the February 4th Senate hearing "Examination of the Safety and Security of Drinking Water Supplies Following the Central West Virginia Drinking Water Crisis, I submit the following:

Questions from Senator Barbara Boxer:

1. **Mr. Huffman, you say you support the Manchin-Boxer-Rockefeller Chemical Safety and Drinking Water Protection Act, which would give States the authority to establish minimum standards to help avoid chemical spills like the one you have experienced. Why do you believe action is needed?**

   Response: Most environmental regulatory programs in the United States have been established by Congress and are managed by states. By requiring minimum standards at the federal level, Congress ensures consistency and a level playing field for most industrial activity in this country.

   We believe the regulatory weakness revealed in West Virginia this past January is reflective of potential risk nationally. There are very few rules in place at the state or national level that specifically address the integrity of tanks and secondary containment. This risk is even greater when considering chemicals that are not listed as hazardous, such as MCHM.

2. **Mr. Huffman, Governor Tomblin proposed legislation to give your agency additional authority under state law to protect drinking water systems from risks posed by above-ground chemical storage tanks.**

   In addition to proposing changes to State law, your agency is investigating how many such tanks are located across your State. What other actions has the State taken or plan to take to address the risks from these facilities? What have you learned so far?

   Response: The WV Legislature passed the above-ground storage tank (AST) legislation (Senate Bill 373). WVDEP will draft rules pursuant to the new legislation, for Legislative approval, over the coming months.

   Currently, WVDEP is developing an AST registration program which will be implemented subsequent to rule promulgation. Additionally, WVDEP intends to incorporate the applicable requirements of the new regulatory program into the established regulatory framework of permits and registrations administered by the various offices of this agency.

   WVDEP recently completed a field survey of facilities located within zones of critical concern for potable surface water intakes. The facilities field surveyed are registered under the WV/NPDES permit program and were initially identified as potential AST sites, based on the limited relevant information in the WVDEP NPDES database. The onsite survey was conducted to confirm the presence of ASTs and to obtain preliminary information regarding the contents, characteristics, maintenance and secondary containment of those tanks. As the actual field work was completed last week, the data is still under review, and no conclusions have been formulated.

Questions from Senator Benjamin L. Cardin:

1. **What legal requirements, if any, did Freedom Industries violate or ignore by not reporting the occurrence of the spill?**

   Response: WV Code of State Rules 47CSR11-2, "Reporting spills and accidental discharges," establishes the immediate spill reporting requirement.

2. **Should our water resource protection laws require individuals who contaminate the water to not only inform the appropriate environmental authorities, but also notify any downstream drinking water providers?**

   Response: Our current law requires that anyone who spills anything that impacts or has the potential to impact the waters of the state to call our spill line. In West Virginia, the DEP, the Office of Homeland Security and Emergency Management (HSEM), and the Department of Health & Human Resources (DHHR) have personnel who receive

the spill reports. DHHR has regulatory authority over drinking water providers and notifies public water intake operators of spills and releases upstream of their intake.

3. **What prevented the public, and most importantly the technicians at West Virginia American who were trying to remove the chemical from their system, from knowing the identity of the chemical in a more timely fashion?**

   Response: WV American Water was notified of the MCHM release by Office of Homeland Security and Emergency Management and by WVDEP personnel when the spill was reported by Freedom. They were under the impression that they could add additional powered activated carbon and take care of the problem. When they found out that the MCHM was coming through the filters, it was several hours later, and the public was notified in short order by the Governor.

4. **What barriers were there to your agency from immediately learning the identity of the chemicals spilled?**

   Response: We learned the identity of the MCHM immediately after arriving on the site via an MSDS. The fact that the MSDS had little information is a function of the failure of TSCA. We didn't learn of the additional chemical until 11 days later. That was due to a lack of communication between facility personnel.

5. **What reporting requirements are there for MCHM, since it isn't a regulated contaminant under the SDWA, both in terms of regular storage or in the event it illicitly enters the environment?**

   Response: There are no reporting requirements for storage of MCHM. WV has the spill reporting requirements referenced above.

6. **If MCHM did not have such a strong odor, when do you think the discovery and report of the chemical spill have been made?**

   Response: If MCHM did not have a strong odor, we would not have learned of the release unless or until the Freedom facility noticed a loss of inventory and reported a spill or when WV American Water noticed impairment of their water treatment process. A spill may have been detected by a visible sheen of product on the river being reported, although at the time of the spill there was a significant amount of ice along the banks of the river which would have made this difficult at best. The product was seeping out under the ice layer and was not readily visible.

7. **How concerned are you with the risks of chemicals that are odorless and colorless posing a threat to public safety.**

   Response: My concern is with the impact of any potential contaminant that is released. The stringency of regulations regarding the storage of materials should reflect the physical and chemical characteristics, as well as the volume of the materials under storage, and the proximity to public water intakes.

Questions from Senator David Vitter:

1. **Mr. Huffman, as you are aware Senator Manchin has been a big part of the work we have been doing to modernize TSCA and is one of the lead cosponsors on the Chemical Safety Improvement Act (CSIA). We had great testimony from one of your colleagues, Mike Dorsey, in July voicing strong support for the CSIA. I just wanted to ask you whether you and West Virginia DEP are supportive of the bill and whether you feel that it would help states be better prepared for incidents like this spill in the future?**

   Response: Having not seen the bill since last summer, I don't know whether there have been any significant changes to it; but, on the whole, we need to support the bill. States such as California and Washington oppose it because they have their own chemical evaluation programs that would be preempted and overridden by the CSIA as it was originally written. This could be fixed by allowing those states with existing programs to keep their numbers and other requirements and allow them to move forward on their own. There are also some confidentiality issues, from the perspective of states that have no comparable law (and there are many). That being said, it is important for this bill to move forward and to be adequately funded and managed to get the kind of information on chemicals that TSCA was supposed to supply to those who need it. Remember that folks in the emergency response world rely on the information that is supplied by the manufacturers and the government.

Should you have questions or require additional information, please do not hesitate to contact me.

Sincerely,

Randy C. Huffman
Cabinet Secretary

RCH/gb

Senator CARDIN. Thank you, Secretary Huffman, for that very thorough presentation.

Mr. Olson.

STATEMENT OF ERIK D. OLSON, SENIOR STRATEGIC DIRECTOR FOR HEALTH AND FOOD, NATURAL RESOURCES DEFENSE COUNCIL

Mr. OLSON. Thank you, Chairman Cardin, Chairman Boxer and Ranking Member Vitter, for the opportunity to testify today.

As we have heard, shock waves went throughout Charleston as a result of this order to not only not drink the water but not even bathe in it. Toxicity data that existed for these two chemicals, MCHM, and we learned 12 days later, a second chemical, PPH, was sparse. Officials trying to find a safe level really had very little information to deal with.

CDC announced a 1 ppm supposedly safe level but, as we have heard, within a couple of days, basically retracted that, at least with respect to pregnant women saying, "CDC recommends, out of an abundance of caution, that pregnant women drink bottled water until there are no longer detectable levels."

This is yet another fundamental reason that residents across Charleston were wondering whether it really was safe for kids, for pregnant moms, for anyone in their family. As my colleague, Dr. Sass has highlighted and I discuss in my written testimony, the supposedly safe level really was not protective of vulnerable populations.

Last weekend, I had the opportunity to visit with a lot of folks in Charleston and appreciated the courtesy of West Virginia American Water Company who gave me a tour of their drinking water facility. I will say the residents with whom I spoke remain deeply dismayed about the safety of their water and very skeptical about reassurances that the water is safe.

I heard about parents and pregnant moms who really wonder about the long term effects of bathing or drinking this water. Across the city, stores still advertise bottled water and some restaurant signs still proclaim they cook with bottled water.

I met a couple who own a small Indian restaurant and a store within sight of the dome of the capital. They told me they had shuttered their restaurant for 5 days and that they had to toss a huge amount of food. They had to borrow money to meet their payroll, had to ask people to hold checks and spent a lot of money on professional cleaning and replacement food.

Their store also lost quite a bit of money because people stopped cooking and as a result perishable commodities had to be tossed.

I heard people drove as far away as Kentucky to get bottled water during the crisis and families stayed with friends or relatives and drove as far as 60 miles just to shower. Parents really are angry especially that some of the recent tests, some came in as recently as Friday, showed the chemicals in schools were higher than expected.

I want to say that this is not an isolated situation. The water intake at Charleston simply cannot be shut off. They cannot just shut off the water when a spill occurs. This is true not only in Charleston, but I am learning in many water utilities across the country

where they do not have the capacity to simply shut off when there is a spill because they need to continue pumping water.

Charleston's treatment technology also, as I learned, was unable to deal with a spill of this magnitude. It was simply overwhelmed and could not deal with it. As my testimony highlights, there were likely hundreds of other water utilities across the country, large and small, using surface water that simply cannot deal with a spill like this.

We all remember back in 1988 a huge spill of oil into the Monongahela that contaminated the drinking water of a million people in three states. At least some communities are doing something about it.

Cincinnati, Ohio installed state-of-the-art treatment, basically granular activated carbon in deep beds like that in your fish tank that removes virtually all these organic contaminants. The cost is just $20 per household per year. This is the direction which things need to go. I understand Northern Kentucky Utility has just made that same switch. You have to do this if you have this situation.

We absolutely need to fix the Safe Drinking Water Act. We heard the source water assessments were done, yet nothing was done about them after they flagged major risks. In this particular situation, just for Charleston, 53 potentially significant contamination sources were identified in the early 2000's, 26 so close that they were in the zone of critical concern, yet it appears nothing was done about that or specific recommendations to take action.

I wanted to briefly address the Manchin-Boxer bill referenced earlier. We feel that is an important step forward. I mention in my testimony a few tweaks that we would recommend including one item which might be to move the inspections to annually similar to what the West Virginia Senate just passed.

Although this hearing is about drinking water, I want to briefly mention the Toxic Substances Control Act and the need to reform it. We certainly agree that TSCA is broken and needs to be fixed. However, we need real reform of that law. I would as that some of the attachments to my testimony be entered into the record.

The bill that is pending, the USIA, although it is bipartisan, would not fix this problem. As I highlight in my testimony, it is unlikely that this particular chemical would have been flagged as a high priority. It is quite likely that State action would have been preempted if this had actually been enacted.

Although we do support reform of TSCA, we believe that reform needs to be strong, needs to fix the problem and we stand ready to work with the members of this committee, with Senator Boxer, Senator Vitter, Senator Udall and others to reform the law in a meaningful and real way.

In conclusion, we strongly support moving forward with legislation for real source water protection and drinking water, we support the Manchin-Boxer-Rockefeller bill with the tweaks I mentioned and ultimately, we think we need comprehensive solutions to source water protection across the country.

Thank you.

[The prepared statement of Mr. Olson follows:]

NATURAL RESOURCES DEFENSE COUNCIL

Testimony of
Erik D. Olson
Senior Strategic Director for Health & Food
Natural Resources Defense Council

Before the
Subcommittee on Water and Wildlife
Of the
U.S. Senate Committee on Environment and Public Works

At the hearing entitled
Examination of the Safety and Security of Drinking Water Supplies Following the Central West Virginia Drinking Water Crisis

February 4, 2014

Good morning Chairman Cardin, Ranking Member Boozman, and members of the subcommittee, I am Erik D. Olson, Senior Strategic Director for Health and Food at the Natural Resources Defense Council (NRDC). I appreciate the opportunity to testify today at this important hearing. NRDC is a national, non-profit organization with over 1.5 million members and activists that works to safeguard human health and the environment.

On January 9, 2014, residents of Charleston, West Virginia—and soon people across the state, nation, and the world—learned that the drinking water of over 300,000 people in and around Charleston was contaminated due to a large chemical release from a Freedom Industries facility immediately upriver from the city drinking water plant's intake. Gradually the facts started to come out. First, we were told that the chemical—which has a smell like licorice—was Crude MCHM, primarily 4-Methylcyclohexane methanol. Twelve days later, the company admitted that another chemical, PPh, or polyglycol ethers (apparently propylene glycol phenyl ether), also had been released, in smaller amounts. Toxicity data for the chemicals was, to put it mildly, sparse, so officials trying to determine a "safe" level were working with very little information.

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A series of shock waves traveled through the city as the residents were told not to drink or bathe in the water. Days later, the federal Centers for Disease Control and Prevention (CDC) teamed up with state health officials and told residents that a 1 part per million (ppm) level on MCHM was basically ok. Residents were soon told the water system had been flushed out and the water was safe enough to drink (at least in some parts of the distribution system). But then the next day citizens were told that "CDC recommends—out of an abundance of caution—that pregnant women drink bottled water until there are no longer detectable levels of MCHM in the water distribution system." Understandably, residents were confused and upset, wondering whether it really was safe for their kids, nursing moms, and others. As my colleague Dr. Jennifer Sass has highlighted in her detailed commentary,[1] the supposedly safe level proclaimed by state and federal officials was based on very little information, and was not sufficiently protective of vulnerable people like pregnant moms.

Last weekend, I visited with many residents in Charleston and appreciated the courtesy of West Virginia American officials who gave me a tour of their water treatment plant. Many of the residents I spoke with over the weekend and earlier are profoundly upset and deeply skeptical of reassurances of the water's safety. Many stores and restaurants across the city continue to advertise bottled water sales, and some restaurant signs proclaim that they cook with bottled water, despite reassurances that the water is now safe in most of the city.

I met one couple, Harish and Meena, who own a small Indian restaurant and grocery store within view of the gold-domed state capitol. They had to shutter their restaurant for 5 days, and tossed a lot of food. Due to the lack of cash flow, they had to borrow money to meet payroll, ask people to hold checks, and spent great deal of money on replacement food, professional cleaning of equipment to get rid of the chemicals, and many other expenses. They are still spending money to buy bottled water by the case for cooking and service. They even had to change some of their recipes because spices important to Indian food taste a bit like licorice. They couldn't use those spices out of concern that their food would be rejected by customers suspecting contamination. Their grocery store also lost money from fresh foods that went bad because people stopped cooking due to a lack of water.

I heard stories of people driving to Kentucky to get bottled water during the crisis, and of many families who had to stay far away with friends or relatives, or drove 60 miles to take a shower. I heard about a pregnant mom who was upset that she had returned to using the water after being assured of its safety, only to be told later that "out of an abundance of caution," maybe she shouldn't have done so. Parents are angry that recent tests show levels of the chemicals in schools are higher than expected, and many are skeptical of assurances of safety.

One remaining issue is that apparently all of the testing done by state, utility, and other government officials is being done at hydrants or public locations (such as schools), not inside homes. Andrew Whelton and his team of scientists from the University of South Alabama, initially without funding, drove to Charleston and started to conduct at the tap sampling of drinking water, which they hypothesized may be of different quality than that coming from flushed hydrants. For example, even if homeowners have now flushed the water in their homes as recommended, some worry that the chemicals may have penetrated into their plastic water piping during the days that the water was stagnant, and that the chemicals may continue to be released into the water for some time. While Whelton's team recently received a small grant from the National Science Foundation, there are insufficient resources to conduct an extensive testing regime that would be representative of the 300,000 customers affected. This is an issue with the way that SDWA testing is generally conducted—usually not at the tap of actual users.

Apparently the water intake at Charleston, like that of many other water utilities across the country using rivers and lakes, cannot simply shut off when there is a big spill and continue to serve water to customers unaffected water. The treatment technology at Charleston—basically permanganate, sedimentation and clarification, sand and gravel filters with about three feet of carbon caps, available powdered activated carbon to deal with occasional taste, odor, and other problems, and chlorination—simply was unable to deal with a significant release like this. And they had no other water source that they could turn to, though West Virginia American Water officials told me they had requested access to an alternative source many years ago.

There are likely hundreds of other water utilities, large and small, using surface water that simply cannot deal with a significant spill, release, or other major pollution in their watershed. Many of

us remember the massive oil spill in 1988 by an Ashland Oil facility that rolled down the Monongahela and Ohio rivers, temporarily contaminating drinking water sources for what EPA estimated was one million people in Pennsylvania, West Virginia, and Ohio.

Cincinnati, Ohio had the foresight twenty years ago to install deep bed granular activated carbon (GAC) because of repeated spills and other water quality problems, including those caused by upstream polluters on the Ohio River. The cost? About $20 per household per year.[2] The vast majority of large surface water systems do not use such modern technology, leaving them vulnerable to spills and other pollutants from upstream sources.

Where Did the System Fail?

The Safe Drinking Water Act

The public water supply provisions of the Safe Drinking Water Act (SDWA) as originally enacted in 1974 were focused upon setting standards for contaminants in drinking water and moving water systems towards improved treatment—but did virtually nothing to ensure what experts in the field refer to as "multiple barriers to contamination"[3]—that is, protection of water sources against pollution, as well as effective treatment. The law focused on treatment, not protection of the sources of the water, which the SDWA left largely unaddressed.

However, the SDWA Amendments of 1996 (Pub.L. No. 104-182) included provisions requiring that states complete source water assessments to assess whether water supplies are vulnerable to pollution. These assessments are supposed to evaluate what the current and potential pollution sources are upstream of surface water-supplied public water systems, or that could contaminate groundwater-supplied systems. While NRDC and a coalition of public health, consumer, and environmental groups had urged the inclusion in the 1996 legislation of strong enforceable source water *protection* provisions that would prevent or remedy upstream or up-gradient water pollution, these measures were opposed by some polluting industries and agricultural interests, and were not included in the final legislation.

Thus, under section 1453 of the SDWA, source water assessments were EPA-funded across the country, but it appears that too often, they were completed but little or nothing was done when they identified significant known or potential pollution sources upstream of water intakes. We have reviewed many of these documents from water systems all over the United States. Most of those for surface water systems highlight known or potential industrial, commercial, or other sources of pollution upstream of their facility.

For example, West Virginia's source water assessment for Charleston (Elk River) found high vulnerability of the water supply to contamination from upstream polluters like this facility.[4] In fact, the assessment identified 53 "Potentially Significant Contamination Sources" in the Charleston water supply's watershed, including 26 so close they were in the "Zone of Critical Concern." This included 7 industrial facilities in the Zone of Critical Concern.[5] Presciently, the assessment found that "Of these [Potentially Significant Contamination Sources], some of the industrial sources may have large volumes of potential contaminant stored." Recognizing the risks, the assessment recommended: "Protection options need to be actively considered to further evaluate and manage all potential contaminant sources and the WVAWC-Kanawha Valley public water supply should place a high priority on protecting its supply source."[6]

Unfortunately, there is little evidence that either the state or the water utility acted on these recommendations or took effective action to address the identified pollution sources.

Absent a huge effort to collect and review every source water assessment completed for thousands of water systems, there is no way of knowing the precise number of drinking water plants that, like the Charleston system, have major known or potential polluters upstream. However, based on my experience with the Safe Drinking Water Act for over 25 years, and from my review of a large number of source water assessments nationally, it would be reasonable to surmise that virtually every state has a similar situation for at least some of their drinking water supplies. Most big cities get their water from surface water, and most surface water is vulnerable to industrial pollution and spills, as well as other pollution sources. Groundwater-supplied drinking water utilities also often are vulnerable to contamination. NRDC did a report in 2003 documenting that most cities reviewed are doing little if anything to protect their source water,

though a few, such as New York, Seattle, Boston, and Portland, Oregon, have taken significant steps to protect their sources of fresh water.[7]

Two other provisions in the SDWA are worthy of note here. The Bioterrorism Act of 2002 (Pub. L. No. 107-188, Title IV), added section 1433 to the SDWA, requiring that larger public water systems complete two tasks. First, the utility is required to complete a vulnerability assessment, in which it is to evaluate how it is vulnerable to a terrorist or intentional attack, and what measures it will take to prevent or mitigate the impacts of such an attack. Substantial federal funding was provided, but these assessments are not publicly available so it is impossible to evaluate whether the money was well spent. We do not know whether the vulnerability assessment for this utility evaluated the potential for an intentional act that could have caused a major release from an upstream contamination source. Second, the water systems also are required to develop emergency response plans for how they will deal with any attack, to avoid disruption and protect their customers. Again, these are confidential, so it is hard to know whether the plan helped expedite or improve the response here. States with primacy under the SDWA have also been required since 1974 to have "plans for provision of safe drinking water under emergency circumstances..."[8] Unfortunately, in this case according to residents, it was difficult to obtain safe drinking water for some time after the incident, though the National Guard and utility did bring in tankers and alternative water after a while.

The Need for Stronger Protections: The Manchin-Boxer-Rockefeller Chemical Safety and Drinking Water Protection Act of 2014

The recently-introduced Chemical Safety and Drinking Water Protection Act, S. 1961, sponsored by Senators Manchin, Boxer, and Rockefeller, would take important steps to begin to address some of the clearest problems brought to light after the West Virginia spill. The legislation would require that primacy states develop programs to inspect and ensure safeguards for covered chemical storage facilities that could pose a risk of harming a public water system. It would require the facilities to adopt certain safety measures and show financial responsibility. It also would require them to reimburse state or federal authorities for the cost of responding to a release, and would require certain assurances that the safety of facilities whose ownership is transferred is addressed. Additionally, emergency response plans are required of the covered

chemical storage facilities; these plans will be shared with the water utility, EPA, the state, and the Department of Homeland Security. Provisions for enforcement and implementation by states (or by EPA if a state does not adopt the plan) are established. Importantly, emergency authority is provided to public water systems to act in the case of an imminent and substantial endangerment of their water supply, an authority now available only to EPA.

We support the legislation as a significant step forward. We have a few detailed comments that we would be pleased to share with the committee about issues including clarifying the definition of a covered facility and tightening the scope of information that would be kept confidential, for example. Additionally, we believe that more frequent inspection—we would recommend annual inspections of covered chemical facilities as required by the legislation that recently passed the West Virginia Senate[9]—would offer greater assurance of protection. A lot of corrosion, maintenance, leakage, or other problems can crop up in 3 to 5 years. Thus, we strongly support moving forward with this targeted legislation immediately to address the urgent problem of chemical storage facilities posing risks to downstream drinking water supplies.

The Clean Water Act

Since 1972, the Clean Water Act (CWA) has included a provision (§311(j)(1)(C)) requiring that, "[c]onsistent with the National Contingency Plan,...as soon as practicable after the effective date of this section, and from time to time thereafter, the President shall issue regulations consistent with maritime safety and with marine and navigation laws ... (C) establishing procedures, methods, and equipment and other requirements for equipment to prevent discharges of oil and hazardous substances from vessels and from onshore facilities and offshore facilities, and to contain such discharges...."

