

US EPA ARCHIVE DOCUMENT

Transcript of March 11, 2010 EPA Pre-Symposium Webinar for

Strengthening Environmental Justice Research and Decision Making: A Symposium on the Science of Disproportionate Environmental Health Impacts

**Reginald Harris:** I would like to welcome everyone to the pre-symposium webinar for the Strengthening Environmental Research and Decision Making: A Symposium on the Science of Disproportionate Environmental Health Impacts. We are going to be looking at Environmental Justice program implementation and decision-making at EPA as part of this second pre-Symposium webinar. What we want to do is take the time to look at what is being done programmatically to address Environmental Justice, how we are going about it, and we want to also look at the factors we take into account as we address Environmental Justice. A couple of quick notes before we get into the main body of the webinar, if you have questions, you may post questions that we will try to address at appropriate times when we have breaks in the presentation process and you would access that by the Q&A icon on the bar at the top of the page. Also, if you are dropped from the webinar you are asked to call back in to reconnect. I understand that was an issue at the first one. Are there any things I left out that are important for...?

**Sheila James:** We would just like to let everyone know to place your phones on mute. \*6 will mute and unmute. And we will place everyone on universal mute. And also to let you know that the webinar and web conference will be recorded.

**Reginald Harris:** Ok, thank you Sheila. Alright, to move forward... Well, like I said, just a reminder. As we move forward, now you are seeing the list of today's speakers. My name is Reginald Harris, I'm going to be moderating the session. I'm a toxicologist for EPA in Region 3. You're going to hear from Charles Lee, Kent Benjamin, Terry Wesley, Arthur Totten, and LaShonia Richardson. See the information for each of the speakers there. So without further ado I would like to introduce the Director of the Office of Environmental Justice, Charles Lee, who is going to give us the first presentation on the concept of Environmental Justice in regulatory decision making.

**Charles Lee:** Thank you Reggie and hello to everyone. Good afternoon and let me just say that this, as the build up to the Symposium on the Science of Disproportionate Impact Analysis: Advancing both Research and Decision making. We see this as a really important part of our efforts to build a strong science base for incorporating Environmental Justice in EPA's decision making processes, particularly its regulatory processes like rulemaking and enforcement and permitting. Just to begin, my presentation is going to be providing just a little overview and then just talking about a frame of reference for identifying disproportionate environmental and human impacts to minority, low-income and tribal populations, a factors framework for doing that which we will go into a lot of detail about and which is the basis, or the framework, by which the upcoming Symposium is organized. And then lastly, some of the decision making framework that EPA uses and will be part of the Disproportionate Impacts Symposium.

Just by way of introduction, everyone knows that Administrator Jackson has placed a huge emphasis on Environmental Justice. She says it needs to be a part of everything that EPA does and recently she announced her seven priorities, one of which is expanding the conversation about environmentalism

and working for Environmental Justice. She said that as we go about our work in all areas there are three important principles. One is that science has to be a backbone of EPA programs, that we follow the rule of law, and the third is transparency. And of course the Disproportionate Impact Symposium and the work that went into preparing for it is part of building a strong science foundation for incorporating Environmental Justice into our decision making processes.

I want to say a little bit about the mission of the Office of Environmental Justice. It is stated here to facilitate Agency efforts to protect environment and public health in minority, low-income and tribal communities by integrating Environmental Justice in programs, policies, and activities. We believe that the ultimate measure of EPA success in Environmental Justice is to achieve environmental public health results in communities which are overburdened. And our role is to help facilitate the Agency's efforts to do that by integrating Environmental Justice into all the programs, policies, and activities.

[Muting problem]

What you see on the PowerPoint is the mission and we see it is very important to talk about how the Agency as a whole addresses Environmental Justice by achieving environmental public health results in disproportionately burdened communities, in minority, low-income, and tribal communities. In order to do that EPA, needs to integrate Environmental Justice into all the programs, policies, and activities. Our role as the Office of Environmental Justice and Environmental Justice Program is to facilitate, to work with all the offices and regions to make sure that that happens. And that is in line with what the Administrator says about making Environmental Justice a part of every decision that we make.

In terms of identifying and assessing disproportionate impacts on minority, low-income, and tribal populations, we think that it is very important to have an evidence-based approach. There is a lot of evidence, a lot of studies and literature around how disproportionate impacts are effecting minority, low-income, and tribal populations and it is really important to go out there and systematically inventory that so that it can be brought to bear on EPA's decision making processes. That when we start to look at accessing disproportionate impacts, that we are looking at both procedural and substantive considerations. The definition of Environmental Justice, about the meaningful participation and fair treatment of all populations, all communities, has been addressed, in large measure, by looking at process issues, procedural issues, how we are making sure that different communities are being involved, how we are trying to make sure that there is the capacity building within communities to participate. However, we have not made as much progress in terms of then taking a systematic approach towards taking scientific evidence and making sure that it is being considered in EPA decision making processes.

So we, the Office of Environmental Justice, several years ago, identified a number of factors which can start the process of both identifying and accessing those types of impacts and that is something that I will talk about in a second. And the last point that I want to make is that fact that all this, in our opinion, is to help serve EPA's efforts to incorporate Environmental Justice in its decisions, like in rules, permits, and enforcement, and other regulatory actions. We are not just talking about assessment but also the linkage between this type of evidence and EPA's decision-making processes. And that is why the

Symposium has two major parts to it, one of which talks about the state of the science and the second is a number of decision making frameworks that EPA uses and begin the conversation about what those linkages should be.

So these factors that we identified are the following. The first is proximity and exposure. The second is cumulative impacts, physical infrastructure, susceptible populations, unique exposure pathways, and the ability to participate in decision making. In terms of the first one, there are lots of studies, I think over one hundred if not more, that look at the impacts in terms of proximity to hazardous facilities in the Environmental Justice/public health literature. Cumulative impacts are areas where, places like Algell Garden or the Mississippi industrial corridor, Cancer Alley, where there are many different types of impacts, including industrial facilities and transportation, and pesticides, and other factors that will as a whole affect the health of the residence of those communities. This also speaks to there being other factors involved, both at-risk conditions that exist already, things like asthma, the inability to participate in decision making and other things that affect then the way that these facilities, the chemical emissions, affect risk in these communities.

Thirdly, physical infrastructure, housing, transportation, and school are all things that come up in terms of the way they impact the way communities are affected by chemical and other physical hazards. Susceptible populations, like farm workers down here, but also children, particularly low-income, minority, and tribal children, are examples of susceptible populations. Unique exposure pathways, a good example of that being fish consumption in Native Americans, but also very unique hazard that has very unique exposures like lead.

And then lastly, the ability to participate in decision making obvious impacts whether a particular community is aware of and to be prepared for and in effect, in terms of the decision making process, the impacts of environmental hazards. We also found that as we were identifying these factors that there was a lot of literature in the area of psycho-social stress, called chronic community stress, and we also added that to the list in terms of the factors that are going to be discussed at this symposium.

And then lastly, like I said, there was going to be a set of sessions at the symposium that talk about EPA's decision making frameworks. In terms of legal authorities, we know that, going all the way back to the time Executive Order 12898 on Environmental Justice was signed by President Clinton, there was a presidential memorandum that said that EPA and other federal agencies should look to existing statutory authorities to address Environmental Justice issues. And in 2000 there was a memo from the Office of General Counsel that said that EPA did indeed have the discretion to utilize these statutory authorities in the area of permitting and there is a lot of work that is being done now to look further into that and we think that this is going to be really important as we move forward because this is where some of the statutory hooks are going to be identified to address EJ issues. We want to do, through this symposium, is to say we have this kind of science that exists now, how can we bring it to bear, in terms of how EPA uses its statutory authorities.

