

Webinar Transcription 5-25-2010

Jennifer: And we'll make the recorded webcast and written transcript available on the chemical right to know website, so again please check that site later for that information. We'll also be posting all the presentations, presenter biographies, resources and contact information to the site, and lastly, and we'll go over this at the end, we do need your feedback at the close of the webinar, so you will receive a very short follow-up email from GoToWebinar, so please check your spam boxes for that, as it may end up there. But we'll just be asking you a few questions just to get your feedback after the webinar so that we can improve future webinars.

I'll just quickly go over the webinar agenda right now. We've just gone through our logistics. We will first hear from Heather Case, from the EPA's Office of Environmental Justice and then we'll have an overview of TRI, a basic overview, and then some practical demonstrations using questions that are of interest to the environmental justice community, we'll have demonstrations of several TRI tools that can be used to address community concerns about EJ, and then we'll have a program update from Rebecca Moser from the TRI program division. And then we will hear from four folks from out in the field, we will hear their success stories and how they've used TRI to address community EJ concerns. And last we will have a presentation on some important research happening with TRI and coupled with other environmental information, again to sort of dig a little deeper and take TRI to the next level. And then we'll have a little wrap-up and I'll remind you again about your feedback.

So just to recap our learning objectives, we hope today that you will learn the TRI basics, and that includes facilities and chemicals included in the database, various tools available that we won't be able to cover all of them today, how to perform basic queries, generate reports and interpret results, generally. We hope you will understand through the practical examples how communities have successfully used TRI to address environmental justice concerns, and then learn how research has taken TRI to the next level to better understand health risks among EJ communities.

OK, so our first presenter today will be Heather Case. Heather is the deputy director of the EPA's Office of Environmental Justice. During her 14 year EPA career, she has served as branch chief in the Office of Environmental Information; she holds a Masters of Public Health from the University of Medicine and Dentistry of New Jersey, and a Masters in Business Administration for UVA. Welcome Heather in joining us. And we'll give you presenter rights. And there's just a little delay here.

Heather: OK. So you can hear me OK? Excellent, OK. Show my screen... Slideshow... And let's see, can I make this... Are people seeing the sidebar here of the different activities of the GoToWebinar...

Jennifer: No we are just looking at your slides.

Heather: OK good we are all lined up. Thank you again Jennifer for the intro, and thank you everybody. Just to give you a little bit more background about me, I just wanted to mention that when I was at the University of Medicine and Dentistry and working on my MPH, my awareness about environmental justice was really raised there, where I studied numerous case studies, including people for community recovery, the toxic waste reports that our director Charles put together, as well as the people from (?). That was an awakening for me, but the seeds were set very early during my education that if we're going to effectively protect public health, then we have to look at multiple sources of pollution, we need to be thinking about health, housing, neighborhood safety and of course, economic equity. And so since coming to EPA 14 years ago, my career has largely centered on the analysis of data and information and tools to support decision-making, and that's just the path I've followed and have enjoyed and embraced. And those decisions are decisions made by communities to take action, decisions by policymakers as they administer their programs, things like writing regulations and targeting resources for programs, and I think one of the big takeaways here is that time and time-again, those decisions that are made demand that we take a holistic view of the multiplicity of factors that contribute to environmental public health impacts from pollution.

That's why I'm really happy to be here today, to be part of this program, I think this is really about bringing information and tools for decision-making, to take this broader, more holistic view, and it's so vital. I mean when we're thinking about integrating environmental justice considerations and decision-making, what we need to be thinking about are multiple and cumulative exposures. TRI helps us see that, and we also need to be looking at socioeconomic factors that are contributing potentially to greater impacts of pollution in certain populations.

So today, my presentation is really about EJ at EPA these days, and at the end of this presentation, what I hope you'll take away very clearly is that EJ is a priority at EPA. Just a little bit about the Office of Environmental Justice and how EPA's broader EJ program works, how EJ as a priority is being carried out, and mostly I'd like to tee up the impact it's already having on the nation, with some examples. And then as a means of teeing up my colleagues from EPA, I'd like to present what I think are some pretty basic connections, or pretty obvious connections hopefully after my presentation, that you'll see between TRI and EJ. And with that, let me turn to our first slide here.

I think this is a very strong quote, but I think the point with this slide is that today, the opportunity to make real progress towards the vision of environmental justice is perhaps greater than ever before. We have a great champion in Lisa Jackson as our EPA Administrator. And I think this speaks very clearly to her expectations. This is a quote in July of 2009 to our national environmental justice advisory committee, and I think the point being that we need to factor environmental justice considerations in every decision, and that is a strong commitment. Second, I'll mention that our administrator appointed a senior policy advisor in January of this year. Her name is Lisa Garcia and she has brought already a lot of great knowledge, experience, and energy to the agency to push forward this priority.

This next slide is a set of priorities that were established in January of this year, and as you can see, the fifth one down is about expanding the conversation on environmentalism and working for environmental justice. Again this is reaffirming the notion that we need to include environmental justice principles in all of our decisions, and in this expression of our priorities, she asks the agency to bring innovation and bold thinking to this vision, and this creativity in bringing environmental justice principles and to how we manage our program and the decisions we make.

I'll point out with these priorities that they are not islands unto themselves. This notion of expanding the conversation on environmentalism and working for environmental justice is something that we do as we carry out our work in the other priorities. For example, as we work to clean up communities, we want to integrate environmental justice into these decisions. Just as a really brief update on Office of Environmental Justice, I'll mention that OEJ, as our acronym, we are a staff office of 19, and our role, our mission is to facilitate the agency's effort to protect public health in minority, low income, and indigenous populations and tribes by integrating. So we play many roles in that capacity. Internally, we serve as a policy advisor, sometimes technical advisor. We're a convener and a facilitator, and we also work directly with communities and the administration of grant programs, but we also have this huge coordination role by working with the rest of the agency so the expectation is that the integration of EJ, we help to facilitate it, but we need to call upon everyone in the agency to do that.

This next slide is just a simple background for those of you who might not be aware of EJ, but I just wanted to mention that we have such a [?] authority to consider disproportionately high impact on minority and low income communities, and also of course, many people know of the executive order on environmental justice which was signed by Bill Clinton in 1994, this basically asked that all agencies make achieving environmental justice as part of their mission, and also focusing on the identification of disproportionately high impacts on minority and low income communities.

So a little more about the background here, and this appears to be a slide that is broken into different pieces, but we have a number of different key program strategies and though I speak to the agency EJ program, again, I'm talking about the Office of Environmental Justice with the rest of the agency. So one strategy we're undertaking to support the administrator's priority on environmental justice is to engage the impacted communities in EPA decision making, and we're enlisting our partners and other federal agencies, other levels of government, to help meet community needs. That's one.

The second is, we're working hard via regulatory tools, to protect overburdened communities and ill be giving examples of each of these. We're working to empower overburdened communities; that's the next one, and the final is that we're building internal mechanisms to integrate environmental justice into decision-making. Our deputy administrator Bob Percesppi (?) talks about integrating EJ into the DNA of the agency and we need to establish this as just a regular part of decision making so a lot of it is focused on the processes.

So let's talk a little bit about expanding the conversation on environmentalism. One of the key things that we are working on with the agency is to increase awareness of the issue of environmental justice and this past spring the Office of Environmental Justice working with the Office of Public Affairs ran what was called "the faces of the grassroots environmental justice video contest." The purpose to engage youth who are using video and web 2.0 and whatnot to share or to illustrate the issue, and we really wanted to get the public's perspective on this, and if you look on our website, there's some really great videos. We're currently going through the process now to make some final decisions about the winners, but I really encourage you to take a look at those. They're very innovative, creative and impactful, so those are my takeaways from that.

EPA is also working with James Pfiburn (?) and Donna Christiansen on what's called the PVC environmental justice tour. Again this is to illustrate burdens in disadvantaged communities and to create a focus on the creation of jobs and how we need to work, the EPA with other agencies to address these issues. Another way in which we're expanding the conversation is our office of solid waste and emergency response under the leadership of Manny (?) is focusing on a community engagement initiative, and this is his desire to revitalize (?) processes as they engage communities in decision-making as they clean up contaminated land, for example.

So that's one strategy, again, expanding the conversation, and these are some examples. The next strategy is applying regulatory tools, regulations are the bread and butter of EPA. Certainly a lot of what we do, and one of the areas in which we're working is to create guidance with the agency on how to integrate environmental justice in rulemaking and this is something that has been under development for about a year. We've been providing updates to our FASA(?) committee on this, and again our current plan is to release an interim draft of the guide this summer that describes key questions that need to be considered around environmental justice as we develop rules to encourage engagement with communities on rulemaking and lastly, to think about the timing of the engagement, which of course, early is always better than late. So look for that.

We also recently focused on a symposium, or hosted a symposium, and the focus of this is to gather the best science, and thinking as we identify this proportionate impact in analyses that promote decision-making, we are capturing all the factors that could contribute to people being more vulnerable to the impacts of pollution, and this was back in March, we had a great symposium, a lot of wonderful feedback, and we have some technical papers that are going to be published next year so stay with that.

We also have our Office of General Counsel. It's currently working on an analysis of opportunities to use our environmental laws and statutes to address environmental justice, and most recently, the Office of Policy has published what's called a rulemaking gateway, and this is for communities and the public to understand where the agency is with it's development process and one of the points I'm going to make is that there are rules that are identified as having EJ impact. The potential for the forces being regulated

to have a disproportionate impact, and that's being factored into the rulemaking discussion.