While EPA established Spill Prevention Control and Countermeasure (SPCC) rules for oil decades ago, comparable requirements for hazardous substances do not appear to have been promulgated. Thus, while as mentioned above, we strongly support moving forward with S. 1961 to address the immediate emergency need for protection of drinking water supplies, we believe there remains a need for a long-term, broader solution—that EPA should adopt comprehensive SPCC rules for hazardous substances under section 311 of the Clean Water Act, which would

also protect environmental resources. We would recommend that EPA be required to issue these by a specified deadline in the same legislation.

In addition, I should mention the need to restore CWA protections to many headwater streams and wetlands, many of which feed drinking water supplies. My colleague Jon Devine discusses this issue in greater detail elsewhere[10], but in summary:

- The spill illustrates that drinking water supplies are vulnerable and deserve strong pollution protections.
- Drinking water systems serving over 117 million Americans rely, at least in part, on small headwater streams and streams that do not flow year-round for their supply.
- Because of a pair of Supreme Court cases and subsequent policies implemented by the Bush administration, many of these streams and the wetlands that sustain them are in legal limbo, such that it is unclear whether the various pollution control programs under the Clean Water Act protect them.
- The Obama administration has initiated a rulemaking – with a proposed rule expected imminently – to clarify that tributary streams and many wetlands are entitled to the Clean Water Act's safeguards, as they long had been before the recent legal mess. This is critically needed, and therefore should proceed promptly.

The Toxic Substances Control Act

While this statement is not intended to address the arguments regarding the need for reform of the Toxic Substances Control Act (TSCA), it is important to note a few issues that have arisen lately in the context of this spill. It is true that the utter failure of TSCA is highlighted by this spill—here, most of the toxicity characteristics of a chemical used in large quantities and stored in a manner that caused a contamination incident affecting over 300,000 Americans' tap water—are virtually unknown. The Material Safety Data Sheets (MSDS) for MCHM and for PPh are rife with "no data available" statements for innumerable toxic effects of these chemicals. TSCA has been a failure—we simply don't know much if anything about the toxicity of these and thousands of other chemicals used in commerce, including many that are in widespread use. And there are virtually no rules applicable to ensure safe use of most of these chemicals.

Thus, clearly there is a need for real reform and an overhaul of TSCA. However, as my colleague Daniel Rosenberg has detailed elsewhere,[11] the legislation that has been suggested by some as a solution to this problem—the Chemical Safety Improvement Act (CSIA, S. 1009)—as introduced would not only fail to fix the problems highlighted by this spill, but would actually make matters worse. For example, Rosenberg points out that the bill would prevent EPA from requiring testing of a chemical like MCHM unless it has been classified as "high priority," which in many cases as here may be difficult without some additional testing. This would be true of thousands of chemicals, due to the lack of available health data. Additionally, if MCHM or PPh ended up being classified as a low priority because EPA found it met the weak standard in the bill, states would have been preempted from taking action on it. Thus, as Rosenberg concludes:

> In short, the problems with TSCA that are illustrated by the chemical spill in West Virginia would not be fixed by the Chemical Safety Improvement Act, as introduced, and in some respects they would be made worse. The bill as currently written would provide the public with the illusion of an effective federal program to regulate chemicals, while tying the EPA in knots and taking away existing state authorities. The chemical spill in West Virginia is an illustration why we need to strengthen the Toxic Substances Control Act (and certain other environmental laws); it is not a justification for enacting a flawed CSIA.

Conclusion

The West Virginia incident highlights the many holes we have in current federal environmental laws. We urge Congress to move forward with enacting legislation like the Manchin-Boxer-Rockefeller Chemical Safety and Drinking Water Protection Act as an immediate measure. We also recommend real reform of TSCA that unlike some pending proposals substantially strengthens current law, and that steps be taken as recommended to strengthen implementation of the Clean Water Act.

NOTES

[1] Dr. Jennifer Sass, "WV Chemical Spill of MCHM - doing the math on drinking water safety." (posted January 19, 2014). http://switchboard.nrdc.org/blogs/jsass/doing_the_math_on_the_west_vir.html
[2] Westerhoff et al, "The Cincinnati GAC Experience, Government Engineering (2009), available online at http://www.govengr.com/ArticlesMar09/Cincinnati.pdf
[3] EPA, "Multiple Barrier Approach to Public Health Protection." Available online at http://www.epa.gov/ogwdw/smallsystems/pdfs/guide_smallsystems_mba_09-06-06.pdf
[4] West Virginia Department of Health and Human Resources, "State of West Virginia Source Water Assessment and Protection Program Source Water Assessment Report WVAWC - Kanawha Valley, Kanawha County, PWSID: WV3302016. Available online at http://www.wvdhhr.org/oehs/eed/swap/get.cfm?id=3302016
[5] Ibid, page 5.
[6] Ibid, page 7.
[7] NRDC, "What's On Tap: Source Water Protection." (2003). Available online at http://www.nrdc.org/water/drinking/uscities/pdf/chapt4.pdf
[8] SDWA section 1413(a)(5).
[9] West Virginia Senate Bill 373, passed State Senate January 28, 2014. Available online at http://legiscan.com/WV/bill/SB373/2014
[10] Jon Devine, "What the West Virginia Chemical Spill Teaches Us About Clean Water." (posted January 17, 2014), http://switchboard.nrdc.org/blogs/jdevine/what_the_west_virginia_chemica.html
[11] Daniel Rosenberg, "The Chemical Safety Improvement Act will not solve the problems illustrated by the West Virginia chemical spill." (posted January 15, 2014), http://switchboard.nrdc.org/blogs/drosenberg/the_chemical_safety_improvemen.html

Environment and Public Works Committee Hearing February 4, 2014
Follow-Up Questions for Written Submission
Submitted March 19, 2014

Questions from Senator Barbara Boxer

1. **Mr. Olson, is it correct that the Safe Drinking Water Act does not require any source water protection for waters upstream of a water treatment plant? Why doesn't the law require that, and should it?**

   Answer: That is correct; the SDWA does not require source water protection for waters upstream of a drinking water plant. Although NRDC and other members of the Campaign for Safe and Affordable Drinking Water sought to make source water protection a mandatory requirement of the SDWA during the debate leading up to the SDWA Amendments of 1996, no such requirement was enacted. Congress did enact provisions to require source water *assessments* under section 1453 of the SDWA, whereby known or potential sources of pollution were to be identified. However, aside from an ineffective program in section 1454 authorizing voluntary "petitions" to EPA for "voluntary, incentive-based" source water protection efforts, the Act does not include source water protections. There are wellhead protection areas designated around groundwater-supplied systems' wells, and source water areas upstream of surface water systems' intakes, but these are basically unprotected by any regulatory safeguards under the Act. The Underground Injection Control provisions in the SDWA do offer limited protection of underground sources of drinking water from certain types of underground injection wells, though that program suffers from serious shortcomings (including an exemption in section 1421(d)(1)(B)(ii) for virtually all hydraulic fracturing wells) that render it of limited or no value with respect to a vast array of non-covered pollution sources. Additionally, section 1431 of the SDWA authorizes EPA to issue emergency administrative orders or to take civil actions to address an imminent and substantial endangerment of the health of persons served by a public water system, but this is not a preventive source water protection program.

   We strongly believe that the Safe Drinking Water Act should include mandatory source water protection measures. They should be implemented in close coordination with the Clean Water Act (CWA), the Resource Conservation and Recovery Act (RCRA), and other applicable laws. Permits and regulatory requirements under the CWA and RCRA, and other EPA-administered statutes should include enhanced protections for drinking water sources, to ensure that drinking water supplies are not contaminated by regulated facilities upstream. Ultimately, it is far more effective, safer for public health and the environment, and less costly to prevent pollution of our water supplies than it is to try to clean them up after the fact.

2. **Mr. Olson, you say you support the Manchin-Boxer-Rockefeller Chemical Safety and Drinking Water Protection Act's requirement that States put standards into place for chemical storage facilities, and inspect them.**

   a. **Do you believe this bill will provide immediate and focused attention to the highest risk facilities?**

   Answer: Yes, we believe that it is important to immediately focus attention on the high risk facilities that store significant quantities of hazardous substances, and that could contaminate public water supplies. While we recognize that there are additional known and potential sources of pollution beyond these tanks, and as noted above we support mandatory comprehensive source water protection measures, we believe that the Manchin-Boxer-Rockefeller bill would take an important first step towards addressing an important class of threats to public health.

   b. **Why is this needed nationally?**

   Answer: The West Virginia spill from Freedom Industries' chemical storage facility has reinforced the urgent need for a comprehensive national program to address significant storage tanks containing hazardous chemicals that could contaminate our water supplies. The issue has been left to states with little or no oversight, creating a patchwork of sometimes ineffective programs. Individual states cannot fully protect their waters from such spills, as this incident showed. Indeed, the chemical spilled near Charleston moved down the Elk River and eventually contaminated the Ohio River which serves as a drinking water source for millions of Americans. Similarly, spills on other rivers and lakes can contaminate the drinking water of millions of people in multiple states. The Ohio River is but one example. The Potomac and its upstream tributaries serve as another object lesson: an upstream spill could contaminate drinking water not only in West Virginia but also in Virginia, Maryland, and the District of Columbia. Major spills in the Upper Mississippi River basin could contaminate the drinking water of millions of people in as many as ten downstream states. A national program will not only address these interstate issues, it also will help serve as a backstop to states that are seeking to do the right thing to prevent contamination from spills, while ensuring that they are not put at a competitive disadvantage when seeking to attract or retain industry. Ultimately, we believe that no matter where a child or any other person lives in the United States, they should be guaranteed safe drinking water—whether they live in West Virginia, Louisiana, Maryland, California, or another state.

3. **Mr. Olson, you mention that the Clean Water Act, section 311, says that EPA was supposed to adopt rules to address potential spills of hazardous substances from chemical facilities.**

   a. **If EPA were to move forward with such standards how would this fill the current gap in oversight?**

Answer: EPA is required under section 311(j) to issue rules establishing "procedures, methods, and equipment and other requirements for equipment to prevent discharges of oil *and hazardous substances* from ... onshore facilities...." Although there are regulations specifying spill prevention, control, and countermeasure requirements for facilities with certain storage capacities for oil products, comparable rules for hazardous substances are not in place. We believe that EPA should prioritize the development of such requirements. In doing so, the agency should expand its list of hazardous substances covered by this provision (for example, the chemicals involved in the West Virginia spill apparently were not listed as hazardous substances under the EPA section 311 list), and could adopt categorical inclusions for purposes of these requirements. We believe that the agency should include all facilities storing chemicals for which Material Safety Data Sheets (MSDSs) are required and that are covered by the provisions of the Emergency Planning and Community Right-to-Know Act (EPCRA), 42 USC §11001 *et seq.*, that require chemical storage facilities to notify state and local authorities including Local Emergency Planning Committees of what they are storing. If EPA were to adopt such comprehensive section 311 rules, this would take a major step forward to filling the current gap in oversight.

b. How would such standards complement what is required in the Manchin-Boxer-Rockefeller Chemical Safety and Drinking Water Protection Act?

Answer: These programs could and should be closely integrated, but in our view one set of standards should not displace the other unless all of the requirements of both are fully in force. Certain important provisions in the Manchin-Boxer-Rockefeller bill, such as a direct tie-in to mandatory protection of public water supplies; required notification of these supplies; new clarified authority for water supplies to take action to protect their customers from imminent and substantial endangerment from pollution; and certain financial responsibility and mandatory inspection frequency requirements for chemical storage facilities, would likely not be ensured by EPA section 311 rules for hazardous substances.

Questions from Senator Benjamin L. Cardin

1. **Are there any requirements in the Safe Drinking Water Act for states to update their risk assessments?**

Answer: Unfortunately, there are no requirements of which we are aware under the SDWA for states to update their source water assessments. This is a fundamental flaw in the program. As we have seen, these assessments were generally done in the early 2000's, over a decade ago. Most of them apparently have not been updated since then. As time passes, these assessments are increasingly becoming outdated and of limited value. There should be a requirement for the assessments to be updated regularly. Additionally, as noted in response to Senator Boxer's

questions, there also is a need for mandatory source water protection measures to protect water supplies from upstream pollution sources. It is of little benefit to the public for states to flag major known and potential pollution sources for their drinking water, and then to do nothing to control them.

2. Are there any contamination incident reporting requirements in the SDWA?

Answer: There is not a generally-applicable contamination incident reporting requirement in the SDWA. In certain limited circumstances, public water systems are required to notify the public and their primacy authority (that is, their state if has primary enforcement responsibility under the SDWA, or EPA if their state doesn't) of contamination with certain specific contaminants in excess of the enforceable standards under the SDWA. For example, if a public water system violates the enforceable standard for E. coli or total coliform, it would be required to notify affected customers and their primacy state. However, such requirements are generally limited to certain health standard violations, and in some cases can be issued weeks or even months after the violation. In the case of the West Virginia spill, since the chemicals involved are not regulated under the SDWA, to our knowledge no incident reporting requirements were triggered under the SDWA.

3. **Can you describe the dearth of public health and risk information on the chemicals that are in commercial production and use?**

Answer: Of the approximately 62,000 grandfathered existing chemicals in EPA's Toxic Substances Control Act inventory, the agency has been able to require a full set of testing on only roughly 200. See, Testimony of EPA Administrator Lisa Jackson before the U.S. Senate Committee on Environment and Public Works, December 2, 2009, http://www.epw.senate.gov/public/index.cfm?FuseAction=Files.View&FileStore_id=07100a89-d2f0-4298-80af-db5597364928. Even for the tens of thousands of chemicals that have been added to the inventory since 1976, EPA has reported that two-thirds (67 percent) of the Pre-Manufacture Notices include no test data, and 85 percent include no health data. EPA, Overview: EPA Office of Pollution Prevention and Toxic Substances, 2007, http://www.epa.gov/oppt/pubs/oppt101c2.pdf

This is one reason why NRDC supports a meaningful overhaul of the more than 35 year-old Toxic Substances Control Act (TSCA). We stand ready to work with Senator Boxer, Senator Cardin, Senator Vitter, and other members of this Committee on reform of this outdated and ineffective law. However, as my testimony noted, legislation that has been suggested by some as a solution to this problem—the Chemical Safety Improvement Act (CSIA, S. 1009)—as introduced would not only fail to fix the problems highlighted by this spill, but would actually make matters worse. For example, that bill as introduced would prevent EPA from requiring testing of chemicals like

those spilled in West Virginia unless the chemical has been classified as "high priority," which in many cases, as here, may be difficult without some additional testing. This would be true of thousands of chemicals, due to the lack of available health data. Additionally, if these chemicals ended up being classified as "low priority" because EPA found they met the weak health standard in the bill, EPA and states would have been preempted from taking further action on them in the immediate aftermath of the spill. In short, as my colleague Daniel Rosenberg has noted, "The bill as currently written would provide the public with the illusion of an effective federal program to regulate chemicals, while tying the EPA in knots and taking away existing state authorities. The chemical spill in West Virginia is an illustration why we need to strengthen the Toxic Substances Control Act (and certain other environmental laws); it is not a justification for enacting a flawed CSIA." Again, we would be pleased to work with this Committee on strong and meaningful reforms to the SDWA and TSCA.

4. **What is the likelihood that our water may contain chemical contaminants that don't give off immediate tell-tale warnings of their presence like odor and discoloration?**

Answer: In fact, it is well known that drinking water systems across the country contain contaminants at varying levels that in some cases can pose substantial health risks, but that are undetectable by taste, odor, or color. For example, by EPA's estimation, as many as 16.6 million Americans may have tap water contaminated with the rocket fuel component perchlorate at levels of potential health concern. EPA, Fact Sheet: Final Regulatory Determination for Perchlorate. http://water.epa.gov/drink/contaminants/unregulated/upload/FactSheet_PerchlorateDetermination.pdf Perchlorate can disrupt the normal functioning of the thyroid and pose risks to pregnant women, infants and children especially. But this contamination is undetectable to the human senses. While EPA said in 2011 after extensive evaluation that it will regulate perchlorate in our drinking water, it has yet to propose a standard, after over a decade of study.

Moreover, recent scans of the nation's drinking water sources by EPA, the U.S. Geological Survey, states, and the water utilities themselves confirm the presence of a wide array of contaminants that generally are undetectable to human senses, including nitrate contamination from farm runoff and sewage; the known carcinogen arsenic; a wide array of pesticides such as atrazine that can disrupt hormone function; pharmaceuticals and personal care products that can pose health risks; and a plethora of other industrial chemicals and pathogens. While some chemicals and pathogens are regulated and have enforceable standards, many are not.

5. **What protections does the Safe Drinking Water Act provide to drinking water sources from potential threats upstream?**

   Answer: As noted in greater detail in response to Senator Boxer's Question #1, the current SDWA offers virtually no safeguards for drinking water sources from potential (or known) threats upstream.

6. **[Are] the enforcement mechanisms of the Clean Water Act sufficient in ensuring illicit dischargers who contaminate source waters are held accountable under the law?**

   Answer: While the enforcement tools available to EPA and to citizens under the CWA are important and helpful, they by no means ensure sufficient accountability for polluters of source waters. For example, groundwater pollution generally is not addressed under the CWA. Additionally, today there is uncertainty about whether certain surface waters are considered "waters of the United States" to which many of the CWA's pollution control programs apply; EPA has acknowledged that this ambiguity has frustrated law enforcement with respect to particular kinds of water bodies. Finally, permit violations or the spill source can be difficult to establish, making enforcement complicated or impossible.

   Additionally, as the West Virginia spill illustrates, the penalties and remedies available under the CWA in many cases are inadequate to create sufficient incentives for companies to ensure that they will not spill or discharge pollutants that can contaminate water supplies. The CWA provisions simply have not ensured full liability for cleanup and restoration of the environment in many cases, much less compensation to those harmed. For example, it is unclear what remedy a public water system has under the CWA to prevent or remedy contamination from many upstream pollution sources, or to hold the polluter accountable for substantial costs and threats imposed on that drinking water system.

7. **What measures should entities that present potential contamination risks to the safety and security of source waters be required to take?**

   Answer: We believe that entities that present a potential risk of contamination and threaten the safety and security of source waters should be required by rules and/or permits to adopt safeguards to ensure that they are not endangering public health. Specifically, as outlined in our answer to Senator Boxer's first question, we believe that a mandatory source water protection program should be enacted in the SDWA that would ensure that the nation's drinking water supplies are protected against pollution, and that existing regulatory and permitting regimes under other laws like the CWA and RCRA should specifically include protections for drinking water sources. We also support the Manchin-Boxer-Rockefeller bill's measures to protect drinking water sources.

8. **Should the responsibility to protect the public fall on the entities creating the risk?**

Answer: We believe that the polluter should pay for the risks and costs it imposes on the public. Specifically, if a polluter contaminates a water source and drinking water supply, it should be accountable for all downstream costs its activities impose. But perhaps more important, the polluter—or potential polluter—should also be responsible for adopting *prevention* measures that avoid the imposition of these costs on downstream citizens and the environment in the first place. It is cheaper, more effective, and more protective of human health and the environment to prevent pollution in the first place, rather than trying to clean it up after the fact.

9. If so, how would you recommend Congress change the laws to assure the responsibility for preventing and mitigating these risks are [borne] by the entity posing the risk?

Answer: We believe that the Manchin-Boxer-Rockefeller bill would take an important step towards ensuring the responsibility for preventing spills from chemical storage facilities would be borne by those who own and operate them. However, ultimately a mandatory comprehensive source water protection measure is needed. As noted above in answer to Senator Boxer's first question, the current SDWA system which identifies known and potential polluters of our drinking water supplies but then does little or nothing to control them, falls far short of what is needed.

10. How often do you think watershed assessments should be conducted?

a. How would you recommend these assessments be financed?

Answer: We believe that watershed assessments should be updated approximately every 5 years. They should be financed jointly by federal appropriations matched by state funds. Ultimately, it would be ideal to have a fee-based system whereby polluters would pay a user fee to support source water assessment and protection programs. Some states have experimented with such programs on a limited basis to pay for certain environmental oversight activities. We recognize that it would require substantial discussion to fashion a reasonable and politically viable fee system of this sort at the federal level.

b. What improvements in the data collected in the assessments would you recommend?

Answer: We recommend that assessments review all reports filed under the Emergency Planning and Community Right to Know Act by chemical storage facilities, permits and compliance information for all CWA permitees, all Resource Conservation and Recovery Act and

Superfund law facilities (including the full CERCLIS), and all other reasonably available permit and compliance data in state and federal files. In addition, we would recommend that states work closely with the US Geological Survey (and that USGS be funded) to assist in an assessment of water quality in water bodies being assessed. These data should be regularly updated with new information under these statutes.

11. What security and contamination prevention measures would you recommend be required for entities that pose contamination risks to source waters?

Answer: We believe that entities that pose contamination risks to source waters should be subject to binding source water protection requirements that ensure that they will not contaminate drinking water sources. They also should be subject to enhanced permit requirements under existing laws such as the CWA and RCRA, to the extent that they are regulated by those laws. Our views are discussed in greater detail in response to Senator Boxer's first question.

Senator CARDIN. Thank you, Mr. Olson. We appreciate it very much.

Mr. Fewell.

STATEMENT OF BRENT FEWELL
ON BEHALF OF UNITED WATER

Mr. FEWELL. Thank you, Chairman Cardin, Chairman Boxer and Senator Vitter, for holding this important meeting this morning. I appreciate the opportunity to testify this morning.

I am currently employed with the law firm of Troutman Sanders but until last week, I served for the last 4 years as a senior executive for United Water with the responsibility for overseeing the provision of safe, clean drinking water for over 5 million people.

Although I am testifying today on behalf of United Water, I also offer supporting statements and recommendations by the National Association of Water Companies which are appended to my written testimony.

As a former EPA water regulator and a chief compliance officer of a major water company, I can assure you, Mr. Chairman, this is an issue United Water takes very seriously, as do other public water suppliers. While new regulations may not stop accidents like this from happening, I do believe there are a few targeted, commonsense things we can do to ensure the continued protection of our drinking water sources.

Overall, we as a Nation need a more integrated, sustainable approach to managing water and watersheds, a concept my good friend Ben Grumbles, President of the U.S. Water Alliance, often refers to as a one water management approach.

First, this is about keeping harmful chemicals out of our Nation's drinking water. There are tens of thousands of chemicals, as we have heard this morning, currently in commerce, each of which has the potential to impact a drinking water source for someone, some community, somewhere at some time.