Risk assessment, as you know, is a standard way that EPA uses to do its regulatory decision making and it is really important that this is carried out with a view towards the special issues that confront

minority, low-income, and tribal populations, particularly to account for differential vulnerability in terms of social and psycho-social factors and based on risks, as far as existing \_\_\_\_\_ are concerned and which may have consequences for future risk. For example, like I said, asthma would be a good example. And lastly, vulnerability from multiple impacts, both simultaneous and sequential, to different organ systems as well as to a diminished resilience, or really to recover, from these insults.

In terms of economic analysis, as we know, Executive Order 12898 on regulatory development calls for economic analysis and some of the EPA statutes make it mandatory. Again, it is really important that we understand that costs and benefits are distributed along the lines of minority, low-income, and tribal populations and that we address the issues of equity. We also understand that in looking at that, there are opportunities where the decision-maker can issue rules that take into account and address the disproportionate impacts of the regulation, particularly in areas that are already overburdened. And the Office of Management and Budget is considering the inclusion of these equity considerations as it is looking at a review of Executive Order 12866 on regulatory developments. And then lastly, in terms of program evaluation, over the past year EPA has been conducting environmental analysis of its programs, EJ program reviews, to make sure that two things are happening. 1) That Environmental Justice concerns are being addressed through the conduct of programs that exist, particularly in terms of areas, such as meaningful involvement and fair treatment. On the other hand, it is also important to look at where EPA is applying its resources and what kind of results are coming forth from that, particular in areas which need it the most or are disproportionately impacted.

So I will stop there, the idea here is to give an overview of how the kind of thinking that went into the symposium fits into the work the EPA is doing and how the dialogue at the symposium will unfold.

**Reginald Harris:** Okay Charles. Thank you for that interview. It gives us some good insight into the thought processes that has gone into the development of framework and into the development and elucidation of factors that we should consider as we do our work at the EPA. Does anyone have any questions at this time? If not, if there are no questions, and I don't see any up here, then let's as we prepare for Kent's presentation, let's take a couple of minutes to think about the things that Charles has said and the opportunities to identify possibilities for addressing Environmental Justice as we work, keeping in mind the seven factors that we are going to be talking about and where in the programmatic framework we are going to tie these things together and comprehensively take a meaningful look at Environmental Justice. So Kent, are you ready?

**Kent Benjamin:** I am here and I believe my materials are up on the screen. So what Reggie has asked me to do today is to talk about a review protocol we developed as part of the ways to consider Environmental Justice in the EPA. This is just one of the things we do at the agency and I wanted to give you some insight into the things we looked at and how we came to look at it and develop it this way as just an example of some of the work we have done to factor in and consider Environmental Justice. So across the agency, at the request of the Inspector General, we developed a number of, what we came to call, EJ review protocols for looking at the work in EPA to understand how Environmental Justice has been integrated into that work.

The group that Reggie and I were responsible for was looking at a number of things in the cleanup and remediation side of the EPA which could include Superfund, the Resource Conservation Recovery Act areas, also called RCRA, or solid waste issues. It could also consider underground storage tanks and some of the activities that happen around federal facilities. So what we wanted to do was to understand how and whether the lessons learned and information we gathered in our exposure to the issue of Environmental Justice and our exposure to activists and community representatives, and our own experiences, how well that experience and understanding was being factored into the way people do their work. So, over time, we started to think about happens in many cases, not all, but many cases, in respect to these types of programs. So all these programs have relation to land and all of them have a cycle where someone identified a place where they have some concern about an environmental hazard, exposure, risk, etc, and then there are things we do under the various programs that direct us to understand what is there, direct us to make decisions about how we decide to or how we are able to mitigate what is there, or clean up what is there, and the other part is sort of how we connect to the people who are affected by that place or that space or the material that might be there. And so we start to say 'Okay, let's look at the life-cycle of a space from the time somebody says there is an issue to the time when the EPA's relationship is all done.' And we said 'Okay, we have a lot of people in the Agency who work on the inspection of issues and let's start to find out if they have the same experience that we do and if they are using that to influence their practice of looking at and addressing sites.

One of the things we did was look at about four or five categories of efforts that happened. On page 2, you see at the top the geographic distribution of impacts and we put together this survey which goes really fast, you just kind of click through, and in the end we get a picture of what people are aware of and what people are doing. And the other part of how we intentionally crafted this one was to also, if people didn't know something, they would learn about it by going through this survey and trigger them to inquire further. So the people in the Agency completing the survey would learn something and, ideally, it's part of a larger process where we engage them and we can go back to decide whether we need to provide training, we need enhance or policy, we need to add resources to the effort. Then this would give us direction in that way.

One of the things we learned, EPA has a lot of legal, statutory, and guidance processes in place for how we do things but what we are hearing from community folks and other representatives was that at this stage of your activity you could have done this or you should have done that and so what we did in this questionnaire or this review protocol was we plugged in our cycle of what we do so that we captured all that and then we plugged in all the thoughts that community folks and other had given us over time. So you see right there, under section 2 question 1 is the community a source of demographic information? Rather than going just by what the Census had or some other source it was saying 'Go into the community and ask who is there. See who is there.' Some communities are sensitive to responding to a census. You now see this big push for more people to respond to the 2010 census. So not everything is always captured in the Census. We asked people to talk about where they get information about the community as you see question 3, like what sources are you using. That way we can understand how strong the information was and whether there might be additional information resources that should be

considered. So a lot of it was that sort of back and forth thinking of what we do and what we might do per the suggestions of outside folks.

Another area that we looked at is meaningful involvement and community involvement and meaningful involvement, and Charles touched on this in his remarks, to me that's when you can influence the decision making. Sometimes people are notified in various ways and public notices, etc; sometimes people are truly engaged at different points along the process so that they can influence what and how we do things. So that's what this section talked about. There in question 2 you can see, is the community input considered at every stage of the lifecycle of the site identification, assessment, and cleanup process? So we wanted to get a sense of how well people were doing that and did they check all stakeholders. So we asked them to tell us the stakeholders that they work with to get a sense of people's awareness of the types of stakeholders they could and should connect to and work with.

Then there were other aspects that we looked at with public health and vulnerable populations. We wanted to make sure that these areas were being thought of too. For example, under age considerations, we didn't want to just make assumptions based off the median age, or the average age, of people in the country but did they look at specific ages in those communities because of course you know that gives you an insight into is there an issue that affects young people or children or infants or elderly people differently in that in that locale, and are you getting data to influence and make you aware, as you make your decisions and as we follow are procedures to make decisions, are we including that. Other things here are, do we consider language spoken? So when we are reaching out to folks, are we only doing it in one language and not necessarily the language of that population? Are we making assumptions about a range of things like who is living there, whether home ownership makes a difference in whether people are aware of certain things, when you have a mortgage bank send you information is different from when you are a renter, that can be informative.

Over here we looked at data collection and analysis. Again there are the same kinds of pieces. What were the range of ways that people were collecting data? And how were they providing and communicating with folks? I had one bad example in my experience with the EPA where people were putting notices in the Business Journal in English in a heavily Spanish speaking community. So we took those kinds of lessons and said are the ways you are providing information right for that community? So we could learn from that and they could learn from us asking those questions.

There is one last category. The last one is Outreach, Education, and Training. So we also asked them questions about how they were doing those things to get a good sense of whether they were, again, taking all the different lessons and experiences that we have had and making sure that they are reaching out as widely as they could and should in those different circumstances. That's just a quick overview and we have three other protocols in the Agency they've taken different tasks but they have all tried to incorporate the lessons we have learned over time into how we have approached analysis or remedy selection and all those pieces. So I will pause there.

