

Toxics Release Inventory (TRI) Winter Webinar: The 25th Anniversary of the Emergency Planning and Community Right to Know Act (EPCRA) of 1986

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Hosted by: Environmental Council of the States (ECOS); U.S. Environmental Protection Agency (EPA)

Jennifer Major: Welcome everyone, it's right at the top of the hour, 2 p.m. Eastern, or 11 a.m. for those of us on the West coast. Welcome everyone on behalf of the Environmental Council of the States, or ECOS, and the US Environmental Protection Agency to our webinar, titled "The 25th Anniversary of the Emergency Planning and Community Right to Know Act of 1986." My name is Jennifer Major, from Ross & Associates, and I'm going to be moderating today's session. Now before we get into the agenda I'd just like to thank our co-sponsors from ECOS and EPA, Bryan Shipley and Mavis Sanders; Bryan is the TRI program manager for ECOS would like to say a few words.

Bryan Shipley: Hello everyone. On behalf of ECOS I'd like to welcome everyone to the TRI Winter Webinar. Thank you for taking time out of your day to join us here. Through trainings and outreach and this webinar, we hope to increase understanding of TRI and its important usefulness to a vast number of stakeholders. This is our fourth public webinar under our cooperative agreement with EPA in support of the Toxics Release Inventory. Be sure to check out our Chemical Right to Know website (www.chemicalright2know.org) for past webinar content and future webinars coming forth. Enjoy.

Jennifer: Thanks very much, Bryan. Alright, well we have a very packed agenda, with two presenters that we are very fortunate to have with us today. Before we get started with the presentations, I'd like to take a couple of minutes upfront now to walk us through the agenda. Okay, so we'll begin with very briefly some webinar logistics, mostly related to how the Q and A session will work, and then we'll jump right into our first presentation by Mike Walker, and then we will have our second presentation by Steve DeVito. After both of the presenters have given their presentations, then we will do the live Q and A session. That does not mean, however, that you can't type in a question at any time and we really encourage you to do that. I'll walk through how that works in just a moment. At the conclusion of the Q and A session, we'll just show you a few contacts and resources and then we'll wrap it up and kindly request your feedback at the conclusion of the webinar, and I'll walk through how that works as well. Okay, so just a few things about the logistics for today. All of the attendees' phone lines have been automatically muted. We do that to try and minimize the amount of background noise that we can get on these webinars sometimes. There are quite a few of you logged on and who continue to log on as I speak actually. So that's just a safeguard for all of our enhanced experience here. To ask a question, again as I said earlier we hope that you will please do so, you'll need to use the question pane on your webinar dashboard. So the graphic that you see on the slide there shows you where to find that, and you'll type in your question and hit "send." And we'll be monitoring those questions as they come in. We are recording today's webinar, and we are going to make the complete recorded webcast available on the Chemical Right to Know website, you see the URL there and we'll be plugging it again later. So that will be available hopefully within the next 48 hours. All the presentations, presenter biographies, the resources and contact information, will also be made available on the Chemical Right to Know website, and as I mentioned earlier, at the conclusion of the webinar you're going to receive a very short list of

three open-ended questions to try to get your feedback on the webinar. That will help us for future planning purposes and helps us gauge whether we accomplished what we were hoping to achieve. So we really appreciate your taking the time to do that.

The learning objectives that we've laid out today are, one, improve awareness of EPCRA and the TRI Program; their use and role in supporting informed decision-making by industry, government, and non-governmental organizations, and the public; two, increase understanding of TRI as a powerful tool for identifying chemicals used, stored, and released into communities; three, provide insight into the TRI program's direction.

That takes us to our first presenter, and that is Mike Walker. Mike is the director of the National Enforcement Training Institute, in EPA's Office of Enforcement and Compliance Assurance. He's been involved in litigation and negotiation of many high-profile environmental enforcement actions since he began his career in EPA's Chicago Regional Office in 1979. He's the author of numerous articles, the titles of which you can find on the Chemical Right to Know website, and he currently serves as adjunct professor of law at the William and Mary College of Law and at both University of Toledo and Maryland School of Law, where he teaches federal commercial chemical regulation of TSCA, FIFRA, EPCRA, and RCRA. That's a lot of acronyms. Mike, thanks so much for joining us.

Mike Walker: Thank you all and welcome to our webinar today. Just last night, I polled my class at William and Mary: how many of you know what the Toxic Release Inventory is? One person out of thirty-five knew what it was. How many of you have ever heard of EPCRA? One person out of thirty-five had heard about EPCRA. These are students seeking a career in the practice of environmental law. And so it has become one of my missions to try to educate as many people involved in environmental work to be aware, to be understanding, to be able to use what I consider to be one of the most valuable, powerful tools ever given to the EPA. In fact I like to call EPCRA, TRI, America's largest neighborhood watch program, period, because it is through EPCRA, and it is through the Toxic Release Inventory, that we're able to monitor, look into facilities, see what's going on in the communities, and as the name implies, the "Emergency Planning Community Right to Know," this statute gives us the information and the tools to prevent chemical accidents, and it was a chemical accident that led to the enactment of this important statute.

Let me put this into perspective. Turn the clock back to December 1984: an enormous industrial chemical accident took place in Bhopal, India. Something that riveted public attention. Those of us seen disasters – 9/11, tsunamis, earthquakes, picture a chemical accident that kills over a period of years over 15,000 people. Picture a facility that during the middle of the night erupts, releases methyl isocyanate, the next day when the sunlight arrives, 3,000 dead people within a radius of the facility. Everything was dead. Every person, every dog, every cat, every rat, animals, insects, everything dead. Media attention was focused in on this, Congress in the United States held hearings, could this possibly happen in the United States? Well, this was a Union Carbide facility. We have Union Carbide facilities in the United States, could this happen? Did EPA have the data? Well, not really. We had databases dealing with facilities that had Clean Air Act permits. We had databases that monitored facilities National Pollutant

