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OVERSIGHT HEARING ON THE FEDERAL SUPERFUND PROGRAM'S ACTIVITIES TO PROTECT PUBLIC HEALTH

HEARING

BEFORE THE

SUBCOMMITTEE ON SUPERFUND AND ENVIRONMENTAL HEALTH

OF THE

COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS
UNITED STATES SENATE

ONE HUNDRED TENTH CONGRESS

FIRST SESSION

OCTOBER 17, 2007

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ONE HUNDRED TENTH CONGRESS
FIRST SESSION

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[1]Note: During the 110th Congress, Senator Craig Thomas, of Wyoming, passed away on June 4, 2007. Senator John Barrasso, of Wyoming, joined the committee on July 10, 2007.

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C O N T E N T S

OVERSIGHT HEARING ON THE FEDERAL SUPERFUND PROGRAM'S ACTIVITIES TO PROTECT PUBLIC HEALTH

WEDNESDAY, OCTOBER 17, 2007

U.S. SENATE,
COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS,
SUBCOMMITTEE ON SUPERFUND AND
ENVIRONMENTAL HEALTH,
Washington, DC.

The subcommittee met, pursuant to notice, at 9:34 a.m. in room 406, Dirksen Senate Office Building, Hon. Hillary Rodham Clinton (chairman of the subcommittee) presiding.

Present: Senators Clinton, Inhofe, Lautenberg, Craig, Boxer, Barrasso

OPENING STATEMENT OF HON. HILLARY RODHAM CLINTON, U.S. SENATOR FROM THE STATE OF NEW YORK

Senator CLINTON. The hearing will come to order.

I want to start by welcoming our newest member, Senator Barrasso, to the Subcommittee. We are delighted to have him. He is already a Ranking Member. That is a rapid ascent in the Senate.

I want to thank Chairman Boxer and our full Committee's Ranking Member, Senator Inhofe, for their support of this Subcommittee hearing.

I want to thank our witnesses for appearing today.

We will begin with 5 minute opening statements, and then we will hear testimony from EPA Assistant Administrator Bodine. The Superfund Program is such an important part of our environmental protection system in our Country, and I think this is a very significant opportunity to discuss what it is doing and what more it could do.

Superfund has its roots in New York. Stemming from the discovery in 1978 by Niagara Falls resident Lois Gibbs that her neighborhood, known as Love Canal, had been built on a massive chemical dump. The effects of that chemical dump had been seen, but not understood for years. The impact on the people who lived there was tragic.

Love Canal became a national story and helped spur Congress to enact the Superfund law, which was signed by President Carter in December 1980. The Love Canal site was finally taken off of the Superfund's national priorities list in 2004, but 1,246 sites across the Country remain on the Superfund list today, including 86 in New York alone.

So as we approach this 30 year anniversary of Love Canal, the Superfund site remains vitally important because it reminds us of why we went down this path. The importance is underscored by a report issued last year by the Center for American Progress and the Center for Progressive Reform. That report profiled 50 of the most dangerous sites still on the Superfund list scattered across 10 States. We will hear more about that report later in the hearing, but I want to highlight a couple of its findings.

First, most of the 50 sites are locate in heavily populated areas. Second, many have been on the list for decades. Third, they contain a range of highly toxic chemicals such as PCBs, creosote, lead, arsenic, mercury and TCE. Sixty percent were located in neighborhoods where households reported median incomes in the range of $40,000, and some 26 percent were in the midst of populations comprised of 40 percent or more of racial or ethnic minorities.

So this is both an environmental health issue and an environmental justice issue. That is why I am dismayed by the Bush administration's handling of this program. The number of cleanups has fallen dramatically from an average of about 75 sites per year from 1993 to 2000, to an average of fewer than 40 sites per year under this Administration. In Fiscal Year 2007, only 24 cleanups were completed.

When we have asked the Administration to explain this sharp drop in cleanups, they claim it is due to greater complexity of the sites left to be cleaned. I don't accept that point. But even if you take it at face value, it raises another important question. Why won't the Administration, therefore, ask for more money to get the program back on track to deal with the allegedly more complex sites? When asked that question, the Administration has tied itself into knots defending the absurd position that more money wouldn't help all that much.

They have been extremely secretive about the program, keeping information from the public and stonewalling this Committee. Chairman Boxer submitted a series of questions, and I am delighted that she is here, because she submitted those questions to the EPA about Superfund 5 months ago. On Monday, 2 days before this oversight hearing, she received a stack of documents in response. All but three of the documents were marked privileged. That is just simply unacceptable. What does the Administration have to hide? I thought we were all in this together.

I hope we can get beyond this pattern today. For the Administration to keep repeating mission accomplished about the Superfund Program doesn't square with reality. There are 11 Superfund sites where human exposure to dangerous levels of toxic chemicals is not under control. There are 111 of those sites, because seven of them are in New York alone.

In addition, EPA data indicates there are 160 other sites where EPA has insufficient information to determine whether human exposure to these toxic chemicals is under control. I will be pressing EPA today to explain their plans to get these sites under control and to explore the reasons for the slowdown in cleanups.

I think it is clear this program needs additional funding. I think reinstating the polluter pays fee is a step we must take, both to provide additional funds for the cleanups and to make the program

fairer. Ordinary taxpayers should not pay for cleanups, and that is what has been happening at orphan sites for the last 4 years.

So we have a lot of ground to cover today. I want to turn now to Ranking Member, Senator Barrasso.

OPENING STATEMENT OF HON. JOHN BARRASSO, U.S. SENATOR FROM THE STATE OF WYOMING

Senator BARRASSO. Thank you very much, Madam Chairman. Thank you very much for that very kind welcome to the Subcommittee. I look forward to working with all of the members and I appreciate you holding this hearing today. I appreciate the witnesses who are here to testify.

I think that it is important that we engage in constructive dialog to find solutions to the tough problems that we need to answer. We have excellent witnesses. I look forward to what all of them have to say.

There have been successes in the history of the Superfund, but like any Government-run program, there is always room for improvement. I am from Casper, Wyoming. It is known as the oil city, and I will tell you two short stories today. One is about Casper. In 1913, a refinery opened there. It was actually the first paved road in that community. The Amoco refinery at its height had 750 workers. It was on the bank of the Platte River on 340 acres. In 1991, when it closed, there were smokestacks, storage tanks, pipes, concrete, aging equipment and it was too expensive to be in compliance and they merely closed the refinery. It left behind a mess.

There were about 10 million gallons of oil that went into the groundwater beneath the refinery, and that is about the same amount that was leaked in the *Exxon Valdez*. The oil was seeping into the Platte River and there was oil sheen on the riverbank. But together, local leaders, community leaders, government and an oil conglomerate all worked together. They came up with a plan. They put a 40 foot high steel wall that was then sunk into the bedrock along the riverbank. Groundwater was pumped through a series of filters and a filtering wetland at the rate of 700 gallons a minute.

From this, they were able to get out a lot of the oil that was left under this abandoned refinery, 4,000 gallons of oil a month. They now have a world class golf course. We do in Casper, Wyoming. Robert Trent Jones, Jr., designed it, the same designer where they played the President's Cup 2 years ago in Manassas, VA. There is a restaurant. There are pathways. There are trees, picnic areas. There are ducks and deer, a few businesses that are there in offices.

So what the folks have done working together, they have turned a rust-enclosed polluting eyesore into an economic development center that is giving us a clean environment. It is going to take a while to get all of this cleaned up, but as it continues, this is now useful and economic development and a tremendous asset for our community. This has become a model for closed refineries now all around the world.

The second story is about red tape and government bureaucracy, how it at times prevents innovation from occurring. I think we need to encourage innovative solutions and provide a legal framework for that to happen. I think we have to get away from the phi-

losophy that only the Federal Government can fix the problem. In Casper, with the refinery, it was much more than that. It was a cooperative effort.

But sometimes, government programs have unintended consequences. To that, I want to tell you about my friend Russ Zimmer. Russ lives in Torrington, WY. He and Ila are still there today. For many years, he ran the local feed store. He was a good neighbor, helped out, and volunteered in the community, always lending a helping hand. Neighbors actually encouraged him to run for the legislature. He got into the Wyoming State Senate, and because he was such a good friend and a neighbor, he became President of the State Senate. But he ran the feed store.

One day, to help out a lady in the feed store who was buying some dog food and some feed, she had a check that she got from turning in her battery to a battery disposal place, and he didn't want her to have to go to the bank and cash the check. So he took it as a third party check, signed the check, and kept it. He forgot about it for many years.

Well, it turns out that the company that the check was written from ran this battery disposal company, and that company went bankrupt and there was some pollution that occurred as a result of the cleanup of the battery business. When folks went through the records of the defunct company looking for someone to be held liable for the damage at the site of the battery disposal business, they found this check that Russ Zimmer had cashed for the company.

Russ Zimmer, good neighbor, innocent bystander, was named a potentially responsible party, they call the PRP. Well, for the common sense people of Wyoming, this was laughable. But yet, it cost Russ Zimmer nearly $10,000 to deal with his legal problems. People all around the State of Wyoming are aware of it because he was the President of the State Senate, and said, is this the way government should work, this government that can do all of this to some person who is just trying to be a good neighbor and helpful? But under joint and several liability, a person who contributed even a very little can be held responsible for the entire cost of the cleanup. We need some common sense in this.

Thank you very much, Madam Chairman.

Senator CLINTON. Thank you very much, Senator. We certainly agree with that. We need common sense everywhere we can find it. It is not always apparent.

I want to now turn to our Chair of the full Committee, who is doing a wonderful job, Senator Boxer.

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

Senator BOXER. Thank you so much, Madam Chair. I am very proud of this Committee, members on both sides of the aisle. You have taken your responsibilities very seriously, and as a result I think we are making progress. I do say to our Ranking Member of the Subcommittee, welcome.

So I thank Senator Clinton for holding this hearing on the EPA's management of the Superfund toxic waste cleanup program. We all know Superfund is a critically important program. It protects the

health and safety of our families. Here is the point. One in four people in America lives within four miles of a Superfund site. Let me say that again because people forget. One in four people in America lives within four miles of a Superfund site, including 10 million children. Every politician says our children are our future. Well, if you mean it, then you have to protect them so they grow up healthy.

Superfund sites are the most contaminated toxic waste sites in our Country. They are polluted with dangerous toxic substances including lead, arsenic, mercury, which are known to cause cancer, birth defects and harm the nervous system. Superfund was created to address these threats. It is a landmark environmental bipartisan law.

We made great strides in protecting communities by cleaning up sites in the 1990's. Unfortunately, in the past several years, the pace of listing toxic waste sites and of actually cleaning them up has slowed to a crawl. As we have heard from Senator Clinton, cleanups have dropped by at least 50 percent, from 80 sites down to 40. And this year, EPA couldn't even meet its own goal of cleaning up 40 toxic waste sites. Instead, EPA now says it expects to clean up 24 sites. That is a drop from 80 cleanups a year to 24, and it is unacceptable not only to members of this Committee, but it should be unacceptable to the American people.

Based upon EPA's own documents and studies by outside experts, EPA is likely failing to list many toxic waste sites for cleanup that are posing health and environmental risks. The agency has failed also to quickly address sites at which human exposure is not under control. There are at least 111 of these sites, according to data from earlier this year.

In addition, EPA hasn't even collected enough information to determine whether human exposure is under control at 160 other Superfund sites. These figures are alarming and they are telling. Senator Clinton, that is why this hearing is so important. We will get out this message. EPA hasn't even collected enough information to determine whether human exposure is under control at 160 other Superfund sites and they admit that 111 of these sites human exposure is not under control. More must be done.

In an effort to determine if EPA could do more work with more money, earlier this year I asked a series of questions about EPA's management of the program. In the last few days, EPA delivered a response, a large volume of paper. Could we just show the volume of paper that we received just in the last two nights? The vast majority, as Senator Clinton has pointed out, has been marked privileged.

I again went over the laws that rule whether a document is in fact privileged and can be kept from the public. The good news for our Committee is that we can release all this information. It is up to us. It is at our discretion. Unless there is a trade secret issue involved in there, or some national security problem involved, and as far as we know at this point, none of that is the reason these documents are marked privileged.

I just want you to know what I intend to do, because I am not going to do it today because we are going through these documents. I am going to share these documents with my colleagues from both

sides of the aisle, and then I intend to make these documents public in accordance with the laws of the Country and the rules of this Committee.

I have to ask rhetorically, since when does EPA have the right to withhold important information about toxic waste sites and cleanup from families whose health may be at risk from living near those sites? Who is the boss, the people or the EPA? I say the people. That is what this Country is about. They deserve to have the truth.

Superfund is one of our landmark environmental laws. It has resulted in cleanup and it helped to protect the health of millions of Americans who live near these sites. I will not stand by, and I know members of this Committee on both sides of the aisle will not stand by while this crucial environmental law is undermined and information is kept secret from the public.

I will work with Senator Clinton to follow up on this hearing. We will carefully review the large volume of these so-called privileged information documents that the agency has provided. I find it appalling that I would get those at the eleventh hour. If we have to have another hearing, I say to you, Madam Chair, I am sure you will be available, so we can let the people know what the truth is. We will get to the bottom of these issues.

Thank you very much.

[The prepared statement of Senator Boxer follows:]

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

I would like to thank Senator Clinton for holding this hearing on the Environmental Protection Agency's management of the Superfund toxic waste cleanup program. Superfund is critically important to protecting the health of children and families who live in communities across our country.

One in four people in America lives within four miles of a Superfund site, including 10 million children. Superfund sites are among the most contaminated toxic waste sites in the country.

They are polluted with dangerous, toxic substances, including lead, arsenic, and mercury, which are known to cause cancer, birth defects, and harm the nervous system.

Superfund was created to address these threats. We made great strides in protecting communities by cleaning up sites in the 1990's. Unfortunately, in the past several years the pace of listing toxic waste sites for cleanup, and of actually cleaning up these sites, has slowed to nearly a crawl.