**Reginald Harris:** Thanks Ken. I would like to point out that if you look at the protocol list Kent presented you notice the concepts that are expressed as part of the factors that we need to consider are clearly

present and demonstrated throughout the protocol. I think that it is important for us to think about when we are looking at what we are doing in this Agency at this point and time, we're arriving at a point where we are beginning to think comprehensive about what we do, the way we do things, why we do them, and this was an opportunity for us to not only gather information about the types of information and considerations that people were looking for and the types of concerns that they were addressing is we work on cleanup programs but also what types of information would be helpful in making the people that operate in our programs better informed and better able to get to and identify and address concerns in a more holistic manner. Kent, do you say that would be a fair statement about....?

**Kent Benjamin:** Absolutely.

**Reginald Harris:** Okay. So again I go... I don't see any questions that... Anything anybody wanted to raise? Well Kent, in the process, did you find when we were working with the different groups of people across the Agency putting this thing together, that there became an "Ah ya!" moment for people where people would start to look at these things and would say 'Hey, you know, this is what this is about. This is why you ask that question. This is what you are trying to get to by exploring that.' Did you find that there was this kind of moment where everything started to come together and click for folks?

**Kent Benjamin:** Yeah, there were different a couple of moments like that. One was when we brought together different EPA "specialists," if you will, to put this together so that we would have a comprehensive piece and there was a point where we start to combine all the pieces where people start to see the connection. They start to see their place in the universe. And then the feedback that we have gotten as we have deployed this to over 400 people already in the Agency already, people have come back and said that we need to this or we figured out that this or we have figured out that this is a really good vehicle for assessing our capabilities and our understanding and we'd like to share this with other folks, use this more, so our intentions of not only having it be an analytical tool but an education are absolutely being fulfilled. Very please that has worked out. We have really tried to embrace that let the education of external folks tried to give us in informing our process.

**Reginald Harris:** Thank you for that Kent. We did have one question. Will this information be made available to the participants of the webinar?

**Sheila James:** Yes, the webinar is being recorded and it will be posted. You will be able to look through the webinar again.

**Reginald Harris:** And they will be able to see all the presentations again?

**Sheila James:** Right.

**Reginald Harris:** Okay, thank you.

**Sheila James:** Also, I would like to remind about asking questions in case you didn't hear at the beginning. On the upper tool bar there is a Q&A tab which will open a box where you can type in a question, so that is the way you can ask your question.

?: Okay. Here is another question about Enviromap, is it available to local governments? And Kent, you can answer that.

**Kent Benjamin:** That I believe you can but I'm not 100% sure so I will have to get an answer on that but I will try to get that while we are on the webinar.

?: Okay, and then the other question I wanted to know, where would all the information be posted? I would imagine we are going to send something around to everyone who participated to that effect, giving them the information.

**Kent Benjamin:** Yes, I guess it will all be posted here. The part I do want to go back to about our Enviromapper, we do have our EJ view tool available on the OEJ webpage, which you should be able to access right now by typing [www.epa.gov/EnvironmentalJustice](http://www.epa.gov/EnvironmentalJustice)

?: Thank you.

**Reginald Harris:** Okay, Sheila, was all that correct in that all of the presentations would be sent out in some form, that everyone who participated in the webinar would have access?

**Sheila James:** It is my understanding that it will be posted on the EPA website. Okay, thank you.

**Reginald Harris:** Okay, with no further ado, I guess it is my turn. Now, with respect to Environmental Justice, I want to take some time and take a look at some of the things that we do. Now, we talk about Environmental Justice and many times people will talk about Environmental Justice in very abstract terms but understand that here at EPA we do cleanups or we do rulemakings or we do standards or we do risk assessment or we do program evaluation or reviews or we do some time of assessment. We conduct business in a lot of different ways here at the EPA and so we thought it would be useful to try and look at some of the things we do and how we do them in respect to Environmental Justice.

I am probably going to go fast through these slides. So let's go back and let's look at the seven factors again because I think it is important to tie these seven factors together with the information that is going to be presented and understand that in the Environmental Justice framework we need to constantly be thinking about these things and taking into consideration the proximity factor. You know the proximity to hazards and threats, the susceptibility and vulnerability, some of the questions that Kent reviewed with you earlier were designed to identify who was successful. Where the vulnerable populations are. Where are the people of greatest risk? What are some of the pathways? Are their unique pathways in some communities that will make a difference in the type of assessment that you do and what type of difference will that be? How significant is it? Are there things that you are aware of or totally unaware of? Where do you get that information from? Are there multiple sources of potential exposure and concern? Are there queue-specific exposures that we need to think about? What do we do to help the community capacity to allow people to participate meaningfully in the decision making process? Physical infrastructure, Charles talked about that. The chronic exposures to stress that were also mentioned before.

What are some of the implications of what's going on with dynamics of what is happening at the community level? And again, I'd like to re-emphasize that from a policy standpoint Charles provided background on the policy side now I'm going to look more programmatically. I like to do these types of things with case studies and places where we have been and things that we done that exemplify the types of things that we are talking about. And I quickly want to go through this ABEX Superfund site in Portsmouth, VA. A very compelling case. A very interesting case in that when you look at the case and you think about what transpired there and what the approaches are to addressing the various types of issues it was surely something that exemplified the way we do things from an Environmental Justice standpoint. The ABEX Superfund site was the site, in Portsmouth, VA, where a company had basically manufactured coupling for railroad cars. So there were large amounts of lead and other heavy metals used in the process of making those couplings. It also happened that this company was located directly adjacent to a federally funded low-income housing project and single-family homes that were right on the fenceline here. Obviously there are going to be a number of issues. If you look at other institutions in the immediate area, you notice the community is right here in the middle of downtown Portsmouth and the Navy shipyard is directly adjacent to the site. Also, there are highway entrances and a number of other facilities located in close proximity to the site.

Now the foundry operated for 50 years from 1928 to 1978, made those railroad couplings and I mentioned the thing about the heavy metals but what needs to be understood is the exposure scenario for this site was very very complicated because you had a large number of sources of exposure and you had surface and sub-surface concentrations of lead that went up into the 10% range you had lead in dust in homes in concentrations as high as 7,000 ppm. On top of all of this you had a shipyard sandblasting naval ships where large amounts of lead are also used. You had a naval incinerator that was emitting significant quantities of dioxin, all in the area around a low-income housing project where there were large numbers of children under six years of age. You can see I am setting up and I'm giving you information that speaks to the vulnerability factors we are talking about here when we talk about consideration of Environmental Justice. Also, there were large numbers of elderly people living in this housing project. You had a significant number of people who were at risk in close proximity here. Like I said, the lot was directly adjacent to where the people were living. There was a playground located right next door. I mentioned the lead in the 10% range around the foundry and in the soils concentrations as high as 58,000 ppm and the sand directly adjacent to people's homes had concentrations as high as 10,000 ppm, residential soils as high as 45,000 ppm, and dust in the attics I had already mentioned as high as 7,000 ppm.

Now also, its public housing built in the early 1950s so there was also lead-based paint in the housing. So I've talked about proximity to hazards, I've talked about susceptible populations, I've mentioned multiple sources of exposure, multiple types of exposures, and potential for significant numbers of impacts associated all within this one community of very very susceptible people.

I think it is important to look at all the different things that were done to address the issues. The very obvious thing the program did was the demolition of the foundry and the removal of all the foundry soils and sands of course is significant. But also, the program also looked at adverse impacts and exposures as a part of the process of remediation whereby we took the opportunity to immobilize the

lead to diminish the chance of exposure while things were in transit. The residents were all temporarily relocated. Removing the citizens from the source of the exposure reduces their risk. The remediation levels were based on sound science. We did blood lead testing on all residents because we understood, not only was lead a primary contaminant at the facility but there were also other potential sources of lead exposure we wanted to monitor for and we understood the seriousness of childhood lead poisoning. We did blood lead testing on everyone who lived there and everyone we were able to negotiate free blood lead testing for the entire community for life in order to ensure continued monitoring and vigilance.