The best thing we can do, and where I believe the greatest focus needs to be placed, is keeping these harmful chemicals out of our drinking water sources. Truly, in this case, an ounce of prevention would have been worth a pound of cure.

It is abundantly clear that we would not be here today had the storage facility in this particular incidence provided adequate storage and secondary containment. In light of this catastrophic release, there have been many calls for robust inspections and controls at bulk chemical storage facilities, particularly those located close to waters that serve as drinking water sources. United Water joins with those calling for additional measures for additional support.

Second, prompt notification of a spill that threatens a water supply is absolutely critical. Surface water systems are often at the mercy of those located upstream from the water intake structures. Advance warning and timely notification are critical in any kind of emergency response. Receiving timely notification about a spill can make a bad situation less bad and help to mitigate the most significant risk to the public.

Without prompt notification, the water provider may have no way to detect and respond to the presence of a contaminant until

it is too late and already in the distribution system. For these systems, having 2 hours, 1 hour or even a half hour, for that matter, can make a big difference preparing for a slug of chemicals that may be headed toward its water intake structure.

Simply closing a water intake structure, as we have heard, and waiting until a threat has passed by is not always possible and such decisions must be balanced with other needs and threats to the community, including fire suppression. These can be difficult decisions to make, often made with imperfect data and in the midst of an emergency situation.

Third and my final point, water systems need better and more specific data to identify and prepare for these types of risks. Public water systems currently use a number of tools to identify and prepare for risks, but most of these tools assess broad, general categories of risks. Rarely, if ever, are public water providers provided specific data about chemicals upstream that if released could affect that water system. This is a commonsense change I think needs to be made.

The Federal Emergency Planning and Community Right to Know Act requires facilities to store hazardous substances in excess of threshold planning quantities to provide data annually to local emergency responders but there is no requirement that such data be provided to nearby water systems.

Similarly, the EPCRA, the Clean Water Act and CERCLA require any facility that experiences a release in excess of reportable quantities to immediately notify the National Response Center and local emergency responders. Yet again, there is no requirement that a nearby water provider be provided similar notice.

Last, I offer a cautionary note. Our water systems welcome the additional support. It will do no good to simply dump reams of paper and data on these systems and expect the problem to go away. Rigorous assessment of these risks for multiple upstream sources can be a complex process, requiring significant resources and expertise which many systems simply do not possess.

The most effective solution will necessarily involve greater public education, collaboration, communication with EPA and states and all stakeholders within a watershed about the importance of source water protection, an important concept I mentioned earlier and a one water approach.

Thank you, Mr. Chairman.

[The prepared statement of Mr. Fewell follows:]

Statement of Brent Fewell, Esq.
On Behalf of United Water

Before the Senate Environment and Public Works

Subcommittee on Water and Wildlife

February 4, 2014 Hearing On

"Examination of the Safety and Security of Drinking Water Supplies Following the Central West Virginia Drinking Water Crisis"

Chairman Cardin, Ranking Member Boozman, and Members of the Subcommittee, thank you for the opportunity to discuss additional steps we can take to ensure the protection of our nation's drinking water supplies.

I am currently employed by the law firm of Troutman Sanders, and until last week served as the Sr. Vice President for Environment Health and Safety at United Water for the last four years. Although I am testifying on behalf of United Water, I offer supporting statements by the National Association of Water Companies, of which United Water is a member, which are appended to my written testimony.

NAWC is an organization representing the regulated private water service industry. Its members are located throughout the nation and range in size from large companies like United Water that own, operate or partner with hundreds of systems in multiple states to individual utilities serving a few hundred customers. Through NAWC's various business models, private water and wastewater professionals serve more than 73 million Americans, nearly a quarter of our country's population.

As a former U.S. EPA water regulator and chief environmental compliance officer of a major water company, with the responsibility for overseeing the provision of safe and clean water to over 5 million people, I can assure you that this is an issue that United Water and every other drinking water provider in this nation cares very much about. Let me emphasize from the outset that this issue is not about public versus private water systems, it's about the security, safety and wellbeing of all Americans.

As James Salzman, Professor of Duke Law and the Nicholas Institute, and author of a new book on drinking water, has recently noted, since before Roman times, water providers have sought to protect against three broad classes of threats: natural contaminants and pathogens, malevolent attacks, and accidents. And as Dr. Salzman's scholarship bears out, never before in human history has the quality of our drinking water been more secure and safe. Notwithstanding the progress made to date, I am here to offer additional thoughts on how we can better prepare for and respond to these ever present threats, but particularly threats from chemical contaminants.

Earlier this month, the water supply for over 300,000 in Charleston, West Virginia, was significantly impacted by an upstream chemical spill. Events like this serve as a stark reminder of the importance of safe, clean, and reliable sources of water to our families, communities, businesses and local economies. The purpose of this hearing is to understand what went wrong in that situation and what we can do as a nation to ensure that our drinking water supplies remain secure, safe, and clean. We appreciate the opportunity to offer our thoughts on this important matter.

First, and foremost, this is a matter of spill prevention and protecting source waters. There are tens of thousands of chemicals currently used in commerce, each of which has the potential to impact a drinking water source for someone or some community, somewhere. The best thing we can do - and where the greatest focus ought to be placed - is keeping harmful chemical contaminants out of the water altogether. It's abundantly clear that we would not be here today had the storage facility at the heart of this spill provided adequate secondary containment, which would have prevented the chemical from reaching the Elk River. In light of this catastrophic release, many have called for more robust inspections and controls at bulk chemical storage and manufacturing facilities, particularly those located close to waters that serve as drinking water sources. United Water supports these calls for additional EPA and state efforts, for example, to enhance inspection, spill containment, leak detection, and training requirements for personnel managing the activities of chemical storage facilities.

The passage of new regulations, in 1988, bolstering the Clean Water Act's Spill Prevention, Control and Countermeasures (SPCC) program, in response to the Ashland oil spill on the Monongahela, which impacted over one million people, resulted in dramatic reductions of major oil spills. The obvious thrust of the SPCC program is to prevent harmful oil spills as opposed to reactive after-the-fact measures to respond to and cleanup such spills. As the old adage goes, "an ounce of prevention is worth a pound of cure." Some states, like New Jersey, under state law, have extended the core principles and requirements of the SPCC program to all hazardous chemicals, helping to improve spill prevention, control and countermeasures across the spectrum of possible chemical contaminants.

Second, water systems need better and more specific data to identify and prepare for upstream risks. Public water systems currently use various tools to identify and prepare for risks, including source water assessments, vulnerability assessments, and emergency response plans. And water systems work closely with state and EPA regulators, and industry associations, like the American Water Works Association,[1] who provide tools and training for water operators on how to identify, prepare for and respond to water emergencies. Most of these tools, however, assess general, broad categories of risks, whether physical, biological or chemical in nature.

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[1] See, for example, ANSI/AWWA standard G300, Source Water Protection, and ANSI/AWWA standard J100 – Water Treatment Plant Operation and Management.

Rarely, if ever, are public water systems provided or privy to specific data about the chemicals upstream that, if released, could affect the water system. This needs to change.

Some have also suggested that public water systems should monitor for more chemicals. While water systems routinely monitor for a host of contaminants under the Safe Drinking Water Act, these systems simply cannot monitor for the thousands of chemicals that could potentially impact water supplies. Nor should they be expected to serve as watershed police. Rather, water systems can only reasonably be expected to monitor those chemicals for which they know of or reasonably expect may impact source waters and enter their distribution system.

The federal Emergency Planning and Community Right-to-Know Act (EPCRA) currently requires facilities that store hazardous substances in excess of threshold planning quantities to provide data annually to state and local emergency response personnel. But there is no requirement that such data be provided to nearby water systems. Similarly, EPCRA, the Clean Water Act, and the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), require any facility that experiences a release in excess of established reportable quantities to immediately notify the National Response Center and state and local emergency response personnel. Yet, again, there is no requirement that downstream water suppliers be notified of these releases or spill. This leads me to my third point.

Prompt notification of a spill that threatens a water supply is critical. Advance warning and timely notification are critical in any kind of emergency response. Receiving timely notification about a spill can help make a bad situation less bad, and help mitigate the most significant risks to the public. But while requiring early warning and timely notification may improve emergency response, it will not entirely eliminate the risks.

Surface water systems, in particular, are often at the mercy of those located upstream from their water intake structures. Without prompt notification of a spill, a water provider may have no way to detect and respond to the presence of a contaminant until after it has already entered the distribution system. At which point, the only effective emergency response is immediate public notification in the form of a "boil water" or "do not drink" notice. But as we saw in the case of the West Virginia spill, very little was known about the human health risks of the chemical that was spilled. For these systems, having two hours, one hour, or even a half-hour to prepare for a slug of chemicals that will reach its water intake, can make a meaningful difference in responding to a chemical release.

The ability for water systems to rapidly respond to and mitigate the impacts of a spill is influenced by many factors, including:

- The proximity of the spill to the intake structure, in the case of surface water, and the protective zone, in the case of groundwater;
- The volume of the spill relative to the volume of source water;
- The toxic profile of the chemical;
- Whether a system is solely reliant upon a single source;
- The availability of alternative water sources, including interconnections; and
- Drinking water storage capacity.

Simply closing a water intake structure, and waiting until a threat has passed by, is not practicable, in all cases, and such decisions must be balanced with other needs and threats to the community, such as fire suppression. These can be difficult decisions to make, often made with imperfect data and information in the midst of an emergency situation.

I would also mention that some communities, such as Philadelphia, and interstate compact commissions, such as the Ohio River Valley Water Sanitation and Delaware River Basin Commissions, have deployed watershed early warning systems that monitor, detect and notify communities of impending threats.[2] While these early warning systems are by no means perfect, they do present another option and layer of defense for protecting our public water supplies from accidental spills.

Lastly, we offer a cautionary note.

While water systems welcome the additional support in preparing for and responding to chemical threats, expectations of what can be accomplished with more data must be tempered. It will do no good to simply dump reams of paper and data on public water systems and expect that that information alone will solve this problem. Many systems are already resource constrained and struggle to meet the demands of everyday operations. Moreover, rigorously assessing the risks of chemical contaminants from multiple sources can be a tedious and complex process, requiring significant resources and expertise, which many systems simply do not possess.

The most effective solutions will necessarily involve greater public education, collaboration and communication with EPA, states, and all stakeholders within the watershed about the importance of source water protection. This brings me full circle to my opening remarks about the singular importance of prevention.

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[2] See Delaware Valley Early Warning System: http://www.state.nj.us/drbc/quality/alert/index.html; See also this description of the ORSANCO early warning system: http://www.epa.gov/OEM/docs/oil/fss/fss04/schulte_04.pdf.

In closing, as the Members of this Subcommittee contemplate solutions to increase the safety of our water supplies, water systems encourage several areas of attention:

1. Preventing spills and protecting source water;
2. Providing water systems specific data regarding chemicals and chemical storage that pose the greatest and most immediate risks to water supplies; and
3. Ensuring prompt notification of any spill that threatens water supplies and public health.

Once, again, thank you for this opportunity.

NAWC Supporting Principles

Examination of the Safety and Security of Drinking Water Supplies Following the Central West Virginia Chemical Spill

The National Association of Water Companies (NAWC) and its member companies are committed to advancing effective security and safety measures. Our highest priority is to provide safe, clean drinking water to the public. Private water utilities and contract operators in the U.S. have a demonstrated record of compliance with regulatory requirements and of prudent preparation and planning for vulnerabilities and water emergencies. Water utilities, whether private or municipal, deal with an ever-changing risk landscape. By constantly evaluating threats and vulnerabilities and also identifying and characterizing biological and chemical agents that can enter their distribution systems, they must ensure they respond and recover in a safe and effective manner from acts of physical or biological threats, natural disasters, cyber incidents or any other event—foreseen or unforeseen.

NAWC and its member companies make the following recommendations:

1. **Ensure more effective and streamlined security communication among U.S. EPA, states and water utilities regarding releases of hazardous substances.**
    a. Currently, several statutes, such as the CWA, EPCRA, and CERCLA collectively require both annual inventory reporting and emergency spill reporting to federal and state authorities, without any requirement that utilities be similarly notified.

    b. To effectively assess vulnerabilities and respond to threats, water utilities must also be provided this critical information, including receiving prompt notification in the event of a release or spill.

2. **Ensure higher level of disclosure of potential upstream risk to utilities, as well as warning protocols.**
    a. Potential sources of contamination must be disclosed to utilities, just as they are required to be disclosed to local emergency responders. Chemical facilities should disclose which chemicals are stored upstream. There are thousands of potential contaminants, but limited resources force water utilities to focus their resources on monitoring for those that pose a known risk to public health, or are reasonably expected to be present in source water.

    b. Simply knowing that a potential contaminant is stored upstream is insufficient. The technology does not exist that would set off an alarm when a specific contaminant approaches a utility's intakes. Protocols are needed for warning

water utilities in a timely manner when a spill upstream occurs, what the contaminant is and what remediation is recommended.

3. **Ensure government agencies at all levels more effectively protect watersheds that provide sources of drinking water.**
    a. Water utilities are proactive and collaborate with federal, state, and local governments to maintain effective regulatory oversight of clean, safe drinking water.

    b. To ensure that water systems can be in the best possible position to safeguard and minimize impacts on water supplies, water utilities support more efficient information sharing and have specific ideas about how to improve information sharing.

    c. New regulatory regimes should be measured and not create new legal burdens on drinking water providers, and should not put them in the role of regulator or enforcer.

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March 19, 2014

VIA E-MAIL

Mara Stark-Alcala
United States Senate
Committee on Environment and Public Works
410 Dirksen Senate Office Building
Washington, DC 20510
Mara_Stark-Alcala@epw.senate.gov

Re: Follow-Up Responses to Hearing, "Examination of the Safety and Security of Drinking Water Supplies Following the Central West Virginia Drinking Water Crisis"

Dear Ms. Stark-Alcala:

Please find enclosed a copy of my responses to the Committee's questions regarding my recent testimony. Don't hesitate to contact me with any questions.

Sincerely,

Brent A. Fewell /by Byhoud

Brent A. Fewell

Enclosure

Follow-Up Responses to Testimony Provided by Brent Fewell, Esq.
On Behalf of United Water

Before the Senate Environment and Public Works
Subcommittee on Water and Wildlife
February 4, 2014 Hearing On

"Examination of the Safety and Security of Drinking Water Supplies Following the Central West Virginia Drinking Water Crisis"

Questions from:

Senator Barbara Boxer

1. Mr. Fewell, you state that it is nearly impossible for a public water system to monitor for every possible chemical and that the best way to protect drinking water supplies is through prevention. The legislation I have proposed with Senators Manchin and Rockefeller would provide tools to States to protect drinking water from risks posed by chemical storage facilities. Minimum requirements of State programs would include design standards, spill response plans, state inspections, and financial assurance requirements.

   Do you agree that these tools would help reduce the chances of another spill like the Freedom Industries spill?

Response: Yes.

Senator Benjamin Cardin

1. Do you feel that most drinking water providers have a complete handle on the risks present in source water boundaries they are operating within?

Response: An understanding of broad categories of risks are generally understood to most water providers, but the specific chemical threats upstream are not always known. The knowledge of these risks depends largely upon the size of the watershed, number of the upstream potential contaminant sources, and the availability of information. Large and heavily industrialized watersheds with storage tanks and transportation modes (e.g., rail, highways, pipelines) are likely to exhibit hundreds or thousands of potential contaminant sources.

2. How resource intensive is it for a water provider to keep regular and up-to-date information on contamination risks present in their water boundaries?

Response: States are already required to prepare source water assessment plan (SWAP) for the potential threats to drinking water sources. This information is typically shared

with water providers, but is rarely updated. The following is a link to an example of a combined SWAP for several public water systems located in the Upper Ohio River.
http://www.orsanco.org/images/stories/files/sourceWaterAssessment/upperohioriverfinal.pdf

The level of resources required for water providers could be significant, depending upon the nature and characteristics of the watershed, the number of potential upstream contaminant sources, the proximity of those sources to water providers, and the amount of available information.

3. Is it fair for the responsibility of protecting drinking water sources to fall solely on the heads of drinking water providers.

Response: No.

4. In your testimony you raise concerns about the value of simply "dumping reams of paper" or information on drinking water providers. What is the proper threshold or essential information on potential risks in the watershed water providers need to keep drinking water supplies safe and free of outside contamination?

Response: Critical information should be provided only for bulk chemicals with a reasonable potential, if released, to adversely affect the water supply. In such case, the information should include only essential information, such as the facility name, address, SIC, latitude/longitude, location of aboveground storage tanks, quantity of chemicals stored, physical and toxicological properties, if known, and emergency contact personnel.

5. If the task of keeping regular tabs on the threats in a watershed provides to be too difficult or expensive, what measures do drinking water facilities need to take to protect their customers?

Response: Although public water systems are already required to comply with the Safe Drinking Water Act, including monitoring for 96 different contaminants, a growing number of systems are voluntarily participating in watershed early warning systems. Toward this end, one consideration would be for EPA, states, and interstate compact commissions, in collaboration with water systems, to expand the deployment of stream monitoring and early warning systems, currently in limited use in the Ohio and Delaware River Basins, as described below.

Delaware Valley Early Warning System

The Delaware Valley Early Warning System (EWS) is an integrated monitoring, communication, and notification system used to provide advanced warning of water quality events to water suppliers and industrial intake operators in the Schuylkill and Delaware River watersheds. The EWS was initially deployed in 2004 and by 2008 has grown to include over 250 users in 47 different organizations within the EWS coverage area. EWS partners include 23 water treatment plants (WTPs) from 12 utilities in Pennsylvania and 5 WTPs from 5 utilities in New Jersey, along with PA DEP, NJ DEP,

DRBC, US EPA, USGS, US Coast Guard, County Health Departments, and over 25 industries.

Source: http://www.schuylkillwaters.org/doc_files/EWSfactsheet.pdf
Contact: Chris Crockett, Deputy Commissioner of Planning and Environmental Services for the Philadelphia Water

Ohio River Advanced Measurement Initiative

The Ohio River Valley Sanitation Commission, an interstate commission representing eight states and the federal government has launched an Ohio River data buoy called the AMI (Advanced Measurement Initiative Buoy). ORSANCO needed to design and implement an early warning detection and water quality monitoring system for the Allegheny and Monongahela Rivers in Pennsylvania. These two rivers supply drinking water for approximately 1.3 million residents throughout western Pennsylvania and are critically important to the state's well being. As the confluence of the Monongahela River creates the Ohio River, it was imperative that a system be developed with the capability of detecting and tracking any possible contamination in either of the two tributaries. To achieve this, ORSANCO and NexSens Technology worked together to create a system that combines both human and automated efforts to establish an effective water quality monitoring program on the rivers.

Source: http://www.nexsens.com/case_studies/ohio_river_data_buoy.htm
Contact: Peter Tennant, Executive Director, ORSANCO

In addition to the obvious benefits of using more sophisticated analytical equipment and tools to monitor for chemical spills, the value of early warning systems is multifold, including (1) providing a greater awareness of contaminant sources and their proximity to and potential threats to public water systems and (2) the ability to rapidly communicate to those on a need-to-know basis in the event of a spill. These systems leverage and build upon existing critical watershed and water quality data, such as the chemical and physical threats already contained in a SWAP, and allow water systems and other users to access sensitive information through a secure on-line portal. These early warning systems are also being used to provide important stream specific-data, flow rates and travel time that influence when a chemical release would arrive at a water intake structure. These systems are also being used successfully to send out email and telephonic alerts to first responders and water systems that may be affected by a release, based on a low, medium, or high risk potential. Importantly, the costs of implementing and operating such systems will vary, depending upon the scale and complexity, but for larger watersheds can be established for under $1M, with annual maintenance costs of several hundred thousand dollars.

6. Is it common for public drinking water sources/intakes to be located so proximate to a potential contamination risk?

Response: It is not uncommon for drinking water sources with surface intakes to be located in proximity to potential contaminant risks, particularly in large, industrialized river systems like the Ohio River. The above SWAP identifies hundreds of proximate

sources (storage tanks, commercial traffic, railway accidents, releases from power plants, bermed retention ponds).

7. What measures should entities that present potential contamination risks to the safety and security of source waters be required to take?

Response: As emphasized in my testimony, first, bulk chemicals in proximity to source waters must be properly and safely maintained in storage facilities, similar to those requirements pursuant to the Clean Water Act SPCC program, with a focus on tank integrity testing, secondary containment, emergency response plans, etc. Second, in the event of a release that threatens a public water supply, immediate notification must be provided to the water system. For this to be accomplished, chemical storage facilities within the watershed must be aware of and knowledgeable about potentially affected water systems and who to contact in the event of a spill.

8. Should the responsibility to protect the public fall on the entities creating the risk?

Response: Yes.

9. If so, how would you recommend Congress change the laws to assure the responsibility for preventing and mitigating these risks are borne by the entity posing the risks?

Response: The Clean Water Act's Spill Prevention, Control and Countermeasures (SPCC) has been successful in reducing the number of oil spills from large storage vessels. Many of the principles of the SPCC program that focus on tank integrity, inspection, and secondary containment could apply equally to other potentially harmful chemicals stored in bulk quantities. And, in fact, some states, such as New Jersey, have extended the SPCC principles under state law to all bulk aboveground storage tanks containing hazardous substances, under the Discharge Prevention, Containment, and Countermeasures (DPCC) program.

10. How often do you think watershed assessments should be conducted?

Response: Optimally, source water assessments should be updated when material changes in the watershed occur, such as new construction or significant expansion of a chemical bulk storage facility in close proximity to a public water system.

a. How would you recommend these assessments be financed?

Response: Currently, most source water assessments are conducted by state water programs, which would need additional funding to meet these obligations.

b. What improvements in the data collected in the assessments would you recommend?

Response: While additional data may be required in some cases, most watersheds with public water systems already have significant data available on the various sources of chemical threats. This information is only as good as the accuracy and use of the information made available. Often times, these assessments are performed and only rarely used or updated. Therefore, the most cost-effective efforts will be to leverage existing information, and develop integrated systems where such information can be leveraged and routinely updated as needed. Refer to Responses 2 and 5 regarding the SWAP for the Ohio River and the use of Early Warning Systems.

11. What security and contamination prevention measures would you recommend be required for entities that pose contamination risks to source waters?

Response: Refer to Response 9.