The next area where we're doing a lot of work, and this with OEJ and our regional offices, and the development of EJ showcase communities, these communities' efforts bring together government and nongovernmental organizations to pour collective resources and expertise on the best way to achieve results in communities. And the example I'm showing here, this is in our EPA region 6, which includes Texas and right now our regional office there is developing and implementing a comprehensive cross-media project in this very diverse city. More than 50 percent of its residents are African American or Hispanic, and the city has many facilities including chemical plants, refineries, and a hazardous waste incinerator. So this project is being developed with other government agencies in response to community-based organizations who called upon EPA to look at the cumulative effects of and impacts in Port Arthur. So this is one example where we were really trying to... again EPA can't do it alone, we're really trying to work with other government agencies to bring our collective resources and expertise to play.

The next example is what we call the Hudd DOT Partnership for Sustainable Communities, and this goes back to the strategy of how we're empowering communities. I think the key takeaway with this partnership is again that EPA can't do this alone. We need to be working with our other federal partners and one of the key points about this is that what I love about the (?) is that they're promoting equitable, affordable housing, and that we're supporting existing communities, and it's done in a way that there is this focus on equity, and this is another example where we're already having a huge impact.

Building internal accountability mechanisms... really quickly... one of the other things that I mentioned is that we're trying to integrate EJ into the DNA, and so part of that is how do you influence key processes like the development of a strategic plan for the agency? Building and putting in place measure that will enable the agency to track progress in improving environmental conditions and public health in disproportionately burdened communities. And also we are supporting agency program evaluations, or what we call EJ reviews, which are a look... programs look at their existing activity to assess how well or how can we improve the consideration of environmental justice. And these are all things, that, for the long haul, are all things that we want to employ so it becomes part of the day to day business of the agency.

OK so now im going to talk a little bit about impact and I realize I'm probably running over so I'm going to try to make it really quick. These are some examples where we're already starting to see the impact of the administrator's priority on EJ. It's a really big deal; let's take the greenhouse gas endangerment findings. One of the things... the focus of that finding was the health effects. One of the notable health effects that was highlighted was on vulnerable populations and environmental justice. Ill just mention that in this environmental justice issues were barely raised through examples such as warmer temperatures in urban areas as having a more direct impact on those living without air conditioning. So clearly this is an area where already the thinking about EJ is

influencing agency decisions. I'll also mention for example is the FASA? Control Act reform. We have a principle that risk management decision should take into account sensitive subpopulation cost availability of substitutes and other considerations, and I think that the key point here is that we should have the clear authority to take risk management actions when chemicals do not meet a safety standard, and taking into account a range of considerations including children's health, economic costs, social benefits, and equity concerns, and clearly that is speaking to the principles of environmental justice.

Again, a couple other examples where we're already seeing a huge impact. In the... I'm just going to jump to mountaintop mining. As many know, that has had a huge impact on communities, particularly in central Appalachia. On April 1st of this year, EPA issued interim guidance to our regional offices that explains the factors that EPA is using to reduce proposed permits and permit application. And the guidance, if you look at this, explains that EPA will consider adverse human health or environmental effects on low income and minority populations as part of determining whether to exercise its discretion to draft state permits under Clean Water Act section 402. That's a big deal. Now this has been published as interim guidance in the agency's currently collecting public comment on this until December 1st.

So I just wanted to share not only is this a priority and we're working on it, but it's already having an impact. So again, the key takeaway is yeah, the agency is once again guided by a broad vision of public health and environmental justice... again this speaks to the progress being made and the progress that will be made. So with that, Ill turn to... this is the handoff... I wanted to share a couple thoughts to set the stage for the next presentation.

When I think about environmental justice and TRI, there are many connections but the things that came to my mind were, one, the principle, the right to know, speak to empowerment of communities, and when we think about TRI information and data and tools... yes, they empower communities to take action and to enable meaningful participation, and I think it's a strong environmental justice principle and something that has certainly been a priority for the agency. And secondly, when we use this data and information, I think it helps again those decisions that are made, it helps us support the identification of disproportionate impact of minority and low income population.

So with that let me turn it over to the mistress of ceremonies, and again I thank you for your attendance and participation today.

Jennifer: Thank you so much Heather. That was great. I believe we are going to hear a lot more about community empowerment and the power of TRI to do that in one of our presentations coming up. Moving quickly along here, our next two presenters will give you an overview of the TRI program and run through some practical examples of how various TRI tools and can help address EJ questions. First we'll hear from Mariela Lopez, she's been with the EPA since 2002, and she is currently a program and enforcement officer in the TRI program in region 9, San Francisco. And we'll hear from

Tony Davis, he'll walk us through some live demos, using various TRI tools, Tony is a Senior Environmental Employee working in Compliance Assistance and Outreach, in the TRI program here in region 10 in Seattle. So without further ado, OK Mariela are you ready to go?

Mariela: I am ready, I'll be showing my screen very shortly [OK]. OK, I am putting it on the slideshow. Can everybody see that? [Jennifer: Yes we can.] Thank you so much for the introduction, Jennifer, and welcome everyone to the ABC's of TRI, and we'll start with the letter A. A is for acronym. EPA has a lot of them.

Let's start with some very important ones. The Emergency Planning and Community Right to Know Act, or EPCRA created the Toxic Release Inventory, or TRI. And TRI is on the community right to know side of EPCRA. EPCRA was enacted in 1986 after a deadly chemical release in Bhopal, India. T is for toxic chemicals. R is for releases that are estimates calculated by facilities, based on EPA guides. I is for inventory, all the data is available online with no log-in and no passwords. TRI is a rich data source, and Tony will show you just how much in his demo. TRI is the starting point when looking for potential toxic chemical hazards to health and the environment. As you can see on the slide, in Los Angeles County alone, there are 417 facilities and over 1500 chemical reports. In the US there are 22 thousand facilities and 85 thousand chemical reports, basically meaning that we have a lot of information for you.

B is for break it down. I'm going to tell you about the who, what, when, where, why, and so what of TRI. So let's start with the basics.

So why TRI? As I mentioned before, EPCRA was created in 1986 after a deadly accident. This law was the US response to citizen concerns, and we have a right to know what is in our communities. So who must report to TRI? Any facility that meets these 3 criteria, and they have to meet all of them: TRI listed by North American Industrial Classification Code, or NAIC (yet another acronym!), 10 or more employee or equivalents, and be above the threshold for TRI chemicals.

So when the facility meets all these 3 criteria, it has to report to US EPA, and the state in which it's located, the releases that it had for the previous year. The deadline is every July 1st, and failure to report this information is enforceable under the law and can mean monetary penalties for those that aren't compliant. So let's talk a little more about these different criteria for reporting.

So which industries? The EPCRA's inception in 1986, manufacturers were the first to report. On the fly, you can see a brief list of those. Next came federal facilities in 1994. In 1998, 7 more industries were added. And these industries, as you can see on the screen... and also just wanted to mention that there is a petition process to add or delete sectors to the TRI. So as far as the chemicals that were included, our original list was about 300 chemicals, and it has grown to over 600. Even more recently, EPA proposed adding 16 new chemicals to the TRI list, and like I mentioned, there is also a petition process to add and delete chemicals.

So the threshold for chemicals is 25 thousand, or 10 thousand pounds per chemical per year. Manufacturing means that the facility is actually producing, preparing, or importing the chemical. Processing means the facility is incorporating an already-manufactured chemical into their product. Otherwise use means that the facility is using the chemical, but not manufacturing or processing, but the chemical is still necessary to process, like lubricants used to grease machinery. There are also much lower thresholds for chemicals that are persistent bioaccumulative and toxic. For example, dioxin is 1 gram per year to trigger reporting and lead is 100 pounds per year.

So what the facilities are reporting are releases. And what is a release? In the TRI world, a release can mean many things, as you can see on the screen, they can be spilling, they can be leaking, they can be pumping, and releases can be categorized as on-site or off-site. So on-site basically means at the facility, and there's releases of the TRI chemicals to the air, surface water, underground injection, and land, meaning that they're placing material on the actual land of their facility. Off-site releases means the transfer of hazardous waste to disposal sites.

So how are facilities reporting these releases? On one of two forms. Similar to taxes, the long form and the short form. Most releases are reported on Form R which has detailed information on chemical releases. For Form A, which only have facility, address, and name of chemical, can only be used when production-related releases and waste management like recycling is below 500 pounds per year. So you might be asking yourself, where can I find this information? Tony will talk in much greater detail in his demo, but these are a few places to find and work with the data. And a few specific places to find the data are envirofacts, TRI Explorer, and TRI.net.

So C in my ABC's is what TRI can and cannot give you. TRI can give you data that you can access, chemicals released by year, by location, facility information and public contacts. Comparison by industry, by location... It can also give you tools and maps for analysis, and it's a great starting point looking into potential hazards to public health and the environment. What TRI can't give you is all the information needed for risk assessment. It doesn't include any information on exposure, toxicity, sanction, etc. Or we also don't have releases from mobile sources, and also facilities that fall below our criteria.

In conclusion, TRI provides the public with information and tools; it's available online 24/7 with no log-ins or passwords, but they are releases that are calculated by industry. We like to think about it as the sunshine effect. We are putting the spotlight on companies and making them think about their actions. It is enforceable by law and finally, it's a great starting point, and can be combined with other data. The TRI program in region 9 is located in the Communities and Ecosystems Division in the Toxics Office. Myself, Mariela Lopez, I put my number on there in case you want to reach us and also Nancy Levin, our coordinator here in region 9. So after ABC's comes D for demo, by Tony Davis. So thank you everyone for your time and attention.

Jennifer: Thank you so much Mariela. Tony are you ready to go? Tony are you out there? We are giving you presenter rights.

Tony: Thank you.