There was lead education done, all the homes were also cleaned to HUD standards for lead. All of the houses in the area were cleaned that way. We did a removal at the playground. We demolished the houses closest to the foundry because we realized that from a practical standpoint the types of exposures that were going on there were such that it would not be possible to remediate them in a way that would be practical and safe for people with 7,000 ppm of lead in the dust of the attics of those homes plus them being right adjacent to a factory of 15,000 ppm. Those types of things presented barriers to assuring the protection of the people.

The one thing that worked in our favor was at the same time, HUD had recently finished lead abatements all over the low-income housing projects in the area so we had in our favor that one of the sources of lead outside of our control was being controlled by HUD and then with our house cleaning and monitoring we were able to control the internal environments in the homes as well as from the remediation outside we were able to control what was happening in the external environment.

I mentioned the dioxin before. We did comprehensive sampling for dioxin. We did find that the wind was blowing directly in the direction of the housing. Fortunately, we did not find an elevated risk but we were also able to work with the Navy on doing so fixes to those incinerators so that the dioxin emissions were no longer a concern. I mentioned the blood lead testing and there were a number of other things. There was outreach through the CDC, through the state local health department, through DOJ community outreach program, through regional programs and other institutions to make sure that people were well-informed, well-educated about what was going on and the things that we did were in response to the totality of the concerns that the people were being presented with.

I think that is it for this time. I think what I will do here because I think we want to allow time here for conversation and questions, I just had some other examples of other types of things that we did to address Environmental Justice but basically the idea is the same. The identification of those factors that we talked about, the consideration of how, through programmatic activities, we were able to formulate appropriate responses to address the various types of concern and do the types of things that were protective of human health. I don't want to take up too much of the time and I built extra things into my presentation in case there was time left over and people wanted to back to something. So, not to hog the time, I will hold here and will check to see if there are any questions. If there are any questions or comments at this time that anyone has regarding this presentation and then we will move on to the next.

Okay, I have a question. How does the community involved in the decisions (e.g. the idea of relocation)?

Actually, we had several public meetings with the people in the community to talk about the alternatives for how we were going to address the problem and they recognized, and we recognized, that it wasn't a good idea to have people around while we were doing all of that work. It was unsafe and it was impractical to have people located in the area while we worked because we were remediating surface and sub-surface soils in and around the buildings and, speaking of unique exposure pathways, one of the things that was brought to our attention, that a lot of the single family homes had been built with crawlspaces under them and family pets spent a lot of time in those crawlspaces. In looking at the literature and considering the nature of lead, that could have been a potential source of exposure for people in homes because the dogs would go under the homes and would be in these lead contaminated soils and then would come into the house and bring the material in on their body. That was another source of exposure but with respect to the people, when we realized that it was not safe to have people stay in place while we did remediation because we were going to have to close streets, we were going to have to dig up many many tons of soil in order to remediate the area. When we met with the people and discussed options for relocation and we allowed people to look at the various places that we identified that were available, because we had to temporarily relocate almost 600 people. We were able to find a number of locations where people could stay while the work was going on. We were able to find that the senior citizens had certain needs that they wanted address and we were able to find some buildings that were relatively close to the area where they could be relocated to and families with children there were a number of places we used, hotels, we used a lot of different places. But we allowed the people to review the different options to outline their needs and desires and were able to successfully relocate all the people temporarily during that part of the work.

Here is another question. I developed a document that addresses how to identify populations that are highly exposed. The documents need to be updated but it fits perfectly with the goal of identifying and assessing the unique exposure pathways that lead to greater exposures for various population groups. The document is also helpful in enumerating those highly exposed populations. My question is, is the EJ office aware of this and other such documents that are available for use in implementing the Administrator's EJ goals? How can useful documents, tools, and research such as these reach those who need to incorporate these types of EJ analysis? And that comes from Amena Wilkins. Kent, would you like to tackle that?

**Kent Benjamin: Sure,** I can't say what documents that folks might be aware of. Anyen Mayteweka (?) who is working with Devin Pain-Sturgiss in our office of research and redevelopment. They are scientists and they are probably aware of any number of documents. If you would like to send it to us or contact us, that is fine. You can email me if you like and [Benjamin.kent@epa.gov](mailto:Benjamin.kent@epa.gov). I won't try to tell you to tell you Maytews address but if you send it to me I will connect you to her or to Devin Pain-Sturgiss.

**Reginald Harris:** Okay, thanks Kent. Another one. When was the decision made to cleanup and relocate the residents. One, the site was identified as an NPO site and listed we recognized once that once the site was listed that it had to be cleaned up, so that was when the decision was made. The how, that took awhile because we had to do the remedial investigation. Once the decision was made how it was to be

done, that's when we started the process of the relocation of the citizens. We started preparing for that immediately afterwards. Since the facility was closed for a number of years before the site was identified as a Superfund site, now when we went and did blood lead testing, I mean we did extensive blood lead testing, we tested more people than actually lived in the housing project incidentally. But we never found anyone who lived there that had an elevated blood lead. We were really fortunate in that there were no elevated blood leads identified. We think that it could have been a couple of reasons for that. One was that the HUD abatement that they had done. Another one of the reasons was that the housing had been well-maintained and was actually the best public housing in the city.

Okay. Thank you for your attention. And so let's move on to our next speaker.

**Terry Wesley:** Hello. Good afternoon to everyone. You see the topic of my presentation is "The Role of Place-Based Enforcement Strategies to Address Environmental Justice". I have two areas to cover over the next twelve minutes or so and let's jump right into it. You know for most of the operators the mere mention of enforcement or the sighting of this badge can make them a little nervous. Some may drop a little special gift in the mail after the inspection, which understandably can also lead to a slight aggressive response. Nonetheless, I would like to offer a different perspective regarding enforcement, typically one approach that may prove beneficial for the range of environmental concerns impacting low-income and minority communities. But before I do, let's take a few minutes to take a look at EPA's enforcement program which will provide a regulatory context for the balance of this presentation. In protection of our air, water, land resources, enforcement is a vital component in getting those who are regulated to choose their environmental obligation and unfortunately deter those that might otherwise profit from violating the law and level the playing field with environmentally compliant companies. By working with the Department of Justice, state and tribal governments, actions are taken to bring polluters into compliance. Further, the Agency has decided on those actions that reduce the most significant risks to human health or an environment, and consult extensively with states and other stakeholders in determining risk-based priorities. Although enforcement certainly gets a lot of attention, it should be understood that EPA's compliance activities work in tandem to insure that the nation's environmental laws are complied with among all regulated sectors, and this is the context why improving compliance by assisting the regulated community to better understand their requirements, ensure compliance, to affect their monitoring assessment, and lastly through compliance incentives and auditing for example by lowering or reducing penalties for facilities that voluntarily disclose and correct their problem. Rather than go into any specific detail, as well as in the interest of time, I welcome and encourage everyone visit EPA's compliance and enforcement webpage to learn more. A wealth of information can be found there which includes the Agency's enforcement goals and national enforcement initiatives for the next three years.

So now let's take a moment to revisit the set of factors shown that Charles just spoke about earlier, the representative conditions associated with added burden to high exposures, to environmental hazards, increased vulnerability to these hazards, and adverse health outcomes. These cycles seem to be prevalent among minority low-income populations. I'm not going to go into these in depth but a question I do throw out there to everyone is, how can the EPA, or for that matter state and local environmental agencies seek to address the range of EJ issues, such communities they face, particularly

through their regulatory enforcement programs? To respond to that question, perhaps we probe a little deeper into the actual way a compliance program is being administered. To this end, here are a few program specific questions that can help us better understand to what extent these EJ concerns are being considered. Even looking at the first question, are the responses proportionate? Even includes, factors such as injunctive relief, penalties amounts in the use of escalating enforcement, and other measures and for the others you will note the wording being applied here, “sufficiency” “ensures” “coordination,” they all get at the heart of, to what extent, the program is factoring EJ concerns into its day-to-day operations. Looking at this next set of questions, such as how are the results of monitoring are communicated to the community? As regulators who still take into account, and we need to, both the need for enforcement confidentiality and the force of minimizing health and environmental impacts as soon as they are identified. And the other question are just as straightforward but are just as important as they touch on the issue of adequate resources and the summation of useful materials.