Discharge Elimination System. We had databases that looked at the facilities that stored hazardous waste under the Resource Conservation and Recovery Act. We knew facilities that manufactured pesticides. But we did not have a very comprehensive database on facilities that manufactured raw chemical ingredients like methyl isocyanate that could, in fact, create a disaster like this in the United States. So Congress began to evaluate whether something like this could be done. So EPCRA came along. Congress was in the middle of trying to fix certain provisions of the Superfund law, the Comprehensive Environmental Response Compensation and Liability Act, and during the negotiations leading up to the Superfund revisions in 1986, CERCLA Title 3 (as EPCRA was originally identified) was added to this giant bill as it was going to Congress. When the sun rose after this bill had been passed by the Congress, people at EPA looked at EPCRA and thought, well, what are we going to do with this? First of all, there was no money attached to it. To an agency like EPA, or any agency, making sure that we had the money and the resources to implement a new program, of course, is very critical. Other aspects of the statute appeared to require other sorts of financial assistance. The emergency planning aspect of this statute requires that states and local emergency response commissions be established, but there was really no grant money, no block grant, to put that into place, and so as we began to look at EPCRA, a number of important factors began to emerge. We describe EPCRA as beginning with a giant "E" for enforcement because in the law enforcement office, we know that public reaction to chemicals can be very emotional. We know that planning is an important element in the Congressional intent of the statute, and that this "right to know," the Toxic Release Inventory aspect, mean access to data that's both timely and accurate, that becomes very critical, and in fact we really use EPCRA here on a daily basis. In the context of law enforcement, we routinely look at EPCRA TRI before we sit down with a company. Let me just tell you a way that I've used it. I once was meeting with a company that had come in here, they were facing violations of the TSCA statute, and the company was interested in looking for something they could do to reduce their liability to civil penalties. I said to them, we are interested in any chemicals that you have on site that you might be willing to reduce or eliminate, especially some of the ones that are more toxic or volatile or problematic. The attorneys looked at me and said, "All we know is the one chemical that's the subject of this enforcement action." And I reached under my desk and I got out a 200-page printout of their Toxic Release Inventory. They were on the money, they were timely, they were accurate, and they in fact had used, stored, or otherwise disposed of more than 200 chemical substances at that facility. And they, frankly, were a bit astonished that we had access to all of this information which came from them in the first place. So, we really use the data here, and we see the TRI inventory data as an important aspect of not only our ability to know what's going out there in the neighborhoods and the communities, but also something that's important to state, local, national priority planning, particularly as we look for situations that might expose people to wrongful activity, to environmental justice considerations and so forth. Now our national priorities that we're implementing go hand in hand with the TRI. We are looking constantly in the law enforcement program for opportunities for pollution prevention. The EPCRA TRI as I've just demonstrated is an important tool that we can use any time we sit down with a member of the regulated community. And if we sit down with someone, and this has happened, we've sat down with people who have not filed a TRI and this of course presents potential for additional enforcement where a facility may claim they never heard of the statute in the first place. So we use it for pollution prevention. We're increasingly looking at the protection of whole ecosystems. A couple of years ago, the agency mapped out every watershed in the United States. In the Chesapeake

Bay, where you have seven states with watersheds feeding into that ecosystem, we can look at the TRI data and ascertain who's contributing what to various watersheds, to certain rivers, to certain sensitive areas. We also use the TRI to build partnerships. And of course it's an important component in our overall environmental justice effort. We know that in some areas of the country, there are populations, including minority or low-income communities, that experience higher levels of environmental hazards than other high-income communities. And evidence of some of these environmental hazards and risks have been demonstrated by higher death rates, higher levels of asthma, higher health effects, and we have been able to tie some of these back to specific facilities using the Toxic Release Inventories. So it's an important tool in identifying neighborhood risk for chemicals. We also use it, as I have indicated, as part of our new environmental focus on pollution prevention. Pollution prevention, we have a policy statement, we have a definition even if implementing compliance and regulation, and our public information and right to know using Toxic Release Inventory data is very important. When this statute first came out, and we started to implement it, there were a number of people who were questioning, of course, whether anything good could really come of this initial Toxic Release Inventory. And let me tell you what I mean by that. The law and the regulations require best engineering judgment estimates of chemicals stored, used, or otherwise disposed of, and people here at EPA, people who had worked in air and water thought for a long time, these are just estimates, and perhaps some facilities might overestimate what they're using, storing, or releasing, but the idea being if they overestimate, the agency if they subsequently were to ratchet down limits, they might at least have some cushion to work within. Other people questioned, why are you requiring the facilities to list longitude and latitude? Isn't that a burdensome requirement, and quite possibly could the regulated community maybe justifiably say that this was a burden that was beyond the original intent and scope of the statute? What was really behind all this? As we began to implement the program, and the first reporting year came and went, the first company – and we put out many lists when we got the first year's data in, we had a list of the top 100 companies in the United States who reported to the TRI. We did top 100 lists by state, sometimes by county. Of the top 100 reporters in Cook County. And to some extent when we think about public information, some of this perhaps could have been seen by some as misleading. After all, where you're reporting in terms of pounds, the toxicity varies from chemical to chemical and 10,000 pounds of one item might be much less toxic than, say, ten pounds of another chemical substance. But what we began to see, and what we heard through anecdotal information, was that when the very first reports were analyzed and categorized, the #1 company reporting to the TRI was the Monsanto company. Although we weren't there, we were told by a number of people who claim to be reliable sources that the president of Monsanto said "We never want to be number one on this list ever again, so figure out a way to get us off the number one position." And in fact by looking at their operations, on a wholesale way of doing this, they were able to get reporting down. Now, some of the ways they got reporting down, and some of the ways other entities have gotten reporting down, was simply by storing less onsite. You might think, well what's the big deal about that? Well, the big deal about storing less onsite is if there's an accident, if there's an earthquake, if there's an explosion, if there's an act of terrorism, if you have less stuff onsite, you are less likely to have an even more massive problem than you would. I tell people all the time, if you own a gasoline-powered lawnmower, the last thing you're going to do, assuming you are a common-sense individual, is store in your garage five or six hundred gallons of gas. I mean yes you could buy it when it was a dollar a gallon and save it in your garage for the next ten years,

but if you have a discarded cigarette, lightning strikes your house, you have 500 gallons of gasoline, that's going to be it for that piece of property. No one would do that. We know from our own lives not to store a lot of hazardous stuff in large quantities in your personal residence. Why then would certain businesses want to stockpile a lot of stuff that could result in some terrible chemical accident if something like that would present? So, Monsanto, they got off the number one spot on the list. The very next year that came along, and I'm not going to go through all the reporting years, but the very next year, just by illustration, the number one company reporting to the Toxic Release Inventory the very next reporting year was not Monsanto, was not Dupont, General Electric, Dow Chemical, General Motors, General Dynamics; it was the Kodak company. And Kodak had such a dramatic impact on the thinking of many people here at EPA where, like the general public, we commonly view Kodak as a wonderful, lovely, yellow-box company that provides film for your children's birthday party and weddings and wonderful human events. But very few people saw Kodak for what Kodak really is: a multinational, giant chemical company. The fact that they had reported storing, using, or otherwise disposing of chemical substances really put them on the path for additional scrutiny, which ultimately led to a number of enforcement actions. So, it helped raise the profile, and long-term Kodak has cleaned up their act. But it all came about as a result of this reporting. So the data itself is critical. I consider that the TRI is the broadest regulatory net ever cast by the Congress. If you stop and think about it for a moment, it certainly is. Here is a statute, and what I have on the screen right now is the most simplistic limitation, when the program began it was standard industrial codes 20-39, 10 employees or more, and 1 or more of over 700 chemicals. But this initial group, 20-39, 10 or more employees, one or more chemicals, many of these facilities never had much regulatory involvement with either the federal government or in some cases even the state government. An example of that; the very first company that we encountered with a TRI problem was a company down in Fort Smith Arkansas, Riverside Furniture. Riverside Furniture, which is in SIC codes 20-39, they actually had 900 employees, they had 11 of these initial 300-some chemicals - they came into EPA and their position was, number one, we've never heard of this EPCRA statute. We're in Fort Smith Arkansas, we're trying to make furniture, we're trying to put food on the tables of these 900 employees, we're not a big business compared to General Motors, General Electric, General Dynamic, and these are just paperwork violations, we don't have a NPDES permit. We don't generate hazardous waste. We make furniture. We are not a black furnace foundry some other business, why should we be penalized for this sort of thing. They had no prior contact with the federal government. In fact that was their defense at the hearing. Fortunately for us, we had cause to be sent to Riverside Furniture and other similarly situated businesses in SIC 20-39, three separate and distinct mailings of information. Dear company, we have reason to believe that you are in SIC codes 20-39, have 10 or more employees, may have one or more of the listed chemical substances, you are obligated by July 1st to file the Form R with the TRI. The company denied ever getting this information but we were able to produce a witness from Washington who in fact had signed a contract to require that this information we had purchased SIC mailing lists. We had done that because we wanted to make sure that the regulated community knew what was required, why it was required, and what might happen if they did not comply. That company was fined almost the full proposed penalty. So it's a broad regulatory net. When you stop and think about 10 employees or more, and one or more of the chemicals in reportable quantities, you can see how deeply we can reach into the regulated community. And yes, we are concerned about large facilities that create pollution. But we also know