As we have heard from Senator Clinton, cleanups have dropped by at least fifty percent, from 80 waste sites cleaned up per year down to 40. And, this year, EPA couldn't even meet its own goal of cleaning up 40 toxic waste sites.

Instead, EPA now says it expects to clean up only 24 sites—that's a drop from 80 cleanups a year down to 24. This is simply unacceptable.

EPA has also listed far fewer sites for long-term cleanups under the program. The number of sites listed has dropped from 30 per year to 17 per year—a 56 percent decline.

Based upon EPA's own documents, and studies by outside experts, EPA is likely failing to list many toxic waste sites for cleanup that are posing health and environmental risks.

The agency has also failed to quickly address sites at which human exposure is not under control. There are at least 111 of these sites, according data from earlier this year.

In addition, EPA hasn't even collected enough information to determine whether human exposure is under control at 160 other Superfund sites. These figures are alarming and telling.

More must be done.

In an effort to determine if EPA could do more work with more money, earlier this year I asked a series of questions about EPA's management of the program.

In the last few days EPA delivered a response, a large volume of paper—the vast majority of which is stamped "privileged."

This is unacceptable. I have to ask: since when does EPA have the right to withhold important information about toxic waste sites and cleanup from families whose health may be at risk from living near those sites?

Superfund in one of our landmark environmental laws. It has resulted in the cleanup and helped to protect the health of millions of Americans who live near toxic waste sites. It is the best and clearest example we have of ensuring that polluters pay for the messes they make, and that the public has a right to know about the toxic risks they face.

I will not stand by while this crucial environmental law is undermined. I will work with Senator Clinton to follow up on this hearing, and will carefully review the large volume of so-called privileged information the agency has provided. I anticipate that we will have to hold additional hearings to get to the bottom of these issues.

Senator CLINTON. Thank you very much, Senator Boxer.

Senator Inhofe, thank you for being here.

OPENING STATEMENT OF HON. JAMES M. INHOFE, U.S. SENATOR FROM THE STATE OF OKLAHOMA

Senator INHOFE. Thank you, Madam Chairman. I appreciate having this hearing today.

The Superfund program was enacted over 25 years ago to deal with sites that were endangering the health of citizens and of the environment.

I also want to say before starting, Administrator Bodine, you are doing a great job and I appreciate your being here today.

I am happy to say that for the most part, this program has been a success. A great number of these sites have been cleaned up and we have established additional provisions in the law to guard against the creation of new sites and hold those accountable for any pollution to our environment.

I anticipate discussion today regarding the pace of cleanups and the addition of new sites to the national priorities list. It is important to note that the cleanup rates from the previous Administration reflected completions of the simpler, the smaller Superfund sites, or the low-hanging fruit, as you might say. What we have left today are highly complicated sites. I know that in Oklahoma I have been concerned with the progress at Tar Creek Superfund site.

It is very important to understand that, and it happened in my State of Oklahoma, we have the most devastating Superfund site anywhere in America. I think there was some competition for that title, but not anymore. So we are making progress there.

I have been concerned about the progress at the site, but over the last few years we have been pleased to see new collaboration among the Federal and State agencies involved in this site. Although I know there is still a lot left to be done, I appreciate your work and the work of the Regional Administrator Greene down in Dallas-Fort Worth and Region VI Superfund Director Sam Coleman. Both of them have spent a lot of quality time personally at this site.

I might add also there is a very simple way of getting this off of high center. When I was chairing this Committee, we actually got people from DOJ and DOI and the EPA and the Corps of Engineers all in one room together. That is unheard of, but when they did, it is awfully hard to pass the buck from one to another. So we have made a lot of progress there.

Within Superfund, we have to prioritize, and the protection of human health first. Once this is done, some sensible analysis should go into the cleanups of these sites. Cost considerations should be balanced with future intent of the land use and the risk of exposure. There needs to be modable cleanup alternatives considered for each site and this important decision should be made by high-level EPA officials, someone who can be held accountable, as opposed to someone who cannot be held accountable.

In fact, it has been a focus of mine while I was Chairman, and I will continue to press for accountability of the EPA regions. All too often, the regions disregard their agency's own guidance and directives, making decisions that incur significant long-term costs for the agency without any type of review. For example, I have been most troubled to learn of the Federal creosote site in Manville, New Jersey.

In this case, the EPA has acted contrary to its own guidance and excavated some 450,000 tons of dirt and shipped a significant portion of it to Canada for incineration. Amazingly, the decision was made by someone at the EPA to dig up a shopping mall parking lot and excavate 125,000 tons of dirt, only to be recovered by another parking lot. For this 50 acre site, the price tag was around $300 million for the American taxpayers. This type of gold-plated cleanup makes no sense.

Now, we hear from some that the Superfund tax should be reinstated because EPA lacks funding for cleanups. First of all, it is simply not true. But how can this assertion even be made when we hear such outrageous spending of money, as in the example that I just talked about. It only takes away the valuable resources from other sites. That is why I am working with Majority Leader Harry Reid on this issue, and the two of us will be requesting the GAO to investigate just how the Federal creosote site literally grew into a money pit for the American taxpayers.

Some of my colleagues would like to see the Superfund corporate tax reinstated. I am strongly opposed to this tax. In fact, the Chairman made the statement that ordinary taxpayers should not have to pay for something for which they are not responsible. That is exactly what this is, this type of a tax.

I have opposed this for quite some time. The tax does not distinguish the polluter from a company that is an environmental steward. In fact, when applied, this tax unfairly targeted the oil and chemical industries, penalizing companies who had no contact with any Superfund sites. The tax goes where the money is, not where the responsibility lies. This is not a targeted tax on polluters. This is an indiscriminate tax on business.

So the supporters of this tax simply imply that if we do not reinState the tax, we will not have enough money to clean up sites. This isn't true. There has never been a correlation between the amount of money raised by the tax and the dollars spent on cleanup.

For example, in 1966, the tax fund was at its highest level, yet the amount spent by that Administration, the Clinton administration, for Superfund cleanup was at a 10 year low. While in 2004, the money spent by the Bush administration was at a 10 year high, while the fund was at a low point.

So I look forward to discussing these critical items during the course of this hearing. I appreciate your holding this hearing, Madam Chairman.

[The prepared statement of Senator Inhofe follows:]

STATEMENT OF HON. JAMES M. INHOFE, U.S. SENATOR FROM THE STATE OF OKLAHOMA

Today this Subcommittee will be addressing an important issue for Americans and that is the cleanup of toxic waste sites. The Superfund program was enacted over 25 years ago to deal with sites that were endangering the health of our citizens and the environment. I am happy to say that for the most part, this program has been quite a success. A great number of these sites have been cleaned up and we have established additional provisions in the law to guard against the creation of new sites and hold those accountable for any pollution to our environment.

I anticipate discussion today regarding the pace of cleanups and the addition of new sites to the National Priorities List. It is important to note that cleanup rates from the Clinton administration reflect completions of simpler and smaller Superfund sites—the low hanging fruit. What are left today are highly complicated sites. I know that in Oklahoma, I have been concerned with the progress at the Tar Creek Superfund site. Over the last few years, I have been pleased to see a new collaboration among the Federal and State agencies involved in this site, and although I know there is still much left to do, I appreciate your work and the work of Regional Administrator Greene and the Region 6 Superfund director Sam Coleman.

Within Superfund, we must prioritize the protection of human health first. Once this is done, some sensible analysis should go into the cleanups of these sites. Cost considerations should be balanced with future intent of the land use and risk of exposure. There needs to be multiple cleanup alternatives considered for each site and this important decision should be made by high level EPA officials—someone that can be held accountable rather than EPA bureaucrats.

In fact, it has been a focus of mine while I was Chairman, and I will continue to press for accountability of the EPA regions. All too often the regions disregard their agency's own guidance and directives, making decisions that incur significant long term costs for the agency without any type of review. For example, I have been most troubled to learn of the Federal Creosote Site in Manville, New Jersey. In this case, the EPA has acted contrary to its own guidance and excavated 450,000 tons of dirt and shipped a significant portion of it to Canada for incineration. Amazingly, the decision was made by someone at the EPA to dig up a shopping mall parking lot and excavate 125,000 tons of dirt only to be recovered by another parking lot. And for this 50 acre site, the price tag is around $300 million dollars for the American tax payers. This type of "gold plated" cleanup makes no sense.

We hear from some that the Superfund tax should be reinstated because EPA lacks funding for cleanups. First of all, this simply is not true. But how can this assertion even be made, when we hear of such outrageous spending with the money that they do have. Irresponsible spending at one site, like what I just described, only takes away valuable resources from other sites. That is why I am working with the Majority Leader Harry Reid on this issue and the two of us will be requesting the GAO to investigate just how the Federal Creosote Site literally grew into a money pit for the American taxpayers.

Some of my colleagues would like to see the Superfund corporate tax reinstated. I am strongly opposed to this tax as it is patently unfair. This tax does not distinguish a polluter from a company that is an environmental steward. In fact, when applied, this tax unfairly targeted the oil and chemical industries penalizing companies who had no contact with any Superfund site. The tax goes where the money is, NOT where the responsibility lies. This is not a targeted tax on polluters. This is an indiscriminate tax on business.

Supporters of this tax imply that if we do not reinState the tax we will not have enough money to clean up sites. This is not true. There has NEVER been a correlation between the amount of money raised by the tax and the dollars spent on cleanup. For example, in 1996 the tax fund was at its highest level, yet the amount spent by the Clinton administration for Superfund cleanup was at a 10 year low. While in 2004, the money spent by the Bush administration was at a 10 year high, while the fund was at a low point.

I look forward to today's hearing and hope that we discuss reasonable and fair reforms to the Superfund program.

Senator CLINTON. Thank you very much, Senator Inhofe.

Senator Lautenberg.

OPENING STATEMENT OF HON. FRANK LAUTENBERG, U.S. SENATOR FROM THE STATE OF NEW JERSEY

Senator LAUTENBERG. Thank you very much, Madam Chairman, for bringing this to the public discourse, because it is pretty obvious, as I think we look at the records of what has happened with Superfund, and we see it being criticized here for an action her or an action there. My work with Superfund began in 1983 because New Jersey had the most Superfund sites of any State in the Nation.

I believe in a pretty basic principle. If you dirty it, you clean it up. Polluters, those responsible, not everyday taxpayers, ought to pay for the cleanup. Based on their actions, it appears that the Bush administration doesn't share this logical view.

I listen very carefully to my friends from the other side. They talk about low-hanging fruit. Well, low-hanging fruit got to be very expensive because in my hometown of Montclair, N.J., we had over $100 million spent on a single site. That doesn't sound like very available little fruit when it cost over $100 million.

Now, this is the first Administration to oppose reinstating the Superfund tax on the oil and chemical industries. Yes, it is a broad-based tax, but those are the people who created these sites in the first place. Because of their opposition, taxpayers are paying to clean up the Nation's worst waste sites, rather than the industries that created these messes.

When we look at who is paying for it now, we heard objections to imposing taxes on those who create the mess. But now it is John Doe taxpayer who is paying this. In Fiscal Year 2005, it cost $1.24 billion. In Fiscal Year 2006, it was the same thing and in Fiscal Year 2007, $1.260 billion. So it goes on.

So the taxpayers are paying a heck of a price for the problems that others created, not to be that way. Cleanups under this Administration have plummeted from approximately 80 per year to 40. Now, EPA estimates it will only cleanup 24 sites in 2007 and 30 in 2008.

It is unacceptable. Some witnesses on today's second panel will detail how the Administration's failure on Superfund has allowed cleanups in my State to languish. There are at least 15 toxic waste sites in New Jersey where people face uncontrolled exposure to contamination. Many of these sites pollute the ground and surface water that we rely on for drinking, swimming and fishing. I am pleased that this Subcommittee is now conducting real oversight of the way EPA runs the Superfund program to make sure that it puts public health, not polluter profits, first.

I look forward to hearing from today's witnesses, in addition to Ms. Bodine, particularly our witnesses with ties to my home State of New Jersey. Bradley Campbell is former Commissioner of New Jersey's Department of Environmental Protection, and Rena Steinzor is former Staff Counsel to New Jersey Representative and later Governor Jim Florio. Jim Florio was one of the authors of the Superfund program in 1980. It was done in a lame duck session and it was the best thing that came out of that session. At least

we understand the problems we have. Now, what we have to do is figure out a way to make them work more efficiently.

So I thank all of the witnesses for being here, Madam Chairman.

[The prepared statement of Senator Lautenberg follows:]

STATEMENT OF HON. FRANK R. LAUTENBERG, U.S. SENATOR FROM THE STATE OF NEW JERSEY

Madam Chairman, thank you for holding today's oversight hearing on the Superfund program—which the current Administration continues to neglect.

My work to improve the Superfund program began in 1982. I got involved because New Jersey had the most Superfund sites of any State in the Nation.

I believe in a pretty basic principle: Polluters—not everyday taxpayers—should pay for cleanups.

But based on their actions, it appears that the Bush administration doesn't share this priority.

This is the first Administration to oppose reinstating the Superfund tax on the oil and chemical industries.

Because of their opposition, taxpayers are paying to clean up the nation's worst waste sites, rather than the industries that created these messes.

Cleanups under this Administration have plummeted from approximately 80 per year to 40. Now EPA estimates it will only cleanup 24 sites in 2007—and 30 in 2008.

That's unacceptable.

Some witnesses on today's second panel will detail how the Administration's failure on Superfund has allowed cleanups in New Jersey to languish.

There are at least 15 toxic waste sites in New Jersey where people face uncontrolled exposure to contamination.

Many of these sites pollute the ground and surface water we rely on for drinking, swimming and fishing.

I am pleased that this Subcommittee is now conducting real oversight of the way EPA runs the Superfund program, to make sure it puts public health—not polluter profits—first.