So at this point I’d like to summarize. I’ve tried to provide you with a brief overview of how EPA’s compliance and enforcement measure. A reintegration of six factors that caps the range of concerns for impacting these communities and lastly offered a suite of probing questions for regulators to consider in the implementation of their own enforcement programs. Next up here, that I’m going to take is to see whether we can identify examples where EJ concerns were incorporated into the enforcement regulatory process and as an outcome positive results were achieved. To this end I offer two such cases, one of them involving an EPA Region 2 led initiative in Rochester, NY, and the other in Canton, NJ, led by the state environmental department.

So let’s first look at the Rochester initiative. In October, 2004, EPA Region 2 issued a combined Environmental Justice and children’s’ health place risk called the Rochester Community Environmental Project. Part of this effort in the children’s’ health strategy sought to minimize exposure, that is to the children, to environmental pollutants and to further integrate environmental programs to address drinking water in schools, lead-based paint, pesticides, hazardous waste, and asbestos in schools. The project worked in collaboration with the state, county and city health and environmental agencies to provide compliance assistance and outreach to Rochester’s regulated facilities. Under the project, a mix of regulatory and voluntary programs were used to improve health and environmental protection for all residents in Rochester.

Now, taking a step back, we might ask “How was Rochester selected by Region 2?” Well, first the decision was made by management to focus on New York State. Next was to conduct an assessment that utilized and included census data, facility compliance information, health data, particularly lead and asthma, and estimated risk associated with toxic chemicals. Environmental Justice GIS 2 served as the principal platform for displaying the assessment results and among the 247 cities identified in the New York State assessment, the city of Rochester was primarily selected because it had the highest toxic release inventory, or TRI, emissions in the state. In terms of outreach, the region sought out, before embarking with the initiative, specifically developing working relationships with the following list of entities you see on the slide. In particular, we owe a debt of gratitude to Monroe County Department of Public Health, the Rochester City Department of Environmental Science for their outstanding assistance on this project.

Let's talk about activities and results. From May to July 2004, 31 inspectors completed 203 program inspections at 156 regulated facilities and single program inspections were emphasized to maximize compliance monitoring coverage. Over 30 enforcement actions were taken against those facilities found to be in violation of federal environmental regulations. Vital assistance was provided to the health care sector in the form of hosting workshops to help regional hospitals identify and manage hazardous waste. And lastly, 17 regional hospitals signed an audit agreement with Region 2 in which they identified the flows and corrected violations. Further the gravity-based penalties were generally waived and consequently these hospitals are now safely managing more than 45,000 pounds of their hazardous waste. From a health-based perspective, coordination and cooperation between EPA Health Department Region 2, the Rochester city school district, and the Monroe County Health Department. There resulted a standard analysis for lead in drinking water in all 42 elementary schools in the district. Where many of the outlets exceeded the action levels of 20 ppb, parents and kids were notified while those outlets were shutoff and piping replaced. With respect to asthma, Region 2 in December 2006, completed work with the American Lung Association and the school district to reduce exposure to asthma triggers in homes and schools and to reduce absenteeism in children with asthma. Also, I believe there were more than 211 homes and occupants that received residential environmental assessments and further benefitted from reducing exposures. What's impressive about this effort was that this effort generated significant improvement in children's lives by reducing absenteeism, emergency room and hospital visits, all by more than 50%. Region 2 Department of Environmental Conservation and Rochester City School District completed an effort to identify, remove, and recycle mercury sources in nine of their high schools. Thermometers, barometers, and other mercury-containing devices were replaced with non-mercury units and lastly the science teacher were educated about better management of their lab chemicals and the district took on a systemic approach to minimizing the environmental impacts to developing implementation of environmental management systems. Further, the proof that this initiative has kept varying, even after regulatory initiatives were winding down, through the collaborative partnerships with Rochester-based organizations. This has led, that is, in May of 2005, the Center for Environmental Information successfully receiving one of twelve inaugural EPA Community Action for Renewable Environment, or CARE, agreements at the time to create partnerships with other partners included the University of Rochester, the city's environmental supervision department, and the Eastman Kodak company. So what exactly was the outcome of this project? Seven school district refrigerated diesel trucks were retrofitted to reduce diesel emissions on school grounds, thus affecting children. A neighborhood toxics education program was developed to educate residents to be knowledgeable about toxic effects in and around their houses. Small stationary sources of air emissions were identified and pollution prevention measures were implemented. And sorry, the part of the screen you can't see because it is being cut off a little, property owners in urban areas with occupant children under six years of age were put in touch with local, state, and federal funding sources available for lead remediation. To this day, our ways in Rochester are still reporting good news and just last December EPA awarded Rochester school's initiative to avoid lead poisoning, another partner, with an EJ, that is Environmental Justice, achievement award, one of five nationally, for their outstanding leadership in community-based efforts to prevent childhood lead poisoning in that city.

Moving on to Camden, NJ. Now I would like to talk initially about another case study for environmental strategy here led by the New Jersey Department for Environmental Protection. In October 2002, the Camden Enforcement Initiative was a week-long, multi-media enforcement action that took place in the city of Camden led by the environmental protection agency. Joining the DEP in this effort were the EPA Region 2, the NJ state police, the NJ Department of Law and Safety, the Department of Community Affairs, the Camden County Government, as well as the City of Camden. The goal of this project was simply to inspect 100% of the target facilities, to perform multi-media inspections where initial program inspections raise concerns. As mentioned previously, the city was mainly selected because of citizen complaints. However, other factors that contributed to the selection were facilities that had not inspected in recent years and facilities with a history of compliance problems in one area, say air, that had not been previously inspected by another, such as water or the waste program. Prior to conducting these inspections, as part of a outreach campaign, the DEP held a community availability session as an opportunity for community members to receive information about the initiative. It also afforded an opportunity for residents to state their environmental concerns. As a result, several facilities identified by the community were added to the target list. Here is an example of meaningful involvement as alluded to earlier.

And so what were the results of this place-based initiative? Very impressive numbers. DEP, EPA, and the County conducted more than 760 inspections. From the initial sweeps to the following referrals more than 120 violations were discovered during the strike. The majority were in the range of unregistered underground storage tanks and failure to install air monitoring and emissions equipment, illegal treatment and storage of hazardous waste, and unpermitted storm water discharge activities. This effort was considered to be a landmark achievement in New Jersey for many reasons. As noted on the slide here focusing on a community that had long been neglected, the agency was able to build trust with local residents, the community helped shape the initiative, this was an opportunity for what is known as smart government in New Jersey as the DEP made use of all resources including Rangers from Parks and Conservation Officers from Fish and Wildlife. And finally, by focusing on the entire units within a community, the DEP had a broader picture of the types of violations that may be occurring at similar sites and communities across the state. And by the way, just in case you were interested in who was the principal architect instrumental in the Camden Initiative, it was none other than Lisa Jackson, EPA's Administrator, who at that time was the Assistant Commissioner for Enforcement at the New Jersey DEP. You know back then she was known as Action Jackson.