Senator CARDIN. Thank you very much.
Mr. McNulty.

STATEMENT OF MICHAEL W. MCNULTY, GENERAL MANAGER, PUTNAM PUBLIC SERVICE DISTRICT, WEST VIRGINIA

Mr. MCNULTY. Thank you, Mr. Chairman and members of the subcommittee.

Putnam Public Service District is a drinking water supplier near Charleston, West Virginia. I live I Charleston and my family and 300,000 residents of greater Charleston have been dealing with contamination of our drinking water for past 26 days.

I am here to talk about source water protection and preventing drinking water contamination from the perspective of Putnam PSD and on behalf of the West Virginia Rural Water Association and the 30,000 member systems of the National Rural Water Association.

I want to thank Senators Rockefeller and Manchin, Congressmen Rahall, Capito and Governor Earl Ray Tomblin for their assistance during this crisis.

For the sake of time, I will summarize the six essential policy principles included in my written testimony needed to promote effective protection plans.

The best plan is one that is developed by local officials who know their particular vulnerabilities and is implemented with constant vigilance. Consider my water supply. We can treat up to 4 million gallons of water each day gathered from streams that are vulnerable to contamination similar to the recent Elk River spill.

We have completed an extensive contamination prevention plan, an emergency contingency plan and a contamination detection plan to protect our population. However, for a plan to work, it cannot just set on the shelf. The local officials who implement it must believe in it and let it influence their daily conduct and attitude.

Our delineated watershed map with potential sources of contamination is displayed here. Our notable points of concern include truck stops and interState, railroad and commercial enterprises like gas stations. It is not feasible to remove all the threats to our watershed, so we have implemented a number of policies to quickly detect and minimize the effect of a potential spill and establish emergency contingencies, including interconnections with neighboring water supplies.

One of the most important elements of our plan is constant monitoring of our presource water to detect contaminants, including any similar to those that were in Charleston's water. If we do find contamination, we can keep a large reservoir sequestered with approximately 4 months of treatable water.

None of the presource water tests are federally mandated. I point this out to illustrate how difficult it is to have a Federal regulatory solution to this issue. All 51,651 U.S. drinking water supplies have unique challenges. This is why rural water associations have been advocating for local communities to adopt protection measures for decades. They directly assist communities like mine with technical resources to implement a protection plan.

Over 1,000 communities have completed the rural water process and are actively protecting their source water. Consider how many

contamination events may have been prevented in these communities.

I will close with this suggestion for a Federal response in the aftermath of the Charleston crisis that allows for immediate protection and does not require any grand spending program or expansion of unfunded mandates on local governments.

A few years ago, Congress provided a small package of funding to the State agencies that protect groundwater to design and publish online a public disclosure data base of all chemicals used in hydraulic fracturing. This experiment proved to be widely successful. For a small Federal investment, this system could also publicly disclose all watersheds and potential threats within, a list of communities that have adopted protection plans and copies of each protection plan. Such an enterprise would empower the people who benefit from a clean and safe environment to take responsibility for securing it.

While every State and locality believes that it is doing the best job possible, this system would allow the public to make sure their claims are accurate.

Thank you, Mr. Chairman. On behalf of the small and rural communities, we are grateful for your attention and assistance.

[The prepared statement of Mr. McNulty follows:]

TESTIMONY OF
MICHAEL W. MCNULTY
GENERAL MANAGER, PUTNAM PUBLIC SERVICE DISTRICT
SCOTT DEPOT, WEST VIRGINIA
ON BEHALF OF
PUTNAM PUBLIC SERVICE DISTRICT,
THE WEST VIRGINIA RURAL WATER ASSOCIATION, AND
THE NATIONAL RURAL WATER ASSOCIATION
BEFORE THE
THE U.S. SENATE COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS
SUBCOMMITTEE ON WATER AND WILDLIFE
FEBRUARY 4, 2014

"Examination of the Safety and Security of Drinking Water Supplies Following the Central West Virginia Drinking Water Crisis"

Introduction

Good morning, Mr. Chairman and Members of the Subcommittee. It is an honor to be here. My name is Mike McNulty, and I am the general manager of the Putnam Public Service District (PSD) which is a drinking water supplier just outside of Charleston, West Virginia. I live in Charleston, and my family and the residents of greater Charleston have been dealing with the contamination of our drinking water for the past 3 weeks and 5 days. I am primarily here to talk about source water protection and preventing drinking water contamination from the perspective of our drinking water supply and on behalf of the West Virginia Rural Water Association and the National Rural Water Association which has over 30,000 drinking water supply member systems. I want to thank our state's junior Senator, Joe Manchin, for his assistance during this crisis and for the leadership he has shown in crafting common-sense policy solutions to ensure this type of event never occurs again. Thank you very much Senator Manchin. I would also like to thank Governor Earl Ray Tomblin for working directly with the affected communities in our area.

Putnam PSD's water supply has an extensive source water protection plan and it is highly unlikely that a similar event could impact our raw water reservoir. I will attempt to explain why our plan is effective and what federal, state, and local policies promote dynamic source water protection plans in our country's 51,651 community drinking water supplies. One primary mission of the National Rural Water Association is to assist community drinking water supplies in adopting source water protection plans. We have assisted over 1,000 communities to adopt plans.

Key Points

Six essential policy principles needed to promote effective protection plans include:

1. Recognition that the best plan is the one that was developed by the local officials who know their particular vulnerabilities;
2. recognition that local responsibility for protecting local resources is more effective than additional mandates;
3. acknowledging existing agreements resolving land-use or zoning conflicts within local government jurisdictions;
4. providing federal resources, expertise, and education - including publicly identifying inadequate plans to the public and local governments;
5. public disclosure of all potential sources of contamination to allow the public and governments to prepare for or regulate them;
6. and constant vigilance of the local communities and governments that depend on the water source to identify new threats and improve protection.

Putnam SWP

Consider my water supply. We can treat up to 4 million gallons of water each day, gathered from a series of streams to supply 23,000 people with their drinking water. The streams upon which we depend for water are, like all surface water sources, vulnerable to contamination similar to what occurred in Charleston. We have completed an extensive contamination prevention plan, emergency contingency plan, and contamination detection plan to protect our population. Combined, these documents contain about 60 pages of maps, data, contingencies, plans, intergovernmental agreements, and contact information. I did bring one hard copy of the plan with me today. In order for this document to work, it can't just sit on the self after completion – the local officials who implement it *must* believe it is necessary and influences their daily conduct and attitude. Our delineated watershed map and the watershed map overlaid with the potential sources of contamination are on display here, and on display at our water plant and is accessible on most of our computers. An assessment of the watershed identifies the potential contamination threats from trucks stops that service vehicles carrying a number of chemicals, an interstate railroad with numerous potential threats moving by each day, and a number of commercial enterprises like gas stations and auto repair shops. Of course, it is not feasible to think we could remove all of these threats from the watershed, so we have implemented a number of policies to minimize the effect from a potential spill, quickly detect a spill, and establish emergency contingencies, including interconnections with neighboring water supplies. For some of the potential threat sites, storm water run-off mediation practices have been installed. Perhaps the most important element of our plan is constant monitoring of our source water. We have a small reservoir that collects water from the watershed before the water is then pumped to a large reservoir approximately one mile away. The water then returns to the water plant for treatment. This gives us a unique ability to test the water before it enters our larger reservoir. This is what we refer to as "pre-source water." We are continually testing both of these reservoirs for pH, turbidity, the amount of biological

indicators in the water, odor (which can be more sensitive than some lab detections), and temperature, which will detect contaminants similar to those that were in Charleston's water. All of the pre-source water testing is voluntary, adopted by our utility's staff to implement our program

Because we have two reservoirs, we only pump to the second reservoir when the first one has been tested safe. This procedure enables us to secure and sequester the second reservoir if contamination is ever detected in the streams and our first impoundment. Even if we did find contamination, the second reservoir is isolated with approximately six months of treatable water, which would give us that same amount of time to remediate the source of contamination.

The federal government requires us to conduct hundreds of drinking water tests each year, but none of the pre-source water tests I mentioned are mandated by federal agencies. I point this out to illustrate how difficult it is to have a federal regulatory solution to this issue. Every one of the 51,651 U.S. drinking water supplies has a unique set of vulnerabilities and challenges, and if you apply a uniform regulatory standard to mandate protection in all of them, you will end up not addressing the greatest risks in many communities, and forcing many other communities to implement unnecessary regulations that fail to address their threats

We maintain an excellent relationship with first responders, state governmental authorities, and local organizations. The more our public knows about what is potentially threatening, the better. Public disclosure of all potential sources of contamination and public education campaigns can be a very effective method to engage individuals. Communities can take action and adopt strict plans with the understanding that they have the civic power to influence policy and know who is accountable if things go wrong.

The West Virginia Rural Water Association and the National Rural Water Association have been advocating for local communities to adopt protection measures for decades. They directly assist communities like mine with technical resources to complete and implement a protection plan. I mentioned the 1,000 communities that have completed the rural water process and are actively protecting their source water. Consider how many contamination events may have been prevented in these communities as a result of proactive source water protection planning.

Closing

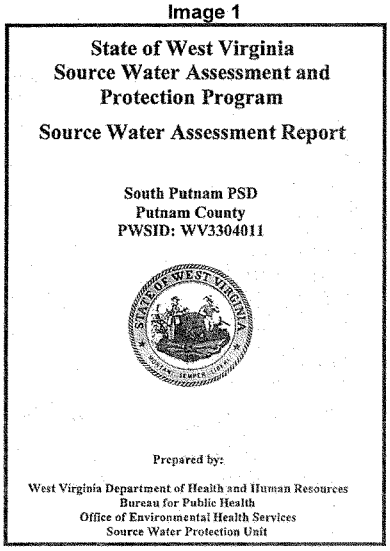
I will close with a suggestion for a federal response in the aftermath of the Charleston crises that allows for some immediate protection and does not require any grand spending program or any expansion of federal unfunded mandates. This suggestion relies on the advancement of information technologies to educate and empower the public to protect their own resources

In a novel governmental experiment a few years ago, Congress provided a small package of funding to the state agencies that protect ground water to design and publish on the internet a public disclosure database of all chemicals used in hydraulic

fracturing events. This experiment proved to be widely successful. As it was created by the states, it was more accountable to state priorities and supported by local governments. For a small federal investment, this data-system could begin to publicly disclose all watersheds, all potential threats within those watersheds, the list of all communities that have adopted protection plans, copies of each protection plan, a grading system for communities taking action, etc. Communities could populate the data-system with their localized information. All of this would provide direct access to environmental data, governmental response information, and governmental accountability to the public. In addition, it would create a climate of peer pressure or polite competition for communities to highlight their initiatives. We can all agree that every city and state thinks it is doing the best job, and this system would allow the public to make sure their claims are accurate. Large communities and states would likely have the resources to complete plans and showcase their successes. Additional technical assistance could be provided to assist smaller communities that lack technical resources; 94% of community drinking water systems serve a population of fewer than 10,000 people.

Thank you Mr. Chairman, and on behalf of all small and rural communities, we are grateful for your attention and assistance.

Image 1



State of West Virginia
Source Water Assessment and Protection Program

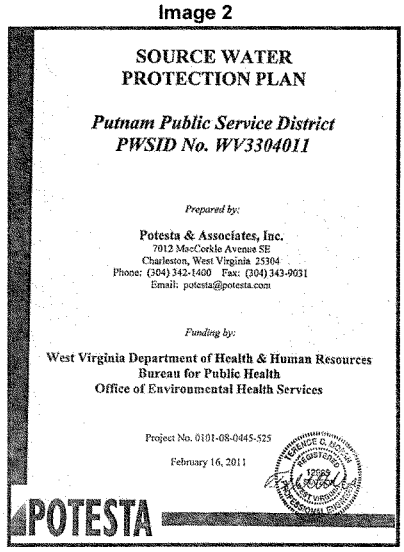
Source Water Assessment Report

South Putnam PSD
Putnam County
PWSID: WV3304011

Prepared by:

West Virginia Department of Health and Human Resources
Bureau for Public Health
Office of Environmental Health Services
Source Water Protection Unit

Image 2



SOURCE WATER PROTECTION PLAN

Putnam Public Service District
PWSID No. WV3304011

Prepared by:

Potesta & Associates, Inc.
7012 MacCorkle Avenue SE
Charleston, West Virginia 25304
Phone: (304) 342-1400 Fax: (304) 343-9031
Email: potesta@potesta.com

Funding by:

West Virginia Department of Health & Human Resources
Bureau for Public Health
Office of Environmental Health Services

Project No. 0101-08-0445-525

February 16, 2011

POTESTA

Image 3

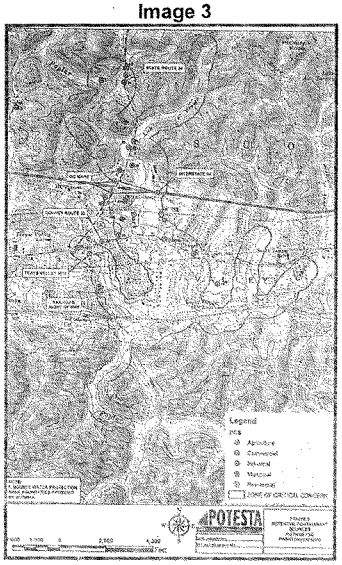
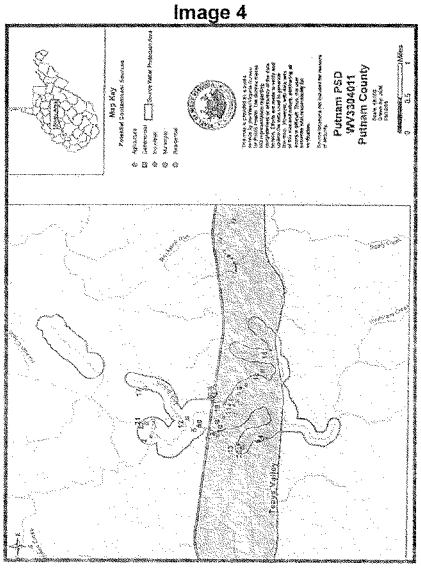
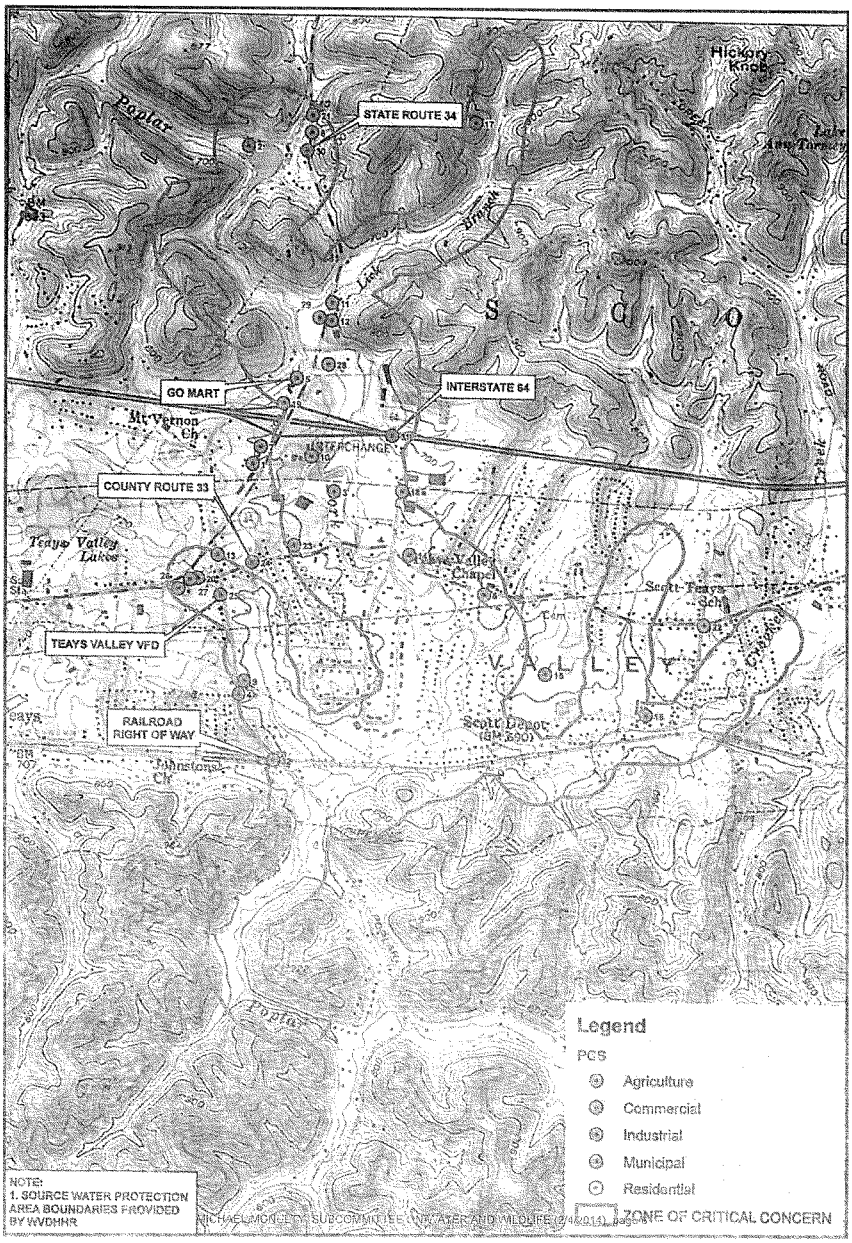
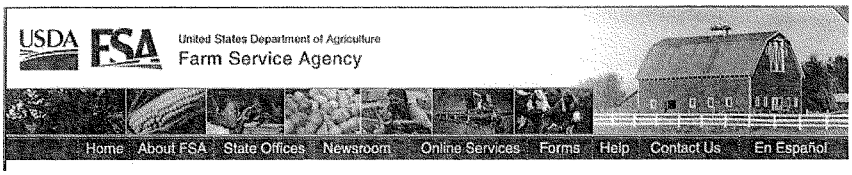


Image 4




STATE ROUTE 34
GO MART
INTERSTATE 64
COUNTY ROUTE 33
TEAYS VALLEY VFD
RAILROAD RIGHT OF WAY
Hickory Knob
Poplar
Mt Vernon Ch
Teays Valley Lakes
Teays Valley Chapel
Scott Teays Sch
Scott Depot (BM 600)
Johnstons Ch
Legend
PCS
Agriculture
Commercial
Industrial
Municipal
Residential
ZONE OF CRITICAL CONCERN
NOTE:
1. SOURCE WATER PROTECTION AREA BOUNDARIES PROVIDED BY WVDHHR



You are here: FSA Home / Conservation Programs / Source Water Protecti

Conservation Programs

Source Water Protection Program

What is the Source Water Protection Program (SWPP)?

The Source Water Protection Program (SWPP) is a joint project with the U.S. Department of Agriculture (USDA) Farm Service Agency (FSA) and the National Rural Water Association (NRWA), a non-profit water and wastewater utility membership organization. The SWPP is designed to help prevent pollution of surface and ground water used as the primary source of drinking water by rural residents.

How does SWPP work?

Through NRWA, full-time rural source water technicians with practical experience are hired. The technicians work with specialists from the USDA Natural Resources Conservation Service (NRCS) and state and county FSA staff, to identify areas where pollution prevention is most needed. Once areas for pollution prevention are identified, technicians work with state rural water associations to create local teams made up of citizens and individuals from federal, state, local, and private organizations. These teams collaborate to create a Rural Source Water Protection plan to promote clean source water. The plan identifies voluntary actions that farmers and ranchers can install to prevent source water pollution.

Why is SWPP important?

Clean drinking water is critical. The SWPP works at a grassroots level to educate and inform rural residents about steps they can take to prevent water pollution and improve water quality. Most importantly, it is the local community that helps create the water protection plan and is invested in its success.

For more information on enrollment, eligibility, and land requirements, please scroll down to the **Participant Information** section on the page.

Environment and Public Works Committee Hearing
February 4, 2014
Follow-Up Questions for Written Submission

Questions for McNulty

Questions from:

Senator Barbara Boxer

1. Mr. McNulty, your drinking water system has an advantage of the Charleston system because it has two reservoirs and can "pre-test" the water before it is pumped into the second drinking water reservoir.

   a. For a system like Charleston that lacks such protection, do you agree that prevention is the key to protecting their water from the risks posed by chemical storage facilities in their watersheds?

      ANSWER: Yes, prevention is the key to protecting the potable water source. The West Virginia Legislature just passed SB373, a bill that mandates inspections of storage tanks which should greatly reduce the risk of another spill of the magnitude of the one that occurred on the Elk River on January 9, 2014.

   b. Shouldn't states and water systems be given additional tools to prevent spills like the one at Freedom Industries?

      ANSWER: Yes, states and potable water utilities should be given flexibility and additional options in order to protect their watershed from being contaminated by a chemical spill or some sort of other emergency situation at an industrial site, commercial business, or residential household.

Senator David Vitter

1. Mr. McNulty, in your testimony you mentioned that local officials and planning at the local level is more effective than that at the federal level. Can you elaborate on why that is and further explain you comment that "additional mandates" presumably at the federal level can often have a negative impact despite their intention of helping?

ANSWER: Every watershed in the United States has its own unique characteristics. I am of the opinion that one sweeping, over-generalized federal mandate cannot possibly address all of the distinct challenges that each potable water utility must overcome. I have greatest faith in systems and plans in which state primacy agencies partner with local government officials to determine the best protection options for their watershed.

2. In your written testimony you indicated that a uniform regulatory standard "will end up not addressing the greatest risks in many communities" and may force many communities "to implement unnecessary regulations that fail to address their merits." Can you elaborate on why a one-size fits-all solution may not be appropriate under these circumstances?

ANSWER: State and local government officials know more about a given watershed and its vulnerabilities than anyone else. My concern is that a federal government official with experience and knowledge relating to watersheds in one part of the United States may think that applying the same source water protection criteria with which he or she is familiar nationwide will address all of the challenges for every potable water utility across the country. Some systems utilize surface water (streams, rivers, lakes, etc.) while others use ground water drawn from underground aquifers as their primary source of raw water in the potable water treatment process. Watersheds in West Virginia that are located near coal mines and processing plants should have a different approach to source water protection than one in place in a region with primarily agricultural or manufacturing economic activities.