Jennifer: And we are seeing your screen, so go for it.

Tony: OK. All the demonstrations that you see will begin at the TRI homepage. That's what you see in front of you. To access the reporting tools, you go to the TRI data and tools tab, and press that. This takes you to a page that gives you the 3 major access points to TRI data: TRI Net, TRI Explorer, and Envirofacts. TRI Net is a high-performance data engine as it says and it's installed on your computer. TRI Explorer and Envirofacts are located on the internet. We're going to start today with TRI Explorer. We'll move to TRI Net and finally do a quick demonstration on Envirofacts. Let's access TRI explorer.

Let's try to search for chemical releases in a county bordering Mexico. Environmental groups in this area could possibly be interested in what toxic chemicals are released in or near their homes. We might expect a large Hispanic population would be effected by these. Imperial County, California is one that we've chosen to demonstrate. You go to the geographic locations; you always start the reports on the left and work to the right, generally from top to bottom. You select the state or county, in this case we're going to select California. Then we select from the list of counties. We go to Imperial County. And we generate a report.

TRI Explorer will display a report in the form of a table. It lists all of the TRI reportable chemicals manufactured, used and released in Imperial County. This is the list for Imperial County. Now, what a person might ask is who is producing these chemicals, and that's easy to find out. Click on the Go to New Report Tab, and select Facilities. Incidentally, Chemical and Facility aren't the only one you can select. Trends and Industrial search too, but let's move on. We go to California again, and then again we're going to go to Imperial County. And we generate the report. This displays the facilities that have TRI reportable chemical releases in Imperial County. You can see there's a sugar company releasing ammonia, a gunnery range, and you also have a gold mine. It looks like it uses a lot of fairly toxic chemicals so we might visit there later on. First though, we want to see just where these toxic chemicals are being released and in what quantities. To do that, we press these horizontal arrows, which lets us know that there are fugitive air emissions, point source emissions and surface water discharges. This is what I'm going to concentrate on in this demonstration.

As you can see, there's underground injection wells and disposal on and off-site land that's available also. Now, to find out or to search the fugitive air emissions, you simply press on the down arrow, and see that the person or company who releases the largest amount of TRI reportable chemical is this sugar company, and they do ammonia. Western Mesquite has a larger list. Now, let's take Western Mesquite. We might want to know a little bit more about this company so we simply click on the highlighted company

name. This takes us to the facility profile report. If we want to talk to the person who is their public contact, his name is listed. And his phone number. This gives the number of Form R's that are available for review, the total on-site releases, and then finally, the TRI chemicals that have been reported by the company.

If we want to go to Form R which Mariela alluded to, we can pull that up out of the Envirofacts database by clicking on the highlighted text. This is the actual Form R. It's a report. It's actually a form submitted by TRI facilities, for each of the chemicals reported. In this case, it's an electronic version of the form. The first Form R is for cyanide compounds. There are fugitive or non-point source air emissions; 4800 pounds, and they have the basis of an estimate called other approaches. If you want to know the other approaches or the units measured, you just simply click on the highlighted text. Now, we're not going to dwell at this page because it's very extensive. But one thing that we want to do is we want to get into the actual relationship to environmental justice data. And to do that, we go to "go to a new report." This one is not going to be the release report. This is going to be the state fact sheet. We click on that and either from the map of the US or from the list on the left, you select California.

This will bring up an interesting report. It's quite general, but it's interesting. It tells about all of the TRI releases in California. Right now however, we're interested only in Imperial County, right on the Mexican border. If you click on the county, you see that you can get a list of TRI chemicals, facilities, industries, or you can go to the census. Now the census bureau is a wealth of information. It categorizes everything. Now what... environmental justice communities generally are interested in your origin or the origin of a person, and generally a person's economic condition. In this case we can see that there in Imperial County there is a 76.8 percent Hispanic population, whereas in California, there is a 36.6 percent.

To carry this one step further, you can do what's called browse data sets for Imperial County, which essentially is just going into the details. We are going to look at the demographics, socioeconomic and housing characteristics. As you might guess, in Imperial County, there could be some populations that are disadvantaged, and that's what we're going to look at, and this is how TRI Explorer links to environmental justice. Under economic conditions, we'll see that 19.7 percent of the population is below the poverty level, as compared with 9.6 percent for the US and 21.2 percent are below the poverty level as 14.2 percent for the US. Hispanic or Latino population, you can see that there's the 76 percent population there, as opposed to the 15.1 percent for the entire US. That's environmental justice data right there, and this is how you reach it through TRI Explorer.

The next place I'd like to go is called TRI Net. This is a more or less advanced search engine. Where it looks for data in the TRI database.... We're going to start at the TRI homepage. Click on data then tools. Since this is not an online service, you have to (audio fadeout) to your computer. I'm not going to do that now; it takes about 2 hours under normal conditions. Once you download the application, it's best to go through quick start and pay attention to the user's guide and follow the tutorial. When you do

that, you begin to understand how powerful TRI Net is. The first place I'd like to take you this morning, or this afternoon, is to Birmingham, Alabama.

To get there, and we'll search for environmental justice communities within 3 miles of the city center. First of all, we establish a city center. And we'll click go. When we do that, you'll notice that the latitude and the longitude point is established on the bottom. That's the very center of Birmingham, Alabama. We're going to go 3 miles outside Birmingham. This sets the stage for our query. Now what we're going to do is build that query. The first place you go are the grouping variables. These are basically the columns of the report. You go to the TRI facility ID number. That's important. That links you to all the maps that we're going to look at in the future. We are going to look at the chemicals, name, address, state, and zip code that are going to appear in the report. Next we're going to look at releases.

As I was telling you when looking at TRI Explorer, we're going to look at fugitive air emissions, point source air emissions, and surface water discharges. Finally, looking at what are called filtering variables, we're going to be able to go into this report and filter out everything except for environmental justice information within 3 miles of the company.

The criteria that we are going to use today is for percent minority greater than 25 percent and percent below the poverty level greater than 25 percent. Then we run the query. This is what we see. We see a long list of chemicals. You have 102 records of discharges within this 3 mile radius. It gives the name of the company, the address, the city, the zip code, and it also gives you the measurement in pounds of the compound. Now if you want to read this a little bit more easily or possibly print it, you can send it to a browser, which makes a very readable report. If you want to sort the data or do an advanced sort on it, you can send it through a spreadsheet. In this case, what we're going to do is we're going to mark all the data by clicking in the upper left hand corner and we're going to send it to Google maps. We're going to create a map of this circle that we've created around the center of Birmingham, Alabama.

Now when this map is generated, what it does, it lists all of the TRI facilities and in the column on the right. It also shows where they're located with respect to downtown Birmingham. You can either click on the number or click on the highlighted text if you want to find out what's going on at any particular spot with respect to environmental justice. If you click on United States Pipe Impoundry(?), you see a little box pops up. If you click on any of this highlighted text right here, it'll take you to the Environmental Justice Geographic Information tool, and you'll get a report for downtown Birmingham; it looks like this.

Now this gives you the percent minority, percent below the poverty level, households on public assistance, and as you might suspect, there's a large African American contingent or population in this area. If you want to go even further into this data, you click on the county and the state comparisons and it takes you to comparison of the study area within a 3 mile radius in Jefferson County, Alabama and to Alabama. Here you can see within

the 3 mile radius of the TRI facility, you have 36.5 percent of the people are below the poverty level, but in Jefferson county you only have 14.5 percent, and in Alabama you have 15.7. There's a pocket of poverty around that facility. Again if you take a look at the African American population, you'll see that there's an 83 percent population around that facility, but in Jefferson County its 35 percent, and in Alabama, it's 29 percent. That's EJ information.

The next place I'd like to take you to is tribal lands. Now this is a map that was generated by EPA's headquarters and the TRI program. Each one of those red dots is a TRI facility that's located within 10 miles of tribal lands. We're going to go a little closer than that in the upcoming report. We're going to look at TRI facilities within 3 miles. Now, to do that, we create a new query, we go to my neighborhood. We're going to be looking at the entire country, so we set the stage for that by eliminating Birmingham, Alabama. We go to the grouping variables and we select ID, the name of the chemical, name, address, city, state, zip code, only this time, we select tribal lands as one of the columns. For the releases, we go to fugitive air, point source air, and surface water discharges. And for the filtering variables, we don't select the 3 mile criteria, we select tribal and we select tribal lands within a 3 mile buffer. As you can see, you have quite a range to select here. But this is the one that is kind of interesting. Then we run the query. This is what we've got.

We have 1178 records of discharges within 3 miles of tribal lands within the United States. On the tribal lands column, you will see what's called null (?). These are facilities that are between the tribal lands and the 3 mile boundary that we've kind of arbitrarily set. What I'd like to do is go to the Navajo nation which is located in the Four Corners area of the United States. You can see in the Navajo nation, there's quite a range of TRI releases, so we mark it on Google maps. What we get when we go to Google maps for the Navajo nation is quite a stretch of geography. And also kind of a range of projects. We have a coal mine, a paper company, and two coal-fired plants.

Let's select the Four Corners Steam and Electric Coal Plant. You have the ability to collect EJ data within 1 mile or within 3 miles, and that's what we're going to do. You receive a report that looks like this. Not surprisingly, you have a 99.7 percent minority and you have quite a population that's living below the poverty level. Narrowing down that data, you can see that 99 percent of that minority is an American Indian population. If we press on the county and state comparisons, we'll see that in the study area, we have percent minority of 99.7 percent. In San Juan County, New Mexico, 53 percent, and in New Mexico itself, 55. Around, in the study area, again it's 99 percent, but in San Juan County, New Mexico, the Navajo population is 37 percent, and in New Mexico it's 9.5 percent. That's TRI data, I mean that's EJ data that you can use, and I'm only touching on... We used fairly limited criteria for all the searching and TRI Net has almost an infinite amount of data that can be developed in reports for information.