through the history of pollution and violators in this country that even small businesses can create enormous environmental problems if they're not attentive to regulatory concerns and one of the examples that comes immediately to mind was a facility right here in Virginia on the James River that manufactured kepone, a fire retardant, 15 employees, they discharged a lot of off-spec stuff to the banks of the James River and have polluted much of that river for the rest of our lifetime. So, small companies can do things that are negative as well.

So, we use TRI daily to measure reductions. We are constantly looking, we will compare facility to facility to see who's using specific types of chemicals. A good example of that is when we were looking a few years ago at the pulp and paper industry. As an industrial sub-category, pulp and paper is distributed all over the United States. There isn't one specific pulp and paper alley like the Houston ship canal. Pulp and paper facilities are often located near water, are often located near pulp tree forests, small trees that are used for making paper and cardboard, and we wanted to know how many TRI reporting facilities were listed in the SCI for pulp and paper. Would you believe that in the United States at that time there were 604 facilities correctly reporting to the TRI? We then began to lay over that dataset, the Clean Air Act permits, because some of these facilities had permits for sulfur and other discharges, we then laid over that all of the NPDES permits that existed for some of these facilities; some had permits, some didn't. Some were discharging chlorine, mercury, other chemicals. So by looking at all this data we were able to create a mosaic where we could compare facility to facility and so we were able to select, and this brings us into our approved targeting, we selected a dozen facilities for field inspections, several very large facilities, several facilities who were on impacted waterways, several facilities that seemed to have very low reporting to TRI, with the thought being maybe they had technology or strategies to minimize what they were storing, using or releasing, and when we began to bring enforcement actions, all of the data, in concert, this big mosaic that was put together gave us substantial negotiation leverage and, because if a facility said well that's not good data you're using, it's your data, you self-reported it to us, we're not making the data up, if you reported the data wrong, it's incumbent upon you to straighten it out. So we were able to use, compare TRI data to air data to water data and this resulted in a number of significant settlements with long-term pollution prevention. Because it's our belief that if we can look for permanent, technical and engineering fixes for some of these problems, it's a benefit, a long-term benefit for EPA, the regulated community, and the public at large. So, looking at toxics in the community, looking at the big picture, this is the critical element of it. Now, I want to talk just for a moment before we go into some of these cases about the section 311-312 reporting requirements, because although I don't have a slide up on this, it's important that we stop just for a moment and remember that portions of the TRI and portions of EPCRA deal with the emergency planning aspects and a big part of that is reporting of chemical releases under section 311 and 312. All facilities in the US subject to EPCRA, with ten thousand pounds or more of hazardous substances, there's that specific definition, or 500 pounds of extremely hazardous substances, and that's a term of art as well, must submit information initially and in some cases updated annually as numbers change to the state emergency response commission and the local emergency planning commission. And these are important components. EPA supports many of these, not necessarily with funds but with technical assistance, because it is incumbent that state and local emergency planning people know what's going on and what's out there and our bottom line is to prevent the accidental, premature death of our

emergency response and police personnel. And this is a very critical aspect of our program. So where are we today in terms of EPCRA, the enforcement process, current status and trends? And I'm delighted to be here for this 25th anniversary, I can remember when this statute came about I was asked to testify before Congress on data and databases which we didn't have. And for this statute, to come about, in the way it did, and EPA's initial, quizzical, well "who wants this" it isn't air it isn't water where should this go, just merged in with the TSCA data people, they were used to keeping data on chemicals, it was put in there, contractors were hired, here we are 25 years later reaping the benefits of that work. Over the years, we have brought more than 5,000 enforcement actions for facilities that were deemed to be out of compliance with the EPCRA TRI. I want to touch on a couple of these that I think are illustrative of what we saw over the years. Under the way our agency operates with EPCRA TRI enforcement, any facility charged with a violation is offered the opportunity first for alternative dispute resolution, if they have factors that they want to bring to our attention, we're ready to listen to anything they want to say. But if they fail to report, if they fail to report on time, if they fail to report accurately, then it is more likely not that an administrative penalty action seeking civil penalties will be initiated. As the slide demonstrates, there have been more than 250 administrative law judge decisions following hearings on the record with full hearing procedures implemented and these decisions suggest that there are very few defenses available to the violators. As I mentioned with Riverside Furniture, "Judge we never heard about it," that failed. Ingenacom corporation, this decision is almost 20 years old, it's wonderful precedent, it upheld the penalty calculation, there was no need to show that there was some sort of offsite risk. Very often the defense says "Your honor this was just a paperwork violation, if EPA wants to recover funds for paperwork violation can't we just send in a box of Xerox paper." Well, no you can't, the paper we want is the TRI form R filed accurately in a timely fashion. The desire of some companies to demonstrate that there has to be actual harm, no. Failure to report can also be seen as a continuing violation, although it is EPA's practice generally only to charge for a one day violation. We know that if you fail to file for a year and if we were to charge you the full \$37,500 per day, that the fine could be in the multi-million dollars. We're not interested in merely collecting money. We're interested in collecting data. We're not interested in putting businesses out of business, we're in the business of making sure business is in compliance with these statutes. Two other cases I want to touch on. Number one, all regions laboratories. This was one of our first cases also, back in the old old days, and really illustrates both the emergency planning and community right-to-know elements of the statutes. All regions lab was operating in the beautiful scenic city of Springfield, Massachusetts. They were involved in the business of repackaging chlorine from bulk containers to five-pound take home for your pool or spa containers. Springfield had a number of vacant buildings, in the downtown areas all regions laboratories had rented a vacant building in downtown Springfield, the building happened to be, of all things, a Presbyterian church. The congregation had moved out to the suburbs and had abandoned this church. Here's what happens: they're repackaging chlorine in the church. A fire breaks out. The fire department comes to put the fire out, they think they're pouring water on choir robes and Bibles, but instead they're pouring it on giant casks of raw commercial chlorine. An even bigger fire develops. A cloud of chlorine gas takes on a life of its own above the Presbyterian church and begins to cover the whole city. Now, they've never had a chlorine disaster in downtown Springfield. There's a seven-mile-long cloud. They're going door to door, they have trucks with loudspeakers, "Stay inside, stay away." The city was under siege for about five days because of this chlorine release. Now, had there been an adequate local emergency