3. What measures does your district have in place to deal with incident like the West Virginia chemical spill?

ANSWER: Putnam Public Service District has a twenty (20) million gallon impoundment on the Poplar Fork watershed which is our pre-source water. We pump water from Poplar Fork to our five-hundred (500) million gallon Jonathan Larck Reservoir, a man-made lake that is upstream from all but a few residential dwellings and closed recreational activities. We only treat water that has been drawn from the Larck Reservoir and we are able to shut down our pumps to prevent contamination of Larck in the event of a spill in the Poplar Fork watershed.

Our Staff conducts pH, turbidity, temperature, bacteriological, and odor threshold testing on our pre-source water prior to being pumped to the Larck Reservoir. In addition to our testing, we have a close relationship with our county sheriff, emergency services director, and our fire department to inform us in the event there is a fuel or chemical spill in our watershed.

We also have approximately two (2) day of potable water storage in the event that an overwhelming instance of water contamination would require us to shut down our treatment plant. Furthermore, we are also connected to a neighboring water system from whom we could purchase potable water if needed.

Senator CARDIN. Thank you for your testimony.
Mr. Faulk.

STATEMENT OF RICHARD O. FAULK, HOLLINGSWORTH, LLP

Mr. FAULK. Thank you, Mr. Chairman.

I am a lawyer practicing here in Washington, DC. I want to make it very clear that I am not representing a client or any organization here today. I am not being compensated for anything I am saying here today. I have simply responded to the committee's invitation as a concerned citizen.

I want to rise to speak to the Chairman's concern of federalism and to sound a note of caution amongst the interests and the intensity of the work being done here in this committee and indeed, I suspect throughout the entire Nation, within the Nation's chemical industry as they intensely look at the concerns this situation has raised.

There are a great many factors in addition to regulations that influence what America's chemical industry does. There are a great many factors other than laws that do so. There are human factors, investigations that they have undertaken. There are trade association issues that have been raised I am sure regarding this situation.

There are other matters that this committee may or may not have been briefed on here, certainly I do not necessarily know the extent of, that should influence some caution before rushing into Federal legislation.

With the focus that is being placed under the magnifying glass of this committee's inquiries, as well as other activities surely going on in the country, should we really rush immediately into Federal legislation?

I think we should be cautious. Complex accidents generate a fog of some kind, simply burdened by the sheer weight of information mixed with all the shock and alarm and confusion. Sometimes that can obscure clear deliberations.

In dealing with incidents like this, it is important, as this committee is doing today, to give the State and local authorities a full opportunity to fully investigate, to deliberate and to decide what their future actions should be. Sometimes when that fog clears, Federal intervention may be unnecessary.

For example, we all know from the discussions today, the West Virginia legislature is actively considering bills and laws to deal with the situation. Once those are passed, our Nation states our laboratories of democracy may decide to develop solutions for their own unique operations which may be very different from West Virginia's. Those solutions may be complemented by voluntary programs developed by industry.

A top down management situation of Federal solutions may actually displace some protective systems of State and local laws, regulations and voluntary industry practices that already exist. For those reasons, I think we should be cautious.

Stated another way, the presence of a Federal regulatory gap does not necessarily mean that a hazard exists uniformly across the Nation. Some of those hazards may be dealt with by other restraints. A one size fits all Federal approach may sometimes even

reduce safety by preempting broader, more effective or carefully tailored solutions that are already working.

Again, it calls for cautious consideration and deliberation. I know this committee is doing it. I simply rise to suggest that they continue to do so and keep these factors in mind.

Spill prevention is a recurring concern regarding chemicals and all sorts of substances that are stored. West Virginia and other states, as well as the EPA, have issued guidance documents on this subject. They provide commonsense information and advice that could have prevented the tragedy in West Virginia.

For example, if we simply look at West Virginia's guidance documents regarding above ground storage tanks, they suggest and refer to existing regulatory standards which, if obeyed regarding groundwater protection, would have prevented the spills into the surface water here through effective secondary containment according to their specifications.

Like many tragedies, this failure cannot necessarily be blamed on the absence of the law. It can be blamed, however, on human error. We need to be cautious as we walk into this situation and we work through these issues. Not every problem requires Federal legislation, but every problem, especially serious ones, deserves the careful consideration, the empowered intervention, the educated assistance of responsible and politically accountable community members, the closest people to the problem.

I applaud the communities' efforts, I applaud the efforts of West Virginia in cooperating with the committee, and I applaud this committee's work as it delves into these difficult problems and simply suggest restraint and caution as we move forward.

[The prepared statement of Mr. Faulk follows:]

Testimony of Richard O. Faulk

Before the
Committee on Environment and Public Works
United States Senate

February 4, 2014

Thank you for inviting me to speak to you today. At the outset, let me note that I am not appearing here on behalf of any client or organization. I have responded to the committee's invitation as a concerned citizen, and I will provide information based upon my experience and observation.

I am a partner in the Washington DC law firm of Hollingsworth LLP, where I maintain a trial and appellate practice that includes environmental litigation matters. I also serve as the Senior Director of the Initiative for Energy and the Environment for the Law & Economics Center at George Mason University School of Law, where I develop and participate in forums designed to promote constructive dialogue regarding our nation's energy and environmental concerns. Prior to coming to Washington, I maintained a trial and appellate litigation practice in toxic tort and environmental litigation in Texas for approximately 35 years, most notably as the Chair of the Litigation and Environmental practices of Gardere Wynne Sewell LLP, a large Texas law firm with offices in Houston, Dallas, Austin and Mexico City.

Over the years of my practice, I have become familiar with some of the interaction and inter-relationships between America's oil and chemical manufacturing facilities and the regulatory authorities that address safety and environmental concerns regarding their operations. I do not claim to have expertise in all such areas, but I do generally understand and appreciate the attitudes, concerns, policies and programs that America's responsible chemical and

petrochemical companies apply to reduce the risk of accidents and injuries. Many of those practices are mandated by federal and state laws and regulations, but many are also the result of voluntary programs developed internally by particular companies or industry organizations.

From my experience with the mainstream of that industry, I believe that the safety of its employees and the people who live and work around its operations is the industry's highest priority. I have observed the industry work consistently over the years to enhance and improve their safety standards and practices. Even when accidents happen in facilities owned by other companies in other industries, the American chemical and petrochemical industries use those incidents as learning opportunities to improve the safety of their own operations. Unfortunately, the West Virginia chemical spill is a disappointing, and tragic exception to the practices I have observed in the mainstream of America's chemical and petrochemical industry. Based upon my experience, however, I have reason to expect that American chemical companies are already intensively engaged in inquiries, examinations, studies and discussions regarding the West Virginia tragedy -- with a view to understanding how and whether a similar incident could occur or be prevented in their own unique operations.

I also have reason to believe that federal, state and local regulatory authorities across the United States are actively engaged in investigations and are reviewing existing standards and procedures to determine their ability to detect and prevent problems from causing similar incidents. Their intensity, concern and enthusiasm likely match this committee's zeal because they are on the "front lines" for preventing similar tragedies. Certainly, the West Virginia incident, in itself, strongly motivates companies and state and local regulators to pursue such reviews – and this committee's investigation also provides a powerful motivation for those studies.

With all of this focus, motivation and energy, is there a need for immediate federal legislation? I think not. The aftermath of any complex accident generates a certain "fog" where the sheer volume of information, mixed with the shock, alarm, fear and confusion of the moment can obscure clear deliberations. In dealing with incidents like the West Virginia spill, it is important for state and local authorities responsible for the operations and knowledgeable about the parties' practices to undertake the following actions:

- Investigate and ascertain the facts that contributed to the incident;
- Examine any broader questions they raise about oversight, implementation,
- Determine appropriate remedial actions and coordinate enforcement and information sharing among federal, state, and local officials;
- Critically examine whether better enforcement of existing regulations could have helped prevent this incident; and
- Determine if new regulations are needed and if so, consult and involve all stakeholders to ensure that new policies are carefully tailored to avoid overreaching, duplication of existing industry practices, and to minimize unintended consequences.

All of these procedures are essential parts of an effective and useful investigation. In the process of these investigations, state and local authorities will necessarily address other problems such the existence and scope of existing local laws, the record of spills or releases reported in their jurisdictions, the efficacy of their laws in preventing accidents and redressing offenses, and the relative frequency of enforcement proceedings. After completing this process, the state and local authorities should have sufficient information to redress the situation and determine what, if any, new policies, procedures, laws and regulations should be considered to prevent future incidents. If state authorities prove themselves adequate to this task, federal intervention may be unnecessary.

For example, the West Virginia Senate has already passed legislation addressing the issues raised by the Spill. The bill is now before the West Virginia House of Representatives. Given the intense interest in West Virginia, it is likely that this law, when passed, will broadly address the circumstances that led to this tragedy. Other states may then review the law, consider it and adapt it to their own concerns and needs. As our nation's "laboratories of democracy," each state may develop its own solutions to its own unique operations and problems – and such solutions may be complimented by voluntary and cooperative programs developed by industry.

A "top down" system of solutions mandated hastily by federal authorities may displace a protective system of state and local laws, regulations or voluntary industry practices in some jurisdictions. Without an appreciation of those practices, the scope and severity of the risk throughout the nation may be vastly overstated. Stated another way, the presence of a regulatory "gap" does not mean that a hazard necessarily exists – such hazards may be already prevented by state or local laws or regulations, voluntary and customary industry practices, or other restraints. Without an appreciation of those variations, a "one size fits all" federal approach might even *reduce* safety by preempting broader, more effective, or uniquely tailored programs that are already working.

The safety precautions needed to prevent accidents such as the West Virginia incident are probably known to engineers, regulators, and safety professionals. The challenge of spill prevention, detection and containment is a ubiquitous and recurring concern. West Virginia and many other states, as well as the federal EPA, have issued guidance documents which provide information and directions regarding the necessity for containing dangerous materials, the methods for doing so in above-ground storage tanks, and the means for preventing damage by

containing spills and leaks. These resources describe and illustrate such important matters as sound engineering in tank construction, proper tank maintenance, the need for regular inspections, spill prevention techniques, and containment measures. These publications are available to the public and provide common-sense information and advice that could have prevented the tragedy in West Virginia.

Although no EPA program specifically regulates non-petroleum above-ground storage tanks, EPA's Chemical Emergency Preparedness and Prevention Office (CEPPO) issued a *Rupture Hazard from Liquid Storage Tanks* Chemical Safety Alert in May, 2009, available at http://www.epa.gov/oem/docs/chem/tanks7.pdf (visited February 2, 2014). The alert summarized tank failures due to defective welding, cautioned owners of ASTs in all liquid services to be aware of rupture risks, and provided guidance for proper AST inspection and maintenance. To minimize risk, it recommended the use of API Standards 650, 653, and 579 for tank construction, inspection, and modification. This alert also provided information regarding hazard awareness, identification, reduction and prevention. Among many other recommended precautions, the EOA advised tank owners and operators to "perform regular inspections of tanks" to "be sure to look for all possible risks." *Id.* at 4. In the preface to this important document, EPA also counseled that "[m]ajor chemical accidents cannot be prevented solely through regulatory requirements. Rather, understanding the fundamental root causes, widely disseminating the lessons learned, and integrating these lessons learned into safe operations are also required." *Id.* at 1.

Well before that alert was issued, the federal EPA had provided strong warnings about the importance of regular inspections since at least 2001:

> ***Routinely monitor*** ASTs to ensure they are not leaking. An audit of a newly installed tank system by a professional engineer can identify and correct problems such as loose fittings, poor welding, and poorly fit gaskets. After installation, inspect the tank system periodically to ensure it is in good condition.

> Depending on the permeability of the secondary containment area, more frequent containment area checks may be necessary. Areas to inspect include tank foundations, connections, coatings, tank walls, and the piping system. Integrity testing should be done periodically by a qualified professional and in accordance to applicable standards.

Managing Above Ground Storage Tanks to Prevent Contamination of Drinking Water (USEPA, July 2001), available at http://www.epa.gov/safewater/sourcewater/pubs/ast.pdf (accessed February 1, 2014)(emphasis in original).. Irrespective of whether this is a "law" or a recommendation, the EPA has enforcement jurisdiction under the Clean Air Act over water pollution incidents arising from tank failures. Accordingly, anyone dealing with products which. If not properly contained, could compromise drinking water, should obviously monitor the efficacy of containers and containment barriers to ensure that nearby drinking water supplies are not compromised.

West Virginia itself has "guidance" documents that refer to explicit requirements to protect "groundwater" from leaking above ground storage tanks – but the *existing regulatory requirements* described in those documents would, if obeyed, also prevent leakage into surface waters:

> Secondary containment refers to a structure usually constructed of dikes or impervious walls to contain the tank contents in the event it is drained out. **Section 4.8.a. of 47C858 requires that all ASTs have secondary containment that is appropriate to protect against groundwater contamination . . . The secondary containment must be designed and constructed to contain the full contents of the largest tank within the containment unit until the spilled material can be removed without contamination of groundwater.**

Above Ground Storage Tank Guidance Document (Dept. Env. Prot. 2010), at 3 available at http://www.dep.wv.gov/WWE/Programs/gw/Documents/AST%20Guidance%20Document.pdf (accessed February 1, 2014).

The incident in West Virginia was apparently caused by at least two failures – one which permitted the initial leaks, and another which involved the failure of secondary containment. Viewed in that perspective, *existing West Virginia law expressly provided a requirement which, if honored, would have prevented the incident*. Like many tragedies, the failure cannot necessarily be blamed on the absence of a law, but rather on human error. If a legal requirement under existing West Virginia law did not prevent the tragedy, one wonders whether federal laws will produce a different result. Fortunately, the rarity of events similar to those in West Virginia suggests that, by following common sense precautions and existing laws, American industry appears to be acting responsibly to prevent similar tragedies without the need for federal laws or regulations.

Much more study, including empirical evidence, is needed before this committee concludes that displacing these precautions and voluntary industry programs with federal legislation will achieve more salutary results. More laws – especially more regulation – and especially more *federal* regulations in a nation that is even now struggling to comply with a plethora of existing standards – cannot and should not be the answer to every problem – even every tragedy – that befalls our citizens.

Instead, we must empower the governments closest to the people with information, training, responsibility and tools to address the needs of their citizens. If that requires additional resources, so be it – for those resources are best entrusted and administered by those who are closest to the citizens who need them. Not every problem requires federal legislation – but every problem, especially serious ones, deserves the careful consideration, empowered intervention, and educated assistance of responsive and politically accountable community members. When, as here, the laws – if obeyed – are sufficient, we should avoid federal intervention and allow the

states, which have physical possession of their natural resources, to conserve, defend, and administer them in the best interests of their citizens.

Hollingsworth LLP

Richard O. Faulk
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rfaulk@hollingsworthllp.com

March 7, 2014

Mara Stark-Alcalá
Majority Press Assistant
Senate Committee on Environment and Public Works
410 Dirksen Senate Office Building
Washington, DC 20510

Re: Answers to Senator Vitter's Written Questions

Dear Ms. Stark-Alcalá:

Enclosed pleased find my responses to Senator Vitter's written questions sent to me on March 5, 2014 regarding the hearing on February 4, 2014 entitled "Examination of the Safety and Security of Drinking Water Supplies Following the Central West Virginia Drinking Water Crisis."

Per your instructions, I am also providing a copy of this letter and the answers via electronic mail to your attention at Mara_Stark-Alcala@epw.senate.gov .

Very truly yours,

Richard O. Faulk

Environment and Public Works Committee Hearing
February 4, 2014
Follow-Up Questions for Written Submission

1. Mr. Faulk, I think you made a number of interesting points in your opening statement about the damage we in Washington can do when we rush to create laws following a tragic event in order to "help". One comment I found particularly interesting was your analysis that, had existing West Virginia law been followed, this accident should have been prevented. When state and local governments are under resourced to the point where they have trouble implementing and enforcing laws, do you believe it helps for the federal government to just pile on more requirements for states to manage?

ANSWER: I am not familiar with all facts and details concerning the West Virginia spill. Based upon what I have read, however, it seems that if the company had complied with existing West Virginia law regarding secondary containment requirements to protect groundwater, those same precautions would have prevented the spilled chemical from reaching the river and affecting drinking water supplies. The applicable regulation is cited in my written testimony. Given the company's apparent failure to maintain adequate secondary containment in the face of this West Virginia requirement, federal mandates, even if they existed, may not have prevented the spill. I am not aware of the particular staffing and economic challenges that West Virginia faces in enforcing its current laws, but adding new federal laws may compound state inspection and enforcement by imposing greater burdens than those which existed at the time the accident occurred. This is especially true if the federal laws are "unfunded mandates" that the state must support from its own revenues.

2. Do you feel we have adequate information on what went wrong or caused this spill in order to properly assess what, if any, legislative actions need to be taken at the federal level?

ANSWER: I am not sufficiently familiar with the Committee's record to evaluate whether the Committee has adequate information upon which to base legislative actions. I am concerned, however, that the Committee not act precipitously (i) without a full understanding of the details of the event, (ii) without a full understanding of the laws, programs, policies, and practices already existing in the various states, and (iii) without a full appreciation of the effects, impacts, and burdens new federal regulations may impose on the various states. If the Committee has not already pursued these lines of inquiry, I believe it should do so to develop an adequate record for its decisions. In my personal view, such a record will provide the Committee with a better opportunity to evaluate whether federal, state or local measures are the wisest preventive policy.

3. Certainly this spill is an issue that deserves our Committee's attention and I'm happy that we conducted this hearing. Do you see any risks in potential new federal legislation that might displace state and location precautions as well as risk programs that industry has adopted?

ANSWER: If the Committee acts without the record recommended above, there is a risk of conflict, confusion, preemption, or displacement of existing state and local laws or voluntary industry measures. Without a complete understanding of the current situation throughout the nation, it is impossible to know the extent to which such things might occur. Governing from "above" without understanding the complete scope and nature of the problem "below" creates uncertainties that might be avoided if a more measured and cautious approach is followed. For that reason, I urge the Committee to be cautious in selecting "top down" solutions. If state laws or workplace policies already exist which address the issue adequately, federal action may be unnecessary – or may be more narrowly and effectively tailored to blend with existing solutions.

4. Mr. Faulk, you wrote in testimony that "[e]ven when accidents happen in facilities owned by other companies in other industries, the American chemical and petrochemical industries use those incidents as leaning opportunities to improve the safety of their operations." Can you explain why factories that had nothing to do with the West Virginia would want to improve the safety of their operations after the spill?

Companies which are not involved with the West Virginia spill may view the incident as a learning opportunity. They may choose to evaluate their own procedures or requirements for above-ground storage tanks, and may, on reflection, decide that their preventive programs and procedures are adequate, or decide that changes to improve spill prevention are appropriate. On reflection, they may decide that legislation or administrative regulations are appropriate preventive measures, and they may work with state and local governments to design and support the passage of such measures. Such actions may be taken individually or via trade associations. These inquiries, deliberations, and decisions may, in themselves, work to prevent future incidents.

Senator CARDIN. Mr. Faulk, we thank you very much for your testimony.

Mr. Weaver.

STATEMENT OF R. PETER WEAVER, VICE PRESIDENT, GOVERNMENT AFFAIRS, INTERNATIONAL LIQUID TERMINALS ASSOCIATION

Mr. WEAVER. Thank you, Chairman Cardin, Chairwoman Boxer, Senator Vitter and the entire committee.

Good morning. My name is Peter Weaver. I am Vice President of Government Affairs at the International Liquid Terminals Association. I have been with ILTA since 2006 representing the interests of the owners and operators of bulk liquid storage terminals.

Our 80 corporate members, with approximately 800 domestic terminal facilities, operate in all 50 States, handling all manner of liquid commodities from chemicals and petroleum products to biofuels and vegetable oils. Freedom Industries is not an ILTA member.

Before joining ILTA, I held positions in product development and marketing for one of our Nation's largest chemical manufacturers. I have also served as an officer in the Merchant Marine. I began my career with the Engineering Department of an ILTA founding member company back home along the Mississippi River.

I should note that my wife and I now have a sailboat on the Chesapeake Bay next to our dog's favorite swimming beach and thus, assurance that no one is harming our Nation's waterways is a very personal priority for me, my family and our closest friends. The liquid terminal industry is committed to the safe and environmentally sound operation of our facilities and I consider it a privilege to participate today.

Like the vast majority of bulk storage tank operators, ILTA members are regulated by a comprehensive and rigorously enforced series of laws and regulations. At the Federal level, rules for environmental protection are promulgated in response to numerous laws, including the Clean Water Act, OPA 1990, the Clean Air Act, CERCLA, RCRA, the Safe Drinking Water Act, TSCA, SARA, and EPCRA.

All ILTA members are subject to regulations requiring tank inspections and secondary containment to prevent spills from migrating should a tank fail. Some State laws carry additional requirements. Terminals also follow industry standards and best practices for maintaining the integrity of their equipment and operations.

From among the many Federal regulations that apply to above ground storage tanks, I will reference two. First, EPA's spill prevention control and countermeasure rule, SPCC, applies to every facility possessing at least 1,300 gallons of oil in aggregate or chemicals exhibiting similar properties.

It incorporates robust standards for tanks and pipeline integrity testing such as the API 653 standard for large, field directed tanks. SPCC also strictly regulates secondary containment and requires financial responsibility and plants must be certified by a professional engineer.

Second, EPA regulations stemming from the Emergency Planning and Community Right to Know Act , EPCRA, or SARA, Title 3, requires facilities to inform their local emergency planning com-

mittee, the State Emergency Response Committee and local the fire local fire department of all hazardous materials in their possession. I should add, the newly revised 2012 OSHA Hazardous Communications Standard requires documentation and communication of all hazardous properties of all chemicals.

In West Virginia, State regulations require secondary containment for above ground chemical and petroleum storage tanks that can protect groundwater for at least 72 hours.

We understand that State and Federal agencies and the Chemical Safety Board are all investigating the Freedom Industries accident. Given the impact, there is no question that these will be extensive investigations and we expect that resulting incident reports will cite factors contributing to the release, applicable regulatory programs and possible violations of those regulations. ILTA is very interested in these findings, in particular, how the chemical escaped containment.

Even with an expansive regulatory net, anomalous circumstances exist where an incident such as this could occur. ILTA contends that a proper oversight response would begin with understanding those circumstances. ILTA also contends that a Federal legislative response at this moment would be premature.

Once final investigation reports are released, specific reasons for these tank and secondary containment failures will be better understood and then measures to prevent recurrence in another community can be determined and implemented through refinement and simplification of existing regulations.