Finally, we're going to go to Envirofacts. Again, we go to the TRI homepage and we select Envirofacts. Envirofacts is a lot of data. And so you need to know how to get into it. In this instance, we're going to go to compliance. And we're going to look at El Paso,

Texas. The internet is just a tiny bit slow today so we might have to wait a minute. We typed in, we can go to, we can narrow the searches as far as a zip code, but right now I've been tending to stick with the larger geographic areas. And we search... where we're going right now is a report on all of the industries that are required to report to EPA.

Now this isn't just TRI. This is everybody. And so the search is much broader. What it does is list (audio fadeout) and also once it... compliance problems. We're going to get there eventually. This is Enforcement and Compliance History Online (ECHO). What's in ECHO... we're going to look for an industry that's had some problems in the past. This one here appears to have not only had problems, but it's also paid some fines. So let's see what this database.... Really is quite interesting if you're interested in just pure raw environmental data. As we scroll through the information, we finally come to the end, and here it is.

Demographic profile of the surrounding area: 3 miles. It looks as though that here is a large Hispanic population in this area, which isn't surprising because it's on the border. Also there appears to be a large number of homes that make just a limited amount of money. If we go to the top, there is an environmental justice highlight here, and if we were to click on the 3 mile radius around this, where we would go eventually would be the environmental justice geographic assessment tool again.

Now I skipped ahead to the county and state comparisons for this demonstration, which you can see that there are 31 percent of the people below the poverty level in El Paso within 3 miles of this facility. Apparently we're close to 2 counties: 1 in New Mexico and 1 in Texas. And you can read the data there. Going down, we'll see that there's within 3 miles of this facility, there's a 90 percent population of Hispanic individuals; 63 percent across the border of New Mexico, 78 percent in Texas; and in New Mexico itself there's a 42 percent Hispanic population and in Texas it's 32. So you can see again environmental justice information.

Well this concludes my brief little demonstration, and what I wanted to give you were 3 methods of assessing environmental justice information: the TRI Explorer – it's very user friendly. It's one of the easiest things to learn how to use that the EPA has online. It has you go to the census for EJ data, which is alright. It's good for quick access for what chemicals are being released with links to information about who's responsible.

As you might guess, TRI Net is my favorite. Technically it's a little more difficult to run, but it's worth the trouble, and with all the environmental justice, and tribal filtering options, you can develop a lot of environmental justice information. Envirofacts has a huge amount of data, and it's linked to environmental justice through its compliance tool. You get to the same place, but you do it in a different way. Now, if you ever wanted to talk to me about it, here's my name, my email address and my phone number... and that concludes my demonstration.

Jennifer: Thank you so much Tony. I just want to mention, we're just running a few minutes behind. I do want to open up the Q and A just to throw 1 or 2 questions that

have rolled in. Thank you all for submitting those. I want to mention though, that there are a number of other TRI tools available from the EPA website beyond what Tony was able to cover today. In addition, the theme of our last TRI Webinar was TRI tools: what's new and emerging. And so you can find that recorded webcast on the Chemical Right to Know website. So we're going to just open it up. I have a question here.

Does this tool count when the facility has failed to submit a Form R or has failed to report all TRI releases?

Tony: Not necessarily.

Jennifer: Ha ha ha OK

Tony: Ha ha. I'll keep it brief.

Jennifer: OK well that leaves us... let me just throw another one out there. Uhh let's see. Are the data generated in TRI.net available in shake? file format? Can anyone answer the shake? file question?

Tony: That's a good question, and what I would do, if a person asked me that... I've never used a shake? file with TRI.net, but the person who developed TRI Net would be probably very amenable to this suggestion. He's always been that way when I've talked to him.

Jennifer: OK great, and again we will assemble the answers of all these questions to our FAQ bank which we'll be posting to Chemical Right to Know...[interrupted]

Jim: This is Jim Sap(?), can I try to answer the shake? file question?

Jennifer: Jim, please.

Jim: Jim Sap from Occidental College. I create shake? files from the raw TRI data often, and I just do that in RTIS using the X, Y coordinates that are included in the TRI data file. What I would warn you about, however is that sometimes the locations are not accurate because they're self-reported. So what we do is geocode them and also check for location using Google Earth. OK? And I'd be happy to provide more details.

Jennifer: OK, thank you Jim.

Jim: Sure.

Brooke: This is Brooke Madrone from Regents, (?) I just wanted to comment on the first question. The reports only show what has been reported, but sometimes you can get a sense if you do a comparison between prior years – if a facility reported a chemical in one year and not the next, that sometimes will raise questions, and without enforcement actions with tracking and that sort of thing, there isn't really a way in these forms in with

these databases to know what they should have reported for a certain chemical or not. It's just what has been reported.

Jennifer: Thank you, Brooke. We're going to keep things moving along to our next presenter. Let me just make sure you are out there, Rebecca?

Rebecca: Yes I'm here.

Jennifer: Wonderful, our next presenter will be Rebecca Moser who will give a brief update on the TRI program including some key programmatic changes and new initiatives that have taken place over the past several years. She is acting director of the TRI Program Division in DC, and during her 17 year Federal Career, she has served as the associate director for the TRI program division, chief of TRI's regulatory development branch, and manager of the Exchange Network Grant Program. Before coming to EPA, she worked for the administrator of the National Oceanic and Atmospheric Administration. She has an MS in Biology with a focus on Environmental Science and Public Policy from George Mason University. Thank you so much Rebecca for joining us and we are ready for your presentation.

Rebecca: OK thank you so much Jennifer. Let me see if I can get to it here.

Jennifer: OK we are now seeing your screen.

Rebecca: Great. OK. I just wanted to give you an overview of some of the things that are going on in the TRI program. The first couple of slides that I have you've already heard about from Mariela and some of the tools you've already heard about from Tony so I'll just go over these very quickly. I'm having trouble with my computer here, sorry.

Jennifer: Can you just use your arrow buttons on your keyboard?

Rebecca: I'm trying the arrow buttons and the page down button, and unfortunately neither are working. OK there we go. It may have been my mouse which was dormant for quite a while there. OK so the first slides just gives an overview of the statutory authorities for the TRI program. Mariela already mentioned the Emergency Planning and Community Right to Know Act of 1986, and we're also governed by the Pollution Prevention Act of 1990, section 6607, which requires facilities to report on their waste management and source-reduction activities to TRI, including recycling, energy recovery and treatment.

OK and this is another slide that Mariela talked about briefly. TRI covers about 650 chemicals and chemical categories, but some of the chemicals you might be most familiar with are things like lead, arsenic, mercury, and dioxin. One of the things that I wanted to emphasize is that the administrator may add or delete chemicals based on certain criteria or any person may petition the administrator to add or delete chemicals based on certain criteria, and any person may petition to add or delete chemicals. The next section, you'll

see the various criteria for whether a facility must report to TRI and I won't go over that because Mariela already covered that.

OK, this schematic here just demonstrates that TRI receives data from covered facilities and does on-site disposal, other relations, and other waste management, as well as off-site transfers. OK, here I wanted to talk about the TRI annual data cycle. As Mariela mentioned to you, each year, facilities must report to TRI, EPA, under TRI by July 1st for all of their releases and other waste management of covered chemicals for the previous year. Then EPA processes the data, conducts a variety of data quality checks, and makes the data available to the public. Last year for the very first time, we began releasing the data before we did the TRI national analysis, and this year we plan to do the same thing. So you'll begin to see data for 2009 by the late summer, and we'll put the data out in data files that are on the TRI website and available from links from data.gov as well as make the data available through the various analytical tools.

Last year we just did data files, and this year we are going to put the preliminary data in TRI Explorer, and it will also be in Envirofacts as well. TRI.net will come along later after we have the full data sell, and you have just seen a demonstration by Tony of both of those tools which will help you look at the early data.

A couple of other tools that I wanted to mention that will be coming soon... there's one that's called TRI Chip(?) and that gives you hazard information on the TRI chemicals from a variety of different sources, and then one that you might be particularly interested in. It's a mobile application that will be coming soon called My RTK, and you'll be able to see TRI data in sort of a basic form on your cell phone.

We still plan to do the TRI national analysis by the end of December; that's the one for 2009, so hopefully that will be ready by then. You've already seen the tools and I wanted to emphasize that there are a number of communities that have used TRI data, all the way from environmental justice groups and environmental organizations to individuals to government agencies at all levels as well as academic researchers and the investment community. They use the data to look at trends in toxic chemical releases as Tony was showing you, you could look at the chemical releases from facilities and you can also look at trends, as well as estimate the toxic chemical hazard and try to encourage pollution prevention by various facilities.

As you've already heard, TRI data do have some limitations. A couple of those limitations are that you can't say much about human exposure to toxic chemicals using TRI. You can look at releases but you can't talk about exposure just from the TRI data you have to use other data as well. And you also can't say what the risks to human health and the environment are just with TRI data.

OK, I wanted to tell you a little bit about some enhancements that are underway in the TRI program. It has been a number of years since we have added either chemicals or industry sectors to TRI, and as we begin thinking about ways to make the data more useful to the public, we decided to look at potential chemical additions, and in February

of this year, EPA published the notice in the Federal Register indicating that we are considering listing administrative stays that are on TRI reporting hydrogen sulfide. That comment period closed in May and we'll be making a decision on that later this year.