I look forward to hearing from today's witnesses—particularly our witnesses with ties to my home State of New Jersey:

- Bradley Campbell, former Commissioner of New Jersey's Department of Environmental Protection; and
- Rena Steinzor, a former staff counsel for New Jersey Representative and Governor Jim Florio.

Thank you both for being here.

Senator CLINTON. Thank you very much, Senator Lautenberg.

Now, we will turn to our first witness, Assistant Administrator, Office of Solid Waste and Emergency Response of the EPA, Susan Bodine.

STATEMENT OF SUSAN PARKER BODINE, ASSISTANT ADMINISTRATOR, OFFICE OF SOLID WASTE AND EMERGENCY RESPONSE, U.S. ENVIRONMENTAL PROTECTION AGENCY

Ms. BODINE. Good morning, Madam Chairman, members of the Subcommittee. I am Susan Parker Bodine, the Assistant Administrator of EPA's Office of Solid Waste and Emergency Response.

Thank you for the opportunity to appear before you today to talk about EPA's Superfund program and our efforts to protect human health and the environment from risks posed by toxic waste sites.

I am going to briefly summarize the progress we are making, and I ask that my entire written statement be placed in the record.

Senator CLINTON. Without objection.

In December, the Superfund program will be 27 years old. During these 27 years, there has often been lively debate over how the program should be managed. But there has always been agreement on the goal of the program, to protect human health and the envi-

ronment. I strongly believe in this goal and I know that achieving this goal is the deeply held mission of the more than 3,200 men and women who work in the Superfund program.

I am extremely proud of what they have accomplished. To date, two-thirds of the sites listed on the national priority list have had cleanup construction completed. That is 1,030 sites, and 95 percent of the sites have had cleanup work performed. Our Superfund removal program has conducted more than 9,400 removal actions at more than 6,900 sites across the Country to address immediate risks to human health and the environment.

And just this year, EPA employees made an additional 64 sites ready for reuse by making sure that the cleanup goals applicable to use of the land are met, and making sure that institutional controls that are needed are in place so members of the community don't have to worry that their child's day care center may have been a thermometer plant or their loft apartment may have been a former light bulb factory.

We take our responsibility to the communities very seriously. The Superfund program has over 100 community involvement coordinators that work at each site with the local communities to provide information and help empower residents to become active participants in our Superfund cleanup decisions. Because we have learned from experience that involving the community improves the efficiency and the effectiveness of our cleanup remedies, particularly when we are getting information about choices with respect to future land use and with respect to institutional controls.

We have also learned that by working with the community, we can design a cleanup that will create neighborhood assets. For example, at the Pacific Sound Resources site in Washington State, EPA worked with the local community, the State, the Port of Seattle, and the site owners to develop a cleanup remedy that not only protected human health and the environment, but also provided the Port of Seattle with the opportunity to expand their terminal facility, and it provided the community with property for a new waterfront park.

Ironically, some of the most spirited criticism of the Superfund program is a result of over 20 years of progress. The current managers of the Superfund program are being criticized for no longer completing the construction of as many sites as in the 1990's, but that has nothing to do with the management of the program and everything to do with the fact that over 1,200 sites were listed on the NPL before 1991. Of course, a large number of these sites completed remedy construction by 2000. In fact, the sites listed before 1991 represent over 900 or 90 percent of our completed sites.

What we are dealing with today are 284 sites that were listed before 1991 that did not get finished in the 1990's. That is not because of any mismanagement on the part of the managers of the Superfund program at that time. It is because these are difficult sites. Generally, the sites that have been listed more recently, and this trend began in the 1990's, they no longer include the small easy sites. Instead, EPA lists sites that the States can't address under their State programs, and these tend to be more complex sites, sites with recalcitrant parties, or orphan sites.

Again, this is a shift that began under my predecessors, particularly Tim Fields, a good cooperative relationship with States, and that changes the profile of the sites that we are dealing with today because, of course, the Superfund process isn't a 1-year or 2 year process. It goes through a series of stages.

Now, the sites that are not complete have about 4.3 separate projects per site. While the sites that have been completed had on average about 1.8 separate projects per site. Again, if you look at the remaining sites, a large number of Federal facilities, and a large number are mega-sites, which are sites that we estimate to cost more than $50 million. In fact, those two categories together constitute about 40 percent of our remaining workload.

In addition, we are continuing to do work at the 1,030 sites that are construction complete. We have to make sure that institutional controls are in place at those sites, and a lot of them have long-term response actions, particularly groundwater pump and treat actions that have to be managed.

Now, one of the other criticisms we have heard is failure to list as many sites on the NPL. I can verify, yes, we no longer list as many sites as we used to. I already said that EPA listed more than 1,200 sites before 1991. At the beginning of the program, we were dealing with 150 years of industrialization. Since then, the Congress has enacted the Resource Conservation Recovery Act to deal with hazardous waste management, preventing creation of new NPL sites.

In addition, States have developed their own cleanup programs which can deal with the, again, the easier sites, the ones that are less contaminated. So the fact that we are not listing more sites on the NPL is not a sign of failure. It is a sign of success.

I realize I have gone over, so I ask that my complete statement be in the record.

[The prepared statement of Ms. Bodine follows:]

STATEMENT OF SUSAN PARKER BODINE, ASSISTANT ADMINISTRATOR, OFFICE OF SOLID WASTE AND EMERGENCY RESPONSE, U.S. ENVIRONMENTAL PROTECTION AGENCY

Good morning Madame Chairman and Members of the Subcommittee. I am Susan Parker Bodine, Assistant Administrator of the U.S. Environmental Protection Agency's Office of Solid Waste and Emergency Response. Thank you for the opportunity to appear today to discuss the Superfund program: the significant progress that has been made, the challenges that remain, and what EPA is doing to address those challenges.

THE SUPERFUND PROGRAM SUPERFUND PROGRESS

The Superfund program was established under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA or Superfund), which Congress passed in December 1980 to respond to concerns over Love Canal and other hazardous waste sites.

As it approaches its 27th anniversary, the Superfund program has evolved into a program that is very successful in protecting human health and the environment. Through fiscal year 7, remedy construction was complete at 1,030 sites. In other words, two-thirds of all sites listed on the National Priorities List (NPL) have had cleanup construction completed and of the remaining sites not yet completed, the majority of sites have cleanup work underway. In addition, EPA has conducted more than 9,400 removals

at more than 6,900 sites to address immediate threats to human health and the environment. Further, EPA's long-term site management and post-construction efforts in fiscal year resulted in an additional 64 sites being made ready for anticipated use. My testimony will discuss both the process by which the Superfund pro-

gram protects human health and the environment, as well as how the Superfund program has evolved over the years.

Site Discovery, Screening, and Assessment

The Superfund cleanup process begins with site discovery or notification to EPA of possible releases of hazardous substances. Sites are discovered by various parties, including citizens, but the majority of sites are referred to EPA by State agencies. Once discovered, sites are pre-screened. A majority of sites are screened out at this point because they pose little or no potential threat to human health or the environment. The remaining sites are entered into the Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS). Following preliminary assessment by EPA or its State, Tribal or other Federal partners, more sites are screened out. After the site assessment process, only approximately 2 percent of sites remain to be considered for potential listing on the NPL. Through fiscal year 7, more than 47,000 sites have been assessed (both removal and remedial program assessments), including final remedial assessment decisions at 39,766 sites (395 in 2007, exceeding our goal of 350). In addition to site assessment conducted under the Superfund program, more than 1000 sites are assessed each year under EPA's Brownfields program. EPA assessed 2,139 sites under the Brownfields program in 2006, the most recent year for which data are
available.

Selection of Cleanup Program

At its inception, the Superfund program was often the only program available to clean up a toxic waste site. That is no longer true. Accordingly, following site assessment, EPA and its State and Tribal partners identify the most appropriate program to address sites that require cleanup. This may be a State voluntary or enforcement program; it may be the RCRA corrective action program; it may be the Superfund removal program; it may be the Superfund remedial program either as a Superfund Alternative Site, or by listing on the NPL. Moreover, sites that meet certain statutory criteria are eligible for Federal Brownfields assistance.

At sites that are addressed under the Superfund remedial program, the data developed from site assessment are used to evaluate a site under the Hazard Ranking System (HRS). Sites that score above 28.5 under this system are eligible for listing on the NPL. If listed on the NPL, a site becomes eligible for remedial funding. To date, EPA has listed 1,569 sites on the NPL. The vast majority of NPL sites (1,211) were listed before 1991. Fewer sites are considered by EPA for listing on the NPL than in the early days of the program. However, that result is not surprising given the development in the 1990's of other programs, particularly State programs, to address site cleanup and shows the success of environmental programs nationwide.

Currently, EPA proposes and finalizes sites on the NPL twice a year, generally in March and in September. In 2007, EPA finalized 12 sites on the NPL and proposed 17 sites.

Remedy Selection at NPL Sites

After listing, EPA or responsible parties (including other Federal agencies) usually need to conduct further investigation to determine the most appropriate remedy for the site (called the remedial investigation/feasibility study). Once a remedy has been selected, EPA or responsible parties with EPA oversight then design the remedial action.

Remedy selection also has evolved over the years. In 1995, EPA issued a policy on how the Agency considers reasonably anticipated uses of the land when selecting a remedy. In implementing this policy, EPA works with the community, property owners, and local governments to identify what the reasonably anticipated use of the property may be. EPA also may provide funds for community involvement in the remedy selection process through Technical Assistance Grants.

EPA's community involvement programs help make the community valuable participants in the remedy selection process. By listening to the community's needs and concerns, EPA often is able to tailor remedies to address them. For example, at the MacAlloy Superfund site in North Charleston, South Carolina, a residential community was located next to the industrial facilities that were being remediated. A developer was interested in redeveloping the site. To help preserve the community, EPA worked with the responsible party and the developer on an additional parcel of property that was not adjacent to the community, relocating industry away from an existing neighborhood.

Involvement in the remedy selection process also helps the community understand the tradeoffs associated with different remedy options and the basis for remedy decisions. For example, at the Department of Energy's Feed Materials Production Center in Fernald, OH, the community was originally reluctant to support any remedy that allowed waste to be left in place. However, by creating a Fernald Citizens Advisory Board that was fully engaged in the remedy decision process, the community came to accept and strongly support the selected remedy, which pursued a "balanced approach," allowing low-concentration materials to be contained in an onsite disposal facility, thereby reducing both the time and cost of cleanup.

To ensure that remedies are cost-effective and are employing the most recent technologies, in 1996, EPA assembled a group of experts from both Headquarters and Regional offices to review the technical merits of high cost remedies. Currently, the Remedy Review Board reviews all remedies expected to have costs above $25 million. This review normally takes place before a remedy is proposed. After a remedy is proposed and public comment is solicited, the remedy is documented in a Record of Decision (ROD).

EPA has learned a great deal about how to clean up contaminated sites over the last 27 years. Beginning in 1996, EPA established a policy to improve cleanup effectiveness by reviewing earlier remedies. Through 2006, EPA has updated more than 700 remedies, improving both remedy effectiveness and reducing cost.

In particular, EPA has learned a great deal about how to address groundwater contamination. Originally, EPA installed groundwater pumping and treatment operations at nearly every groundwater contamination site. However, over time, the Agency learned that pumping and treating was not always needed and that monitored natural attenuation also could achieve groundwater restoration goals. EPA clarified its policy on monitored natural attenuation in 1999. This policy clarification resolved remedy issues at a number of sites and allowed 42 sites to be considered construction complete between 1999 and 2000. EPA also realized that already installed groundwater pumping and treating operations were not always operating as expected. Beginning in 2000, EPA began focusing on optimizing groundwater remedies. In some cases, optimization involves adding or moving extraction wells to more effectively capture the contaminated plume. In other cases, optimization involves turning off a pumping and treatment operation because the contamination is naturally attenuating. EPA has optimized more than 50 Superfund-financed groundwater remedies and anticipates optimizing at least four more in 2008.

Remedy Construction

Once a remedy design is complete, EPA or the responsible parties with EPA oversight construct the remedy. In 1993, to measure interim progress of the Superfund program, EPA began tracking the number of sites where all remedy construction was complete. Currently, remedy construction has been completed at 1030 sites (66 percent of the NPL), and is underway at an additional 318 sites (20 percent of the NPL). A site generally is considered construction complete when all the remedies at the site are operational and functional.

At some sites, remedy construction has been underway for a great deal of time. In fact, of the 535 sites on the NPL where remedy construction is not complete (an additional four sites were differed to other programs), 284 have been on the NPL since before 1991. This does not mean that EPA had been neglecting these sites. It simply means that some sites present a greater cleanup challenge than others, often due to the size or complexity of the sites.

In 1999, as part of a Resources for the Future study of the Superfund program, EPA characterized non-Federal facility Superfund sites as either "mega-sites" or nonmega-sites. A mega-site is a site that is expected to cost over $50 million to remediate. EPA has added this term to its Superfund data base, to help track the number of mega-sites. To date, 154 non-Federal facility sites have been identified as actual or potential non-Federal facility "mega-sites." Of these, 26 achieved construction completion in the 1990's, 30 have achieved construction completion since 2000.

Sites owned by the Department of Defense or the Department of Energy also frequently present significant cleanup challenges. To date, there are 172 Federal Facility sites on the NPL. Of these, 22 achieved construction completion in the 1990's and 37 achieved construction completion since 2000.

Given the challenges posed by "mega-sites" and Federal facilities, it is not surprising that remedy construction work remains at many of these sites. To date, of the sites that have all remedy construction completed, only 11 percent were "mega-sites" or Federal facilities. However, of the 535 NPL sites with construction work remaining, 39 percent are either "mega-sites" or Federal Facilities.