planning committee, or information on file as to who was doing what, because this facility clearly had more than 10,000 pounds of chlorine, this sort of disaster might have been averted. This type of situation is not rare, not unusual, it unfortunately happens all too often. Let me highlight another case. The Dove bar company: 560 calorie beautiful Dove bars, the chocolate bars, the ones that come in a box. Here's Burr Ridge Illinois, a small town, they're looking for economic development, Dove bar says we'd love to come in and take over that vacant property, Burr Ridge says great, we'll even give you a tax subsidy to bring your business in, we're looking for clean business, we don't want a refinery, slaughterhouse, crematorium, we would like a chocolate ice cream bar company, what possible problems could come from chocolate ice cream, wooden sticks, and boxes? Well, similar to the All regions laboratories situation, chemical accident, middle of the night, local fire response people paralyzed to know what's going on in the Dove bar factory and it wasn't renegade chocolate or ice cream melting, it was an enormous ammonia release. This was of course not the kind of ammonia that my grandfather used to wash the picture window with. It's a commercial refrigerant. As the investigation unfolds, the number of employees working third shift to handle all these Dove bars being shipped all over the country were having a forklift rodeo, the fork of one of the forklifts pierces a pipe, over 40,000 pounds of ammonia is released in a matter of minutes, causing the evacuation of this lovely suburb of Chicago. So planning is very important. In the case of All regions lab, they challenged the administrative law judge of liability, they appealed to the EPA environmental appeals board, they even went into the court of appeals to challenge this \$89,000 fine, but when the courts were faced with what exactly was going on with all this chlorine, they had no problem upholding EPCRA and CERCLA which was also cited for failing to report these reportable quantities. If you look down at the rest of the slide, you'll see that citizen groups have been enforcing EPCRA as well. EPCRA has very powerful authorities to allow citizens to enforce provisions of the statute as well. For many years, citizen groups such as the Atlantic States Legal Foundation had been filing dozens of lawsuits in conjunction with the work EPA was doing, and very often these citizen groups would go against facilities that were of less importance or prominence to EPA such as this case I've cited here, where Atlantic States sued the Whiting Roll-Up Door Manufacturing Corporation. These are people that make those metal doors that they have in New York City over jewelry stores and what have you. Atlantic States, they looked at the facility, you're an SIC code 20-39, you have 10 or more employees, you have one or more of the reportable quantities, in this case a lot of the stuff was zinc-plated to retard corrosion, so they brought this case, they settled hundreds of cases, until the Supreme Court came along in 1997, in this case Citizens for a Better Environment in Chicago sued the steel company for failing to report anything to the TRI. The steel company was a steel manufacturer in Indiana. The steel company said alright, you caught us, we overlooked the statute, they had air permits, they had water permits, they had RCRA permits, but for some reason or another they had overlooked the fact that they were a company in SIC code 20-39, they had 10 or more employees, they had multiple chemicals. As soon as CBE notified them that they were in violation, they immediately filed with the TRI. Immediately came into compliance. When this case came to the Supreme Court, CBE said "But we did the work, we woke them up out of a deep slumber, we're entitled to some penalties going into the federal treasury, we're also entitled to our attorney fees." The Supreme Court in a stunning 9-0 decision said "Look CBE, you stand for a better environment, you woke these people up from their deep slumber, they're now in compliance, that's your payment for a job well done. But you're not getting any attorney fees or any money." That has largely choked off a lot of citizen

suit involvement, but while it lasted, it was wonderful. This is why we often look now to states that may uncover violators in the course of inspections or other sorts of law enforcement activities. Just a couple other things I want to mention. When we talk about this being the largest regulatory net ever cast by Congress, take a look at these two cases, which I think are illustrative for who they are, not necessarily for the legal policy they are stating. Clarksburg Casket Company in Pennsylvania. Here's Clarksburg, they get cited by EPA for not reporting to the TRI. Or Steeltech which makes a lot of office furniture, including quite a bit for the federal government. Clarksburg's position was, we're not a polluter, if anything we're doing God's work creating these beautiful coffins, wood and metal, for people to rest in peace for time immemorial. Well if you look at a casket company objectively, many of them are doing the same thing that Riverside Furniture was doing down in Fort Smith Arkansas. They're using wood to make coffins which often are beautiful pieces of furniture, one use only, and the metal is no different than Steeltech's spraying metal, using powder, using chemicals, affixing them electronically. Both these facilities had dozens of chemicals that were reportable on the TRI but neither had been in compliance at all and both of them were their fines were upheld. You can see the legal principles here: it was okay to use the EPA Penalty Policy. You'll see in many of these slides that we here at EPA are very concerned about how much we fine people. As I said earlier, we're not in the business of putting business out of business but we do have a penalty policy that we apply per chemical per year, not per day, to seek to make it in a company's best interest to comply. One of the factors that we have considered in terms of calculating penalties is when we were promulgating the regulations, we knew that it would cost time, money, and effort to put together the TRI form R. A number of industries wrote in and said that it would cost about \$7,000 per report to fill out annually. Whether that's true or not we had no basis, but again that was their assertion to us in the administrative record. So we through that process have now said to companies when they come in, the amount of money you save, the benefit you save, if \$7,000 is the case, that's money you save and companies who aren't compliant have that economic benefit. I just want to show you a couple more slides before I turn the podium over. I have a number of TRI program profile sheets up here. This one circled in black is my hometown zipcode in Milwaukee Wisconsin. Anybody can go into the EPA TRI and check on your home zipcode, your grandma's zipcode, and see what's going on in that particular community. The information that's arrayed is easy to understand and EPA has done a great deal of time and effort to try to communicate. This one for example is from the District of Columbia and shows the number of chemicals being used in this community. So we consider the TRI to be an enormous tool for the benefit of the public, for the benefit of regulatory agencies, state, local, environmental justice groups, environmental groups, it's data, and data is critical.

With that, let me turn things over to Dr. DeVito.

Jennifer: Okay thank you so much Mike and just to remind folks, we'll make this presentation available to everyone on the Chemical Right to Know website. So we had to rush through those last few slides, apologies. We are seeing the questions roll in, want to encourage people to keep submitting those. We'll do our best to try to answer as many as we can. I'd like to introduce our next presenter, Steve DeVito. He holds a PhD and MS in medicinal chemistry, and has practiced pharmacy in New York and Virginia, he joined the EPA in 1989 as a chemist in the office of Pollution Prevention and Toxics. He works in the TRI program where he provides scientists with technical support, and he has been involved

in most of the program's major rulemaking activities. He also coordinates all of the program's international activities and represents EPA in many international fora. Please check out chemicalrighttoknow.org to learn more about Steve's background. Thanks for being here today, Steve.

Steve DeVito: Thank you, Jennifer, and I'd like to thank the organizers for the invitation to speak, and Mike for making such an excellent presentation which saves me a lot of time in presenting the background. What I would like to do for this part of the webinar is to focus in on TRI itself and discuss a retrospective look at the reporting that has come in over the years, the different regulatory changes, the big rulemakings that the program has implemented, and how that's affected reporting, and then I'd like to talk about our present priorities and things we have going on right now, and then I'd like to give you my point of view on where the TRI program is heading, with some future perspectives.