In addition, in April, we published a proposed rule to add 16 chemicals to the TRI list that are reasonably anticipated to be human carcinogens. The comment period for that is still open, it closes on June the 7th, so if you're interested in that, you can find that, and there's a link to that Federal Register notice on the TRI webpage. We are also considering the addition of some industry factors and we're right now in the preliminary stages of evaluating a number of different sectors and considering whether or not the information we could gather under TRI would be beneficial, whether there are enough facilities in that industry sector, or that sort of thing.

Related to that, we are in the process of trying to clarify the reporting requirements for the metal mining industry. Earlier this year, we had a blog out to gather comments and input from people on the types of data that they might like to see from metal mining facilities and we plan to be reopening that blog, and later this week, we'll have a link from the TRI website. It's not there at the moment but it should be later this week.

Another effort that we're doing to enhance TRI is working closely with our Office of Enforcement and Compliance, and looking at facilities that we believe may need to be reporting to TRI. Looking over a variety of data quality and compliance issues there. I've already mentioned that we are providing earlier access to the data files, the national analysis, and some enhanced analytic tools.

OK, one of the other things that we're doing as part of trying to encourage participation in the TRI program... A lot of the things that are being done is through the cooperative agreement as part of the Environmental Council of the States. And this webinar today is one of the activities that ECOS has been helping us with. There's another activity – an online cooperative forum and I've put the website there. There's a blog on that website, and if you go to the very last one, the last posting on that blog, you'll be able to put in your comments, suggestions, etc for improving TRI, or making it more useful to you and your needs.

I also wanted to mention that there is a 2010 national training conference that will be held in November, this November 2010 in Washington DC, and this year we will be having an expanded focus on environmental conditions and trends, and if you'd like to submit an abstract, we would welcome those and you can do that through the chemicalright2know.org website.

So here is my contact information. Feel free to contact me if you'd like, and if you have any questions about tools such as TRI Explorer or TRI.net, I've also given you another contact there, Mike Petruce(?) his division is working on those various tools. So with that, I'll turn it back to Jennifer, thank you so much for this opportunity and for participating in today's talk.

Jennifer: Thank you Rebecca, that was an excellent overview of the TRI program and some of the new and exciting things that have been going on there. I'm going to keep things moving along. The next portion of our webinar focuses on real life examples where TRI has been used to support efforts in the EJ arena. We're going to hear a few case studies, or success studies, if you will from 4 individuals who work each day to address the disproportionate impact of environmental pollution on the health and welfare of our communities. So Wilma, we're about to go into our presentation, are you with us?

Wilma: Yes, I am.

Jennifer: And I understand that I will be clicking to your slides?

Wilma: Correct.

Jennifer: OK, so we have your slides up and I'm standing by to advance these when you give the word.

Wilma: Thank you. What we'll talk about today is the correlation of TRI dioxin and TRI emission data with blood levels of dioxin in the community known as Mossville in Louisiana. Next please. Mossville is an African American community founded in the 1790's, and it's located in the industrial area of Calcasieu Parish in Southwest Louisiana. Mossville is surrounded by 14 industrial facilities, consisting for 4 vinyl monomer and polymer facilities, 6 specialty chemical facilities, 2 petrochemical refineries, a coal-fired power plant, and another specialty gases facility. Five of the 14 industrial facilities actually report releasing dioxin and dioxin-like compounds under the TRI into both air and water in the Mossville area. And yes, the community founded in 1790, was there before the industrial facilities. Next please.

Blood samples on a number of the Mossville residents were tested for dioxin, furans, and PCBs, initially in 1997 by a law firm in Lake Charles, Louisiana that was considering a lawsuit. Based on the elevated levels of dioxin that were detected in the blood, ATSDR came in in 1998, and performed testing on additional individuals. Then after looking at the data, ATSDR came back in 2001 and performed follow-up testing on 12 of the individuals that had previously been tested either by the law firm in 1997 or by ATSDR In 1998. Next please.

As the results of the 2 testings, the Agency for Toxic Substance and Disease Registry determined that Mossville residents had average levels of dioxin and furans in their blood that were 3 times higher than the average level of dioxin detected in the national comparison group, and that represented the general US population. Next please.

EPA requires the reporting of dioxin and furan releases for TRI reporting facilities beginning with the calendar year 2000. So just as we were getting the reports back from ATSDR on the blood levels, and actually ATSDR gave me the results of the individuals, but did not identify the individuals in any way other than a number, so this reporting requirement provided essential data for the comparison of dioxin and furans in the blood

of the Mossville residents with the blood of the ? that were being released by the 5 industrial facilities and reported to the Toxic Release Inventory database. Those industrial facilities that released dioxin and reported it to the TRI database were ConocoPhillips Petroleum Refinery, The Roy S. Nelson Entergy Power Plant, which is both coal and natural gas fired, Georgia Gulf, which is a vinyl chloride monomer manufacturer, TPG, which manufactures chlorine and vinyl chloride, and Sasol North America, which is a special chemicals facility. Next please.

So when we looked at the dioxin congeners? that were in the blood of the Mossville residents, the 5 congeners? that were responsible for the most toxicity were the TCDD and was 3 of the hexachloryl? Dioxin congeners? As you see here in the slide. Next please.

When you look at the percentage of the toxicity of each of these components, suddenly you started seeing that the pentachloryl? was 42 percent of the 96-98 results and in 2001. The TCDD was 11 percent in both 97-98 and in 2001. And then the 3-hexachloryls were responsible for 21 and 23 percent in 97-98 and in 2001. So it added up to 75.7 percent of 97-98 and in 2001 it was 77.2 percent for these 5 congeners contributing to the toxicity of the blood in the Mossville residents. Next please.

So when I looked at 5 industrial facilities and their congeners, the absolute match in the fingerprint was the Georgia Gulf facilities. So let's first look at the congeners as reported to TRI by percent – congener by percent – of the total releases into the air by Georgia Gulf. The penta consisted of 35 percent, the TCDD 34 percent, and the 3-hex was 7 percent. So the total was about 77 percent, which actually matched, both in congeners and in total congeners, what we were seeing in the blood of the Mossville residents. Next please.

And then, change in those percent congeners into the toxic equivalence quotient, we saw basically the same amount. The penta was responsible for 35 percent, the TCDD 34, and again those are direct correlations to concentration and toxic equivalence, and then the hexa was down to .77. So we're still getting 70 percent of the total congeners being released by Georgia Gulf and correlated to the congeners that were the most highly toxic in the blood of Mossville. Next please.

So similar correlations have been made over the years of the data that I've been looking at with dioxin and congener fingerprints in the blood of community members living in close proximity to wood treatment facilities that use penta ? as a treating chemical. Also similar fingerprints match the Agent Orange storage and contaminated? facility correlated to the blood concentration of community members living in close proximity to these.

Now as a follow-up, we performed a health survey – next slide please – a health survey in the Mossville community to see exactly what the health symptoms were. Fifty seven percent of the community considered themselves sick. The documented medical symptoms were correlated with the chemicals that were being released by those 14 industrial facilities. Thirty two chemicals were identified as being associated with the

documented major medical conditions; 17 were being released by Sasol; 16 by Conoco; 15 by Georgia Gulf; 12 by PPG; and 5 by Entergy. Next slide please.

Eleven of those 32 chemicals identified as being associated with a major medical condition are regularly detected in the elevated concentrations in the ambient air of Mossville, and we have 4 ambient air stations around the community and in the community of Mossville. So we were able to correlate the releases reported to TRI by the concentrations seen in the ambient air, and of those chemicals, 8 were released by PPG, 7 by Georgia Gulf, 7 by Sasol, and 5 by ConocoPhillips. So it was outstanding that the chemicals that were associated with the health impacts associated in the community were actually the chemicals that were being released by the industrial facilities around Mossville. Next please.

The Toxic Release Inventory is a valuable tool for the environmental justice communities. Without TRI, the environmental justice community would lack vital information about chemicals being released into their communities and the impacts these chemicals are having on their health and environment, and that's why I would like to thank the sponsors of this webinar. I think it's critically important to use this mechanism to educate community members. Back to you Jennifer.

Jennifer: Thank you so much Wilma, and I meant to mention before you went on to everyone how especially lucky we are to have Wilma Subra here with us today. She's actually down in the gulf right now helping to address social and environmental issues that are related to the spill that is happening as we speak. She is the president of Subra Company. It's a chemistry lab that she started. A chemistry lab and environmental consulting firm in New Iberia, Louisiana, and there she provides technical assistance to those across the US and abroad who are concerned about their environment by combining her skills in technical research and evaluation. And there's much more to read about Wilma on our chemical right to know website in her bio along with the bios of all of our presenters today. So I'm going to switch over to our next presenter, Jim Sadd Jim are you ready?

Jim: Yes I am, can you hear me?

Jennifer: Yes I am, we can hear you loud and clear, and we are giving you presenter rights, and we are now looking at your screen.

Jim: OK, let me just...

Jennifer: And I can just give a brief intro. Jim is a professor of Environmental Science at Occidental College in Los Angeles. He earned his doctorate in geology at the University of South Carolina in Columbia. His research focuses on evaluating questions related to environmental exposure, health risks, and environmental justice primarily through the use of spatial analysis, using GIS and remote sensing principles. He is the author of a number of publications, some of which are on our chemical right to know website, including "The Air is Always Cleaner on the Other Side," "Race to Space," and

“Ambient Air Toxic Exposures in California.” Thanks again James for being here and we are ready to hear your presentation.