Addressing Immediate Risks

Although completing remedy construction at large, complex, sites may take many years, the first step at each site is to address immediate risks. This is done through the EPA Removal program. For example, EPA has provided alternative water supplies to more than 2 million people so they are not drinking or using contaminated water. To date, the Removal program has conducted more than 9,400 removals at more than 6,900 sites (including 413 removals in fiscal year 7). Of these, more than 2,400 have occurred at NPL sites. In fact, EPA has carried out removal actions at 56 percent of the sites on the NPL, including 142 removals at NPL sites not yet in the long-term construction phase. This means that 95 percent of NPL sites have had either removal or remedial cleanup work. For example, EPA did not wait to list the Omaha Lead site in Nebraska on the NPL before taking action to reduce the risk posed to residential communities. EPA started cleanup work in 1999 using Superfund Removal authorities. The site was listed on the NPL in 2003, and using an expedited interim remedy process, EPA has completed cleanups of more than 3,500 residential yards through the end of fiscal year 7. Similarly, in 1999, EPA began removal actions in Libby, Montana. The Libby site was listed in 2002, and a final remedy has not yet been selected. However, EPA has been and continues to be actively working in Libby to reduce asbestos exposure. To date, EPA has carried out removal activities at 951 properties in and around Libby and has removed more than 500,000 cubic yards of contaminated soil.

Post-Construction Completion Strategy

With so many sites now at the construction completion stage, the Superfund program also must focus attention and resources to address post-construction activities to ensure that remedies remain protective over the long term and sites can be returned to productive use.

In October 2005, EPA published its Post Construction Completion Strategy. The strategy was developed to improve site operations and maintenance, remedy performance tracking, institutional control (IC) implementation and tracking, and reducing barriers to beneficial site reuse. Under this strategy, EPA is ensuring that 5-year reviews are completed and any discrepancies identified in the reviews are acted upon. EPA also is developing an Institutional Control Tracking System to document and make public the institutional controls that are needed to ensure long-term protectiveness. Site-specific information on ICs will be available on the EPA web site, including contacts to obtain additional information and a link to the IC instrument.

In fiscal year 7, the Superfund program adopted a new measure to capture site progress beyond the construction completion milestone: Site-Wide Ready for Anticipated Use. This measure tracks the number of NPL sites where the remedy is constructed (construction complete), cleanup goals for anticipated uses of the land have been met, and any necessary institutional controls are in place. EPA exceeded its fiscal year goal of making 30 Superfund sites ready for anticipated use by achieving this milestone at 64 sites.

Enforcement

EPA also has been very successful in leveraging Federal dollars to secure private party cleanups. EPA conducts searches for responsible parties throughout the response process and takes action to ensure cleanup work is conducted or paid for by those responsible parties, rather than by EPA using appropriated dollars. Potentially responsible parties (PRPs) have performed work at approximately 70 percent of Superfund site cleanups.

Since 2001, EPA secured commitments (through fiscal year 6) from responsible parties to carry out cleanups and reimburse EPA for past costs worth nearly $6 billion. The cumulative value of private party cleanup commitments and cost recovery settlements (through fiscal year 6) is more than $25 billion. EPA's enforcement efforts have allowed the Agency to focus the Agency's appropriated funds on sites where responsible parties cannot be identified or are unable to pay for or conduct the cleanup.

Superfund enforcement also has evolved over the years. In the early years of the program, most cleanup work was carried out by EPA, using appropriated funding and then seeking cost recovery. To leverage Federal funding and increase the number of sites being cleaned up, EPA adopted an "enforcement first" policy in 1991 to require PRPs to perform cleanups. As a result, more work is being done with responsible party resources up front, and EPA therefore needs to recover a smaller

proportion of cleanup costs. PRP resources represent a greater proportion of cleanup than in the early years of the program. This includes work carried out by EPA using responsible party dollars, as well as work carried out by responsible parties themselves.

In the 1986 amendments to CERCLA, Congress added a provision which allows EPA to retain and use funds received in settlement with responsible parties in site-specific accounts. The principal and any interest earned by these "special accounts" may be used to fund response actions at the site where the settlement dollars were received.

When the Agency uses funds from a special account it allows the Agency to use its appropriated funding for cleanup at other sites were there are no viable or liable parties. To date, EPA has spent more than $1 billion from special accounts to fund cleanup actions and anticipates spending millions more to clean up sites where responsible parties have deposited funds for site-specific cleanups.

EPA's enforcement tools also have evolved into significant tools to advance revitalization of Superfund sites, including encouraging private sector cleanup and development. At the Many Diversified Interests ("MDI") site, a 36 acre former foundry facility listed on the NPL, EPA, working with the site's Bankruptcy Trustee, developed a proposed administrative settlement document which the Trustee published along with a request for bids to purchase the property. The effort to solicit bids for acquisition was successful, with the understanding that the winning bidder would undertake the cleanup remedy selected in EPA's Record of Decision (ROD), and, in return receive covenants not to sue for existing contamination. The site was purchased by a developer who agreed to perform the selected remedy. Today, the site is being cleaned up and its ultimate use will be development of a town house community.

Financial Management

EPA is undertaking a number of actions to ensure that Superfund resources are not expended on unnecessary activities and are available to carry out site cleanup work. For example, EPA has:

- Initiated a workforce analysis to determine if staff resources should be reallocated;
- Started benchmarking studies of EPA performance;
- Shared best practices among the EPA regions;
- Aggressively deobligated funds from old contracts, grants, cooperative agreements and interagency agreements, resulting in approximately $740 million in additional resources for the program through fiscal year 6;
- Utilized special account resources from PRP settlement agreements.

These efforts are, in part, a result of several studies, including an internal review of the Superfund program, known as the 120-Day Study, which identified opportunities for the Agency to put its resources to better use.

In addition, to help EPA manage its funding decisions in a risk-based manner, sites that are ready to begin construction and will be paid for using EPA's resources are subject to a rigorous prioritization process. EPA's National Risk-Based Priority Panel reviews new cleanup construction projects as they become ready for EPA funding. The panel prioritizes the projects based on three factors: protection of human health, protection from significant environmental threats, and potential threats based upon site conditions at the time of review. A number of factors are then used to weigh funding priorities among the sites including: human exposure risk, contaminant characteristics and stability, significant environmental risk, and program management considerations. The panel is composed of national EPA Superfund program experts from both regional and Headquarters offices. In fiscal year 7, EPA funded all new cleanup construction projects that were ready for construction funding.

Public Information

Over the last several years, EPA has greatly expanded the amount of information available to the general public regarding Superfund sites. For example, beginning in 2002, to more accurately reflect the environmental outcomes of the Superfund program, EPA began tracking the sites where a complete human exposure pathway to contaminants above levels of concern has been eliminated, as well as sites where migration of groundwater contamination has been controlled.

The list of sites where human exposure is not under control is dynamic. Over time, sites are removed and new sites are added, depending on changed site conditions or new information. The Superfund program has made it a priority to improve

the quality of the data supporting this environmental indicator so that it can be used to prioritize and manage the program. EPA has posted a description of the exposure scenario on the Superfund Site Profiles web site, along with actions that are planned or underway to address the situation. This has been done to ensure that the public has access to current information regarding the human exposure status at each Superfund site that is listed as human exposure not under control. For each site where the Agency is still gathering data to make a human exposure decision (i.e., insufficient information to make a human exposure determination), EPA has posted on that site the reasons for the insufficient data determination, along with the actions planned or underway to gather the necessary data.

In addition to the exposure information described above, EPA has enhanced the availability of information regarding Superfund sites in the following ways:

- Extensive information about all Superfund sites is available in site profiles which are typically updated each month on EPA's web site;
- EPA's community involvement coordinators regularly communicate site information to community members who live near Superfund sites through public meetings, mailings, and published notices;
- On its Superfund web site, EPA posts Records of Decision (RODs) and other key decision documents [ROD Amendments, Explanation of Significant Differences (ESD)] for NPL sites. More than 3,300 Superfund program documents are currently available on the web site;
- EPA has added information from its Institutional Control Tracking System to Superfund site profiles. This information provides the public with the status of a site's institutional controls (IC), including whether an IC is needed and what (legal) mechanism(s) will be used to implement the IC;
- To reach an even broader audience, EPA has been working with data providers such as Microsoft, Environmental Systems Research Institute (ESRI), and Google to develop the necessary links to allow these companies to access EPA site information and overlay it on maps and other geospatial displays (such as Google Earth).

LAND REVITALIZATION

The land revitalization initiative, launched in April 2003, includes all of EPA's cleanup programs as well as partners at all levels of government and in the private and non-profit sectors. The goal of land revitalization is to restore our nation's contaminated land resources and enable America's communities to safely return these properties tobeneficial economic, ecological, and societal uses. EPA is ensuring that cleanup programs protect public health, welfare, and the environment and also that the anticipated future uses of these lands are fully considered in cleanup decisions.

EPA helps facilitate opportunities for integrating cleanup and reuse. Promoting community-driven site reuse planning and reuse is another way EPA can help to ensure protective and sustainable cleanups. EPA has supported privatization efforts recently undertaken at two Federal facilities on the NPL. At Department of Defense (DoD) Base Realignment and Closure (BRAC) sites, EPA recognizes that the privatization of the cleanup, where a developer or other organization rather than the military conducts the cleanup, can present an opportunity to integrate redevelopment planning with cleanup. The first such privatization occurred on August 27, 2007 at the McClellan Air Force Base, California. The second is expected to occur later this fall at Ft. Ord, CA. Privatizing cleanups at closing military Superfund sites provides another option to Federal and State agencies and local communities to help maximize cleanup and redevelopment resources to help move properties back into productive reuse more quickly.

EMERGENCY RESPONSE

EPA's emergency response activities are another facet of the Superfund program. The Emergency Response program provides national leadership to prevent, prepare for, and respond to human health and environmental emergencies, including terrorist events. Through FEMA funding, EPA's Emergency Response program was actively involved in the response to the events of 9/11 and in the response to Hurricanes Katrina and Rita.

Although EPA was not involved in incidents of that magnitude this year, EPA's Emergency Response program was actively involved in responses and cleanups throughout the country, such as the tornado disaster in Greensburg, KS, and the Synthron Chemical plant explosion and fire in Morganton, N.C.

CONCLUSION

The Bush administration is fully committed to Superfund's mission, protecting human health and the environment by cleaning up our Nation's worst toxic waste sites. The Superfund program has produced significant accomplishments and EPA is continuing its efforts to manage the program efficiently and effectively in order to protect human health and the environment, and provide opportunities for reuse and redevelopment to communities across the country.

RESPONSES BY SUSAN PARKER BODINE TO ADDITIONAL QUESTIONS FROM SENATOR BOXER

Question 1. EPA has slowed or not conducted cleanups due to funding considerations for several years. Looking at the past 5 fiscal years, how did EPA determine which contaminated sites to slow down or not cleanup due to funding issues?

Response. I want to assure you of the U.S. Environmental Protection Agency's (EPA's) continuing commitment to clean up sites that pose risks to human health and the environment. The appropriated funding levels for the Superfund program have remained steady over the past five fiscal years, between $1.2 and $1.3 billion dollars. Moreover, EPA supplements its annual appropriated funding with resources deobligated from prior fiscal year contracts, settlements with responsible parties, and State cost share contributions. There has not been a significant decrease in Superfund cleanup work. Superfund construction work has remained relatively steady over the years; however, work is now concentrated on more costly, complex sites. While there have been years in the past five fiscal years that EPA did not fund all of the new site construction projects ready for construction, we are pleased to report that in fiscal year 2007, EPA funded all new construction projects that were ready for funding, therefore, there is no backlog of unfunded Superfund site construction projects.

EPA prioritizes funding for Superfund construction projects in the following manner: the highest priority is given to funding emergencies which pose immediate threats to human health or the environment. The next priority is for ongoing construction actions that have already begun and require additional resources. Ongoing actions receive a high priority for funding for several reasons: Once an action is started, the best management practice is to complete it so contamination is not left exposed or allowed to re-contaminate an areas; and, significant additional costs could be incurred if these projects were to be shut down in the middle of cleanup construction.

After emergencies and ongoing construction actions are funded, EPA looks to fund new construction projects. New construction projects are ranked according to the risk-based criteria established through EPA's National Risk-Based Priority Panel evaluation process (http://epa.gov/superfund/programs/nrbpp/index.htm). In addition, EPA considers the timing of when a project is ready to begin as well as EPA's goals under the Government Performance and Results Act.

Question 2. The Government Accountability Office (GAO) in 2007 released an investigation of EPA's public notification efforts at sites that received asbestos-contaminated material from Libby, Montana. GAO concluded, "The extent and effectiveness of EPA's [public] notification efforts varied across the 13 states for which EPA had lead responsibility to conduct cleanups. . . At 8 of the sites, EPA regional offices did not implement key public-notification provisions of the NCP. . . [Although EPA's public-notification guidance strongly emphasizes that meeting NCP provisions is often insufficient to meet community needs for public notification, EPA officials did not conduct notification activities beyond those provisions at 4 sites in EPA region 9." Two of these four sites are located in California, in the towns of Glendale and Newark.

Describe why EPA failed to conduct any recommended notification activities at sites in California, including Glendale and Honolulu, Hawaii, and Phoenix, Arizona.

Response. EPA did not fail to conduct notification activities. EPA relies on the discretion afforded in the National Contingency Plan (NCP) to make case-by-case decisions on whether to exceed required public notification and outreach activities. The referenced sites in Glendale CA, Honolulu HA, and Phoenix AZ, are discussed below.

The sites in California, Hawaii, and Arizona were all conducted as time critical Responsible Party (RP) lead removals under an Administrative Order on Consent. The removal actions were small in scope and in each case the RP was willing to conduct the response action. The EPA OnScene Coordinator (OSC) provided Federal oversight and was the designated spokesperson for the site. The OSC interacted

with the industrial site occupants and owners. A repository for local information was established at local libraries. An Administrative Record was established and updated up onsite completion. Public notice was made at the start of the removal per the NCP when the Administrative Record was received by the repositories (Region 9 Superfund Records Center and local Library). Also, public notices were made in the local press (Glendale NewsPress, The Argus, Honolulu Advertiser and Arizona Business Gazette). A public comment period was held for 30 days and for each of these sites no public comments were received. The State Health Departments were all notified at the time of the site assessments.