Mike already provided, I think most of you are aware of our reporting requirements. Of course we were established by the Emergency Planning and Community Right to Know Act of 1986, that's what we're celebrating here with this webinar, the twenty five years of this. And of course that requires the facilities in certain industrial sectors to report releases and other waste management quantities to us, and those requirements were further enhanced by the Pollution Prevention Act of 1990. So I think most of you already know about that and Mike alluded to a lot of that so I won't spend too much time here on this. What I would like to do is take you for a walk down memory lane, if you will, and go over some of the reporting that we've seen over the past 25 years or 23 years or so. This chart you're looking at, the x axis is the reporting years. The y-axis on the left side of the screen represent billions of pounds that were reported that year, the y-axis on the right side of the screen represents the number of reporters or the number of facilities that reported for a given year. That little dot over on the left above 1988 that represents the number of facilities that reported in reporting year 1988. I don't have 1987 up here. Remember that 1987 was actually the very first reporting year. EPCRA was implemented in 1986, the very first year, first reporting year was 1987, the reporting thresholds at that time were 75,000 pounds for manufacturing and processing, and 10,000 pounds for otherwise using. I don't have that up here because of that much larger threshold and also because being the first year, the data itself might be questionable because it was the first year of implementation. So I'm going to begin with 1988, which was the second year of reporting. Even in that year, the reporting thresholds were higher, for manufacturing and processing they were 50,000 pounds and for otherwise using they were 10,000 pounds. So we had roughly, if you look at what's going on here, we had 6 or 7 billion pounds of toxics released reported for that year, reported by about 24,000 facilities, I think we got about 80 or 90,000 form R reports. It's very important to keep in mind, and it's easy to lose sight of the fact that, in 1988 there was no internet, personal computers were hardly in existence, everything was done by hand. Companies filled out their form R reports with pencil and paper, they mailed them into EPA, we had to open a lot of envelopes, when you talk about form R contained at that time 50-100 bits of information on the form. When you have 80,000 of these forms coming in, and it all has to be processed internally by hand, transcribed by hand, it was a tremendous amount of work. Everything was done manually back then. Many people in our regional offices, here at headquarters, our contractors worked very very hard in processing that information. As a result, it took a while before we were able to make that data available to the public. That wasn't unusual at all, that was quite typical in those days that when the

information was submitted to us by the reporting deadline, it took a good year and a half, maybe up to two years, before we released our national analysis or public data release of that information. So I just wanted to remind you of that perspective. Another thing that this did: That quantity, over 5 billion pound quantity; for the first time it raised an awareness of the magnitude of releases that were going on in this country by the chemical manufacturing industries, the manufacturing sector I should say. Up until this, nobody had a good idea as to what kind of releases were going on. So this was a very sobering observation at the time. A lot of people started to think, well, there are a lot of toxic chemicals being released, we need to do something about this. So the next year, 1989, this was the first year where the manufacturing and processing threshold became 25,000 pounds. Note that the number of facilities that reported for that year went up. Releases came down quite a bit. In 1990, we see the releases coming down even a little bit more, and the number of facilities that reported went up. What was going on here at EPA and I think in the public, keep in mind at that time William Riley was the administrator of EPA, George Bush Sr. was the president, and Riley was very impressed with the TRI and this concept of community right to know and collecting emission data. A new mood around here in Congress and in the chemical industry evolved. Looking at this data, there was a universal recognition that a more preventative way of dealing with toxics was in order. Rather than just typical end of pipe approach to dealing with pollution, it was viewed that perhaps preventing pollution would be the preferred strategy. In 1990, the Pollution Prevention Act was passed. That established this hierarchy of pollution prevention, where number one pollution should be prevented at its source, you shouldn't even generate it in the first place. That stimulated a lot of creative thinking. The Pollution Prevention Act also mandated reporting requirements for TRI. Those dark blue lines that I just talked about, 1988-1989 and 1990, they represent total releases. Total onsite releases and total offsite releases combined that were reported. That was the only thing that we required up until 1991. Come 1991, Pollution Prevention Act requirements kick in, and that requires facilities to report other waste management quantities, such as quantities recycled, quantities treated onsite, offsite, quantities burned for energy recovery, all of that. Now it needed to be submitted along with their release quantities. As you can see, that light blue line represents these additional total production-related waste quantities. As you can see, the amount of waste that was being generated greatly surpassed the release quantities. So there was a lot of additional information that we began to collect with the statute. Now Riley was, as I said personally I thought he was a brilliant man, a man of great ambition, and around this time, recognizing the value of TRI, he considered expanding the TRI to more of a three phase approach to expanding it. That would broaden the scope of it. Phase one, he envisioned as a chemical expansion. Phase two, he envisioned as a industry sector or facility expansion. Phase three, he envisioned as a chemical use expansion, or materials accounting expansion. So that's what he was thinking at that time. In 1992 of course, the Bush administration left office, and Riley left, and in comes President Clinton, and he appointed Carol Browner to head up EPA in 1992, and Clinton and Browner embraced EPCRA quite a bit, saw the value in TRI, as Riley did. They also wanted to continue pursuing what Riley had set up, the chemical expansion, the industry sector expansion, and then the chemicals accounting expansion activities. Out goes Bush and Riley, in comes Browner and Clinton, and at this point as we can see as time goes on more and more data is coming in. In 1994 we published a rule that added more chemicals, again this addressed that Phase One TRI expansion that Riley had originally envisioned. The first year of reporting for that occurred in 1995. We added close to 300 chemicals, I think the exact number is 286, but it basically

doubled the size of the TRI list. We went from 300 or so chemicals up to now 600 chemicals total. So that was the first major rulemaking of the TRI program. In 1996, there has generally been a relatively steady decline in total releases as you can see and even in total production-related waste to some extent. In 1997, we promulgated a rule that added industry sectors. Up until this time it was only the manufacturing industry sectors that were required to report. In 1997, we finalized a rule that added seven more industry sectors, and the very first year reporting under that rule was 1998. Now let me just explain this slide. That dark navy blue line that you see near the bottom of 1998 represents total releases reported from all the original sectors that were always required to report. That orange bar represents the additional release reporting by these seven new sectors that comprise roughly 2-3,000 additional facilities that reported in 1998 that did not report in 1997 as a result of this rulemaking. The light blue line, again that pertains to the total production-related waste that was filed by the original industry sectors, and that beige line that you see far on top represents the additional production-related waste from the additional sectors. So I use these different colors to demarcate the differences in reporting. But as you can see, not surprisingly a lot more additional information came in as a result of this rulemaking. In 1999, we finalized a rule, the PBT rule, or persistent bioaccumulative and toxic chemical rule, at that time, and this still exists today but especially at that time, there was a lot of concern for chemicals that are not only toxic but that persist in the environment for long periods and bioaccumulate throughout the food web. It's bad enough that a chemical is toxic but if you have a chemical that's toxic that in addition to that also persists in the environment for long periods of time, and bioaccumulates throughout the food web, there's more of a chance of exposure to these types of chemicals, so they were a particular concern. We finalized a rule in 1999 to take effect in reporting year 2000 and what we did with this rulemaking is that we identified, there were some chemicals that were already on the TRI list that we designated as PBTs in the 1999 rule. We also added other chemicals that were not on the list and we designated them as PBTs. I think we designated about 16 chemicals as PBTs and about 4 chemical categories as PBTs and many of the chemicals that we added were used as pesticides, and of course that enhanced the database quite a bit. The problem was prior to that was that these chemicals, their releases and other waste management quantities were not being reported to the TRI because they weren't meeting the reporting thresholds, the companies were not meeting the reporting thresholds, so we were missing a lot of important information on these chemicals. Now, we make basically two designations, we have the PBT chemicals which have a reporting threshold of 100 pounds, so we drop the reporting thresholds from 25,000/10,000 pounds to 100 pounds and then we have chemicals that we designate as highly persistent and bioaccumulative toxic chemicals, and the reporting threshold is 10 pounds, and then we even have a class of dioxins and dioxin-like compounds and their reporting thresholds are much lower, in the milligrams, I think it's 0.1 milligrams, it's very low, or 100 milligrams, I forgot, but it's very low. 2001, we designated lead as a PBT and we lowered the reporting threshold of that as well down to 2,000 pounds. Now I'm just going to scroll through the years really quickly, as we can see the releases, total releases, generally come down, the number of facilities are also coming down, that's been a general trend roughly since the program started, and probably a lot of reasons for that. Now we're up to 2010. Here's what the total releases and total waste management quantities that were reported to TRI in the major rulemakings over about the past 25 years look like.