Jim: Thank you very much. I’m on the west coast so I’ll say good morning even though I know it’s already the afternoon for many of you. I want to briefly summarize some work that we’ve recently completed using the TRI in California. This was done on a research process combining environmental justice and equity analysis in the San Francisco Bay Area with the development of the environmental justice screening method that includes such indicators as exposure to air toxics. In doing so I want to acknowledge my colleagues in this work: Manuel Pastor, who’s an economist in the geography department at the University of Southern California, and Rachel Morrelo-Frosh (?) who’s an epidemiologist at the UC Berkeley School of Environmental Health Sciences. Together, my colleagues and I have collaborated on analytical research into questions of environmental justice related to both air pollution and climate change impacts over the past decade, and so we’re looking a little old there. At least I am. And we’ve done so by applying spatial analysis and multivariate statistical modeling to test a variety of hypotheses based on both popular and substantive environmental justice questions.

We’ve recently completed a multi-year research contract that was funded by the California Air Resources Board and the California Energy Commission, both state agencies. And that included several elements: among these was a framework environmental justice analysis of the 9 county San Francisco Bay Area, that’s what I’ll be primarily reporting on today. This area has seen very significant but local EJ activism and organizing really around local problems over a period of many years, and the state of California wanted to know if there was evidence of a regional EJ pattern related to air pollution health risk and exposure.

One unusual aspect of this project was our own commitment to both substantive and continuous conversations with the EJ organizations in the area to inform our own research questions and direction and to have them understand our methods in order to instill confidence in our results, whatever those results may be. So the types of questions that we were addressing included – we wanted to know if there were disparities in exposure as the EJ proponents claim, we wanted to understand the patterns of exposure and what facts determine these patterns. We were also interested in whether that pattern of exposure was also expressed in terms of health risk; we were interested in how these patterns developed over time and for what reasons; and whether the pattern of disparity had other consequences.

So as part of this project, one of the markers of exposure of course was the use of the Toxic Release Inventory. We only considered facilities that had air releases and that actually reported releases during the study period. Because of the TRI’s history of sometimes inaccurate location of the actual releases, we carefully geocoded all records and then error-checked the facility locations using aerial imagery. In this study we also used another data set – the National Air Toxics Assessment Health Risk Estimates. They are in part, determined using TRI-reported emissions.

So being a GIS person myself, the first thing that I do is make maps, and look at the pattern visually in first-order. So this is a map that compares the locations of TRI facilities in the San Francisco Bay Area – those with active air releases and 2000 census tracts that are ranked by percent people of color. And as you can see, it looks bad for people of color. As it has been noted by many in many parts of the United States and other studies, particularly those in urban areas and industrialized areas, there is an apparent geographic match between TRI facility location and neighborhoods with a high percentage of racial and ethnic minorities. However a map like this only shows an apparent correlation, there are no numbers to demonstrate the pattern or to explain it.

So we went a little bit farther in the analysis, and in determining proximity to TRI release of populations, we used a somewhat more sophisticated method than has been used in other studies. It turns out that TRI facilities are often located on industrial or commercially zoned land. For this reason, we often find TRI facilities located near the boundaries of census polygons, because the polygon boundaries themselves often follow major roadways.

So here's a good example, the TRI facility here on the center of the map – I'm pointing at it with my arrow, I hope you can see it – actually probably affects the population of the tract just north of it, that's this one here, to a greater extent than the host tract, so that would be the tract in which it is located. As others have done in similar TRI facility proximity studies, we drew circular buffers around the TRI sites to estimate the exposed population, and the one that you see here is a 1 mile buffer, although we used a variety of distances, from one quarter to three miles in this study.

So we used the circular buffers to capture census blocks, and although we're working our analysis at the census tract level, if the buffer contains over 50 percent of the population of the tract, as measured by the blocks captured by the buffer circle, then the tract is considered, the population of that tract is considered exposed. For example, this tract right here of which less than 50 percent is contained inside the buffer circle, much more than 50 percent of its population is actually in that circle, so that would affect the tract in the way in which we determine TRI proximity to population.

And as I mentioned, we did this with a variety of buffer distances in order to test the sensitivity of buffer size in our analysis. So here are some summary metrics to better describe the pattern that we see in the San Francisco Bay Area. We find that all people living within 1 mile of the TRI, of those people, 2 out of 3 are people of color, and of people living more than 2 and a half miles away from a TRI facility, only about 1 in 3 are people of color. So as you get closer to these TRI toxic release sites, you're more likely to see more people of color living there. Or put another way, the distributional impact of exposure to TRI facilities as measured by proximity to those sites is clearly disproportionate in terms of people of color, and primarily blacks and Latinos are affected more than Asians.

So what might be responsible for this pattern of race and TRI location? Well, in the literature and in the ether, there are 3 common explanations for this sort of a pattern. One

is a land use and zoning explanation. Basically TRI's are often located near or in industrial areas and people living near those areas are more likely to work in manufacturing and that of course is correlated with race. Another possible explanation is an income or wealth explanation; that is land values tend to be lower in and around industrial zones and so these lower land values sort of act as magnets to low income populations, which are predominantly people of color. The third explanation is what we call the power explanation, and that is that TRI's, being locally undesirable land uses tend to be sited in areas where there is less local opposition to siting of environmental negatives, such as a TRI, and people of color generally have less influence in local decision-making such as zoning decisions and permitting decisions.

If we look at our data, all 3 explanations appear to be valid or reasonable based on the information. Land use and in manufacturing employment are both higher near TRI's, income is lower, and poverty is higher. But as for the power explanation, it's a little more difficult to measure with the numbers because we don't have direct measures of political power or participation in local decision-making, but we can look at both homeownership and immigration that might tell us something about political power. We can see that homeownership is lower and that there are more recent immigrants around TRI, and that there is also larger percentage of linguistically isolated households, so there appears to be some support for all 3 of these explanations.

What's interesting however, as one might expect, if you look at the pattern regionally, the higher the income of the neighborhood, the less likely it is to be located near a TRI facility. However it's not just income, because if income goes up, fewer people of all races tend to live near TRI, but clearly there is a racial disparity at each level of income. In fact, the probability of the lowest income quintile of white anglo residents that would be here, living close to a TRI is less than that of the highest income quintile of people of color that would be here. This is particularly true of blacks and Latinos.

So this slide is for those of you who love multivariate statistical modeling, but if you don't, basically what it says is that if you take all of the factors together and you are considering the separate impact by isolating whether increases in one of these measures while keeping the others constant, affects the probability of a neighborhood being close to an active TRI site, we still find that race, in terms of black and Latino, has a highly statistically significant effect – 99 percent confidence level.

So even when you control for these other explanatory factors, race remains an important factor on its own, not just because it's related to land use and income. Note also that the significance of Latino falls a bit when we introduce linguistic isolation in the model, and that suggests that recent immigrants are very highly impacted as well. So I showed you this map earlier, where the TRI facilities are located in the San Francisco Bay Area and the race and ethnicity of neighborhoods nearby, and now if we look at this map – this is a pattern which shows a similar pattern for measures of air pollution related health risks.

Highest levels of risk are generally in the same places, so up here in Richmond, West Oakland, the Eastern San Francisco Area and also East San Jose, these are all heavily

minority areas, and I don't have time to detail this part of the analysis but I can tell in summary that we did demonstrate that there are systemic racial inequalities in both air toxic exposures, but also in the degree of cancer risk and respiratory as well.

So takeaways from this analysis briefly, would include: there's clear evidence of a pattern of environmental justice by race in the San Francisco Bay Area that holds when we control for other factors, and also includes the influence of spatial autocorrelation. There's some indication that linguistic isolation and by extension our recent immigration is a factor that has policy import, and we've also demonstrated in the study that community engagement produces, we believe, stronger research, and research which has clearer relevance to policy.

I want to conclude just very briefly by mentioning that we also use TRI information in our environmental justice screening method. The specific metrics that we use are from the risk screening environmental indicators program. That's something that Michael Ash will be talking about in much more detail in a few minutes, but we used the tract level toxic concentration score hazards as one metric of health risk and exposure in our screening method. For those of you that are familiar with EPA's EJC screening tool ? is also used in that method. And this just briefly is a look at the EJ screening results for the greater Los Angeles area.

So thank you for your attention, I'm happy to take questions at the appropriate time, and Jennifer, I'll hand it back to you.

Jennifer: Great, thank you so much Jim. That was an amazing presentation, and we will do Q and A, you guys are submitting those; they just keep rolling in, we really appreciate it. We're probably going to combine the last two Q and A sessions at the end. So I'm going to go ahead and just lead right into our next presentation, and she is Julia May from Communities for a Better Environment in Oakland, California. She's a senior scientist and engineer there; she's been with Communities for Better Environment for about 20 years, and she works on industrial pollution sources, emission sources, pollution prevention options, and community impact. Julia are you ready? Looks like you are.

Julia: I am, can you hear me?

Jennifer" Yes we can, loud and clear.

Julia: And can you see the screen?

Jennifer: Yes.

Julia: OK great. I want to thank ECOS and EPA for having us all here and also for the excellent TRI demo. I want to thank my EJ colleagues who just presented for their fabulous analyses. CBE is a California and EJ organization, we work in northern and southern California, and I'm Julia May senior scientist at CBE. CBE has kind of an unusual model; we have scientists and lawyers, and most importantly, community

organizers who pull us all together for our community members who are very impacted by high concentrations of pollution. You might know us from our work on refinery flares. We spearheaded the northern California and southern California flare regulations requiring refineries to recycle gases instead of flaring all the time. These have become national models and the refineries across the country are just starting to catch up with California on that.

You might also have heard about CBE's work to get Chevron in Richmond to not switch to a dirtier crude source; just something that's also happening all over the country. So on the TRI, on my work, I spend most of my time looking at the nuts and bolts of industrial facilities and figuring out how to get them to recycle vapors or phase out chemicals, but CBE has used the TRI for a long time, and I want to take a little more of a historical approach to talking about this.