If Freedom Industries disregarded applicable regulations, industry standards or its own operating procedures, then the most effective response would be through more consistent enforcement rather than administrative burden and frankly, the confusion of another layer of legislation and regulation.

With regard to the Safe Drinking Water Act, measures have been proposed to require good design and construction standards, leak detection, spill protection, inventory control, emergency response, training, integrity inspections and financial responsibility.

Within the terminal industry, and in my experience, regulations requiring strict adherence to all of these provisions are already well established and would seem directly applicable to Freedom Industries.

Thank you for the opportunity to provide this testimony. I am certainly happy to respond to questions.

[The prepared statement of Mr. Weaver follows:]

Testimony of R. Peter Weaver
Vice President of Government Affairs
International Liquid Terminals Association

Before the

Senate Committee on Environment and Public Works
Subcommittee on Water and Wildlife

EXAMINATION OF THE SAFETY AND SECURITY OF DRINKING WATER SUPPLIES FOLLOWING THE CENTRAL WEST VIRGINIA DRINKING WATER CRISIS

FEBRUARY 3, 2014

Introduction

The International Liquid Terminals Association (ILTA) is an international trade association that represents eighty commercial operators of aboveground liquid storage terminals. These facilities serve various modes of bulk transportation including marine vessels, pipelines, tank trucks and railcars. Operating in all fifty states, ILTA member companies own approximately eight hundred domestic terminal facilities and handle a wide range of liquid commodities including chemicals, biofuels, crude oil, refined petroleum products, fertilizers, and vegetable oils. Terminal customers who store products at these facilities include chemical manufacturers, oil companies, petroleum refiners, utilities, food producers, airlines and other transportation companies, commodity brokers, government agencies, and military bases. ILTA and its members are committed to the safe and environmentally sound operation of terminal facilities. ILTA appreciates the opportunity to provide testimony during this hearing.

Laws and Regulations Governing ILTA Member Facilities

Like the vast majority of bulk storage tank operators, ILTA members are regulated by an extensive series of laws and regulations. These are fairly comprehensive, and rigorously enforced by municipal, state, regional, and/or federal governmental agencies. Facility inspections don't end with the regulator; they are also conducted by other entities. At terminals, these notably include the facility's customers who themselves have a vested interest in the proper handling and safe storage of their products.

At the federal level, rules for environmental protection, as well as safety and security, have been promulgated in response to numerous laws, including CWA, OPA '90, CAA, CERCLA, RCRA, SDWA, SARA, HMTA, TSCA, OSH Act, MTSA, HSAA Sec. 550, and EPCRA. There are also state laws which carry additional requirements. In addition to meeting minimum compliance obligations, terminal facilities

follow industry standards and best practices for designing and maintaining the integrity of their equipment and operations.

All of the approximately 800 domestic ILTA member facilities are subject to regulations that require their storage tanks to be inspected periodically. Their tanks are all located within secondary containment structures to prevent product migration in the event of a tank failure. Freedom Industries is not a member of ILTA. Early reports suggest that the Freedom facility may not have been subject to the same level of environmental protection regulation that is uniformly applicable to ILTA members. As such, Freedom Industries may be substantially different from the vast majority of storage tank operators in this country.

Specific examples of regulations governing storage tank operators include the following federal programs:

40 *CFR* 112. Spill Prevention, Control and Countermeasure (SPCC) Regulations. Impacting all oil products, and numerous chemicals that exhibit similar properties, the SPCC rule applies to every facility possessing 1,320 gallons of oil in aggregate, or greater. It requires tank and pipeline integrity testing and strictly regulates the size and effectiveness of secondary containment structures. SPCC Plans must be certified by a Professional Engineer. Initially established in 1974, this rule has been revised and expanded multiple times since that date. The latest new provisions went into full effect in 2013.

Adherence to robust industry standards is required by SPCC, such as the American Petroleum Institute (API) Standard 653 for integrity inspections of large field-erected tanks, and Steel Tank Institute Standard SP001 for "trailerable" shop-built tanks. The National Fire Protection Association (NFPA) Code 30 for flammable and combustible liquids is another. State-specific regulations that impact aboveground storage tank facilities must be taken into account in the preparation of an SPCC Plan. In all 50 states, SPCC regulations are in force; some states have additional spill prevention provisions that exceed federal requirements.

40 *CFR* 112, 33 *CFR* 154. Facility Response Plan (FRP) Regulations. The Oil Pollution Act of 1990 contains FRP requirements which specifically include provisions that require covered facilities to list any downstream drinking water intakes that may be impacted in the event of an oil or chemical release, as well as to list potentially vulnerable environmentally sensitive areas.

40 *CFR* 122 - 126. Pursuant to the Clean Water Act, it is most common for hazardous material storage tank operators to have a National Pollutant Discharge and Elimination System (NPDES) Permit governing discharges of storm water or waste water from their facility. The permit specifies stringent discharge limits to meet Safe Water Drinking Act (SWDA) requirements for applicable chemicals or contaminants. Discharge monitoring reports are typically required.

40 *CFR* 260 - 265. EPA regulations promulgated in response to the Resource Conservation and Recovery Act specifically require that adequate secondary containment be provided and applicable equipment inspections be completed for all hazardous waste materials.

40 *CFR* 355, 370. EPA regulations promulgated in response to the Emergency Planning and Community Right-to-Know Act (EPCRA, also Title 3 of the Superfund Amendments and Reauthorization Act) specifically require that a chemical inventory be submitted to the local emergency planning committee or department, state emergency response committee or agency, and to the local fire department.

40 *CFR* 302. EPA regulations governing hazardous substances designate the specific reportable quantities in the event of release.

49 *CFR* 194, 195. DOT regulations governing storage tanks at pipeline facilities specifically require that sensitive environments and drinking water intakes downstream of the installation are identified. These rules also require spill response equipment to be effectively deployed in the event of a release.

29 *CFR* 1910, 1926. OSHA regulations require employees to ensure that workers have an adequate understanding of all chemical safety hazards and suitable personal protective equipment.

Additionally, in the state of West Virginia, aboveground storage tanks are regulated by 47 *CSR* 58. Section 4.8.a of this regulation requires sufficient secondary containment for aboveground storage tanks containing product that has the potential to contaminate groundwater. Adequate containment must protect groundwater for no less than seventy-two (72) hours. It is ILTA's understanding that other West Virginia agencies have also taken requirements from the State Ground Water Program and adapted them to their specific authorities.

Freedom Industry Investigation

On January 9, 2014, several thousand gallons of a chemical product[1] escaped through a one-inch hole in the bottom of a 40,000 gallon stainless steel storage tank owned and operated by Freedom Industries in Charleston, West Virginia. The material escaped any containment and migrated into the Elk River approximately 1 mile upstream of the West Virginia American Water municipal intake. It is ILTA's understanding that various state and federal agencies as well as the Chemical Safety Board are presently investigating the incident. Given the impact of this release to the surrounding community, there is no question that the Freedom Industry site will be subject to extensive inspections, both of the facility and its operations. Any resulting incident reports regarding the circumstances surrounding this event would be expected to cite the primary and secondary contributors to the release, as well as identify applicable regulatory programs. ILTA is interested in the findings from such reports, and in particular how the chemical escaped containment and migrated to the waterway.

Conclusion

Even with an expansive net of regulatory requirements, anomalous circumstances exist where an incident such as this can occur. It is ILTA's contention that the first step in a proper oversight response requires an understanding of those circumstances within which it was allowed. As such, ILTA also contends that federal legislative action in response to Elk River at this moment would be premature. Once final investigation reports are released, the specific reason(s) for the failure of the tank and of its

[1] **4-methylcyclohexanemethanol (MCHM)**

secondary containment will be available for analysis. With this information, measures necessary to prevent future recurrence would be most effectively accomplished through a refinement and simplification of existing regulations.

If Freedom Industries disregarded existing regulations, company operating procedures, and/or industry standards, the most effective response would be stronger enforcement rather than the promulgation of new legislation and subsequent regulation.

ILTA COMMENTS ON SEC. 1472(b)(2) OF THE CHEMICAL SAFETY AND DRINKING WATER PROTECTION ACT OF 2014 (S 1961)

The Senate bill includes provisions for minimum requirements to protect water systems from the release of chemicals from a storage facility. ILTA has the following comments on these provisions:

"(A)(i) acceptable standards of good design, construction, or maintenance;

- ✓ Storage tank design, construction and maintenance standards already exist (e.g., 40 *CFR* 112 and NFPA Code 30). Tanks are subject to both existing construction and inspection standards. API Standards 620 and 650 are routinely adhered to for the construction of both petroleum and chemical tanks throughout the industry pursuant to existing regulations and company operating procedures.

"(ii) leak detection;

- ✓ Storage tank and secondary containment leak detection standards already exist. Leak detection cannot be labeled as a sole prevention means of incident prevention. However, leak detection provisions can be a mitigating factor and already exist within the oil and chemical industry (e.g. 40 *CFR* 112). At some facilities, Process Safety Management provisions (29 *CFR* 1910.119) also govern facility equipment inspection.

"(iii) spill and overfill control;

- ✓ Spill and overfill standards already exist. Secondary containment and overfill protection equipment must be in place at hazardous material storage facilities. All such equipment requires routine, periodic inspections. Sufficient variance and loss provisions in industry standards have long been established in the oil and chemical industry (e.g. API Standard 2350 for tank overfill protection).

"(iv) inventory control;

- ✓ Inventory control standards already exist. Hazardous material storage facilities steward and regularly measure product inventories and routinely conduct an accounting reconciliation for all stored product. Storage tanks may also be affixed with measuring devices, such as side-mounted level gauges, that augment the manual measurement of tank inventory volumes pursuant to 40 *CFR* 112.

"(v) an emergency response and communication plan;

- ✓ Emergency response and communication planning requirements already exist. In addition to basic facility security measures, an OSHA Emergency Action Plan (29 *CFR* 1910.38), governing

emergency response and evacuation associated with personnel safety, is routinely found to be in place at storage facilities along with an OSHA Hazard Communication Plan (29 *CFR* 1910.1200).

"(vi) an employee training and safety plan;

- ✓ Employee training and safety planning requirements already exist. Employee training and safety plans are prominent at aboveground storage tank facilities pursuant to OSHA personal protection equipment requirements (29 *CFR* 1910.32) and other general health and safety plan provisions (29 *CFR* 1926, e.g. equipment access).

"(vii) an inspection of the integrity of each covered chemical storage facility;

- ✓ Chemical storage integrity testing standards and requirements already exist. API 653 is a primary industry standard for storage tank inspection. Facilities possessing oil and oil-like products are all required to conduct such testing pursuant to SPCC (40 *CFR* 112).

"(viii) lifecycle maintenance, including corrosion protection;

- ✓ Chemical storage maintenance provisions already exist. In addition to routine facility maintenance practices, chemical storage may also have a cathodic-protection system (corrosion protection rectifier equipment) for products that may induce a higher rate of corrosion to tank metal, or that may be subject to soil or environmental conditions that can cause excessive corrosion. Consideration is given to API Recommended Practice 575, Inspection of Atmospheric & Low Pressure Storage Tanks, for example.

"(ix) notice to the Administrator, the appropriate State agency, and applicable public water systems of—

"(I) the potential toxicity of the stored chemicals to humans and the environment;

- ✓ The toxicity of stored chemicals to humans and the environment is presently taken into account. Each liquid stored must have a Safety Data Sheet (SDS or MSDS) pursuant to 29 *CFR* 1910.1200.

"(II) safeguards or other precautions that can be taken to detect, mitigate, or otherwise limit the adverse effects of a release of the stored chemicals;

- ✓ Safeguards to detect, mitigate, or limit adverse chemical effects presently exist. In addition to OSHA requirements governing SDS information (29 *CFR* 1910.1200), personnel protection is required pursuant to 29 *CFR* 1926 provisions. Pursuant to state criteria, including Safe Drinking Water Act standards, water discharges are monitored against allowable pollutant limits under the National Pollutant Discharge Elimination System (40 *CFR* 122-126).

"(x) financial responsibility requirements, including proof of insurance, bond, or other similar instrument;

- ✓ Chemical facilities typically have financial responsibility requirements in place including insurance governing both sudden and accidental and slow release/seepage insurance pursuant to state and municipal requirements.

"(B) inspections of covered chemical storage facilities, [within the same watershed as the public water system];

- ✓ Facilities possessing oil and oil-like products are all subject to inspections pursuant to SPCC (40 *CFR* 112).

"(C) a comprehensive inventory of the covered chemical storage facilities in each State.

- ✓ Facilities are required to possess an SDS for each hazardous product that is handled or stored on site pursuant to OSHA hazard communication rules (29 *CFR* 1910.1200). Community Right-to-Know reporting requirements (40 *CFR* 370.32) demand that all such SDS are filed with state and local emergency planners, as well as the local fire department, within 60 days.

Thank you for the opportunity to appear before you today. I would be pleased to respond to any questions.

INTERNATIONAL
LIQUID TERMINALS
ASSOCIATION

The Honorable Barbara Boxer
Chairman
Committee on Environment and Public Works
112 Hart Senate Office Building
Washington, DC 20510

The Honorable David Vitter
Ranking Member
Committee on Environment and Public Works
516 Hart Senate Office Building
Washington, DC 20510

March 19, 2014

Dear Chairman Boxer and Ranking Member Vitter,

Enclosed are ILTA's responses to the follow-up questions from the February 4, 2014 hearing, "Examination of the Safety and Security of Drinking Water Supplies Following the Central West Virginia Drinking Water Crisis."

Thank you for your consideration,

R. Peter Weaver
Vice President of Government Affairs

"Examination of the Safety and Security of Drinking Water Supplies Following the Central West Virginia Drinking Water Crisis"

February 4, 2014 Senate EPW Committee Hearing
Follow-Up Questions for Written Submission – Weaver
March 19, 2014

Questions for Weaver from Senator Benjamin Cardin

1. Does your trade association endorse the practice, or advise its members, to file for bankruptcy protection as means to mitigate financial responsibilities when their negligence may have resulted in a situation where victims could seek damages?

Our association does not advise nor advocate for or against any particular legal or financial measures for our member companies. We do, however, support and advocate for responsible maintenance and care of the operations they control.

2. Do you believe that this was an appropriate and prudent action for Freedom Industries to take in the weeks following the discovery of the chemical spill into the Elk River?

ILTA has no specific knowledge of the financial position of Freedom or the reasoning behind any business decisions made by the company following the chemical spill. Therefore, we are not in a position to answer this question.

3. Does your industry association condone neglecting to report chemical spills to appropriate emergency response or environmental protection authorities?

ILTA does not condone any violation of applicable federal or state laws that call for notification of releases to emergency response or environmental protection authorities.

4. Do you believe that it is ok for your members not to report chemical spills to emergency responders or environmental protection officials, even if there is not a clear legal requirement for them to do so?

For any spill of chemicals, petroleum products or other hazardous materials that threatens to impact the environment or the public, ILTA recognizes a duty by its members to notify appropriate emergency response and environmental protection officials.

Federal, state and local regulations and response agencies establish certain criteria that must be followed in the event of a spill. If the legal requirements for reporting are not clear, then that specific

deficiency should be addressed by the federal, state, or local regulators charged with creating and enforcing such obligations. ILTA does not condone any violation of applicable federal, state or local laws that call for a notification of product releases.

5. What responsibility do you feel that chemical storage facilities which pose potential hazard risks to drinking water supplies bear in protecting these water resources?

All bulk liquid storage facilities, including those that handle chemicals, petroleum products and other hazardous materials, have a duty to understand the dangers and risks their operations and facilities pose to employees, the environment and the communities in which they operate. They have a responsibility to take appropriate steps to protect the public and the environment from those risks. This includes taking action to prevent liquid product from escaping containment, reaching groundwater, migrating beyond the facility property or contaminating drinking water supplies.

All chemical and hazardous liquid storage facilities also have a responsibility to ensure that they protect the environment by complying with all applicable government regulations, and incorporating, where appropriate, industry standards and acceptable and proven business practices.

Senate EPW Committee Hearing on Elk River Spill
Follow-Up Questions, Weaver

Questions for Weaver from Senator David Vitter

1. Mr. Weaver, in your testimony you went through a long laundry list of requirements that your member facilities are subjected to. Do you believe that if all of these existing requirements were applied and enforced at the facility responsible for this spill that it could have been prevented?

While strong regulatory programs, such as those applicable to ILTA member companies and the vast majority of storage tank operators, can avoid or mitigate many (if not most) of the risks inherent in hazardous material operations, no amount of regulation and enforcement will eliminate 100 percent of all product spills and other adverse events.

Nevertheless, if the spill prevention and environmental protection requirements that are commonly applicable to ILTA terminal member facilities were applied to, implemented and enforced at Freedom Industries, ILTA is confident that the Elk River spill could have been prevented. For instance, had API-653 integrity testing been conducted, excessive corrosion could have been detected earlier. Additionally, had adequate secondary containment been installed and maintained, a spill could have been prevented from escaping the property.

Furthermore, based on available information, ILTA believes that compliance with and enforcement of existing applicable federal and state regulations would, at a minimum, have prevented the offsite impact of this spill. A specific example is the West Virginia Groundwater Protection Rule, 47*CSR*58, discussed further below.

2. Are there laws and regulations on the books that attempt to prevent the West Virginia spill from occurring? If so, does the West Virginia spill mean that those laws or regulations are inadequate, or could it perhaps mean that better enforcement of the existing laws needs to take place?

Yes. Most prominent among them is EPA's SPCC regulation, applicable to the vast majority of bulk liquid hazardous product volumes, including chemicals in many states. Another notable existing requirement is Section 4.8.a. of the West Virginia Groundwater Protection Rule, 47*CSR*58. This requires that secondary containment be designed to protect groundwater from contamination for no less than 72 hours following a release.

ILTA remains extremely interested in the findings from the investigations into the Elk River incident. ILTA is hopeful that those investigations will provide additional clarity into the body of environmental regulations that were applicable to Freedom Industries at the time of the spill and the extent to which these requirements were properly followed and enforced.

3. Mr. Weaver, can you identify some of the steps that members of your industry take in order to prevent incidents like the West Virginia spill from occurring?

As a general rule, and in compliance with numerous federal, state and local laws and regulations, steps taken to prevent the spillage and off-site migration of liquid products at ILTA terminal member facilities and most other bulk liquid storage facilities include the following:

- Storage tank and pipeline construction in accord with recognized industry standards, including construction material suitability assessments;
- Frequent external and periodic internal storage tank integrity inspections in accord with recognized standards;
- Overfill prevention, corrosion protection, leak detection and secondary containment;
- Product inventory measurement and reconciliation practices;
- Employee operations and safety training;
- Management of change practices to ensure that facilities remain suitable for changes of service;
- Storm water / pollution discharge contaminant limitations; and
- Emergency notification procedures and rapid response spill mitigation capabilities.

Senator CARDIN. Let me thank all seven of our panelists. I thought it was very helpful to us, the information you supplied.

To Messrs. Olson and Fewell, I could not agree with you more about the need for infrastructure. The State revolving fund is inadequate to deal with the challenges of modern water treatment. We need to get adequate funding. This committee has worked very hard to try to increase the funding under the revolving funds and to reauthorize with more updated needs of the different states in our country.

We need to find creative ways because in today's difficult environment, it is tough to get the type of resources necessary. That is part of prevention, part of having the capacity to deal with the day's challenges.

There is a common theme I hear from you all. Mr. Fewell, you said you need better and more specific data which is absolutely accurate. You have to have accurate information to be able to respond. That is certainly not available today in too many of the watersheds.

It is interesting that the TSCA law is aimed at the proper classification of the 80,000 plus chemicals we have in America. That number grows every day. The Safe Drinking Water Act is aimed at making sure we have delivery of safe drinking water in our communities through a variety of methods.

Mr. Faulk, I want to agree with you on federalism. I think federalism does say we believe in the states, we believe the government closest to the people is the most responsive, but we also need to recognize that safe drinking water is an inner State problem.

Maryland could do everything that is reasonable, the District could do everything that is reasonable, but if the water is coming from West Virginia and West Virginia doesn't do what is reasonable, the people I represent in Maryland are at risk. The people in the Nation's capital who depend upon us at the national level are at risk.

I think there is the proper balance on federalism but I couldn't agree with you more and that is why we are always reluctant to preempt local government. I know that issue is being debated in TSCA today. We are always reluctant because things change quickly. Chemicals change quickly. The government closest to the people needs to be able to respond. That is why we are very reluctant to ever take away that authority from the states.

On the other hand, we do need to have national guidelines. As you said, guidelines on getting better and more specific information is an area where the Federal Government needs to fill in the blanks better than we have today.

I want to get to Ms. Tennant for one moment because you raised the point about the damages people are sustaining. Our first objective is to make sure we minimize the risk particularly here where you had storage facilities so close to the Elk River. There should have been a red flag. Obviously the information was not known and the response was very difficult because first of all, just think if this chemical didn't have a unique smell what would have happened.

Because of the fact it had a unique smell, the public was able to determine something was wrong. If it did not have that unique smell and had the same types of damage, it would have been sev-

eral days before the source would have been determined and more people would have been put at risk.

A lot of people were damaged, their health was damaged, their shops were damaged, their homes were damaged and the company is in bankruptcy.

I hope during your work you do in West Virginia you will come forward with suggestions to us as to how we can minimize the cost to the taxpayers, the rate payers, the individuals and find ways to hold those who are responsible accountable for the damage they have caused. Do you have any thoughts on that?

Ms. TENNANT. Yes, Senator. There have been efforts made already. As I discussed how devastating this is, our confidence has been shattered. When I receive letters from a father whose wife is pregnant, this is supposed to be a joyful time and now has turned into a fearful time for them. Certainly anyone who has children understands what they are going through in this situation.

As I talk about being on the front lines, it was those businesses that we are trying to help, 96 percent of our economy in West Virginia is from small businesses. I made reference to a specific business. Think about what is behind those businesses. It is people. It is those employees.

I was on those water lines as folks were waiting to receive water, to get their water jugs filled. That is where I met so many of these people who are minimum wage employees who were off the job to whom missing a shift means perhaps missing a payment on your car or missing utilities.

I have worked hand in hand through the Secretary of State's office with the West Virginia legislature to have a piece of legislation called the Small Business Emergency Relief Fund where the Governor, along with several of his agencies would have the ability to promulgate emergency rules that would aid those businesses, those employees and those workers who lost their wages.

Senator CARDIN. Thank you very much.

Senator Vitter?

Senator VITTER. Thank you, Mr. Chairman.