What I'd like to talk about now are some of the other enhancements that we've made to the program. As I said earlier, access to the, EPA getting the information out to the public was limited by the fact that there was very limited information technology in place. We used to have to publish things in hard copy, mail them out, if somebody wanted to access the database they would have to look at one of our reports, they would have to get their hands on a hard copy or they would have to go to their public library and hope that their public library had access to the National Library of Medicine's database; that's the only way that you could access our TRI database. In 1998, the internet was available and a lot of people had computers so we developed our TRI explorer tool which was the first analytical tool that we made, so you could access the database through our TRI explorer tool which I'm sure many of you are familiar with, and you could do your own analysis. This was really the first tool that enabled facile access to the database. It enabled facile analysis of the database by anyone who had internet access. In 2001, we developed our TRI Made Easy software, this was software that was not intended for the public, rather it was intended for facilities to use rather than submitting things in paper, filling out things with pencil and paper, TRI-ME, as the name implies, was to make it easy for Form R filers to complete their forms and send them in. At that time in 2001, these were made available on CDs and we would mail them out and companies would, facilities would put them on their computers, type in the information, then either print out the form and mail it back or mail the CD back. The advantage was that it made things easier. Also, it had some built-in data quality checks, and that helped prevent reporting errors. It was the first major step in automation that we did for the regulated community. In 2002, up until this point we used to publish these thick telephone book-like documents that were our national report, that had a lot of information in it. In 2002, we streamlined our public data release report. We came out with these very thin brochures that replaced these very thick public data release reports. We made the information, most of the stuff that would ordinarily go into the national analysis we made available directly from the internet. This was another example of streamlining and advancing the program. Now in 2003, we were always struggling with getting the data out sooner. Remember I said it would take 1.5-2 years for us to release the information. We felt that we could do better than that. Especially given that a lot of advances were made with information technology by this time. So what we did here is that we began to release the data to the public shortly after they were submitted. We called this at that time the Early Facility Data Release (EFDR). Some people call it the Electronic Facility Data Release. Basically what we did was make facsimiles of the Form R reports as submitted by the company available shortly after they were submitted. So we weren't doing any kind of an analysis or anything like that, but if people wanted to start viewing data, they could right from the Form R itself, right from the submitter. By today's standards, this would be a very crude release, at that time, this was considered to be rocket science, it was advanced. It's hard to believe that all this happened less than ten years ago but it's true. Later on then we would come out with our national analysis. In 2005, we took TRI-ME and made it web-based instead of mailing out CDs to companies we wanted to make it access through the web, and we did a pilot on that and it worked out very well again and had a lot of built-in data quality checks, you could just fill it out on the web, press a button and bingo the information comes in directly to EPA. All this was targeted at improving the quality of the data, reducing the burden on the part of industry and having to fill out form R reports, and helping us to get the information out sooner to the public. In 2007 TRI-ME Web was implemented, it's gone over very well, everybody likes it, it has helped us out quite a bit, it has helped industry out quite a bit. In 2008, that was the first time that we actually made our

national analysis available. Not the data itself, but our national analysis. Our summary of the data, our official summary report of the data, available in the same year as the data were submitted. Remember as I said earlier that it would often take 1.5, up to 2 years after the data were submitted before we would come out with our national analysis. This was the very first time that we released our national analysis in the same year as the data were submitted. Again this was a major milestone for the program. In 2008 that same year we came out with our TRI.net analytical tool. It is more of an advanced version of Explorer, many of you are familiar with it, but it was developed mainly for the more advanced user, it has a lot of built-in Web 2.0 compatibility technology in it and it has a lot of really slick capabilities to it, mapping capabilities, it's an excellent tool and you can customize your own types of queries. So that's gone over very well. In 2010, we released My RTK tool, My Right to Know, which is a tool that enables one to access our database from a smartphone and do analyses from a smartphone. Again this is in keeping with advances in information technology. As information technology advances, we try to use that, apply that to the TRI program, and make our data more available and more accessible and more usable to the people by developing tools or making changes accordingly in our program. We recently came out with a Spanish version of My RTK net too. So this is a quick retrospective look at the TRI program over the past 23-24 reporting years. I often view the 1990s as the decade of expansion. I view the, from about 2000 onward, as the years of enhancement to the program. As you can see we have certainly expanded and enhanced the program over the past 23-24 years. Our priorities have always been to make data, information, to make it available to the public more quickly and to make it more usable.

So just to summarize some of this. We've come a long way. We've evolved considerably since the passage of EPCRA in 1986. We're not doing things on paper and pencil anymore. We're not printing documents and mailing them out. Generally speaking the chemical releases and other reported quantities have declined steadily. I think that's a good thing of course. We've greatly enhanced access to the data and use of the data. Newly submitted data are now in the hands of the public in a few weeks rather than in months after the reporting deadline. We now provide users with a diverse suite of tools for analyzing the data. So I think we've come a long way. I've also said looking at it from the industry perspective, we've made enhancements to the data submission process. We've streamlined it quite a bit, made it easier, have some really good data quality checks built in, and overall made the information more accessible and usable by communities, academics, and anyone else that wants to use it. We've also impacted the world, I think. The US TRI was the very first public pollutant transfer and release registry in the world. Since that time, a lot of other countries have developed and implemented their own TRI-like programs. I have been trying, it's very hard to keep count of how many countries have them, but I know that there are at least 50 that I have counted. Many of these were modeled closely or indirectly after our TRI program. Many more countries are expected to start PRTRs in the near future. I think particularly in South American and Central America, you're going to see a lot of those countries implement their own PRTRs over the coming years.

This is a map; anywhere you see blue on this map represents a country that has a PRTR. In two more years, if I were to show you this map again, you're going to see a lot more blue on it. So PRTRs are

spreading throughout the world, quite a few of them now. This is just a list of the countries I compiled that I know have PRTRs. So that's where we are now.