So, wrapping things up, what is it that we can learn from these two case studies regarding place-based enforcement strategies? The focus of environmental programs and resources in a defined geographic area results in health and environmental protection, and it does put a face on the EPA as well as other regulatory agencies, particularly in communities that have EJ concerns. Also, it bring together organizations that may not be familiar with one another, to understand the program and to leverage their collective resources, and so on and so forth. Could other place-based strategies work to address local community concerns, particularly in areas with EJ concerns? Without citing my personal perspective on the subject, let me simply leave you with a paragraph from a recent White House memo that speaks of place-conscious planning and place-based programming. Pretty much here it is really

giving the charge to go ahead and proceed with place-based policies throughout. As such, I would say place-based policies are probably underway throughout many of the agencies as I speak now. The last thing that I will say about the use of place-based enforcement strategies is that just maybe another benefit we can look forward to besides using it to address local EJ concerns, is that over time those same facility operators that I spoke of earlier may become a little more friendly to approach. Thank you so much.

**Reginald Harris:** Well thank you Terry and we will be on the lookout for fuzzy animals with their bellies turned up towards us. Thanks a lot for that. I guess, these are two very good examples of very different to address Environmental Justice concerns and again notice the acknowledgement and the focus on the factors that we have talked about and on the totality of the types of strategies and concepts that you use to approach this. When we starting talking about Environmental Justice and putting something tangible on the table, these are types of things that are tangible to talk about, results-based activities designed to address Environmental Justice. They speak to the issues that we are talking about, speaking to vulnerable populations, speaking to proximity, to multiple exposures, to finding mechanisms by which we can effectively bring people into the process and communicate with them. Are there any other comments? Terry, I don't see any questions here right now.

**Sheila James:** There is a question here... at the bottom.

**Reginald Harris:** Okay, I'm sorry. I didn't see that. Terry, here is a question for you. How were these initiative projects selected, particularly given the limited resources available? Aren't there a large number of site areas with need that would meet the criteria listed for Camden? Is it the squeaky wheel, the place with the most complaints?

**Terry Wesley:** That's a great question. If I may, in terms of the Camden initiative, as noted, that was led by the New Jersey Department of Environmental Protection and indeed one of the major factors in determining the focus in that one area was due to facility complaints. I do believe at that time that there was actually many members of the community that filed a federal lawsuit. I believe that lawsuit was for the St. Lawrence Cement Plant that was proposed for there and had definitely gotten a lot of attention. So that coupled with the other factors that I mentioned, areas that hadn't been inspected in a while. Those are considerations also that factored into the site selection but when you talk about place-based initiatives, the biggest issue is the one of limited resources so it has to be a commitment taken by an Agency, EPA or others, that for an area that has been historically disadvantaged, many EJ communities that we have had contact with in the past have also brought forward this continual issue that there is not enough enforcement, a lack of enforcement that has been going around in our communities. And so when you take a look at the opportunity to apply a place-based initiative, it makes sense to start with those types of communities to focus that commitment and those resources towards.

**Reginald Harris:** Terry, I actually like to add because I can help you answer that question on Camden. There was a lot of health data that was available that had to do with the issue of south Camden. In fact, there was there was cancer mortality data that estimated that cancer mortality rates in that community were many times higher than they were in other communities and there were other health outcomes

that showed significant adverse impacts in the south Camden community and also when you start thinking about some of the concerns, because as you write they did file lawsuits, and there was the complaint about St. Lawrence Cement and one of the factors there was the fact that the facility was going to be emitting significant quantities of PM2.5 and that had not been taken into consideration initially. Initially, they had only taken a look at PM10 and when you looked at PM2.5 you saw that there was a very very significant health risk associated with that and I can definitely say from the research that I have done and the things that we had information on that there were some very compelling reasons from a health and environmental standpoint for looking at Camden in that particular case.

**Terry Wesley:** Thank you Reggie. Definitely, and for those of you that aren't familiar and don't know, looking at the St. Lawrence Cement facility and the issue that was raised by Glen, there was also consideration of the diesel trucks that were going to be servicing that facility that many felt were not being incorporated into the permitting process. The issues that the community were raising got a lot of attention.

**Reginald Harris:** Okay, thank you sir. Anything else? I think we are ready for Arthur Totten at this point and time.

**Arthur Totten:** Okay, thank you Reggie and hello to everybody. I wish I could cue of the tune "What A Wonderful World" as we Armstrongs look at this wonderful view of the Earth but I was asked as part of the symposium to bring in the decision making framework for NEPA and Environmental Justice. Some of the questions I will be answering over the next couple of minutes include, why NEPA? What are the limitations of NEPA? What are some of the processes involved in NEPA review? What is the nexus of NEPA and Environmental Justice? What is a case study? And how has NEPA and Environmental Justice evolved over the years?

To start, I would like to take us back a moment, pre-NEPA, shortly after World War II when America gearing up for the after-war effects, building up its infrastructure and what have you. And at that time there was no way for concerned citizens or environmental organizations to express the environmental degradation that occurred because of the rapid build-up post World War II. Any project that was done was two-dimensional, technology and economics. If it was technologically feasible and funds were available, then it was a go. No questions asked. There was little regard for potential environmental consequences. Well that situation did not last very long as things got worse and worse. What NEPA, the National Environmental Policy Act, did was to bring new approaches to project planning and decision making and to address the fact that a lack of participation with engaging public participation.

So what did NEPA do? As I go through this, you will see that offers a tremendous opportunity to achieve Environmental Justice. It will give us a framework to address key issues addressing Environmental Justice and provide a vehicle for resolving disputes in an efficient manner. Forty years ago, in 1970, the National Environmental Policy Act, not protection act, but policy act was established by Congress, signed into law by President Nixon. This established a National Environmental Policy that established procedures for documenting decision making, developing a multi-agency approach to decision making, producing a procedure whereby you could actually see what was done, otherwise known as transparency, and more

importantly, gave an opportunity for stakeholder and interested party involvement, and lastly created the Council on Environmental Quality, which was created to administer NEPA and CEQ, or Council on Environmental Quality, did this by codifying the regulations of NEPA in 40 CFR parts 1500 to 1508.

NEPA in Brief. What that did do was direct agencies to prepare EISs for major federal actions significantly affecting the environment. It asked to look at the environmental impacts of proposed actions, looked at unavoidable adverse impacts of proposed actions, the alternatives, the short term uses and long term productivity of those actions and any irreversible or irretrievable commitment of resources.

So what are looking at in terms of actions? The key here is federal actions and what are we looking at. We are looking at policies, plans, programs, projects, anything that was conducted or produced by federal agencies. This includes issuing licenses, permits, and grants. So the federal actions fall into these categories. When the federal government adopts a policy, adopts a formal plan, adopts a program, or approves specific projects it is considered a federal action, therefore requiring review by NEPA.

Nope, there is no stormy weather here and this is not the Travelers Insurance umbrella but is the NEPA umbrella. So what is the significance of this? NEPA attempts to bring a coordinated process for looking at environmental impacts and all the laws that fall under the NEPA umbrella that you see listed here incorporate certain aspects of NEPA. And these things that they incorporate will be transparency, an opportunity for stakeholder involvement, and a systematic documentation of potential impacts. So all of these things fall under the NEPA umbrella.

I'll just briefly mention some NEPA determinations. On the next slide I'm going to show the NEPA process but these will be covered in that flow chart: Categorical Exclusion, Environmental Assessment, Finding of No Significant Impact, Notice of Intent, Environmental Impact Statement, and Record of Decision. The first one, Categorical Exclusions, tends to cause a little confusion but basically a Categorical Exclusion by the way is an action that a federal agency has determined that the action by itself, or cumulatively, will not have a significant impact on the human environment. Therefore, it will not be subject to have an Environmental Assessment or EIS. Now each federal agency, within its own mission, determines what it considers to be an action that should be "Categorically Excluded." So the question is asked, is there any public input in it? Will we have any say in what NASA or Highways or State Department may do to say that something is "Categorically Excluded"? Yes, you do. There is a process. Before any agency determines that any action is "Categorically Excluded," it has to go through a public review process where public input is asked before it gets finalized.