EPA is committed to its mission of protecting human health and the environment and recognizes that it is important to communicate with the community and State and local government officials regarding cleanups in their areas. EPA always strives to inform the public on human health and environmental impacts associated with an EPA cleanup activity. EPA is reviewing carefully the findings of the GAO report and considering the lessons learned from the responses of State and local government officials and community focus groups.

Question 3. Explain the reason that EPA rejected each of the recommended actions at the ten other sites located in Dearborn, Michigan, Denver, Colorado, Great Falls, Montana, Hamilton Township, New Jersey, Minneapolis, Minnesota, Minot, North Dakota, Salt Lake City, Utah (Intermountain Insulation and Vermiculite Intermountain), and Wilder, Kentucky.

Response. EPA does not believe it rejected actions recommended in the GAO report. EPA continually strives to provide the public with early and meaningful opportunities for involvement in cleanup decisions. In doing so, we comply with the public outreach requirements under the National Contingency Plan (NCP).

EPA understands that it is important to communicate with the community and State and local Government officials regarding cleanups in their areas. Sections of the National Contingency Plan (NCP) are specifically designed to allow rapid action by EPA responders when there is an urgent threat to human health and the environment. Included in the NCP are requirements for public notification and outreach.

The ten sites referenced in your question varied greatly in scope of cleanup which can have a significant impact on the type and extent of public outreach efforts. For example, the Great Falls, MT site in Region 8 was a single residence where a former worker at an exfoliation plant had taken asbestos wastes and placed them in the driveway. For this site, EPA chose to meet with State and local officials and with neighbors in the near vicinity rather than distributing fact sheets and holding public meetings.

Conversely, the Region 5 site in Minneapolis, MN involved hundreds of residences where residents had taken home contaminated "free crushed rock" from the exfoliation plant. Region 5 provided extensive outreach in identifying those contaminated properties and communicating with hundreds of potentially affected homeowners. The Dearborn, MI site in Region 5 which involved sampling of hundreds of homes also resulted in extensive community outreach. The Hamilton Township Site in EPA Region 2 is an example where, due to growing public interest, community outreach was increased after Phase I activities at the site. The Region prepared and distributed fact sheets and provided information to residents, businesses, local and State officials, interested stakeholders and the press to keep them fully informed of all sampling activities. In addition, the EPA On-Scene-Coordinators (OSCs) visited many residents to talk about the "Off—Site Sampling" and local businesses to discuss the Phase II removal action.

Question 4. Describe what steps EPA has taken since the GAO report was issued to improve its public notification activities at the sites listed above?

Response. Work at the sites listed above had been completed prior to the issuance of the GAO report. It should be noted that these cleanups were all conducted as "time-critical removal actions," where the threat to public health was determined to be urgent and cleanups were initiated and completed quickly. EPA OSCs and, in some cases, Community Involvement Coordinators remain available to the public to answer questions onsite actions. EPA may conduct additional public notification and outreach activities should there be a need for follow—up site activities.

Question 5. Describe what analysis EPA has done of the public notification activities at other sites that may have received asbestos-contaminated material from Libby, Montana. Please describe the site, type of analysis, and EPA's conclusion regarding the adequacy of notification.

Response. In response to the multi-phase GAO review leading to the issuance of the report, "EPA May Need to Reassess Sites Receiving Asbestos-Contaminated Ore from Libby, Montana and Should Improve Its Public Notification Process" (GAO—08—71), EPA headquarters and regional offices reviewed available site-specific in-

formation on the GAO list of271 vermiculite sites. Based on best available information, EPA reviewed GAO data (or provided data) on facility location, type of facility, tonnages of venniculite received and EPA actions. The review was helpful in establishing a current baseline of site activities including activities at sites not specifically addressed by the GAO report. For instance, Region 2 visited 24 sites and developed reference fact sheets documenting EPA activities for each of these sites. Of these Region 2 sites, only the Hamilton Township, NJ site investigation resulted in the need for a time critical removal action. Public notification and outreach activities at the Hamilton Township, NJ site are well—documented in the GAO report and supporting regional submissions. EPA complies with the public notification and outreach requirements under the National Contingency Plan (NCP). Should any new sites be identified that require cleanups, EPA will be diligent to follow all NCP requirements for public notification.

Question 6. Has EPA conducted additional sampling and testing using modern methodologies at other sites to determine if the agency should take additional cleanup actions now, rather than to wait until after 2010 when the agency is scheduled to complete studies on asbestos' risk? If so, please list the sites, the results of the sampling, and any additional cleanup or notification actions planned by EPA.

Response. Due to the concern for public health risk associated with asbestos exposure, EPA is not waiting for more definitive tests on asbestos toxicity to be completed in 2010. Rather, since empirical data strongly relates asbestos exposure to increased risk of cancer and plural disease, EPA is aggressively proceeding with site investigations using appropriate and best available techniques and science. Further, EPA is gathering data that, although not currently used in risk evaluation per the Integrated Risk Information System (IRIS), may be useful for the updated risk model. Specifically, EPA is enumerating the full body of asbestos structure size fractions. Doing so should allow for improved risk calculations.

The Asbestos Committee of the EPA led Technical Review Workgroup supports and promotes consistent application of the best science in the field of risk assessment for asbestos at contaminated sites nationwide. The asbestos committee provides site consultation in support of regional requests and develops technical guidance. It has developed a draft guidance document, "Framework for Investigating Asbestos-Contaminated Superfund Sites" currently in draft and undergoing external peer review. The draft document provides (l) a recommended flexible framework for investigating and evaluating asbestos contamination that can be used for removal and remedial actions within the Superfund program, and (2) detailed recommended standard operating procedures (SOPs) for collecting data on the nature and extent of asbestos contamination at Superfund sites. The draft Framework discusses specific strategies and methods that are based on the best available science for characterizing exposure and risk from asbestos. Activities at the below mentioned sites helped inform development of the draft Framework.

The following are examples of sites where best available sampling and testing techniques (e.g., activity-based-sampling) have been applied or are planned:

- N-Forcer (Dearborn, MI): Asbestos was detected at levels of concern. In 2005 contaminated soil was removed to a depth of 18 inches, an impermeable barrier was installed, and the site was backfilled to prevent exposure. No additional cleanup or notification actions are planned.
- Vermiculite NW Inc (Spokane, WA): In 2000 and 2001, EPA determined that there was asbestos contamination in the soil and that it could become airborne if disturbed. In 2004, EPA turned the site over to the State of Washington for oversight of the cleanup activities under the Model Toxics Control Act Voluntary Cleanup Program. No further actions are planned by EPA.
- Intermountain Insulation (Salt Lake City, UT): EPA sampling results showed unacceptable levels of asbestos in the air. EPA completed a removal action at the site in 2004. No additional actions are planned by EPA.
- Vermiculite NW, Inc (Portland, OR): EPA testing showed unacceptable levels of asbestos in soil and in the former processing building. The responsible party cleaned the soil and the building with EPA oversight. No further action is planned.
- Big Tex Grain (formerly Texas Vermiculite/WR Grace) San Antonio, TX: EPA testing indicated unacceptable levels of asbestos in the soil, in the processing building, and in the air monitoring onsite. Activity based sampling has started. Pending the results of the sampling a removal may be done on the property.
- EPA is planning a site assessment at the Zonolite Co/WR Grace in New Orleans, LA. This site is located at 4729 River Road and the assessment is planned for the summer of 2008.

Question 7. Does EPA have any plan to conduct additional sampling and testing at other sites to determine if the agency should take additional cleanup actions not,

rather than waiting until after 2010 when the agency is scheduled to complete studies' on asbestos' risks? If so, please describe the plan, including specific actions, timeline, and anticipated funding needs.

Response. EPA is not waiting until the results of further studies to conduct additional sampling and testing, including possible cleanup activities at sites where asbestos-contaminated Libby vermiculite may be present. EPA is committed to protecting communities from hazards associated with asbestos contamination. EPA agrees that, more sensitive-risk-based sampling methods have been developed and we have experience using these methods. We have developed procedures for conducting activity-based sampling, which allow us to better measure human exposure. These procedures and a decision making framework for assessing asbestos—contaminated sites are described in a draft report titled, "Framework for Investigating Asbestos—Contaminated Superfund Sites".

We agree it would be prudent to take another look at the completed site assessments to determine whether some of the previously assessed sites may benefit from a reassessment. EPA is currently developing a strategy (in Fiscal Year 2008) to reassess, as necessary, and prioritize these sites.

In addition to the planned activities described in our answer to question 3A and with regard to sampling and testing at specific sites—EPA has approved an Action Memorandum to conduct a time critical removal at a site in Ellwood City, PA. EPA Region III does not plan to conduct any additional sampling or testing using activity-based sampling at the site given that cleanup actions are scheduled to begin in May, 2008.

Question 8. Describe the number of workers potentially exposed to dangerous levels of asbestos at the 271 sites described in the 2007 GAO report.

Response. See combined answer for questions 9 and 10 below.

Question 9. Describe the number of people, including the number of children, who may have been exposed to dangerous levels of asbestos at the 271 sites described in the 2007 GAO report.

Response. EPA does not currently have information on numbers of people who may have been exposed at the 271 sites described in the GAO report. However, there is an ongoing project of the Agency for Toxic Substances and Disease Registry (ATSDR) whic1:l is producing this kind of information for selected sites. ATSDR is working with other Federal, state, and local environmental and public health agencies to evaluate public health impacts at 28 sites that processed Libby vermiculite. The evaluations focus on the processing sites and on human health effects that might be associated with possible past or current exposures. For each site evaluated, ATSDR is issuing a report, known as a health consultation. These reports generally include a description of the numbers of workers and other populations that may have been exposed to asbestos at these sites.

ATSDR posted the health consultation reports for the 28 sites on the Internet at http://www.atsdr.cdc.gov/asbestos/sites/national—map/. ATSDR is evaluating the sites that processed Libby vermiculite by (1) identifying ways that people could have been exposed to asbestos in the past or ways that people could be exposed now, and (2) determining whether the exposures represent a public health hazard. ATSDR will use the information gained from the site-specific investigations to recommend further public health actions as needed.

EPA encourages local, state, and Federal public health agencies to launch outreach efforts to locate and assist former workers and other highly exposed individuals.

Question 10. Describe the number of people who live within one mile of the 19 sites that the 2007 GAO report discusses.

Using facility site address information, Census data, GIS tools and information in the draft ATSDR Summary Report mentioned above, EPA developed the table below describing the number of people estimated to live within one mile of the 19 sites discussed in the GAO report.

EPA Region	Facility Location	Facility Name during Vermiculite Processing	Population within 1 mile radius- 2000 Census
1	Easthampton, MA	Zonolite Co./WRG	2,312
2	Hamilton Township, NJ	Zonolite Co./WRG	8,200
3	New Castle, PA	WR Grace	2070
4	Wilder, KY	Zonolite Co./WRG	9,122
5	Dearborn, MI	Zonolite Co./WRG	31,138
5	Minneapolis, MN	Western Minerals Products Co.	21,125
8	Denver, CO	Western Mineral Products Co.	15,374
8	Great Falls, MT	N/A (private residence)	5,459
8	Minot, ND	Robinson Insulation Co.	6,481
8	Salt Lake City, UT	Intermountain Insulation	11,496
8	Salt Lake City, UT	Vermiculite Intermountain	12,238
9	Glendale, AZ	Ari-Zonolite Co.	18,768
9	Phoenix, AZ	WRG	18,411
9	Glendale, CA	California Zonolite/WRG	28,011
9	Newark, CA	WRG	8,972
9	Honolulu, HI	Vermiculite of Hawaii	15,883
10	Portland, OR	Vermiculite NW, Inc./WRG	11,189
10	Portland, OR	Supreme Perlite Co.	652
10	Spokane, WA	Vermiculite NW, Inc./WRG	15,604
			Total: 242,505

Note: Population numbers generated using known facility addresses, GIS mapping tool and 2000 Census data.

Question 11. Describe the date that EPA first learned that substances containing less than 1 percent asbestos, including areas that received asbestos-contaminated material from Libby, Montana and products made of such material, could present a threat to human health. Please provide all relevant records that demonstrate EPA had such information.

Response. Asbestos-related risk and human health effects are measured in terms of airborne fibers, that is, the number of fibers released into the air that could be contained in the breathing zone. Measurements of fibers are made using electron microscopy. Bulk measurement, such as the 1 percent (1 percent) threshold, is not a health based measurement. Rather, it measures the amount of asbestos contained in materials in a bulk state.

The 1 percent asbestos threshold is a Clean Air Act regulatory criterion used for asbestos-containing material (ACM) as defined in Subpart M of the National Emission Standards for Hazardous Air Pollutants (NESHAP). EPA issued a Superfund program memorandum on August 10,2004 that indicated the 1 percent threshold may not be reliable for assessing potential human health risk from asbestos contaminated soils at hazardous waste sites and that a risk-based, site specific, action level was more appropriate when evaluating response actions for asbestos.

With respect to the tremolite asbestos contamination of vermiculite, EPA first learned in 2001 that W.R. Grace, owner and operator of the Libby Montana vermiculite mining operations, had tested its vermiculite attic insulation in the late 1970's and found that it released six times the OSHA permitted level at the time. Subsequent to these findings, discussions during the EPA conference, "EPA's Asbestos Site Evaluation, Communication, and Cleanup Workshop, Keystone, Colorado" held September 23—26, 2003 helped to drive the decision to issue the August 10,2004 memorandum "Clarifying Cleanup Goals and Identification ofNew Assessment Tools for Evaluating Asbestos at Superfund Cleanups" (OSWER Directive 9345.4-see attached). This 2004 memorandum directed that Regions should, "develop risk-based, site-specific action levels to determine if response actions should be taken when materials containing less than 1 percent asbestos. . . are found on a site."