Secretary Tennant, I also wanted to go to you. In your opening statement, you raised a number of frustrations in the aftermath of the spill about lack of clear guidance and information, "lack of consistent, trustworthy information."

On January 24, a group of 24 West Virginia scientists sent a letter to EPA and CDC raising similar concerns, saying, among other things, "If the government had been more forthcoming about what is not known about the leaked chemicals, citizens and local officials would have been able to make better choices about the actions needed to protect their families and communities."

Do you share those concerns and if so, what would you like EPA and CDC to do now, immediately, as soon as possible to try to rectify that uncertainty and lack of trust?

Ms. TENNANT. Certainly, Senator, I share those concerns. That is why I have taken action on many different levels. I have taken action in directly writing to the CDC and saying tell us what you know so West Virginians will know how you are doing your tests, at what level you think is safe for the water, and how did you get to that level? Be open and forthright with the citizens.

As I said, I have sent a letter and now have petitions with West Virginians. We are working from within the Secretary of State's office hand in hand as we register many of these businesses and added oversight for the Secretary of State to have indicated whether a particular company holds and stores chemicals and how we might be able to indicate that in our data base.

We have a very transparent agency within the Secretary of State's office and I pride myself in the efficiency and transparency. We would continue that if we had the requirement through our State code.

Senator VITTER. Thank you.

Mr. Huffman, thanks for your comments about our TSCA reform that Senator Manchin is so involved in. Also pass along my thanks to your colleague, Michael Dorsey, who in July voiced similar strong support and comments.

I want to highlight some important things in that work. I assume you agree, if you want to comment, that EPA should not have to affirmatively find unreasonable risk as they do now under current law in order to move forward. Would that be important, in your mind?

Mr. HUFFMAN. Yes, Senator. One of thing that created more confusion in a time of uncertainty in those first 24 to 48 hours was simply the lack of information about this particular chemical. It was very frustrating to try to explain to a concerned public who has just been informed they cannot use their water what you do not know.

They want to know what we do know and that was very little about this particular chemical and it somewhat degraded from there. Having that information about this chemical or any chemical that is within a zone or range of impacting a public water supply is information we absolutely must have.

Senator VITTER. Also, it seems to me, it should be a big priority, it is with me and our efforts, first of all, that the State have a clear role in dealing with EPA and telling them what they think, what you think should be of high priority; second, that lack of safety and health information, as in this case, the criteria for prioritizing; and third, that we use a risk-based system so that, for instance, a factor like proximity to drinking water supply can be a clear factor in prioritization.

Those would seem to me to be lessons from this incident. Would you agree with that or do you want to expand on that?

Mr. HUFFMAN. Absolutely, Senator, you have said it all. That is absolutely true.

Senator VITTER. Thank you all very much.

Senator CARDIN. Senator Boxer.

Senator BOXER. I agree. I think as we look at the TSCA bill, we should say if these chemicals are stored by drinking water supplies, Senator Vitter, I would support your point. If a chemical is stored by a drinking water supply and could get into the water, I think we should prioritize it. That is absolutely critical. As the law is currently proposed, that is not the case.

Mr. Olson, I wanted to say I am going to read from your testimony if you don't mind and say how much I agree with this.

"The problems with TSCA that are illustrated by the chemical spill in West Virginia would not be fixed by the current Chemical Safety Improvement Act as introduced and in some respects, would be made worse. The bill as currently written would provide the public with the illusion of an effective Federal program to regulate chemicals while tying EPA in knots and taking away existing State authorities. The chemical spill in West Virginia is an illustration of why we need to strengthen the TSCA bill. It is not a justification for enacting a flawed bill."

I wanted to say that in my view, this says it all to me. The last thing I want to do is give people the illusion of protection. That is why I think as we go forward with TSCA, Senator Vitter, Senator Cardin, Senator Udall and others, this particular spill should give us a lot more urgency to get that right and not pass a bill that is a phone deal. I feel very strongly about it.

I was very taken, Ms. Tennant, with what you said about your ability, I want to make sure I got this right, through your good offices because you deal with small businesses and the business community. Do you license them or what do you do? Do you create a data base of all the businesses?

Ms. TENNANT. We register businesses, corporations and limited liability companies. Yearly they file an annual report to keep up to date.

Senator BOXER. I thought I heard you say you would look at trying to find out which of these companies store chemicals, is that what I heard you say?

Ms. TENNANT. It is under the jurisdiction of the DEP to monitor and have oversight over those companies, but in an attempt for added transparency, for added information.

Senator BOXER. Information is what I am getting at.

Ms. TENNANT. Yes, to have that because as I said, we have a wonderful data base and the more information you put into it, the better it is for the public to be able to see. That is one step I am looking into as a result of this crisis.

Senator BOXER. We have 80,000 chemicals out there. We know very little about these chemicals. When we know we have certain of these chemicals along a drinking water path, this is a red flag.

Mr. Weaver, despite your point about regulations, the truth of the matter is there is no regulation except for the above ground oil storage. We have not moved forward with regulation. I think Senator Cardin pointed out there is a law but there is no regulation. That is why Senator Manchin's bill I think is so critical.

Mr. Faulk, I love lawyers. I am married to one, my father was one, my son is one. You are eloquent and your philosophy is interesting but it doesn't get to the point of where we are which is we have people suffering at this time.

It seems to me, without getting into an argument about federalism although I do agree with you, states should have absolute flexibility to move on this, I would rather see, first of all, if we can help you solve the problem which I think since you have the responsibility under current law, states have the responsibility to declare whether water is safe, it sounds like you need some help in monitoring and measuring.

I want to get to that in a minute but also, we want to make sure in the future with these 80,000 chemicals out there. Mr. Weaver, do you have any idea how many chemicals might be stored all over this great nation near water supplies?

Mr. WEAVER. I can speak to our member facilities which I do know about. Honestly, we look at the concern as being the product leaving the property. As far as the terminal industry is concerned, the harm is done if the product gets offsite. If the product reaches private property or otherwise, we consider that to be a concern for us.

Senator BOXER. I am asking if you know—then I will ask Mr. Olson if he knows—do you have any clue as to how many above ground storage tanks—let us put it in simple terms—have chemicals in them? We know some of them have salad oil. We are talking about chemicals. How many are located along water supplies?

Mr. WEAVER. I don't know the number.

Senator BOXER. Do you have a guess, Erik?

Mr. OLSON. As we said in our testimony, it is basically impossible to know that right now. We have reviewed literally scores of these source water assessments and virtually every one has some storage tanks near the surface water which is often done because it is convenient.

Senator BOXER. OK. I will close with this point. We have a massive problem and do not know how massive it is. We know because of the people of West Virginia—my heart is out to them and we are going to do everything we can to help you get the information you need—so after this please let us know how I can help.

I know Senators Manchin and Rockefeller are doing a great job. If you need more help in ascertaining the safety of that water supply, I want to help you.

We need to have an assessment. I think the quickest way is the Manchin bill because it says that every State has to look at it because it is such a huge problem. Mr. Weaver, who is in this business, has no clue. Mr. Olson, who is an advocate for the folks, doesn't really have a clue of how many of these Freedom Industries operations are out there waiting to cause havoc.

As was pointed out I think by our Chairman, if there had not been a smell to this, we still might not know.

The Manchin bill, which I hope we will mark up soon, would basically say every State, you make an assessment. We will help you. Let's have a plan for inspection that is carried out by the State for emergency plans, for standards for these tanks. Mr. Weaver was eloquent about how seriously that is taken in his industry.

You have a rogue operator which is an absolute coward. Running away and leaving the people is an outrage, an absolute outrage. People are frustrated and upset. They always turn to the government, oh, why didn't you do more. How about having some corporate responsibility and making sure that you as a good corporate citizen ensure the safety of the people and not hold a press conference and say, I have to go now—I saw that one—I have to go now; I can't really talk to you and then file for bankruptcy.

It is a violation of basic human decency what they did. We have to protect the people. That is our job now. I am so grateful to Chairman Cardin, Senators Boozman and Vitter for cooperating

with us and we are going to move forward and push this legislation which, Mr. Faulk, will give the responsibility to the states to make sure they have the resources and we have their backs as they move to protect the people from the most basic right, to be able to take a glass of water and not worry that your kid is going to get cancer. Let's put it that way.

I want to say to the people of West Virginia through Mr. Huffman, Mr. McNulty, and their great Secretary of State, how much I want to do to stand by you in this crisis.

I thank you, Mr. Chairman.

Senator CARDIN. Thank you, Senator Boxer.

Senator Boozman, earlier I mentioned your help in accommodating the fast turnaround time for this hearing. I thank you very much for that. As acknowledged, you had a conflict earlier but it is nice to have you sitting next to me at the committee. Let me acknowledge and give an opportunity to Senator Boozman.

Senator BOOZMAN. Thank you very much, Mr. Chairman.

I do appreciate you holding this hearing about such an important topic. I apologize for being late. The prayer breakfast is going on this week and we have people literally from all over the world. I actually had some heads of State I had to visit with, so again, thank you very much for putting up with me.

I would like to follow along the same lines as Senator Boxer in the sense that Mr. McNulty, you mentioned the importance of public disclosure of all potential sources of contamination to allow the public and government regulate them, which I agree. I am very much in favor of doing that.

Do you or any of the other witnesses have any thoughts about how we can balance that, the value of public disclosure with the need to protect the sites in a post-9/11 world? In other words, we do not want to create a situation where we somehow publicize the sites that are perhaps potential targets for terrorists or whoever would cause us harm.

Mr. MCNULTY. I certainly understand there needs to be a balance with the post-9/11 era that we live in now. I think in reality, this information is out there now. You can comb the Web and find information on most every drinking water utility in the United States and find information about where there treatment plants are located and so forth.

How we would go about keeping information confidential but yet engaging the public and making them a part of the solution in protecting their source water, I really don't have the full answer to that.

Senator BOOZMAN. Does anyone else want to comment?

Mr. FEWELL. Senator Boozman, I have some thoughts. Some states have online systems for the management of hazardous substances for which companies under EPCRA are required to file. That information is maintained in confidential data bases at the State and local levels.

It seems to me perhaps that information could also be made available to water companies in proximity to those facilities in the same type of confidential data base that exists for EPCRA.

Senator BOOZMAN. You explained in your testimony, while more data is necessary for response and preparation, it is important to

use the information effectively rather than just dumping massive amounts of data on small water systems. Can you explain what you envision in that regard, especially with improved notification to our small water system operators?

Mr. FEWELL. One of my concerns is obviously some of these watersheds are very large. We are talking hundreds, perhaps thousands of square miles with many industrialized facilities. Where there is a requirement that these public water systems be provided emergency response and information related to hundreds of facilities, that is a lot of information for any public water system whether large or small to digest, understand and figure out of to respond.

I think what we heard here this morning about prioritizing, those facilities in close proximity to water intake structures or drinking water supplies are the ones that it is absolutely critical for that information to be in the hands of water provides downstream.

Senator BOOZMAN. Yes, sir?

Mr. OLSON. I agree with that. I would say, in fact, as highlighted a bit earlier today, a lot of these assessments have already been done, so a lot of the facilities have already been flagged. The water utilities have some information available. The key is to get the more detailed information to them.

I think that the bill recently introduced by Senators Manchin, Boxer and Rockefeller would take a major step in that direction to force somebody to deal with that situation at the State level. I think that would be a significant step forward to actually get action taken to deal with these immediate threats.

Senator BOOZMAN. I do appreciate your leadership, Mr. Chairman, and enjoy working with you on these issues. This is really an important topic which we hopefully can deal with.

Senator CARDIN. Thank you. I appreciate the cooperation we have in this committee. We try to do everything we can in a nonpartisan manner because it involves the public health of the people of this Nation.

I want to give each of you an opportunity to respond to the following. You have heard during the course of this hearing information that would have been very helpful, you heard of the failure to exercise reasonable caution by the private property owner and the manner in which it dealt with its above ground storage.

EPA currently publishes only 90 contaminants as far as regulations on how to deal with that. Chemicals are one aspect of contaminants. There can be other sources than chemicals but 90 is a small number compared to the total risk factors that could enter our water system. As was pointed out, if you ask for too much information, none of the information is going to be terribly useful.

We have before us a specific bill, the bill authored by Senators Manchin, Rockefeller and Boxer. I would like to get your specific views as to whether that bill represents the right priority as you see it for Federal action or whether there are other areas you would like to see us look at? We will start first with Mr. Huffman.

Mr. HUFFMAN. As with most successful environmental laws, rules and policies in this country, establishing minimum Federal standards which the states must meet is vitally important. We do not want too much disparity across the country in how anything is reg-

ulated or we simply see various industries moving around the country to find the areas that may be least regulated.

The Manchin-Boxer bill does that, of course, but the other thing it does is the prevention piece of it. We talked a lot about TSCA and understanding the chemical, emergency response, planning and all of that. The key to this is prevention. That is what this bill does.

It does other things, of course, but looking at it as an environmental regulator in the State of West Virginia, we have to keep this stuff in the tanks. If it leaves the tanks, we have to keep it in the secondary containment. That can be done. We can absolutely do that.

The other thing is we have to stop looking at chemicals in the form of whether it is oil-based or a hazardous classification. We have learned that anything that has the potential to negatively impact a public water supply, however innocuous it may seem on the surface, we need to be able to regulate that.

In the State of West Virginia, we have 3,500 tanks regulated or not the way the Freedom tanks are regulated; 1,000 of those are within the zone of critical concern over water intake. The only way to get that kind of certainty that we can keep this material in the tanks and in the secondary containment is to have annual or some other frequency of testing, inspection and certification. If we can do that, we can minimize the risk of this happening anywhere in the country.

Senator CARDIN. Let me go to Mr. Weaver and try to get the different stakeholders.

Mr. WEAVER. With regard to the proposed bill, as I have observed, all of the proposed measures are currently addressed to various degrees with existing regulations as they consistently apply to the vast majority of storage tank operators.

With regard to this particular incident, it very well may be that exemptions or otherwise could have enabled them to escape that collections of regulations. It is also possible that there may have been violations of those regulations.

Once we know the results from the investigation reports, I think we will have a much better basis upon which to begin acting. Specific reasons will be understood for the containment failures and for how the product got offsite.

At that point, that is when measures to prevent recurrence in another community can most effectively be identified, addressed and implemented I believe for greatest effectiveness through the refinement and simplification of existing regulations, many of which are a web to navigate. Ultimately our objective is to keep the product contained as opposed to adding layers of administrative effort.

Senator CARDIN. It's my understanding we do have authority on petroleum-based above the ground storage but for some of the other contaminants and chemicals, we do not at the current time.

Mr. WEAVER. There are some exemptions for many chemicals. Some chemicals are included and others are not. Certainly within the ILTA membership, the facility gets brought into the regulation at a very low threshold, the petroleum products. Within my sphere, there are very few facilities actually that do hold these chemicals

that are fully exempt because petroleum products or electrical transformers are fairly pervasive. That could be a way to utilize those existing regulations.

Senator CARDIN. In West Virginia, it was not a petroleum-based product that caused the problem; it was a cleaning product?

Mr. WEAVER. Right.

Senator CARDIN. Mr. Olson?

Mr. OLSON. Yes, the problem is that although petroleum-based products are regulated under the Clean Water Act, Section 311, unfortunately EPA apparently has not issued standards for hazardous materials for spill prevention, control and counter measures. That is a big, gapping loophole as I mentioned in my testimony.

The Manchin bill definitely would move things forward at least for those tanks near drinking water supplies.

The other point worth mentioning is the one you mentioned which is the State revolving fund. We really need an investment in our infrastructure. This is another reason to highlight that this treatment plant simply did not have the resources or the technology to deal with this type of spill. There are a lot of others across the country that do not.

Senator CARDIN. Mr. Faulk?

Mr. FAULK. One of the things I haven't heard about the Act that I think is important, at least in this hearing we haven't talked about it, is the Community Right to Know Act passed by this Congress in response to the Bhopal incident many, many years ago. That involves notification and procedures by which persons in the community can become aware and know how to respond to particular situations by virtue of notification.

Although I will hasten to say I am not a thorough expert on that Act, I will say it would be worth comparing those systems so that there is not a significant amount of duplication of effort and burden imposed on the communities if this bill is, in fact, passed.

Senator CARDIN. Thank you for that point.

Ms. Tennant?

Ms. TENNANT. I would echo that. I that is important for not just the citizens of West Virginia but across the country that these guidelines be made public, whether it is what the chemical is, the emergency plan put in place for these storage tanks and companies that hold these storage tanks to be made on a transparent data base easily accessible to the public.

I would also mention particularly for West Virginia as we tackle this crisis, how do we make sure it does not happen again for us. I want to emphasize once again the proposal to have the 10-year study, the long term study for the health care and health of the people of West Virginia, that we might be able to put in place that we need to start today, so that confidence starts today and we have an understanding of what might happen over this 10 year period.

Senator CARDIN. Thank you for that.

Mr. McNulty?

Mr. MCNULTY. I concur with Mr. Huffman's comments. I think Senator Manchin has crafted a good commonsense approach to help solve these problems.

Senator CARDIN. Mr. Fewell?

Mr. FEWELL. I want to reinforce a couple of things that have been said related to EPCRA. Whenever there is a spill in excess of reportable quantity established, there are three touch points: an immediate call to the National Response Center; the local emergency planning commission, the first responders and the State Emergency Response Commission.

I think it would be reasonable to expect one more call to a local water facility downstream. I think one of the benefits with making bulk chemical storage facilities understand the risks may also be having them understand where the closest water intake structure is. If they are aware of that and there is a requirement that local water providers downstream be notified, I think that will go a long way.

Senator CARDIN. Thank you.

Senator Boozman.

Senator BOOZMAN. Thank you, Mr. Chairman.

I really do not have anything else. I was going to followup the way that you did. I was really curious about existing regulations and the loopholes but I think you all covered that well. We have some protections in place but we have some problems we need to address in the future.

Hopefully we can work together and work with you all. This stuff does need to come from the ground up. We all worry about unfunded liabilities put on people who simply do not have any resources now. As you mentioned, Mr. Olson, most of our municipalities, most of these treatment plants are struggling with the funding the have now.

Again, as I said, hopefully we can work together and come up with a good solution.

Thank you, Mr. Chairman.

Senator CARDIN. Once again, I want to thank all seven of our witnesses. As Senator Boxer pointed out, we really do want to work with you and figure out how we can be helpful. Our first priority is to do what we can to prevent these types of episodes from happening again in our country.

I think we can learn from what happened in West Virginia and take steps at the private sector level as well as the governmental level. We also want to make sure that we have knowledge so we know what information is out there.

Last, when a company fails to perform, they should be held accountable. We are very concerned about the business aspect of this company and the steps it has taken to avoid its responsibilities as Senator Boxer and many of you here pointed out.

I hope we can work together to minimize these risks. There are always risks, we know that. We need to minimize the risks and clearly do it in a way that is cost effective and really works. We don't want to do things that are going to cause additional burdens without benefits.

I am glad to see that working together is being done by the West Virginia legislature. I expect the same type of response here in Congress and that we can be a constructive partner to the efforts of the people of West Virginia.

Again, thank you all very much for your testimony.

With that, the hearing stands adjourned.

[Whereupon, at 12 p.m., the subcommittee was adjourned.]

February 3, 2014

The Honorable Ben Cardin
Chair
The Honorable John Boozman
Ranking Member
Senate Subcommittee on Water and Wildlife

Dear Senators,

As the Senate Water and Wildlife Subcommittee convenes a hearing to conduct an "Examination of the Safety and Security of Drinking Water Supplies Following the Central West Virginia Drinking Water Crisis," the American Water Works Association (AWWA) and the Association of Metropolitan Water Agencies (AMWA) would like to share our thoughts on how states and EPA can best help water systems prepare for and respond to such emergency situations.

First and foremost, chemical storage facilities that could pose a risk to nearby sources of drinking water must be held to the highest standard of safety and security. This should include regulatory oversight that includes strong leak detection and spill control capabilities, a robust emergency response plan, and speedy notification of nearby water utilities of any incident that releases a chemical into water supplies.

This last point about spill notification is critical, because it sets the stage for all response and recovery activities that will follow. If a water utility is not told that a certain chemical has entered its source waters, it may not be detected until it reaches homes and businesses throughout the community. Conversely, timely notification by a chemical facility may allow a utility to react quickly with a range of responses such as closing intakes, adjusting treatment, switching to alternate supplies, targeting water quality monitoring, and rapidly providing customers with any appropriate water use advisories. This latter approach is certainly preferable from a public health – and a public confidence – perspective.

Of course, the more comprehensive a spill notification is, the more effective the water utility's response can be. Any new law or regulation that requires chemical spill notifications should mandate the inclusion of all available information on the substance that was spilled, how much

was spilled, how that chemical behaves in water, what treatment measures or techniques are most effective to remove that chemical, what the human health risks are at given concentrations, and any guidance that may be available for dealing with the chemical. Again, quickly getting this information into the hands of water treatment experts will greatly improve the chances of a successful response.

Even with meaningful notification requirements in place, the risk of a water contamination event will always remain. To minimize impacts when such an event does occur, EPA needs to help water utilities answer the basic question of, "what should the utility do with the contaminated water?" Existing EPA guidance essentially says to store the water or get an NPDES permit to flush the system. In practice, storing all the water in a utility distribution system means the utility must entirely cease operations, while typical NPDES permits might not be issued in a timely manner. Neither of those is a workable solution in the midst of an emergency. We urge the Committee to ensure that EPA works with water organizations such as ours to develop workable answers to the problem of managing contaminated water.

Finally, we know that any new water quality protection activities to be carried out by EPA or state primacy agencies will come with a cost. And while we are sympathetic to the realities of the federal government's current fiscal climate, most state governments are operating under very tight or declining budgets as well. Therefore any new chemical facility-monitoring program enacted under SDWA must include a sufficient authorization to offset at least some of the implementation costs. Otherwise, these new activities will come at the expense of other ongoing water quality oversight activities or badly needed infrastructure investments.

Again, AWWA and AMWA deeply appreciate the subcommittee's interest in addressing potential threats to drinking water from chemical spills. Our associations, and our water utility members across the country, look forward to working with you to develop effective solutions to this important issue in the weeks and months ahead.