So with these basic determinations, let's look at this flowchart here which is not meant to confuse but to simplify. And from the government, I am here to help you understand. Okay, let's start with the need for environmental review. There is a proposed project, procedure, or plan. The first question to ask is "Does it need an Environmental Review?" You can either go "No, it doesn't" in which case it may be Categorical Excluded and the determination may have been made that this action will not have any environmental concerns or affect the human environment, so you can implement the action. If you consider that there will be an Environmental Review done on it, but you don't know if the action has

significant impacts, then you prepare an EIS to determine if there will be significant actions, effects, and if there are significant effects from the EA, then you conduct a Notice of Intent to Prepare an EIS. You do the draft EIS, final EIS, and the ROD. If you know from this point that there will be significant impacts, you directly go ahead and issue of Notice of Intent to conduct the scoping, the draft, the final, and the Record of Decision which will lead to the implementation of the action. In the grand scheme of things, only a small portion of actions require an Environmental Impact Statement. There are hundreds of EISs done but there are thousands of Environmental Assessments done.

In sum, what NEPA has done to allow for transparency, inform public decision making, and key public involvement in the process. You say “Well and good. That’s great but, you knew this day would come, there are limitations to NEPA.” What are the limitations? For one, NEPA applies only to federal, Executive branch actions. However, keep in mind that many projects that require federal or private sector funding or activities will involve a federal action such as issuing a permit or approval for federal funding or use of federal land, in which case it would be required to go through the NEPA process. This is an important point here, NEPA relies heavily on other environmental laws. Remember that umbrella that I showed you earlier. All the environmental laws have some component of the NEPA process in their statutes; public participation, transparency, documentation. NEPA relies heavily on these other environmental laws, standards, policies, plans, and programs for decision making criteria for monitoring, follow-through, and enforcement.

This particular slide shows some limitations of NEPA that people may not be aware of or tend to forget. CEQ or EPA does not have authority to halt the action. Remember, that NEPA’s document is a decision making document. It’s not going to mandate that an environmentally friendly project be done. It lays out, for the decision maker, the various aspects of what the project can do, how will the project affect the environment, and it is up to the decision maker, which is the particular federal agency proposing to implement the project or other proponent to decide “We are going to go ahead with it” or “We are not going to go ahead with it.” If they go ahead with it and it is environmentally damaging and the stakeholders and other concerned citizens, parties don’t agree with it there are ways that they can challenge that. Which, in the second bullet, the public has a right to seek judicial review if they believe the federal government has not adequately addressed their concerns.

This chart shows the organization of NEPA and the process. The second chart shows EPA organizational chart and the NEPA review process. But most importantly for the Symposium’s concerns, we want to know, what is the nexus of NEPA and Environmental Justice? We’ve got the trilogy here. We’ve got the Executive Order, NEPA, and the Presidential Memorandum. I’ll assume that everyone is familiar with Executive Order 12898 and what it says. We are familiar with NEPA which I previously mentioned this particular one declares the continuing responsibility of the federal government to improve and coordinate plans and programs so that the Nation may assure for all Americans safe, healthful, productive and aesthetically and culturally pleasing surroundings.

The Presidential Memorandum speaks to what Charles spoke to earlier about looking for the existence of statutory authority to bring this all together. EPA’s working Environmental Justice program definition as stated “a coherent and cohesive collection of resources, etc. Again, referring to what Charles

mentioned earlier, NEPA and Environmental Justice Disproportionate Impact Factors, remember the umbrella that I showed you earlier and the environmental laws. We have here the disproportionate impact factors that Lisa and Jackson and the Office of Environmental Justice are focusing in on as we look at Environmental Justice concerns in the communities.

NEPA and EJ, a holistic process. The NEPA review process as it pertains to EPA review concerns encompasses all these areas: wetlands, endangered species, the whole scene here, which can relate to each of the seven factors that we had mentioned previously in this symposium.

NEPA and EJ, common terms and agency action – All of the terms you see listed here, “Affected Environment” “Cumulative Impacts” and so forth, share a common grounds with NEPA and Environmental Justice. EPA and CEQ have developed guidance to assist federal agencies and EPA in its review of environmental documents as it relates to Environmental Justice. Two of which here, from EPA, I know I have less than 30 second, but I just wanted to show you an example of a successful use of NEPA and Environmental Justice. The primary thing I want to point out is that we have a project to perform here in California and the Environmental Justice community really got involved in helping the decision makers come up with alternatives to reduce the impacts. The project was to modernize the container terminal facility at the Port of Los Angeles and upgrade the wharf facilities. Also, this area was close to an Environmental Justice community. But, long story short, as you can tell that the community developed a mitigation agreement that incorporated these factors, the Clear the Trucks Program, the Community Mitigation Fund and negotiation was led by local leadership; Council members, the mayor’s office, community-based organizations. The mitigation was consistent with recommendations made by EPA’s Environmental Review Office and Environmental Justice staff and the Agency’s draft and final comments.

In sum, how has NEPA and Environmental Justice evolved over the years? Environmental Justice concerns are increasingly incorporated in policies, plans, and procedures by the Agency. One point being the survey that Kent Benjamin mentioned earlier. Streamlining with other environmental requirements. More effectively tailored public participation, again focusing in on getting information to the public, by whatever means possible, language translation or what have you. Better job of capturing cumulative and indirect effects. And lastly, communications technology increases access to the NEPA process; Internet, CDs, and NEPA assessment tools like the EJ View.

NEPA turns 40 under the Obama Administration and so does the EPA so what does that say? It says that in the 40 years that we have worked with the National Environmental Policy Act and Environmental Justice that, for the Environmental Justice community most importantly, NEPA has provided a venue where sound science is being utilized, the rule of law has been applied, and transparency of procedure is promoted. I thank you. Sorry for the quick run through but if you have questions let me know and that’s it, Reggie.

**Reginald Harris:** Thank you Arthur and we do have some questions here. The first one is, is there any chance that a broader public health effects not just expulsive contaminants will ever be considered, measured and included in the EIS process or would this require a new law? There have been some local

efforts to include issues such as impact on walkability \_\_\_\_ develop the policies but the national framework and emphasis on how projects affect health more broadly, especially in at risk communities could encourage more and broader inclusion of public health considerations.

**Arthur Totten:** I would say to that that the way that particular concern can be addressed and brought into the NEPA process is public involvement, as the project is proposed, especially in the scoping process which lays out areas that should be addressed in an environmental document. These are the areas that we want to cover, the concerns about the health, measures that you just mentioned in that phase so if the project and the EIS is developed, that aspect can be looked at, it can be researched and brought out in the document. The point is to bring the information into the document for the decision makers to have for their purpose.

**Reginald Harris:** Thanks Arthur. Now here's the second one. Do you know of any plaintiffs who have successfully challenged a NEPA decision based on a failure to identify or mitigate EJ impacts?

**Arthur Totten:** Well, don't we have something going on right now about mountain top mining? There are several instances where concerned parties, stakeholders, have challenged the decision of an action for a federal agency. I can get back with the person and elaborate on what those were but the answer to the question is yes.

**Reginald Harris:** Okay. Joe Lyons was the person that asked that question. The final question is something that we will address at the end because it is about the webinar itself, so we will address that at the end. So I would like to move on to LaShonia's presentation. Are you ready?