Question 12. Describe the actions, other than those discussed in the 2007 GAO report, which EPA took to alert the public about the potential health threats in areas that received asbestos-contaminated material from Libby, MT.

Response. In its report, GAO was asked to determine the extent and effectiveness ofEPA public notification efforts about cleanups at sites that received Libby ore. The focus of the GAO review on public notification efforts covered the 13 sites where EPA conducted removal actions. GAO research was extensive in documenting its assessment of EPA's public notification and outreach efforts. However, there were many actions taken by EPA that were not specifically discussed in the GAO report. EPA Headquarters and regional offices maintain web sites with updated information on asbestos, potential health threats and the status of activities in Libby, MT and other asbestos-contaminated vermiculite sites. Also, many of the detailed records of EPA interaction with the public, State and local officials onsite assessments and activities by EPA at vermiculite sites are available at Regional Superfund Records Centers.

For example, the On-Scene-Coordinators for the Western Minerals (including Gluek Park) site in Minneapolis, MN, and the N-forcer site in Dearborn, MI established websites on EPAOSC.net for public viewing that include site cleanup details/progress, public meeting information, site fact sheets, flyers, news releases, sampling plans, sampling results, maps, and health consultation reports.

More recently, several public meetings have been conducted in San Antonio, Texas for the Big Tex Grain Site. The last meeting was held in January 2008. The public was notified of this meeting via a mailed flyer. The results of sampling studies were discussed, as well as, the plans for further sampling and potential cleanup actions.

EPA Region 3 is conducting public notification activities at the Ellwood City, Pennsylvania site consistent with the requirements of the NCP including the designation of a spokesperson, establishment ofAdministrative Record, notification of the Administrative Record with a public comment period, as well as a fact sheet to be delivered to the surrounding community.

Question 13. Describe the actions that EPA has taken or plans to take to alert the public to the potential health threats posed by products made from asbestos-contaminated materials from Libby, Montana. Please provide all relevant records that demonstrate EPA actually took such actions or plans to take such action. For any future activity, provide a timeline describing the steps that EPA plans to take.

Response. In May 2003, EPA and the Agency for Toxic Substances and Disease Registry (ATSDR) co-authored the consumer outreach brochure, Current Best Prac-

tices for Vermiculite Attic Insulation. In addition, EPA worked cooperatively with home improvement centers (Lowes, Home Depot, and Sears) to assist in our effort to educate consumers about concerns relating to vermiculite attic insulation. EPA's website provides information largely taken from the outreach brochure, including information about asbestos and how it may affect health; products and areas in the home where asbestos may be found; how to identify materials that may contain asbestos; how to manage and address asbestos; do's and don'ts for homeowners; how to find and work with an asbestos professional; and references to additional information. Please see: www.epa.gov/asbestos.

On May 21, 2003, EPA and ATSDR held a press briefing announcing the EPA-ATSDR public awareness campaign on vermiculite attic insulation which may contain asbestos. An EPA press release was also issued that day. Additionally, the EPA's Regional offices helped inform State agencies about the issue and provided extensive information. Most, if not all states have vermiculite information on their appropriate State agency websites.

In addition to posting information regarding asbestos and vermiculite attic insulation (VAI) on the EPA website, the Agency conducted an extensive outreach effort to the major home improvement stores including, Sears, Home Depot and Lowes. Beginning in 2003, Sears displayed the VAI brochure in the information kiosks of most Sears stores nationwide. However, Sears later went through a major reorganization in their stores where all of the information kiosks were removed, along with our brochures. Home Depot decided not to display the brochure in their stores due to stocking issues and display placement issues, but did agree to link their website to the EPA's VAl website. Lowes made a similar decision and agreed to work with their partner, the Home Safety Council, to display EPA's information on their website. http://www.homesafetycouncil.org/safety guide/sg poison w003.aspx.

EPA also conducted an extensive mailing to various associations and organizations, including home building and repair magazines, newsletters, and a number of home and garden television shows, to share information about VAL The Agency sent approximately 60 letters as part of its outreach efforts to provide information on asbestos and vermiculite attic insulation.

RESPONSES BY SUSAN PARKER BODINE TO ADDITIONAL QUESTIONS FROM SENATOR INHOFE

Question 1. Do you agree with the conclusions of the report authored by Professor Steinzor "The Toll of Superfund Neglect?"

Response. EPA does not agree with Professor Steinzor's conclusions that the Superfund program no longer cleans up hazardous waste sites because of funding shortages and neglect. The report ignores the extensive cleanup construction and risk reduction measures taken at the sites identified as not being cleaned up.

The appropriated funding levels for the Superfund program have remained steady over the past five fiscal years, between $1.2 and $1.3 billion dollars. Moreover, EPA supplements its annual appropriated funding with resources deobligated from prior fiscal year contracts, settlements with responsible parties, and State cost share contributions. The report fails to account for these resources. There has not been a significant decrease in Superfund cleanup work. Superfund construction work has remained relatively steady over the years; however, work is now concentrated on more costly, complex sites. We are pleased to report that in fiscal year 2007, EPA funded all new construction projects that were ready for funding, therefore, there is no backlog of unfunded Superfund site construction projects.

Far from neglecting Superfund site cleanup, through fiscal year 2007, 1,030 Superfund sites had cleanup construction completed, that represents 66 percent of the sites listed on the National Priorities List (NPL). Moreover, through fiscal year 2007,95 percent of NPL sites have had remedial or removal cleanup construction work performed.

Significant work has occurred at the 50 sites identified in Professor Steinzor's report. Construction has been completed at 2 of the sites; UGI Columbia Gas Plant and ALCOA Lavaca Bay. However, "Construction Complete" is an interim measure of site cleanup progress and much work occurs at a site before this milestone is achieved. At 22 of the 50 sites in the report, construction work is underway. At another 6 sites, engineering design work is underway in preparation for construction. At 17 other sites, important studies are in progress to determine how the sites should be cleaned up. In addition, at 3 of the 50 sites, although studies have not yet begun, early response actions have been taken.

Although completing remedy construction at large, complex, sites may take many years, EPA often addresses immediate risks at sites through its Removal program.

For example, EPA has provided alternative water supplies to more than 2 million people so they are not drinking or using contaminated water. Through fiscal year 2007, the Removal program conducted more than 9,400 removals at more than 6,900 sites. Of these, more than 2,400 have occurred at NPL sites.

In fact, EPA has carried out removal actions at 56 percent of the sites on the NPL, including 142 removals at NPL sites not yet in the long-term construction phase.

Ten of the 50 sites in Professor Steinzor's report are known as mega sites—NPL sites where the final cleanup remedy is expected to cost more than $50 million. Mega-sites typically take a longer time to clean up because they are more complex than the average NPL site. Of 535 sites that are not construction complete (as of end of fiscal year 2007), nearly 40 percent are either Federal facility sites or are mega-sites, where cleanup costs are expected to exceed $50 million. This compares to 1,030 sites that are construction complete (through fiscal year 2007) of which only 11 percent are Federal facility or mega-sites. Today the remaining number of sites to be completed is much smaller, but a greater percentage of those remaining sites are the larger, more complicated, mega-sites which take more time to complete.

The Iron Mountain Mine Superfund site, one of the fifty sites in Professor Steinzor's report, is a good example sofa mega-site where a significant amount of cleanup work has been achieved. Iron Mountain Mine covered 4,400 acres in northern California and operated from 1860 to 1962. Annual rains and surface waters washed through the abandoned, exposed mine and created acid mine drainage (AMD) that flowed into the Sacramento River—making it the largest discharger of heavy metals to surface waters in the United States. After being added to the NPL in 1983, EPA has studied the source of the AMD and carried out several emergency response (removal actions) and long-term cleanup actions (remedial actions) to reduce the AMD discharging from the mine to the Sacramento River by 95 percent.

The report also mischaracterizes the purpose of the Superfund Hazard Ranking System (HRS). The HRS has never been an indicator of relative risk among sites. A site need only score above 28.5 to be eligible for listing on the National Priorities List. It is not necessary to score beyond this, and inappropriate to use the scores as indicators of relative risk. In setting cleanup priorities, the Superfund program focuses attention and resources on the sites that present the greatest imminent risk.

Question 2. Do you agree with the characterization of the Superfund program found in Bradley Campbell's hearing testimony?

Response. EPA does not agree with Bradley Campbell's conclusions that Superfund program completions have dropped because of funding shortages and lack of enforcement. These assertions are simply untrue. The appropriated funding levels for the Superfund program have remained steady over the past five fiscal years, between $1.2 and $1.3 billion dollars. Moreover, EPA supplements its annual appropriated funding with resources deobligated from prior fiscal year contacts, settlements with responsible parties, and State cost share contributions.

Superfund program work has remained relatively steady. Through fiscal year 2007, 1,030 Superfund sites had cleanup construction completed, that represents 66 percent of the sites listed on the National Priorities List (NPL). Moreover, through fiscal year 2007,95 percent ofNPL sites have had remedial or removal cleanup construction work performed. Annual site completions have been affected by the composition of sites that have not yet reached construction completion. These sites are generally more complex than the sites we have completed in the past. Of 535 sites that are not construction complete (as of end of fiscal year 2007), nearly 40 percent are either Federal facility sites or are mega-sites, where cleanup costs are expected to exceed $50 million. This compares to 1,030 sites that are construction complete (through fiscal year 2007) of which only 11 percent are Federal facility or mega-sites.

In addition, EPA continues its vigorous Superfund enforcement efforts. Through aggressive enforcement, EPA has been able get responsible parties to conduct cleanups, and has collected settlement dollars to clean up sites. Since the beginning of the program, the value of Superfund settlements has exceeded $25 billion. In fiscal year 2007 alone, EPA secured more than $1 billion in settlements for cleanup or cost recovery. EPA currently has more than $1 billion in site specific special accounts that can be used to clean up sites, and since 2002, more than $535 million has been used for cleanup work.

Question 3. Would reinstating the lapsed Superfund taxes provide additional funding for the Superfund program?

Response. The lapsed Superfund taxes did not dictate the annual level of congressional appropriations for the Superfund program. Neither taxes nor the balance in the Superfund Trust fund governed annual levels of congressional funding. EPA

never had direct? access to tax revenues or to Trust Fund balances. The Superfund program has always relied on appropriated funding to fund Superfund program activities.

Question 4. Mr. Michael Steinberg suggested in his testimony at the Committee hearing on October 17, 2007 that there historically has not been coordination between senior EPA headquarters policymakers and the regional staff on major clean-up and funding decisions. What input did EPA headquarters have into the Manville Site decisions and what process did EPA follow to ensure that the cleanup decisions were effective but also reasonable?

Response. To ensure that the cleanup decisions were effective and reasonable, EPA followed the statutory requirements for CERCLA remedies and the process established in the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) for meeting these requirements.

EPA headquarters was kept informed and involved during the remedy selection process for the Federal Creosote site. In March 1999, comments on the Operable Unit 1 (OU1) proposed plan were solicited and received from EPA Headquarters/the Office of Solid Waste and Emergency Response (OSWER). Comments received from OSWER were incorporated into the proposed plan. Also in March of 1999, the proposed remedial action for the Federal Creosote Site was presented before the National Remedy Review Board (NRRB), which is chaired by OSWER. The NRRB reviews proposed Superfund cleanup decisions projected to cost greater than $30 million at this time to assure that they are consistent with Superfund regulations and guidance, and to verify that remedy selection is cost effective. The NRRB focused on the nature and complexity of the site, health and environmental risk, cost, the range of alternatives that addressed site risks and other relevant factors. The recommendations that NRRB provided were followed by the Region. EPA Headquarters provided additional solicited input on the draft Record of Decision (ROD) for OU1, which were incorporated into the final OU1 ROD. In addition, EPA headquarters was engaged and provided input on proposed plans and the draft RODs for the two subsequent operable units at the site.

EPA Headquarters was kept informed and provided support during the implementation of the remedy. Remedial action funding was prioritized through the National Risk-Based Priority Panel process and all funding requests were developed in conjunction with Headquarters throughout the entire period of the remedial action at the site.

Question 5. It has historically been EPA's policy to identify and pursue as many potentially responsible parties (PRPs) as possible to contribute to site clean-up costs. To date EPA has focused on only one PRP at the Manville Site. Is EPA going to investigate fully and pursue other PRPs?

Response. EPA's enforcement efforts at this site have been substantial. EPA evaluated the liability of and sent notice letters to two parties, who were the owners/operators of the facility at the time of disposal. EPA has also sent numerous 104(e) Information Request letters to parties to assess potential liability that those parties may have for the transactions that their companies had at the site. To date, EPA has received no information that has justified issuance of notice letters to these parties. Although EPA's PRP investigation is in its last stages, EPA is in the process of evaluating information from two additional parties.

Question 6. EPA has not ranked the Federal Creosote site high on its ranking list of priority sites. In addition, the Federal Agency for Toxic Substances Disease Registry (ATSDR) and New Jersey health officials concluded that there were no significant health risks at this site, unless long-buried materials were dug up. Do you believe that spending close to $300 million (approximately 25 percent of EPA's average annual Superfund appropriation) to respond to one site that apparently posed no significant public health risk is a wise use of limited taxpayer dollars?

Response. By definition, a site on the National Priorities List is a priority. The Federal Creosote site was placed on the NPL in 1999. Prior to listing, the Site was operated as a coal tar wood treatment facility from 1911 to 1956. After operations ceased and the wood treatment facility was dismantled, the property was purchased by a developer. In the 1960's, 137 single family homes were built on 35 acres of the Site. This residential area became known as the Claremont Development. The remaining 15 acres of the site was developed into the Rustic Mall which consists of commercial and retail establishments.