I gave you a retrospective look and where we are now. I'd like to give you some insight as to where I think we're heading toward in the future. I think we're going to continue to draw upon the ongoing advances in information technology. Information technology is always advancing and I think we're always going to take advantage of these advances to improve the accessibility and quality of the data, the TRI data, and to address ever-evolving user needs; they evolve as time evolves, as IT technology evolves. I think we can't lose sight of the fact that EPCRA stands for Emergency Planning and **Community** Right to Know Act. The word Community is very important there. We should never lose sight of the importance of community. So we're always looking for ways to address user needs at the community level, how it can benefit communities, we have several engagements going on with communities, there are some activities going on now in my office where we're doing some pilot studies with communities, some of our regional offices are assisting with that, I also the program has an activity going on with the North American Commission for Environmental Cooperation, and we are looking at developing a framework that would put forth the key factors that would need to be considered to assess a community's vulnerability to chemicals. We recently started an engagement with colleges and universities where we're going to work with them to help us identify and address needs at the community level, and I think also we're going to look more at what communities can do to make TRI information more actionable. I think we've done a very good job in making information available to the public, but, I think now we need to give them some insight on how they can take that information, interpret it, and put it into action. Looking at things on a more global sense, there's this ever-growing emphasis on sustainability worldwide, and even within EPA, the word sustainability has been used by EPA for a long time. But in more recent years it's been becoming to be used more seriously and more frequently. The National Academy of Sciences in the United States has just released a book called, a report called "Sustainability and the U.S. EPA." Essentially that book requests that EPA adopt a sustainability paradigm and articulate its vision for sustainability and sustainability principles. It basically challenges EPA to show more leadership in how one can go about achieving sustainability. Up until now I think we just assume that people know how to do that but now the EPA is going to start showing more leadership in that area, and from what I understand our office of research and development is developing a sustainability framework document that will address the recommendations of this National Academy of Sciences report. So just to put that into the current perspective here, we know that there is this emphasis on sustainability that's growing as a global paradigm. We know that information technology is advancing quite rapidly. That enables one to mash up different datasets to be used together to assess things. We also know that in the past ten years or so that chemical manufacturers are implementing green chemistry and green engineering practices, thereby making achievements in sustainability. Of course what I mean by green chemistry and green engineering: these are practices that are designed not only to cut down on releases of toxic chemicals but even the need to use toxic chemicals in the first place. So this is something that's going on. The next thing that's been happening: we know that global production is expected to increase three percent annually over the next several decades. I'm going to show you this chart summarizing this nicely. I got this chart from a publication by Michael Wilson and Megan Schwarzman out of the University of California at Berkeley and they

published this in 2009, it's a very good paper and I recommend all of you to read this. It provides some insight into the things I'm about to say. They got, they developed this chart from a publication from the OECD, the Organization for Economic Cooperation and Development on the future for chemical production on some estimates for chemical production worldwide and as you can see from the chart, we have global chemical production being illustrated and global population. Global population as you can see is expected to increase somewhat but global chemical production is expected to increase dramatically over the next 20-30 years. In fact it's turned out where this information at least for 2000, 2005, 2010 predictions appear to be reasonably accurate. If that's the case and if the 2015 on up numbers are also reasonably accurate predictions, that begs the question how are regulatory authorities throughout the world going to deal with this? We're having enough challenges now with chemical production as it is now. What's going to happen in the future when it goes up dramatically? So I urge you to take this slide very seriously. What does this have to do with us? I think people and regulatory authorities and other organizations are going to turn to the TRI systems as a means to assess progress toward sustainability. As chemical production goes up and emphasis on sustainability goes up there's going to be this need for some practical way to assess progress toward sustainability. I think that is where PRTRs come into play. The TRI already collects a lot of pollution prevention information. As do many of the other 50 PRTR systems that are out there. I think the role of TRI and PRTR data information as it relates to sustainability is going to need to be better defined. You know the TRI program and other PRTR programs have for many years made the claim and it's true that this information has wide applicability in preventing pollution and being useful to assess sustainability. I think what we are weak on is explaining exactly how to do that. Exactly how does one go about using PRTR data or lack thereof to assess sustainability. So I think that there's going to be more emphasis on that, we are going to have to define the role of PRTR data within the realm of sustainability. I also think up until now most PRTR data has been used at a local level or at a national level, but as this emphasis on sustainability increases and becomes more important there's going to be a need or a demand to look at chemical emissions and other pollution data on a continental level. Even on a global level. You have to look at sustainability on a global level because pollution from one country can affect some other country or countries. So I think we're going to start looking at things in the near future more on a continental and on a global level. In fact the North American Commission for Environmental Cooperation, they have their, they are taking stock database. They add, that database is composed of three PRTR systems here in North America. The Canadian system, Environment Canada, is PRTR, the US TRI, and the Mexican system. They've already begun to do this, to start combining datasets such that we can view things on a continental level. I think that's going to be expanded, this need to do this on a continental level. So we're going to have to start comparing datasets, the different PRTR datasets and combining them or comparing them but that's going to be difficult. I've mentioned the CEC, there's also the OECD, the Organization for Economic Cooperation and Development, they have their PRTR datacenter and they too have a tool that can enable to some extent combining different datasets to look at things on continental or on a global level. The problem is that the datasets are somewhat incompatible. The reporting requirements are different, the chemicals that are covered are different with many countries the thresholds and even the units that these chemicals are reported in are different, so there's this language barrier and country differences that make it difficult to compare data. But we're going to need to do this. It's going to be challenging, but I think we'll be able to figure something out. I think these new emerging PRTRs that I alluded to

earlier, I think their datasets, they're going to need to construct their PRTRs such that their data will be more comparable with the existing PRTRs. Also I think there's going to be a need to mash up PRTR datasets with other datasets, non-PRTR datasets, perhaps census data or toxicity data or whatever it may be. There's all sorts of datasets out there that are important that are related to sustainability, and I think we're going to have to start mashing these things up with one another.

Bryan: We actually have a question on this topic if you'll –

Steve: Actually I'm on my last slide. So that's all I had to say, and I'll take that question.

Bryan: The question is, are American firms that have foreign facilities obligated to report their foreign toxic activity? Obviously not under TRI but potentially under other.

Steve: Well if they're in a country that has requirements then they would have to comply with the requirements in that country. If those requirements include submitting information to the PRTR-

Mike: But in, from our perspective at EPA, we're not able to get Apple Computer, for example, to tell us what's going on in China. And I suppose a question like this may have come from some of the articles that have been in the New York Times lately about chemical activity in Apple and China.

Steve: Well we can't do that, but if the country has a PRTR and it's available on the web, we can access that information.