Since others have talked about you know, the EJ issues, I'm going to go through these quickly. Here's an example of one of these areas we work in Wilmington, LA, where about a third of the entire state's refining capacity is concentrated here. Huge other sources of pollution like the ports of LA, Long Beach, freeways, hundreds of smaller sources, and it's about twice as high concentration of Latino population in the area, and it's lower income than the rest of LA, and a lot of pollution sources are there.

And let's see, I'm having trouble, I've got this web – how do I minimize this web thing from you guys so I can see my own slides?

Jennifer: There is a little orange arrow, a little box with a white arrow in it actually. There you go.

Julia: OK close enough. You know since EJ concepts are built on addressing siting and land use patterns and meaningful public participation, it's really key that people have free access to data including TRI and many other data sources because when you can get data easily and specific data like you can get from the TRI, you can get it without having to pay money or get lawyers in there to do freedom of information requests or without having to wait months, through public records requests, it's a big boon to community members to be able to get that data and use it for community power. Let's see if I can go to the next slide, I'm trying and it's not going down. There we go.

We've used the TRI in many ways. People use TRI all the time for basic information very regularly. We've also used it in more detailed analyses to identify patterns of environmental racism. Also used it in lawsuits and protests and direct negotiations with companies to get them to phase out completely their use of chemicals and in CBE reports I'll go through with you.

One of the earliest EJ reports was 1989; Richmond at Risk, that's Richmond, California, where CBE looked at the TRI superfund local data and demographic data. And this was back when we had a couple of Apple II computers with dot commands, and we had two of them in the whole organization, we had to cut and paste on paper, so I really

appreciated the demo on the TRI and looking at how it's changed over the years and how much better access it is, and how you've actually integrated with census data. At the time, the Richmond at Risk report was one of the first kinds of this kind of reports, and it did show that in Richmond, there was heavy concentration and we also did mapping – I was not one of the authors - but CBE staff did mapping and showing that the pollution was highly concentrated in communities of color in the area; mainly the black community. This was used by community members in many different contexts to push for EJ policy improvements and pollution prevention measures and regulation of pollution.

I'm having trouble getting my screen to move...

Jennifer: Yep, there seems to be a slight delay, but there we go.

Julia: OK. Another report in southern California, *Holding our Breath* by ? et al, found about (audio fadeout) more environmental hazards concentrated in southeast LA compared to LA, and you can see that we were able to get that specific data ranked by individual companies from the highest to lowest, and that report compares other areas of the county and found a high concentration and unfair burden in this area. Again, used by the community members to get pollution prevention members in regulatory context.

Here's a map that shows pretty clearly – the red is high concentrations of people of color and you can see the green dots are the TRI facilities. Again, it's being slow for some reason going to the next slide. I'm going to skip through this map, another similar map. I just wanted to say that we've done a lot of these reports over the years, back in '89 on ozone depleting chemicals were IBM in San Jose, was identified as having about one and a half million pounds per year of ozone depleting chemicals. Community members – over 100 – marched to their door, and asked them to phase out I think CFC113 and many of the companies reporting these ozone depleters in the report also used toxic chemicals and carbon tetrachloride was still used at the time.

IBM soon decided to phase out in favor of soap and water instead of CFC13 and I'm sure they saved a lot of money doing that too. I'm going to go to the next slide. How am I doing on time?

Jennifer: We'll you're fine, we're as a team going over a little bit, so we're going to skip the next Q and A and just lump it together at the end. You just keep going, you're going fine.

Julia: Another – you know people brought up this issue in one of the earlier questions – what happens when someone doesn't report to the TRI. In the past, CBE actually did research using other databases and local regulatory agencies where we had to be pretty painstaking to find out companies that should have been reporting to TRI but weren't. We did citizen's lawsuits, we sued companies for failure to report, and we won a lot of settlements, and we directly negotiated with these companies to get them to phase out their toxic chemicals in lieu of penalties. Frequently they found that it was cheaper than

using the chemical in the first place. A lot of toxic chemicals and ozone depleters were phased out as a result.

This chart here shows, just for a couple of years, all of the companies that agreed to settle and about 1.5 million pounds of chemicals were unreported by these companies, which we found, and about 1.2 million dollars were paid by these companies, but a lot of that, most of that, was not just paid in penalties, it was paid – it was used by them to phase out their toxic chemicals. And some... a smaller amount of the money went to third party environmental projects, some of the money went to the treasury for penalties, but mostly it went to environmentally beneficial projects.

Unfortunately the Supreme Court later decided that companies that were notified that they failed to report could correct their reporting within 60 days and not get any penalty, so that took a big incentive away for reporting unfortunately, and it sort of killed the citizen's enforcement provision of the TRI which was very unfortunate because this was a good way to make sure that companies not only reported but stopped using chemicals. CBE also petitioned EPA to add dioxin compounds in the mid 90s. There was a dioxin conference in Baton Rouge, maybe Wilma was there, and hundreds of people signed petitions asking for dioxin compounds to be added to the TRI. CBE filed the petition with EPA, took a couple of years but EPA acted and added dioxins and also added additional compounds including mercury and other persistent bioaccumulative toxics to the TRI. So I think that that's a great provision that we as community members need to make more use of.

There are still a lot of facilities out there that are not included in the TRI umbrella and people need access to this information. So I think there is an example where a Bay Area refiner actually did some modifications to their process to include lower dioxin generating in their process as a result of their reporting and some negotiation with CBE. I also think that there was an embarrassment factor going on in this earlier reporting – maybe still. There were a lot of carcinogens, ?, methylene chloride, others widely used, ozone depleters, and after the TRI reporting requirements and also public hints.... Going on to gather the data and publicize it... I believe some of these companies phased out just so they wouldn't have to report that they were using these toxic chemicals anymore, and especially because some of these clean alternatives became available. Not just switching to other kinds of toxics, like switching from carcinogens to reproductive toxics. I think that companies were frequently not happy at first, but ended up with more cost-effective solutions and a healthier work environment,

So historically, the TRI has changed the chemicals that are used and we've seen that directly in our work. I guess that's it, I wanted to mention that I saw recently that there's a president's report on cancer in the environment that I just started to look at. We were very happy to see that the president's report looks at the environmental causes of cancer that are so widespread in the environment, and having access to data about the TRI, having access to information about the impacts of these chemicals which is key to phasing out these chemicals and building healthier green communities. Thank you.

Jennifer: Thank you so much Julia. And folks, I know we're right about that 2 hour mark and I ask if you can stay on, we have one final presenter, Michael Ash. He's got an amazing presentation here that we hope you can stick around for, and we certainly appreciate all the questions rolling in, and I just want to remind you again, we will be assembling an FAQ that we will be posting to the chemical right to know website after the webinar. So sorry to skip out on the next Q and A session we have lined up but I want to make sure we have time for Michael to present. So Michael are you ready to go?

Michael: Yes, I believe so. Let's see. Does it look good to you?

Jennifer: Yes.

Michael: Good thanks. So thank you, thank you very much for organizing and thanks to ECOS and to EPA for hosting this. I'm going to... let me begin by introducing the idea of the corporate toxics information project which I co-direct at the University of Massachusetts-Amherst. Because the US depends so heavily on right to know legislation, as well as direct regulation to protect citizens against special toxic pollution, we need to have certain institutions in place. The right to know approach means that corporations are under mandate to publicly report their pollution, but after the reports are filed and published, citizens, employees, consumers, shareholders, and managers are left to respond if they see fit. So if the right to know approach for improving corporate environmental performance is to have any change of success, you need to have stakeholders who have access to the information, but also the ability to interpret the information and the capacity and incentive to respond to the information.

So we've already heard a little bit from other presenters about the history of right to know legislation in the US coming out of the ? disaster in Bhopal. The corporate toxics information project at UMass-Amherst is intended to increase the effectiveness of the right to know approach to corporate pollution by bolstering the ability of stakeholders to interpret information on toxic releases, and by increasing the incentive for shareholders and managers of polluting corporations to clean up their act.

Another simple function of CTIP is simply to spread the word about TRI and RSCI. We also add some value of our own by ... including facilities of their parent corporations and by performing environmental justice analysis that is implicit in TRI and in risk... environmental indicators. But, it's not necessarily made explicit until we take action. So our aim is to help people translate the right to know and the right to clean air and water, and the aim is also to take these fairly complex data sets and make them more accessible. And as we do that we're thinking about different audiences. Audiences of stakeholders who can take action to improve... to include the environment.

So I'd like to introduce something that's actually a product of the EPA. It's the Risk Screening Environmental Indicators Project as produced by EPA's Office of Pollution Prevention and Toxics. It's a value added data set on top of the toxics release inventory so it starts with the toxics release and then makes 3 important contributions, I'll talk about each of those in turn. It uses RSCI, a peer-reviewed system of toxicity weights to

talk about each chemical on a per pound basis. Second it describes state and transport, or how chemicals spread from the point of release, at an industrial point source to the environment, and RSCI shows the effective population by using census data to examine the number of people in the most effected and significantly effected areas around the releasing facility.

So some 16 thousand industrial facilities reported releasing about 420 chemicals to TRI in 2006. You've already heard quite a bit about TRI so I'll go on to describe RSCI. Let me mention that my focus is going to be on air releases, but RSCI like TRI also measures risks of surface water releases. And that's an area where we're just initiating research.