A review of historical information revealed that, during its operation, the facility treated railroad ties with creosote. Wood treatment activities at the Site resulted in the production ofcreosote—contaminated sludge, sediments, process residuals, preservative drippings, and spent process liquid. The most prominent features of the wood treatment operations included two unlined canals that conveyed creosote

waste to two unlined lagoons that were used to hold concentrated creosote waste sludge.

Investigations by EPA revealed that creosoting materials and contaminated soils associated with the wood treating facility were not removed prior to construction of the Claremont Development and Rustic Mall. The former lagoons are located from 2—5 feet below ground surface; the waste from one lagoon extends approximately 25 feet below ground surface while the other extends over 35 feet to bedrock. At several properties, the former lagoons and associated sludge were found to abut and/or underlie existing residences. The material in the lagoons was concentrated creosote sludge; on at least one occasion, creosote sludge seeped into a residential basement sump, was pumped onto the residential street, and flowed into the storm sewer system. The creosote waste in the canals is shallower—extending approximately 14 feet below ground surface. The material found in the buried canals range from a dry, crusty creosote/soil mixture to flowable creosote waste sludge.

EPA conducted extensive surface soil sampling in the spring of 1998 to determine whether there was any immediate threat to current residents. This sampling revealed that surface soil at approximately 11 homes with the highest overall levels of carcinogenic polycyclic aromatic hydrocarbons (material associated with wood treating chemicals) posed an unacceptable risk over the long-term and EPA took immediate action at those properties. The lagoon sludge and canal waste is highly contaminated source material which poses a risk to current and future residents. The primary routes of exposure included dermal contact with contaminated sludge and soil (present and future risk). Source material contaminated groundwater which could result in a future risk associated with ingestion of contaminated groundwater.

EPA concluded, based on its investigations, that the site did pose a significant public health risk. Following the Remedial InvestigationlFeasibility Study, the proposed remedial activities were reviewed by the National Remedy-Review Board and later, the National Risk—based Priority Panel for funding. The site work was considered as the highest prioritized new construction project in 1999 and was allocated funding that fiscal year.

ATSDR did not conclude that there was no significant public health risk at this site. At the time of its review, ATSDR concluded that "past and present exposures to surface soil represent no apparent public health hazard." ATSDR followed up this conclusion by stating: "However, this conclusion does not rule out the need to continue remedial activities". Furthermore, based on their conclusions, ATSDR made the following recommendation in the Public Health Assessment for the Federal Creosote site: "The NJDHSS (New Jersey Department of Health and Senior Services) and ATSDR recommend that the USEPA continue its remedial plans to remove source material from the site." ATSDR was fully supportive ofEPA's selected remedies for the site.

The decision to take remedial action at the Federal Creosote Site is consistent with the risk-based approach as mandated by the National Contingency Plan (NCP). As stated in the NCP, the acceptable risk range for site-related exposures is 10–4 and 10–6 . EPA conducted a Baseline Human Health Risk Assessment (BHHRA) to estimate the potential risks associated with the Federal Creosote site. The BHHRA demonstrated that the site-related exposures exceeded EPA's acceptable risk range which triggered EPA's response action.

Question 7. EPA removed more than 450,000 tons of soil from the Federal Creosote site-almost 300,000 tons more than EPA originally estimated. If the scope and cost of a selected cleanup changes as fundamentally as this did during the cleanup, shouldn't EPA re-evaluate the choices it has made for the site? Was that done in this instance?

Response. While the increase in quantity from EPA's original estimate was significant, the quantities provided in the statement above are incorrect. EPA's original quantity estimate was approximately 250,000 tons at the ROD stage not 150,000 as indicated above.

EPA re-evaluated its remedial decisions at several points during the remedial process; however, site constraints limited the available remedial choices, and EPA concluded that the increase in volume did not justify a change in remedy. After the OUI ROD, additional investigations led to an increase in the estimated quantity of OUI waste. This increase in quantity and resulting cost was evaluated in the remedy selection process and was documented in the OU2 ROD.

The remedial action differed significantly from the remedy selected in the OUl, OU2 and OU3 RODs with respect to cost. In accordance with the NCP, EPA consulted with the New Jersey Department ofEnvironmental Protection and published an Explanation of Significant Differences (ESD). The ESD made an explanation of these significant cost differences and supporting information available to the public in the administrative record established for the site and published a public notice

that summarized the ESD, including the reasons for such differences, in a local newspaper.

Question 8. EPA's "presumptive remedy' guidelines direct EPA's regional offices to use bioremediation or low temperature treatment on former wood-treating sites. EPA's guidance also advises against selecting a remedy that would incinerate large volumes of soil because "incineration of large volumes of contaminated media may be prohibitively costly." Do you believe an EPA decision to ship more than 150,000 tons of soil from the Federal Creosote site to Canada to be incinerated is consistent with EPA's own policy and guidelines in this area?

Response. EPA implemented the remedy in accordance with its policy and guidelines, considering site-specific conditions such as space constraints and the residential nature of the site.

The presumptive remedy guidance document is intended to assist EPA in determining appropriate cleanup technologies. The guidance document states that "EPA officials may decide to follow the guidance provided in this document or to act at variance with the guidance, based on an analysis of specific site circumstances." Recognizing that there is no such thing as a "one—size fits all" remedy for sites, the NCP requires the agency to formulate different remedial alternatives "taking into account the scope, characteristics, and complexity of the site problem that is being addressed" 40 C.F.R. § 300.430.(e)(2).

EPA's presumptive remedy guidance considered three technologies effective in treating creosote wastes that contain organic contaminants: bioremediation; thermal desorption; and incineration.

On-site and offsite applications of these technologies as well as additional technologies were given consideration during the remedy selection process for the Federal Creosote site.

The site-specific evaluation of treatment alternatives required by the NCP resulted in EPA's determination that site conditions were such that onsite treatment using either bioremediation, thermal desorption, or incineration was not appropriate. In additional to the practical concerns regarding the operation of a hazardous waste treatment facility in the town center and within a housing development, there were technical concerns regarding the ability of bioremediation and a thermal desorption system to treat the high concentration of contaminants present in the soil and address the types of material encountered at the site.

Senator CLINTON. Thank you so much, Administrator Bodine. It certainly will be, without objection.

I have some specific questions, but I want to make just a general comment. As I said in my opening remarks, you know, the glass is half full, the glass is half empty. People look in, see the same set of facts and draw different conclusions.

I think what we are interested in on this Subcommittee is what we can do together to help make progress in dealing with a lot of these complex sites in a more expeditious way. My ears perked up when Senator Inhofe talked about targeted funding sources. What targeted funding sources would be acceptable to the Administration to begin to get more money into the process? Because certainly if we are dealing with more complex sites that certainly does for me argue that there is a higher level of technical skills required; it is more painstaking. And yet the amount of money requested has not increased to reflect the complexity of those cleanups.

So I hope that the EPA will work with this Committee to come up with some solutions for these complex sites.

I want to specifically draw your attention to a site called Lawrence Aviation Industries. It is a 160 acre site in Suffolk County which is on Long Island in New York where huge quantities of TCE and acid sludge were dumped into two large lagoons. The site is located on a hill and the waste has leached toward wells and the Long Island Sound.

Now, this is a case where we do have a responsible party, and yet the site has a status of human exposure uncontrolled, more than 7 years after it was listed in 2000. I would like to ask why

the EPA has not controlled human exposure to pollution at this site and when can we expect the EPA to get it under control?

Ms. BODINE. Thank you.

Actually, I am glad that you brought up this site because it illustrates a broader point. We are dealing with sites and determining whether the human exposure is under control or whether we have sufficient data to make that determination. That is a determination that can change as our information about the site changes over time. So a site can be under control, and then we can learn about a new exposure pathway and it could be not under control or insufficient data until we have learned what is going on.

So at Lawrence Aviation, it is one of many sites around the Country where we have become aware of a pathway related to TCE, which is vapor intrusion. By no means is that the only site. There are a lot of sites around the Country where we have recognized that there is this new exposure pathway, vapor intrusion, that wasn't thought of. In the 1990's, we were dealing with these sites, and we thought if we dealt with the groundwater, we were done. We have discovered, no, there is another pathway. We have to go back and check because we need to protect human exposure.

So that is why a large number of sites either are not under control, or particularly a large number of sites are insufficient data because we are going back. We think there may be a vapor intrusion problem. We don't know yet. We will collect the data.

Specifically at Lawrence Aviation, we did do the sampling, and to date we have not found a vapor intrusion problem, but we need to go back and verify that. Again, the groundwater problem was taken care of at the site a long time ago. The local residents were hooked up to a public water supply system, and on the vapor intrusion site we have conducted the sampling and I will have to get back to you on the record on what the results are.

Senator CLINTON. Well, Ms. Bodine, I would like for a full status report on all the 111 sites where there is a finding of human exposure to dangerous levels of toxic chemicals. Obviously, I would like to know the status of that. I understand the vapor intrusion problem. We have that unfortunately at a number of sites in New York. But I would appreciate your submitting that to the Committee.

I also want to just clarify something. In your written testimony, you talk about how the potentially responsible parties have performed work at 70 percent of the sites. I have a letter from Chairman Dingell in the House to Administrator Johnson asking whether 50 percent is a more accurate figure. The EPA responded, "We cannot accurately predict what the percentage will be in the future. However, some believe that there will be more orphan sites where there are no viable PRPs in the future, and thus the percentage of PRP participation may decrease."

May I ask you, what do you think the future holds? Is it likely that the PRP share will increase or decrease?

Ms. BODINE. Well, you are looking just at NPL sites.

Senator CLINTON. Right.

Ms. BODINE. We are not listing as a proportion of the sites as many sites that are PRP-lead, because oftentimes there will be a highly qualified State program that can manage and oversee the responsible parties action. So those sites don't necessarily get list-

ed. So again, the sites that are being listed have the recalcitrant PRPs, the complex sites, or the orphan sites.

So yes, going forward, the proportions of the cleanup actions that are orphan are larger than they had been in the past, because we don't list every responsible party.

Senator CLINTON. Well, but then of course that raises the question that we now think there are nearly 400 orphan sites. Since the Superfund trust expired 4 years ago, that does mean, as Senator Lautenberg pointed out, that totally innocent parties, namely American taxpayers, are paying for all of these cleanups, and they are in a sense carried as unfunded liabilities on the Superfund program.

So I would like also in writing what you think the liability is; how much the total cleanup costs at these so-called orphan sites currently on the NPL will be. I think it is an important question for us to try to get to the bottom of together because it will help inform the debate about what to do with respect to reinstating the Superfund fees or trying to get some targeted funding to help us cleanup.

So if I could, Administrator Bodine, I would appreciate that. And then I would ask unanimous consent to submit the letters and the backup to my questions for the record.

Let me now turn to Senator Barrasso.

Senator BARRASSO. Thank you very much, Madam Chairman and thank you for being here today. I appreciate your time.

Senator Boxer referred to some privileged documents. I think we saw a big pile in the possession of the Committee. Is this information that needs to be privileged because EPA is bound by laws to do that? Could you just help clarify that a little bit for me?

Ms. BODINE. We generally claim a privilege for our deliberative processes, as have all Administrations before us, as well as other agencies, because you need to be able to preserve the candor in the communication within an agency as we are dealing with whatever complex situations that is under our authorities.

So of course, you are our oversight Committee. We are sharing documents with the oversight Committee, but when it involves, again, privileged internal debate discussion draft deliberative material, we ask that this not be made public because if it were, it would then chill the ability to have those kinds of discussions with our staff within the Administration about how to deal with situations.

Senator BARRASSO. I have read through the testimony of the second panel as well, and if I could just refer to one of those and visit with you about it, because you are testifying now and they are later. Mr. Steinberg says that there is a need for the EPA to manage its annual appropriations differently, that some of the money that is going into what people might think is Superfund activities is actually being used for other administrative and other purposes. What would you think about that?

Ms. BODINE. The Superfund program is a large program. As I talked about, we have over 3,200 Federal employees, men and women who are working every day on the program. So yes, we are paying their salaries. We do manage a large construction budget

for sites where we are overseeing the cleanup directly. So we do have to have staff that deal with management of contracts.

So there is, as there is in the private sector, you have your base core program costs and then you do have administrative overhead costs that are associated with that, but those costs are necessary to get the work done.

Senator BARRASSO. And then the final question, we talked a little bit about the Amoco refinery and a partnership, and I know you talked a little bit about the local communities and what they are doing. So I think it shouldn't be a surprise that there are maybe fewer things going on the list because of the efforts that are being done at a local level and private-Government partnerships.

Ms. BODINE. Absolutely. EPA and the Superfund program is not the only game in town at all. Where local communities can manage their problems, where the State can deal with the situation that is good news. That is success.

Senator BARRASSO. Thank you very much.

Thank you, Madam Chairman.

Senator CLINTON. Thank you very much, Senator.

Senator Boxer.

Senator BOXER. Thanks, Madam Chairman.

Ms. Bodine, you said that we have always had a lively debate on how the program should be managed. I would respectfully disagree that this is what the debate is about. You can always have a disagreement on management. I think the debate is much more fundamental. It is about the priority that is given to the Superfund program and the lack of priority that is given to it under this Administration, and the seeming lack of concern for the people who are impacted.

With that in mind, I would call to your attention a 2004 EPA report where there is an acknowledgment that, "current resources appropriated to the Superfund program may be insufficient to fully implement the program." Do you disagree with these statements?

Ms. BODINE. I would have to look at the report that you are referring to.

Senator BOXER. OK. Grant? This is your own agency, cleaning up the Nation's Waste Sites, 2004 edition, and this is where that comment is made. We will send it over. Could you send that over to the Administrator?

Do you agree or disagree whether or not you see it there? Do you believe that there is in fact a shortfall coming of $100 million to $200 million over a 10 year period?