**LaShonia Richardson:** Okay, can everyone hear me now? Thank you Reggie for that introduction and I want to say good afternoon to everyone still on the line. So let's talk about the Office of Pesticide Programs Environmental Justice training module and the integration of EJ into the human health risk assessment process, which plays an integral part in pesticide regulatory decisions. So what do we do in the Office of Pesticide Programs? We register pesticides for use in the US. We register those under the Federal Insecticide, Fungicide, and Rodenticide Act. We set pesticide tolerance under the Federal Food, Drug, and Cosmetic Act. And we also conduct new chemical evaluations, evaluations of new uses for existing chemicals, and comprehensive re-evaluation of old chemicals, also called Registration Review. During the training developmental stages, we knew that we wanted to enhance the current human health risk assessment process by filtering it through an EJ lens. Although our assessment process is designed to be protective of all populations, we wanted risk assessors and risk managers to attend this training to add an EJ layer and to look deeper into the assessment. But first we needed to raise EJ awareness and help assessors to marry the definition of EJ to the processes and principle to which we conduct risk assessments in OPP. The training would also help staff to identify and characterize EJ issues by looking closely and populations affected by the use of application and \_\_\_\_ of a specific chemical and identifying those subpopulations and their susceptibility. We also wanted to provide real world examples of EJ issues and actions in OPP. The training would also identify tools, old and new, that could strengthen our EJ efforts in risk assessment. Lastly, we wanted to use the training to identify opportunities for improvement in EJ.

In implementing the training, the initial focus was the human health risk assessment for environmental pesticides carried out by the Health Effects Division of OPP. We knew that this training would serve as a base for future trainings and that all of OPP would need to be trained. The eventual goal in training was for all the divisions in OPP to develop EJ training modules very specific to the work that they do. So we piloted a series of trainings, which was a success, and the team reasoned very positive and valuable feedback, which was included in a revised version of the training. Now we are ready for action.

The training was officially launched in late 2008. We offered an aggressive biweekly series of trainings in the summer of 2009 and are currently offering quarterly training sessions until 100% of OPPs scientists are trained. The training consisted of six sections that follow this layout. The overview of existing methodology for how this section is generally incorporated into the human health risk assessment. We had examples for incorporating EJ consideration, including suggestions and questions for how Environmental Justice could be applied to that section. We provided a toolbox appropriate for that section ranging from suggested models, websites, and places for future consultation. And finally, we added case studies to each section.

These are the sections of the module. The training consisted of, like I said, six sections. The different components come together to form the human health risk assessment. You have hazard assessment, human incident and epidemiology data, dietary exposure and risk assessment, occupational and residential exposure assessment, and aggregate and cumulative assessment.

The first section was hazard assessment. So in the hazard assessment section, assessors were given these questions to consider for identifying and EJ concern or issue. Are there any toxicological characteristics of the pesticide or pesticides class that might make certain segments of the population more vulnerable to adverse effects? We also asked assessors to ask, is there any literature available indicating that the chemical may have an adverse effect on a subpopulation?

Human incidents are reported as adverse health impacts for pesticide exposure and epidemiology is the study of disease and human populations, so when considering EJ assessors were asked to determine if any of the chemical-specific incident or epidemiology data indicated potential Environmental Justice concerns. Also, to examine the literature for epidemiology data, and conduct a chemical search on the HED, which is the Health Effects Division, Pesticide Alert database that contains relevant journal articles.

As we started thinking about EJ and dietary exposure assessment, we came up with these five factors that could help us identify populations that may not be adequately assessed when we do our routine dietary assessment. As I'm going through this, I think you will see a couple of themes: different regions of the country may have a different exposure profile because of where they get their food or water than the typical person or different populations that may have different consumption patterns. You want to ask questions like "Are all subgroups considered?" You want to ask about atypical use patterns. Are foods with low to no consumption data included in our dietary assessment? Do we check for bioaccumulation in food and drinking water? And we also ask assessors to look at the fact that our drinking water estimates are protective of all populations.

In Occupational and Residential Exposure Assessment, we ask assessors to ask these questions for EJ consideration. Are population subgroups disproportionately impacted when we are looking at farm children and urban children and what are the use patterns of that chemical? Is there the potential for chemical trespass from spray drift, volatility, or any other means and who might be affected? We also looked at risk characterization. Assessors really needed to look closely at incident reports and assessors should keep in mind that early research plans for ORE, or Occupational and Residential Exposures, were not focused on EJ issues, so it was very important that we reiterated that Occupational and Residential assessors look very closely at the data.

In the training, we also touched on the issue of aggregate risk. In the Food Quality Protection Act, they set a new safety standard when setting pesticide tolerances, and as you can see in this slide, aggregation requires common effects across routes of exposure. Here is a real world example of an aggregate assessment involving basketweaving. As you can see, you have an oral route of exposure, dermal route of exposure, inhalation route of exposure aggregated for the assessment of risk. The case studies were an integral part of the training because it helped us drive home everything that we had discussed in each section. So for the hazard assessment section we talked about a Chlorpyrifos case study that involved susceptible populations. For the dietary assessment we used the Lindane and Alaskan Native populations and for residential assessment we used a fumigant and people residing near treated farms case study.

The training also included an overview of risk management because it is such an important part of the regulatory process. Risk management is the process by which risk assessment results are integrated with other information to make risk management decisions. Risk managers were advised in this section to identify groups that may be disproportionately exposed, but first to understand use patterns and all routes of exposure and also to develop the best risk communication and implementation practices, for example, bilingual factsheets and outreach materials in different languages.

So we wanted to ensure that the training was educational and interactive and not just another boring lecture so we spent some time on the development of the interactive group activities and discussions. We had an EJ story time and EJ Amazing Race and some very intense group discussions that helped us to gauge how much of the information we presented as being retained and if our attendees were getting the general take home messages from the training.

So far, we have trained over 200 OPP staff. The evaluations for the training have been mainly positive with an 80% rating of Good to Excellent. Anecdotally, more discussion of EJ issues has come up in peer review and team meetings as a result of people attending the training. Most of all, OPP EJ training is on-going and definitely as new tools and information and technology become available.

This is my final slide. In the Office of Pesticide Programs activities we have some EJ strides. We have a lot of activities going on. This is just going to name a few of them. We have EJ language included in our Federal Register notices seeking comment. We are currently in the process of a revision in the Worker Protection Standard. Just recently, we published the Agriculture Worker Safety policy paper for additional safety factors and aggregate/cumulative assessment. We also have future EJ trainings on the

horizon. We have EJ and risk management training, looking to launch in late 2010. We have new modeling tools coming on the horizon and we are also beginning to look at some GIS implications for EJ.

I'd also like to take the opportunity to thank the EJ training team for all their help. These were volunteers and I couldn't have carried out the training without them. They did this in addition to their very stressful daily workload. And I'd like to thank the Symposium for having me.

**Reginald Harris:** Well thank you. Just so you know, Amena Wilkins sent you some kudos. She says "Kudos to OPP. This is a great framework that other program officers can follow to incorporate EJ analysis/concerns into their everyday tasks." So I just wanted you to know that you got some great feedback from somebody there.

**LaShonia Richardson:** Wonderful.

**Reginald Harris:** And I want to thank all the presenters and Devin Pain-Sturgiss, in particular, for making this happen and for putting this all together. I'd like to say, in looking back over what we've listened and learned over the last couple of hours, we have talked about the basic framework and motivation behind the directions we are going in at EPA with respect to Environmental Justice; why we are doing the things we do; we've heard about some of the processes that people are using to make sure that we are going in the right direction and looking at and evaluating programs; we've looked at actual activities that people are involved in for case studies to address Environmental Justice; we've looked at the mechanisms available to us through NEPA; to ask the correct questions in order to arrive at answers related to how we address communities and how we address the concerns associated with the projects we've undertaken; and you just talked about a mechanism by which we can incorporate Environmental Justice and take the factors we have talked about into consideration as we educate ourselves and prepare ourselves to do the jobs that we have to do at EPA. I want to thank one and all for this. I think this was wonderful and thank everybody that was on the line for their questions and their support and consideration. And one last time, somebody please inform the group, when will the webinars be posted and where?

**Sheila James:** What we are going to do is send out an email to all the registered participants at the time that they are posted and then the email will let you know where the location of the webinar posting is because it hasn't actually been determined completely yet.

**Reginald Harris:** Thank you. Thank everyone.