So what I have in front of you here is a TRI report. Again, it's pretty hard to look at, this is taking a look at a manganese release from State Industries Incorporated and you can see the pounds of manganese released into different media from that facility... 9000 pounds in fugitive air, about 19000 pounds up the stack, water release of 536 pounds. This is pretty hard for normal people including people who only have doctorates in economics rather than toxicology or environmental science to interpret. So the risks for the environmental indicators undertakes this pretty nifty explanation of what we're looking at.

All 600 of the chemicals on the toxics release inventory are recognized as toxic. The degree of toxicity varies enormously, by up to seven orders of magnitude, so pound to pound comparisons are not very meaningful. The best kind of comparison that often appears in the popular press... after the publication of the annual toxics release inventory. EPA, happily, has developed a peer reviewed system of toxicity that puts each toxic chemical on a common toxicity scale and reprinted a little of the toxicity scale, I've taken a chunk from the top of the scale, a chunk from the lower, and a reminder that not every chemical is in the toxics release inventory is rated. These are modes of toxicities of chemicals, and they make it possible, again, to put the chemicals on an equal footing by mass released. You can see chemicals are also classed by carcinogen and noncarcinogen. At the moment there's equivalence between carcinogens and noncarcinogens with 1 in 250000 cancer risk corresponding to reference concentration. As I said the second piece of value added from RSCI is fade-dispersion modeling. RSCI draws a 101km by 101km grid around each industrial facility and breaks it down into 1 square km cells. You'll see in a moment that RSCI computes a plume model which expresses concentrations. You can see here concentrations of the toxic chemical around the point release. It's a pretty sophisticated model; it uses some facility properties like stack height and how wide the stack is and how fast the gases come out, some properties of chemical and surrounding weather conditions including prevailing winds.

And finally, RSCI maps the concentrations of each release to neighborhoods, to 1km cells representing more or less neighborhoods around facilities. You can see here the somewhat imperfect square ? around ? of the RSCI grid, that's the blue square and the neighborhood. So it represents census blocks, that's the finest unit in the census, and includes information on the age, sex, and race of people living in those neighborhoods.

Block groups are slightly larger and they include information as well on the economic conditions in the neighborhoods.

So combining those three pieces, the estimated concentration data with the toxicity data and the underlying population data makes it possible to make 2 different measures of the impact of the releases from the toxics release inventory. The first which only takes a look at concentration and toxicity is called hazard. That's the individual risk measure. If you were living in a neighborhood that had a particular hazard, what would be the elevated risk of cancer or noncancer response to the exposure of a chemical.

The second measure is a population health risk measure that combines the concentration and toxicity with population exposure. There are two different RSCI data products: first is a public release data set which is available for free by download from the EPA's website. It's intended to identify high priority facilities for action or enforcement based on having a high score. Also of interest as well is called geographic microdata which describes a concentration and score data at the very very fine geographic level that I showed you in the plume model and makes it possible to take a look at what communities are exposed to releases in the toxics release inventory.

And I have a couple of screenshots from the public release data from the application that EPA makes available for free. So it's possible to take a look at high score facilities; here I have a list of high score facilities based on 2006 air releases, and you can see the top of the list. And there are very nice mapping facilities with the light built in here. However what's not possible from the risk screening environmental indicators data is that it's not possible to take a look at the demographics and the social and economic makeup of the communities that are exposed. And so that's where the corporate toxics information project steps in, so let me tell you a couple of projects in the time that's remaining.

In environmental justice, there are these important outstanding methodological issues that have come up in the conversation we've had today. One of them is how close is close, and we can use different buffering methods for example to take a look at what populations look like close or far from facilities. But it turns out that close is actually pretty complicated. You think about the plume picture that I showed you, close varies a lot by how high the stack is and by how much of the chemical is released... what constitutes being close to a facility.

Well RSCI sidesteps this platform by modeling the distribution of the chemical over the entire landscape so it's really possible to distinguish exposed and less exposed populations. Furthermore it's important to take a look at source and receptor. There are often high metric levels of pollution in EJ sensitive communities. RSCI makes it possible to look at not just the level of exposure in a community, but also the source; the facility that's providing that exposure to make it possible to seek remedy.

And finally, an important question in environmental justice is "highly exposed compared to what?" and the RSCI data makes it possible to compare exposed areas to less exposed areas in the same broad region, state, or metropolitan area. This gives us just a quick

picture of Boston that gives a sense of how fine-grained the exposure measure is from RSCI data. It's also possible to do the type of multivariate models of exposure that Jim talked about in his presentation.

What I'd like to talk about in the couple remaining minutes is thinking about measuring corporate environmental justice performance with the RSCI data. It's possible to take a look at the score, which is the total population impact from the facility or from a firm, and then to also take a look at the share of that score that's borne by ethnic or racial minorities. So that's the measure that we call the corporate environmental justice performance – to take a look at how much of a corporation's impact is borne by racial or ethnic minorities or people living below the poverty line. We also have a way of describing how disproportionate impact, where we compare the share of the score that's borne by minorities to the share of the population that's made up of minorities.

So just a couple of slides – I realize I'm over time – here I'm showing median exposure by state. This is just a measure of gross level of toxic exposure from toxic release facilities ranked across states. And then on the next slide, I'll show you a discrepant exposure, and you'll see that these are actually fairly different pictures. So there are some places that are both high impact and high score, or high impact and high discrepancy, but there are some places that are high discrepancy even if they are not at the top of the list for scores. So discrepancy shows the extent to which the impact is borne by minorities more than there are minorities in the population. We can do this for ethnic minorities. We can also do this for the low income population. This is the low income discrepancy.

More explanation of these tables is available in a report called Justice in the Air are available from our website which will be on my final slide. This takes a look at minority discrepancy by metropolitan area, the constant is analogous. It's also possible to take a look at facilities by their absolute level of their score and by their disproportionate exposure of minorities and low income people. So here you can see the top 10 highest impact facilities by RSCI score and their impact on minorities.

Finally, let me describe our toxic 100 project. Our toxic 100 air polluters takes a look at individual companies. We rank companies based on the facilities that they own, and we can also take a look at the EJ performance of the companies. So in these we have both the toxic score in this table which describes the extent to which a company has a large impact and then the EJ and minority shares shows what has a disparate impact for people below the poverty line. If you open up the toxic 100 website as given, you can drill down into each company and find out exactly which facilities or which chemicals are responsible for the company's score.

You can also search for companies that are outside the leading 100. So that wraps up my presentation I'd like to thank you very much for hosting, and I'd be happy to take questions. The website which includes the toxic 100 and justice in the air is given on my final slide. Thanks.

Jennifer: Thank you Michael. That was a lot of information in a short amount of time, we really appreciate that. We are just going to take a few questions while we still have all of our presenters on – well most of them – I think Jim Sabb had to leave, but I do have a question here for Julia Communities for a Better Environment. Julia, are you still there?

Julia: I'm here.

Jennifer: Question for you. In the facilities that you were investigating, how did you determine when chemicals were not being reported?

Julia: We had to look at local, other sources of data, whatever we could find. For example, in the Bay Area, the Bay Area Air Quality Management District had databases we could look at. State had some of their own data. Sometimes there was other information that made it clear that a company was definitely using a certain chemical. So it took a lot of digging to find that, and that's one reason why it was really unfortunate that the Supreme Court kind of gutted the citizens enforcement provisions, because citizens can do a lot of work to try to get a company to report and then the company would be required to report, but there would be no penalties have you not reported before.

Jennifer: OK thank you. Real quick I'll just get another one in here, and remind folks we're going to have all these up on the website after the webinar today. Here's a question, I'm not sure which presenter is best to answer. The question is: additional data, criteria, pollutants and some overlapping chemicals such as ammonia are reported on the state regional air website. Can those be recorded into TRI reports?

Brooke: Anybody willing to go forward? This is Brooke. The only information that officially is on the TRI reports like the Form R's is what the individual facilities themselves reported and that goes into the national TRI database and then that information is shared with State. As you know at this point, state information doesn't go into the TRI data. If the state has additional information like what it permits or something like that, it's separate. I hope that's what you're looking for.

Jennifer: We hope so ha ha. Let's see we might have time for one more quick question before I wrap things up. Let's see... so many questions guys, thank you so much for submitting these... there's a question here about historical data and whether there's a way to get that information from former facilities and their lingering impact from TRI.

Brooke: If the historical data is available, you can go back I think at least 10 years and then on the regular database... if you wanted to back further than that, you can contact the data processor, or you can contact the region that you're in and you can ask them and then they can put you in touch with the people that handle the data and make that available.

Jennifer: Great, thank you Brooke. Well I think that essentially concludes our webinar, I just want to run through a few slides for those of you who are still on. We do have the contact information for all of our presenters today. I want to thank all of them for taking the time to be here and to share their work with us. We also have a number of selected resources; this slide really doesn't do it justice but we wanted to give you a flavor of the kinds of resources we do have on chemical right to know that deal with TRI and environmental justice, and so we hope that you will take some time to explore those. I want to remind you and I believe Rebecca mentioned this in her program update presentation, but we do have the 2010 national training conference on TRI and environmental conditions and communities coming up this fall in Washington, DC, and environmental justice is a key focus area. The abstract submission window is open now and we hope that you will consider submitting an abstract to the conference. Those abstracts will be accepted through June 25th, and registration opens around July 15th. There may be travel dollars available for some – more information about that will be coming later. And again, you can learn more about it on the chemical right to know website.

So finally, I just want to thank you all again, our attendees, our presenters, and hope that you accomplished or learned what we hoped that you would when we set our objectives for this presentation. You will be getting a follow-up email that will ask that you provide some feedback today on what you learned here and what we might do next time to improve our webinar presentation and we're also looking for your ideas for future TRI webinars. So thank you again, everyone for your time and attention today, and this concludes our TRI EJ webinar presentation.