Mike: This also has been something that a number of environmental and public interest groups have been looking at, and one example that comes to mind is there was the comparison made of chemical release data from US companies to some foreign manufacturers in the automobile industry. One study revealed that the car company that had the least polluting manufacturing facilities was not Saab or Volkswagen or Toyota or Honda as one might think, but it was of all places Chrysler here in the US. Of course Chrysler had divested themselves of many facilities and the facilities they have now are newer, leaner, more efficient, and the same with tire manufacturing that a company here in the US, Japanese-owned Bridgestone tire, very clean facility compared to Michelin where they have the older facilities that may be generating more pollution. And as some of these environmental advocacy groups are doing their work, they're trying to suggest that consumers may wish to steer their business toward companies that are producing less pollution per unit produced. So that has been a benefit. Another question we have: would a facility that is obligated to be reporting to the TRI, if they haven't reported for several years can they come in now and report backwards in time? Historically this is something we haven't been sanctioning because once the dataset is made, the dataset is made and we never wanted to encourage companies to report in 2011 what happened in 2009 on the theory that they might be waiting in the weeds to then report but obviously the more data we have is better. Another question that has come in: You've been highlighting some of the EPCRA enforcement actions, what about small and medium facilities that feel inundated by environmental regulations? Is there something the EPA is trying to do, are there resources available at EPA to try to help these facilities? Absolutely. A lot of this

TRI-ME software that the TRI explorer tools, many of these are user friendly and have been designed specifically to help small businesses comply, businesses that are in these SIC codes that may not have had much attention from EPA. Our position in the law enforcement office is that we will look very closely at the knowledge and experience of an entity when we seek to impose an enforcement action. We have the ability to issue warning letters, notices of non-compliance, we certainly are not trying to use a sledgehammer to dispatch a mosquito. On the other hand, if you are doing business in the United States with hazardous, toxic, explosive, flammable chemicals, we take an approach similar to that which is taken by the IRS: if you're going to do business in this country, you have to pay attention and paying attention to environmental or regulatory requirements in fact is a cost of doing business that if your business is not hiring someone expending their resources to have someone assist you, that's really an economic benefit that you may be enjoying that the company next door that has retained someone, has hired someone, has paid for someone to attend training, has incurred. So that's important.

Steve: I have a question here, Mike, if I may. The question is: is there a thought of making the P2 information mandatory on Form R? Most of it in fact is. The quantities recycled or burned for energy recovery or treated onsite or offsite, all of those quantities are mandated, so they have to be reported on Form R. There is some information that is optional and that's the information that one can put in section 8-11 of the Form R and that is if somebody wanted to give some details on some pollution-prevention related activity, they may have implemented that at the facility, they're allowed to do that, it's not required, it's optional. But suffice to say much of the P2 data that is submitted is actually required. I just wanted to make that clear. Another question: what is the best point of contact if we want to get the most accurate location data of the TRI sites? There's, I guess they're asking the lat long? You can identify the specific addresses through any of our tools. One can identify depending on what type of search they do, one can identify the specific facilities that have reported and that would include their street mailing addresses. So that, I think is a very good simple way to identify facilities. We have mapping capabilities in most of our tools that if you wanted to show a picture of a map of the state or the country, it'll put little dots where the facilities are and you can just click on a dot and it'll bring up the address of that, so if you take a look at our tools it doesn't take too long to learn how to use them I think you'll find the answer that you're looking for.

Steve: Here's another question, how do you enforce toxic release inventory reporting by federal agencies since they comply via executive order rather than regulation? Well the executive order that was issued for compliance is 12856 to be specific requires federal facilities to submit EPCRA 313 data to the TRI in the same fashion that everybody else is required to do so. This was an enhancement that was put on with the belief that Uncle Sam and his many facilities around the country should be in the same level of compliance as any non-governmental operation and so this is being done and in fact the agency has cited federal facilities, believe it or not, under most of our environmental statutes, air, water, hazardous waste, we even went after the Smithsonian of all places for maintaining a feedlot right here in the center of our great city of Washington D.C. at the National Zoo, where they were storing animal waste that went into Rock Creek Parkway. So Uncle Sam has to do the same thing that anybody else does. Two other questions concern the remarks I made about citizen groups who stand in the shoes of the federal government to enforce EPCRA provisions. Do the citizen groups who sue these companies

get any of the recovered money? Yes and no. They are entitled to recover their attorney fees if a court so orders it. They are required to pay all penalties they collect right into the US treasury, which they have done in thousands of cases they have had penalties come into the treasury. They also have negotiated supplemental environmental projects, pollution prevention, other terms and conditions where the defendant in these lawsuits, and they all have to be filed in federal district court where the defendant has been conducive to these sorts of terms. The other question along this line: Was any attempt made to rectify the impact of the Citizens for a Better Environment case, or does the precedent stand today? Yes the precedent does stand today. It is almost an identical precedent to one laid down by the Supreme Court before Clean Water Act citizens' suits. The principle being, dear citizens, you've done your job, you have alerted the facility that they're in noncompliance, they are in compliance, you're not entitled to any more penalties once they have come into compliance, it's as simple as that. And although this eliminated the source of potential work and revenue for people like me that might want to work for a citizen group someday, this impacts the long list.

Steve: I think we have time to answer one more question. I'd like to take this as a quick question, and the question reads: Given the fact that TRI has collected pollution prevention data for 20 years, are there any P2 trends, pollution prevention trends, that EPA can point to? I think this is an excellent question. Offhand the only thing I can say quickly in answering this question is that there has been a steady decline more or less over the past 20 years or so in releases that were reported, there has been also generally speaking a steady decline in total production-related waste that's been reported. Maybe not necessarily every year but generally speaking. Now I caveat what I just said with that there's also been a general decline in the number of facilities that reported as well. So you have to take into account these decreases from the point of view that there's also been a corresponding decrease in the number of facilities that have reported. So this is a very good question, I think this is something that I'm going to follow up on. I can tell you that at least with the pharmaceutical sector, they have made some pretty big advances in implementing green chemistry and clean engineering practices. I've noticed that as a sector, the pharmaceutical industry, their releases and their total production-related waste quantities that they report have dropped considerably with regard to other manufacturing sectors, chemical manufacturers. So that might be something. But I'm going to follow up on this question, I think it's an excellent question. I think that's just about done with our time.

Jennifer: Thank you so much Mike and Steve for addressing those fascinating questions and unfortunately we just don't have enough time to get through all of the questions that you all submitted today. I want to make sure we point out a few things on the last couple of slides here. Here are some contacts of your ECOS and EPA contacts, Bryan and Mavis as well as myself, and I also want to mention something that Bryan said earlier, that this is the fourth webinar in this ECOS-EPA TRI series, past topics some of which we heard about today have included: TRI web-based tools, the use of TRI to support environmental justice policies, and toxic releases on tribal lands. You can find the complete recorded webcasts for all of these webinars, including today's webinar, on the Chemical Right to Know website. Here are some additional resources you may be interested in taking a look at. Again these slides will be available on the website as well so if you are unable to jot all of these down now, don't worry about it, you'll have access to them at any time. Finally I just want to thank you for attending, I want to give a

special thank-you to our presenters, we learned a lot and in fact we are very interested in hearing how much you may have learned. So I encourage you to respond to the feedback questions you'll receive at the conclusion of the webinar, and also the 2012 TRI national conference, TRI conference, is coming up in April in Washington, D.C., the theme of that conference is "Understanding the Past and Promoting a Sustainable Future." You can read all about that on, once again, the Chemical Right to Know website (www.chemicalright2know.org). So thank you very much everyone, we'll try to have this recording up by tomorrow if possible and we really appreciate your time today. Thank you, that ends our webinar.