Sincerely,

Tom Curtis
Deputy Executive Director for Government Affairs
American Water Works Association
202 628-8303

Diane VanDe Hei
Executive Director
Association of Metropolitan Water Agencies
202 331-2820

Cc/ The Honorable Barbara Boxer, Chair, Senate Committee on Environment & Public Works
The Honorable David Vitter, Ranking Member
Membership, Senate Subcommittee on Water & Wildlife

House Transportation and Infrastructure Committee
Field Hearing - Charleston, West Virginia
The Charleston, West Virginia Chemical Spill
February 10, 2014

Testimony of Jeffrey L. McIntyre
President, West Virginia American Water

Mr. Chairman, Mr. Rahall, and Ms. Capito,

Thank you for the opportunity to be here today. My name is Jeff McIntyre and I am the President of West Virginia American Water. I have served in this position since March of 2012 and have been with the parent company for nearly 12 years. West Virginia American Water has been serving West Virginians since 1886. Today, approximately 283 employees operate multiple systems and nine water treatment plants, providing water services to 171,000 customers, which include approximately 550,000 individuals or roughly one-third of the state's population. As the steward of a water system that serves more than 300,000 people in the Kanawha Valley, we take our responsibility of providing clean, safe water very seriously. It is our #1 priority in every decision we make.

West Virginia American Water and our parent company, American Water, are proud of our environmental record. At the national level, based on current information from the U.S. Environmental Protection Agency (USEPA), American Water performs 20 times better than the industry average for compliance with drinking water quality standards and 150 times better than the industry average for compliance with drinking water reporting and monitoring requirements. American Water's water quality performance is also seen in how few drinking water notices of violation (NOVs) are issued to its over 300 drinking water systems nationwide. If American Water's systems had performed like the average drinking water system in the U.S., they would have received over 525 drinking water NOVs in 2013. Instead, American Water received six drinking water NOVs as a company nationwide, and none of those NOVs was issued here in West Virginia.

I would like to give my sincere and heartfelt thanks to the West Virginia Department of Health and Human Resources, the West Virginia Bureau for Public Health, and the West Virginia National Guard, as well as the other agencies, companies, and subject matter experts who were our essential and capable partners in the wake of the Freedom Industries chemical spill.

The Freedom Industries Chemical Spill

I am including a timeline but would like to provide highlights in my testimony.

On January 9th an undetermined amount of 4-Methylcyclohexanemethanol (MCHM) leaked into the Elk River from an above ground storage tank at a Freedom Industries facility, located about 1.5 miles above our Kanawha Valley water treatment plant.

We first learned of the Freedom Industries spill from the West Virginia Department of Environmental Protection. We then took immediate steps to gather more information about the chemical, augment our treatment processes in the Kanawha Valley plant and begin consultations with federal, state, and local public health officials.

After our water quality team determined that the augmented treatment process was not fully removing the chemical, we reached a joint decision with the West Virginia Bureau for Public Health to issue a "Do Not Use" order to all customers of our Kanawha Valley system.

As of January 9th the Kanawha Valley system had experienced a significant number of line breaks caused by extreme cold associated with the polar vortex followed by warming weather. Because of the line breaks and customers running their tap to prevent freezing, system storage was low and losing water even though the water treatment plant was running at near full capacity. Our best judgment, based on these circumstances, was that shutting down the plant would quickly result in the loss of the entire distribution system, meaning no water would have been available for any purposes. Further, starting the plant back up after the chemical leak was stopped or contained, then replenishing and re-pressurizing the entire Kanawha Valley distribution system would have taken more than a one month even under optimum conditions. After considering the existing circumstances and potential options, we and the West Virginia Bureau for Public Health determined that the best course of action was to keep the water treatment plant running and institute the "Do Not Use" for several critical reasons:

1. In addition to loss of water for drinking, cooking and bathing, a shutdown would have quickly resulted in the loss of basic sanitation capabilities for approximately 300,000 people;

2. A shutdown would also have quickly resulted in a loss of fire protection (*e.g.*, no water pressure to fire hydrants and sprinkler systems) in the 9 counties we serve;

3. We had no way, at that time, to determine or estimate the duration of the chemical spill or resulting plume that would affect the water treatment plant; and

4. Shutting down the plant, losing the system, then re-starting it would have been a prolonged, difficult process, keeping customers out of water for any use for a substantially longer period of time than the actual period that the "Do Not Use" order was in place. Restarting after system loss would have required us to use chlorinated water to disinfect pipes that had been depressurized and exposed to air, flush that chlorinated water, and refill and re-pressurize this highly complex system with approximately 1,900 miles of mains, more than 100 water storage tanks, and 179 pressure zones.

On Jan. 10, the West Virginia Bureau for Public Health received guidance from the U.S. Department of Health and Human Services Centers for Disease Control and Prevention (USCDC) and confirmation from the USEPA that a maximum level of 1 part per million (ppm) of MCHM would be protective of public health. From the initial spill until today, we have conducted extensive and continuous testing of water in the impacted areas, including the river's raw water, finished water leaving the Kanawha Valley plant, and hundreds of points throughout the distribution system.

Levels of MCHM in the river's raw water and the plant's finished, treated water have been at less than the USCDC designated "protective of public health" level (1 ppm) since January 13.

On January 15, based on additional guidance from the USCDC, we issued another advisory for pregnant women to consider an alternative drinking water source until the chemical was at a "non-detect" level throughout the water distribution system.

On January 17th, Freedom Industries filed for Chapter 11 bankruptcy protection. West Virginia American Water, on behalf of itself and its customers, objected to certain parts of the filing on the following grounds: that the chemical supplier was (1) concealing its true ownership, (2) using a proposed emergency loan to put creditors at a disadvantage, and (3) generally failing to provide the bankruptcy court with sufficient financial information about matters such as Freedom Industries' insurance coverage.

In its bankruptcy filing, Freedom Industries suggested that a water main break had contributed to the hole in its above ground chemical tank. That suggestion is wrong for several reasons: First, to our knowledge, the first report that "water was flowing" on Freedom's property came from the West Virginia Department of Environmental Protection on Monday, January 13, four days after the chemical spill. Second, my understanding is that our personnel went to the Freedom site on January 13 after getting this report and our leak detection equipment did not detect a leak on our main. Third, we have also been informed by the West Virginia Department of Environmental Protection that a flow of water exists at the Freedom Industries' site that originates at an artesian spring from which water flows at a rate of about 10 gallons per minute.

On January 18, following extensive, around-the-clock testing throughout the system, the last area under the "Do Not Use" order was lifted. We will continue to flush the system and test water at designated locations, determined jointly by West Virginia American Water and the West Virginia Bureau for Public Health, until MCHM levels are non-detectable (less than 10 ppb or 0.01 ppm) at all designated sampling locations throughout the distribution system.

On January 21, fully twelve days after the MCHM spill, Freedom Industries informed the West Virginia Department of Environmental Protection of the presence of a second chemical in the spill: a proprietary mixture of glycol ethers known as PPH. Since this disclosure, a group of chemists, researchers, regulators, health organizations and commercial laboratories including: the USCDC, the USEPA, the U.S. Department of Health and Human Services Agency for Toxic Substances & Disease Registry, the U.S. Health and Human Services National Institutes of Health, the West Virginia Bureau for Public Health, the West Virginia Department of Health and Human Resources, the National Guard, the Mid-Atlantic Technology, Research & Innovation Center, the Research Environmental Industrial Consultants Inc., DuPont, the Dow Chemical Company, and West Virginia American Water have collaborated in the development of a method of detection for PPH at the parts per billion level. Even at this minute detection level, only two samples out of 300 samples that have been tested have shown any trace of PPH, and both of those samples were taken after all customers were already under the "Do Not Use" order.

I would like to underscore West Virginia American Water's focus during the Freedom Industries chemical spill and aftermath:

1. Safety is our #1 priority. Throughout this event, our primary focus has been and remains the safety of our customers and employees.

2. Continuous sampling, testing, and treatment is critical. During emergency events like this one, we evaluate the source water entering the system, treat it as deemed necessary or appropriate, and take additional corrective or protective measures--such as "boil water" advisories and "DO NOT USE" orders such as the one that was implemented here--if necessary. For example, we have performed

more than 2,500 analyses since the Freedom Industries chemical spill. We also operate as part of the emergency response team alongside local, state, and federal authorities.

3. Our present objective is no detectable MCHM in the distribution system water. As noted above, we are continuing to flush and sample water throughout the distribution system until there is a non-detect level of MCHM (less than 10 parts per billion) at all of the sample locations.

4. We are partnering with local, state and federal officials. We remain fully committed to working with federal, state, and local authorities to provide information, address concerns, and protect our customer's tap water.

5. We strive to provide our customers with nothing less than clean, safe drinking water. We will work with the state health authorities to assure our customers in the Kanawha Valley that their water is both clean and in full compliance with all applicable Safe Drinking Water Act standards and requirements.

Aiding Our Customers

I would like to share with you some of our efforts to help customers affected by the Freedom Industries chemical spill.

When emergency response efforts began following the chemical spill on Jan. 9, West Virginia American Water immediately deployed 14 water tankers and 6 truckloads of bottled water to assist as bulk water distribution sites, including 16,000 gallons of bulk water from Pennsylvania American Water. I particularly want to thank Pennsylvania American Water and its employees for their support and contribution to our efforts. We also purchased two additional 7,000 gallon bulk tanker trailers, which arrived on January 30 and were made available on February 1 after being licensed, having undergone food-grade washes and distribution headers manufactured.

On January 30, I received a written request from West Virginia Governor Earl Ray Tomblin for additional bottled water resources for the communities we serve. At the time this letter was received, West Virginia American Water had already committed to procuring 20 additional tractor-trailer loads of bottled water at the request of the Governor via a phone call earlier that day. This brought West Virginia American Water's total bottled water contribution to 33 truckloads.

All bottled and bulk water contributed by West Virginia American Water has been and will continue to be coordinated through the state and the West Virginia National Guard for deployment.

We will also provide residential customers with a 1,000 gallon credit to allow them to flush their water system without cost. This equates to approximately ten days of normal water usage for the average residential customer of West Virginia American Water. The maximum water flow through a standard residential 5/8-inch meter is 20 gallons per minute. Flushing guidelines provided by the West Virginia American Water instructed customers to flush for a total of 25 minutes, which would use approximately 500 gallons. The credit being offered accounts for double this amount. In addition, to aid small business customers in this difficult time, a financial credit equivalent to 2,000 gallons will be provided to approximately 5,280 commercial customers. This credit not only recognizes the size of these commercial establishments but also their need for additional cleansing requirements.

Communicating with Our Customers

Throughout this event, we have striven for transparency and open communication with our customers. To accomplish this, we implemented a number of communication changes.

- We created a hotline for West Virginia customers that was staffed 24/7 by twenty West Virginia American Water employees, including temporary employees, to answer specific questions regarding the lifting of zones.

- To better manage the call volume for our West Virginia customers, we made changes at our national call center in Illinois. Beginning January 12th, we rated the West Virginia calls "#1 priority", along with other water emergencies throughout the country. As a result, the average speed of answer for West Virginia customers from January 12th through January 19th was 18 seconds. This was substantially shorter than the average wait for non-emergency calls outside West Virginia during a period of record cold temperatures throughout much of the U.S.

- We created an interactive web-based map for West Virginia customers to determine when the Do Not Use was lifted for their zone. This map has received more than 2 million views and was extremely valuable in communicating with our customers. It was developed by American Water's Information Technology department in coordination with West Virginia American Water's engineering department in only two days. The map enabled customers to view the status of their zone so they could know when the advisory had been lifted for their area and they could begin flushing. The map was Geographic Information System (GIS)-based, and customers could type their addresses in a search bar to get the most accurate information.

- We had multiple resources managing both our social media outreach as well as our website that housed the interactive lift zone map. We believe these were valuable tools. When comparing activity in the days before the event to the days after, our Facebook average total reach went from about 800 to 62,000. Our website had nearly one million visits during that period.

- We implemented automated calls using information from our customer account database to alert customers of the initial "Do Not Use" order and, later, the status of the zones as the order was lifted.

- We posted on our website instructions for customers to flush their plumbing on the customer's side of the meter.

- We created an infographic on our website to better help our customers understand our complex system of pressure gradients (*i.e.*, zones).

Conclusion

West Virginia American Water has always supported laws and regulations that promote safe drinking water and has an outstanding record of compliance with these requirements. We are committed to working with state and federal officials to protect the public from threats to safe drinking water.

Thank you for the opportunity to appear before the committee.

Timeline of West Virginia American Water's
Response to the Freedom Industries Elk River Chemical Spill

Thursday, Jan. 9

- West Virginia Department of Environmental Protection notified the Kanawha Valley Water Treatment Plant of the leak from the Freedom Industries facility -- company took immediate action to determine its impact on water sources.

- West Virginia American Water worked with various state agencies to issue a "Do Not Use," order to all customers who receive their water service from this plant (approximately 95,000 customers throughout parts of Boone, Cabell, Clay, Jackson, Kanawha, Lincoln, Logan, Putnam, and Roane counties).

- Interagency team formed and commenced 24/7 response. West Virginia American Water initiated water tanker deployment and purchased truckloads of bottled water for water distribution sites.

- Subject matter experts from DuPont and American Water worked overnight and into Friday to develop a standard method of measuring MCHM in water.

Friday, Jan. 10

- West Virginia American Water continued work with state environmental and toxicology experts to understand the impact of the chemical contamination.
- Laboratories were identified and set up and equipment calibrated while the West Virginia American Water team began establishing a plan for systematic, representative water sampling of the distribution system.
- The West Virginia Bureau for Public Health received guidance from the USCDC and confirmation from the USEPA that a level of 1 ppm for MCHM would be protective of public health.

Saturday, Jan. 11

- An interagency team command post was set up at the Kanawha Valley Water Treatment Plant, comprised of West Virginia American Water employees, National Guard members and representatives from the West Virginia Bureau for Public Health, West Virginia Department of Environmental Protection and Kanawha County.
- An interagency water sample collecting and testing procedure based on hydraulic modeling of the water system was confirmed and communicated to all agencies involved.
- West Virginia American Water communicated that flushing and sampling beginning at a central location and moving out to the far ends of the distribution system was expected to take several days.

Sunday, Jan. 12

- American Water's IT and GIS team developed an interactive online map of the affected service area broken up by pressure zones in preparation for communicating areas that would be cleared for flushing.
- West Virginia American Water announced that the ban would be lifted in a strict, methodical manner to help ensure that the water system would not be overwhelmed by excessive demand, thereby causing more water quality and service issues.
- Customer flushing guidelines were developed by West Virginia American Water and finalized by the West Virginia Department of Health and Human Resources in preparation for the sequenced lifting the "Do Not Use" order.
- West Virginia American Water announced that it would offer customers a billing credit of 1000 gallons, which should be more than enough to flush the average residential home.

Monday, Jan. 13

- "Do Not Use" order lifted for approximately 25,000 customers (approximately 26% of customer and 50-60% of water usage system-wide), including all hospitals except for Boone Memorial Hospital.
- Automated phone calls were launched in coordination with a map for lifted zones. West Virginia American Water established a temporary local 24/7 hotline to provide additional clarification regarding lifted areas.
- The Kanawha Valley Water Treatment Plant's effluent water test results consistently reported non-detectable levels of MCHM beginning this evening.

Tuesday, Jan. 14

- "Do Not Use" order lifted for additional areas. Cumulative total of 48,000 customers (approximately 50%) restored to date.
- An infographic was designed to educate customers on pressure zones and explain why areas were being cleared systematically.

Wednesday, Jan. 15

- "Do Not Use" order lifted for additional areas. Cumulative total of 56,800 customers (approximately 60%) restored to date.
- Around mid-morning, West Virginia American Water received notice that the USCDC was reevaluating its guidance on the level of MCHM that is protective of public health. Recovery efforts associated with lifting additional zones were temporarily placed on hold for a large part of the day until the West Virginia Department of Health and Human Resources received revised guidance in writing.
- This revised USCDC guidance confirmed the 1ppm threshold, but added an extra level of protection for pregnant women. Customers were advised of this new guidance through the media and West Virginia American Water communications.

Thursday, Jan. 16

- "Do Not Use" order was lifted for additional areas. Cumulative total of 71,000 customers (approximately 75%) restored to date.
- West Virginia American Water issued a statement that lifts would be limited due to excessive flushing activities that diminished water storage needed to move forward with the recovery efforts.

Friday, Jan. 17

- Early this morning, customers in certain locations were advised to not drink and have limited contact with their water until additional water quality sampling data could be verified. Additional flushing and sampling was conducted.
- "Do Not Use" order was lifted for additional areas. By this afternoon, all customer areas had been lifted for flushing except those subject to the morning advisory.

Saturday, Jan. 18

- The re-issued advisory for the remaining areas was lifted. No customers remain on a "Do Not Use" order. The USCDC's guidance for pregnant women remains in place as an extra precaution for pregnant women.
- Interagency team moves into next phase of system testing at the parts per billion (ppb) non-detect threshold of 10 ppb (0.01 ppm).
- All area hospitals except Boone Memorial and the Charleston Area Medical Center Dialysis Unit (for which we are still awaiting final test results), returned samples results of non-detect.

Sunday, Jan. 19

- West Virginia American Water creates an "Our Next Steps" FAQ sheet to address frequent customer questions.

Tuesday, Jan. 21

- Freedom discloses to West Virginia Department of Environmental Protection that a second chemical, "PPH," was leaked with MCHM during the Jan. 9 spill. West Virginia American Water immediately engages MATRIC and Huntington labs to begin developing a protocol to measure PPH in water samples taken both before and after the "Do Not Use" ban was lifted.

Wednesday, Jan. 22

- Labs provide updates on PPH testing. Initial results indicate non-detectable levels, but further testing continues to determine the lowest possible detection limit.

Jan. 22 to present

- West Virginia American Water continues to flush the system and test water at designated locations, determined jointly by West Virginia American Water and the West Virginia Bureau for Public Health, until MCHM levels are non-detectable (less than 10 ppb (0.01 ppm)) at all designated sampling locations throughout the distribution system.

CLEAN WATER ACTION

Testimony for the Record
Lynn Thorp
National Campaigns Director
Clean Water Action

Subcommittee on Water and Wildlife
U.S. Senate Committee on Environment and Public Works

Hearing Entitled
Examination of the Safety and Security of Drinking Water Supplies Following the Central West Virginia Drinking Water Crisis
February 4, 2014

Clean Water Action appreciates the opportunity to provide written testimony for the record on protecting drinking water sources in light of the chemical spill in West Virginia. Clean Water Action is a national organization with over 1 million members. We work in 15 states on public health and environmental issues, with a particular emphasis on drinking water issues and policy.

The chemical spill at Freedom Industries in Charleston WV illustrates the importance of robust oversight of facilities and activities which threaten drinking water sources. It also illuminates the need for reform of chemical policy laws, for robust support of innovation in water science, treatment and infrastructure and for source water protection and emergency planning.

The underlying cause of incidents like this is that federal and state laws fail to make potential impact on drinking water a priority concern, in particular by failing to protect the sources of drinking water. Under existing law in West Virginia and in most states, regulators have little or no authority to keep facilities storing or using dangerous chemicals away from sources of drinking water. Gaps in oversight of above-ground chemical storage tanks are of particular concern in this instance. In addition, the Safe Drinking Water Act (SDWA) has led to enormous public health risk reduction through limits on contaminants allowed in finished tap water, but the law does not provide any authority to protect sources of drinking water.

Safe Drinking Water Act and Source Water Protection

The 1996 Amendments to the Safe Drinking Water Act (SDWA) included requirements that states complete "Source Water Assessments" for Public Water Systems to identify vulnerabilities. During the debate over these amendments, Clean Water Action and coalition allies supported inclusion of enforceable source water protection provisions to address threats to source

water, but these efforts were not successful. The Assessments were completed, but lacking resources and requirements for follow-up - as well as meaningful authority to address upstream threats - states and Public Water Systems do not appear to have been able to update the Assessments or act on the threats they identify.

The recently-introduced Manchin-Rockefeller-Boxer Chemical Safety and Drinking Water Protection Act includes measures which address some of the opportunities to better protect drinking water sources. While chemical facilities pose risks beyond those to drinking water sources, recognizing the particular threats to drinking water sources of spill and other incidents is a good first step. In addition, the bill would address a threat that the incident in West Virginia proves currently falls into gaps in state and federal regulation. The bill as drafted also includes important requirements for notification of Public Water Systems about chemical storage facilities potentially impacting the sources upon which they rely.

We urge the Committee to act with foresight to update our nation's primary drinking water law, the Safe Drinking Water Act, to protect sources of drinking water from disastrous incidents like the spill at Freedom Industries in West Virginia.

Drinking Water Must Be Protected Using Other Federal Authorities

Just as our nation's Public Water Systems can not be relied upon to address contamination, which should be prevented upstream, the Safe Drinking Water Act should not be thought of as the only federal program for protecting drinking water. While Clean Water Act programs include many that should reduce potential harm to surface drinking water sources, all too often their implementation leaves drinking water sources at risk.

A good example is the on-going revision of Effluent Limitations and Guidelines for the Steam Electric Power Sector. Power plants, particularly coal burning plants, are the largest toxic discharger to water and currently discharge toxic metals, nutrients, bromides and other contaminants of known concern into drinking water sources nationwide. While this ongoing contamination is not as immediately disruptive as the incident in West Virginia, it is no less meaningful in terms of public health risk. In fact, the Environmental Protection Agency has identified nearly 400 water bodies that serve as drinking water sources nationwide that have been damaged because of polluted discharges from coal-burning power plants.[1] Additionally, the recent coal ash spill in Eden NC dramatically illustrates the risks that coal plant water pollution pose to drinking water sources. Allowing facilities like these to regularly discharge into sources of drinking water and siting them in locations where they put drinking water sources at risk of catastrophe in the event of an accident are short-sighted and certainly are not protective of drinking water and public health.

We urge this Committee to redouble oversight efforts to ensure that the Clean Water Act is being implemented to meet its "fishable, swimmable and drinkable" goals.

While reform of our nation's chemical policy is not the subject of this hearing, we note that ongoing efforts to reform the outdated and ineffective Toxic Substances Control Act are relevant to the incident in West Virginia. As has been so painfully learned in this situation, state and federal governments do not have sufficient information on the health effects of most of the chemicals commonly used in the United States. Meaningful reform of TSCA and support for robust public health science are critical to government's ability to protect people from chemical spills and other incidents.

For more information contact Lynn Thorp, Clean Water Action National Campaigns Director, lthorp@cleanwater.org

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[1] http://water.epa.gov/scitech/wastetech/guide/steam-electric/proposed.cfm