Ms. BODINE. I know that in 2004 there were some analyses that were looking forward in terms of what we may be expecting for sites that were coming and what we were expecting for funding. I don't know exactly what you are referring to, but I do know that our out-year estimates of costs are not particularly reliable, so whatever numbers there would be a degree of uncertainty associated with those.

Senator BOXER. Forget the uncertainty. Do you feel comfortable with the funding as far as the Superfund site and what we need? Do you feel comfortable that you have the resources that you need now and into the future for your people who are coming after you, assuming we just kept the same funding stream?

Ms. BODINE. We are continuing to make progress in cleaning up sites, and we have funding to continue to make that progress. We are part of the whole unified budget.

Senator BOXER. I know you are part of the unified budget, and I am not asking about the unified budget. I don't have a lot of time here, so the point is you are answering me not yes or no, but you are giving me a story. The story is just very confusing to people, because either you have it or you don't. EPA in 2004 said you don't have it. You seem happy, and you seem to think the debate we are having is about management, when a lot of us believe it is much more than management. It is about a fundamental decision made by this Administration to short the program.

Now, you are familiar with Region VI, correct, which is Oklahoma, Texas, are you not?

Ms. BODINE. Yes.

Senator BOXER. OK. I am going to ask you something here. You in your opening statement were very positive about working with the community. You mentioned it several times, working with the community, working with the State, working with our tribal partners. Are you aware that in Region VI that part of your budget has been decimated in order to take money out of those so you can have money for other matters? Are you aware of that?

Ms. BODINE. No, ma'am, I am not.

Senator BOXER. Well, you should be aware of it because it is a document I got, and it is a document that says it is for oversight. So I am talking to you about this. Do you know how much was cut from technical assistance in order to have money for the NPL site in this region?

Ms. BODINE. I don't.

Senator BOXER. Well, it was 64 percent in 2003. And then community involvement, you know how much that was cut? About 56 percent, State, tribal management assistance was cut 32 percent. State, tribal grants were cut 100 percent. EPA site assessment was cut 48 percent. State, tribal core grants were cut 88 percent. Contracts, program management were cut 66 percent. Other support assistance was cut 25 percent. And the statement is made, and there are no names on this document. This is nothing to do with confidentiality here. This is the taxpayers' money, how it is being spent or not spent. And it says by reducing these categories, Region VI was able to keep its NPL site work progressing.

So this Administration is destroying this program just to keep the facade of the last dollar you can eke out to keep things moving.

So I would just simply say to you, and my time is running out, the debate is a lot more than the way you are portraying it. It is very serious. In my State, EPA failed to use health-based standards when assessing risks. At 271 sites that received asbestos-contaminated material from Libby, Montana, and 36 of those sites are in my region, including my State. How are you responding to that? I know Senator Baucus has a great deal of concern about this. Do you agree with the GAO study of October, 2007 that said you failed to use health-based standards when assessing the risks; you failed to follow your own regulations and guidance in notifying the public about potential dangers? Do you agree?

Ms. BODINE. We know more about asbestos than we did when we were going out and looking at the sites where Libby material was sent. Since then, we have developed better methodologies. Again, it was since that work was done. We have improved our technologies and improved our methodologies. And so, yes, we understand that we need to go back and look at sites where——

Senator BOXER. So you agree with the criticism of the GAO study of 2007?

Ms. BODINE. I don't agree with the conclusion that we failed to follow regulations with respect to informing the public. Those actions were under removal actions and under the national contingency plan, under our regulations the degree of public involvement, whether you would need a public hearing, for example, is scaled to the level of effort, to the size of the cleanup. So in some cases, you could have had a single home that we were addressing and you wouldn't have a large-scale public meeting for a situation like that. In other cases, we did have public meetings.

So again, it was scaled to the relative degree of——

Senator BOXER. So do you agree or disagree with this report?

Ms. BODINE. I agree we need to go back and evaluate the sites using our better methodology, as well as when we complete the toxicity assessment of the Libby amphibole, look at the data, and evaluate against that. That is all new methodologies and new information that we are developing, that we didn't have when we did the work originally.

Senator BOXER. So you agree with this report?

Ms. BODINE. There are two parts. I agree with the recommendation we need to go and look further, and I disagree with the conclusion that we failed to follow our regulations with respect to it.

Senator BOXER. OK. Well, the GAO said you agreed with the whole report. So I don't know whether you told them that or not, but I will send this over. It said GAO expressed general agreement on the notification. Are you planning to go out and notify my people as far as what they have been exposed to? Do you have plans to remediate the problem?

Ms. BODINE. Again, we will go back and evaluate and notify the public as we go back and as we do the work, as we find out more.

Senator BOXER. Madam Chair, I find this response very unsatisfactory because it is halting. It is not clear. Whenever we raise anything to do with Libby and asbestos, this is what we get. I would hope if we could through the Subcommittee and the full Committee, get a response from you to the GAO investigation, and how you are going to go back to my people and people all over this Country, tell them what they were exposed to, and what precautions they ought to take about this exposure.

Thank you. Sorry I went over.

Senator CLINTON. Thank you very much, Senator Boxer.

Administrator Bodine, we will submit very specific questions along the lines of Senator Boxer's concerns to try to get very specific answers, because clearly this is important to all of us that have these sites in our States and are trying to figure out how to protect the people that we represent.

Senator Inhofe.

Senator INHOFE. Thank you, Madam Chairwoman.

Administrator Bodine, you heard my opening statement. I referred to the fact that Senator Reid and I are actively looking into the Federal creosote site in New Jersey and we will be requesting a GAO investigation into the site, particularly the cleanup methods used leading to over $300 million for a 50 acre site.

I think this is a good thing to talk about because all the finger-pointing that is here and which Administration did what, first of all, you weren't here when that happened so you are off the hook. This is something that started in 1999, so both Administrations were involved in it.

Now, at the Federal creosote site, EPA dug up 450,000 tons of dirt and shipped more than 150,000 tons to Canada to be incinerated, raising the cleanup costs of this site dramatically. This was done when there were other remedies available. The EPA's own guidance, which says that incinerating anything over 5,000 would be cost-prohibitive.

Now, you weren't here, but do you have any insight into why the EPA used such a costly remedy as they did at this site?

Ms. BODINE. Sorry, Senator Inhofe. I don't have any insight into that. I can go back.

Senator INHOFE. Well, I would like to have you do that for the record because specifically they say that you should not use this methodology if it is over 5,000. This was way over, and so something got into that decision, and I would kind of like to know what it is.

Now, up until I became Chairman of the EPW Committee, and that was four and a half years ago, the Federal Government spent $130 million on Tar Creek. This is over about a 20 year period. Tar Creek is the site I referred to in the State of Oklahoma. And the results weren't good. Once we got all the Federal agencies to work together and to work on this with the State agencies in a new cooperative manner, we found that sound solutions for the site addressing the environment, the residents, and the cost. Is there some way that you could have used this model of cooperation for the Federal creosote site or for some of the other Superfund sites?

Now, what we did was something that is unheard of in government. We got everybody in one room—DOJ, DOI, EPA, the Corps of Engineers, the State agencies. And we ended up doing this in a cooperative way with Oklahoma University, the State of Oklahoma, and I must say with a lot of cooperation from our Democrat Governor out there. We worked on this thing, but we worked with all the Federal agencies and we got it done.

Now, I would ask you, if you are familiar with this and if this is a model that could be used for other sites?

Ms. BODINE. Yes, I am familiar with the collaborative work among the agencies at Tar Creek. And yes, in situations where you have other Federal agencies involved, then I think in fact you need to follow that model. You need to get all the Federal agencies at the table.

Senator Craig is not here, but there is a site in Idaho that is phosphate mining where they brought——

Senator INHOFE. He and I have argued in the past over which is the most devastating site, and I have won that argument, clearly.

[Laughter.]

Senator CLINTON. Why am I not surprised?

Ms. BODINE. No debate. Thank you.

It is not Bunker Hill that I was talking about, but there is a phosphate mining site which has a lot of the land management agencies involved in addition to EPA, in addition to the State, and exactly the kind of model that you described for Tar Creek is very helpful at that site as well, where you bring folks together. You have different jurisdictions and different responsibilities, but to make progress you all have to work together.

Senator INHOFE. And there is a propensity that seems to be inherent in Government not to do that. It is a turf thing. Anyway, you have probably not noticed that in your years.

We have been referring to that site in New Jersey. That is a site that health officials concluded there weren't any significant health risks. I would like to know, if that is the case, then why did that have such a high priority? Why were we spending so much on it?

Ms. BODINE. Well, I know that we are nearly done with this site, so I wouldn't be surprised that it no longer has health risks because we have addressed them. Now, how it was at the beginning, I would have to go back and find out. But that site is nearly complete.

Senator INHOFE. OK. You said something, and I unfortunately didn't read your written testimony. I normally try to do that, but I believe you said that there were 1,200 sites prior to 1991.

Ms. BODINE. That were listed.

Senator INHOFE. That were listed at that time.

Ms. BODINE. Right. The vast majority of sites on the NPL were listed before 1991.

Senator INHOFE. OK. Now, those that were listed before 1991, of those, how many would you say are still not treated? I think you said 284. Is that correct?

Ms. BODINE. I think it was about 284. Yes.

Senator INHOFE. OK. Yes, it is 284. All right, what characteristics are in those 284 that were in the other 1,000 sites?

Ms. BODINE. Some of them, if you look at the sites that we are still working on, they are really the famous sites. What I would like to do is provide you with that list for the record, but they are sites that have either had contentious litigation or they are just very large complex sites.

Senator INHOFE. I think that would be a good idea, because the argument we keep hearing, and I know it is sincerely posed, is that there is not a great difference in the ones that were done during the 1990's as opposed to during this Administration.

Ms. BODINE. Right. You have to look at the ones that aren't done.

Senator INHOFE. OK. One last thing, very occasionally Senator Lautenberg and I agree on some things.

[Laughter.]

Senator INHOFE. And one statement that he made that I agree with, he said, and it is very simple, and he has a way of putting in terms that even I understand. He said, if you pollute it, you should clean it up. And I agree with that. Frankly, I think we all agree with that. But I think the whole concept that if you are in a particular industry, should you be taxed, even though you don't

have any relationship or any responsibility, have never operated in an area where there is a Superfund site, why should you and the stockholders of that company be responsible for something that you had nothing to do with?

Now, in so far as policies that you take, I would like to have you keep that in mind. Look for areas, yes, if you can find the polluter that polluter should clean it up. We all agree with that, so this should not be a contentious issue.

Ms. BODINE. We have a very strong enforcement program for cleanup work or commitments to clean up work of over $25 billion, with the work done by people who actually caused the problem.

Senator INHOFE. Yes. Good for you.

Thank you, Madam Chair.

Senator CLINTON. Thank you very much.

Senator Lautenberg.

Senator LAUTENBERG. Thanks, Madam Chairman.

I enjoy my opportunities to be with Senator Inhofe. He always makes me think of a response, but I will forego that pleasure.

Ms. Bodine, you seem to take some delight in the fact that we have a bunch of sites that are left, and you excuse them by saying they are a greater cleanup challenges than others. Does that mean that they are not dangerous in any way?

Ms. BODINE. No, I didn't say that.

Senator LAUTENBERG. Well, you said it in your remarks. I will remind you: "This does not mean that EPA has been neglecting these sites. It simply means that some sites present a greater cleanup challenge than others."

Does a greater cleanup challenge mean that these sites might be dangerous to the people in the area?

Ms. BODINE. If there is an immediate risk, we go out, do a removal action, and address any——

Senator LAUTENBERG. But you used the word complicated, and that suggests that there is something big and terrible in there.

Ms. BODINE. At a site, you can have addressed substantial engagement associated with the site and still have a complicated remedy that is technically complicated where the work needs to obviously continue and will take a long period of time.

Senator LAUTENBERG. You remind me of a doctor who was visiting with a patient and says I have good news for you. Your heart is fine, but your cancer is overtaking your body. So here is the good news for you, that one part of you is terrific and the other part of you is terrible. You are taking some high degree of satisfaction out of the fact that we don't have money with which to pursue the cleanup of these sites.

Do you approve of the fact that the taxpayers are paying $1.25 billion to clean up these sites?

Ms. BODINE. We would like to have the responsible parties pay for the entire cleanup. There are some sites where the responsible parties are not there.

Senator LAUTENBERG. Yes, but that is why we had the Superfund reserve at some three some billion dollars in 1996. Now it is zero. There are many sites that need attention, but Senator Boxer was interested in some of the materials, some of the text that was withheld from the public at large. Now, our former Commissioner Brad-

ley Campbell is going to testify on the second panel. I will give you that notice, that he inadvertently receives e-mails in which EPA directed its technical staff to make up excuses why a cleanup could not take place to cover for the real reason, which was lack of sufficient funds. Are you aware of that incident?

Ms. BODINE. No, I am not.

Senator LAUTENBERG. Is there a practice at EPA that says whatever you do, don't admit that things have slowed up because we have insufficient funds; we don't have the resources; we don't have the staff?

Ms. BODINE. I am not aware of that practice, no.

Senator LAUTENBERG. You are not? So you have sufficient staff to do all these cleanups and all the tools that you need to do them with?

Ms. BODINE. We manage our program and we manage it tightly. We scrutinize the sites. We require all of our projects to go through value engineering. We require the projects to be ranked by a national risk-based priority panel before we fund them. So we are closely managing this program, and indeed we are also managing the funds so that we are not putting too much money on a project, because in fact we have been able——

Senator LAUTENBERG. Are you short at all? Do you find any shortages of direct resources, personnel, equipment, or anything like that as a result of not having enough money? You have plenty of dough?

Ms. BODINE. We have been able to de-obligate. In other words, we put money on a project. It wasn't needed. We have been able to de-obligate $740 million since 2001 from sites. So we are managing our resources more closely now. Before, we had a tendency to over-obligate. We put too much money on a project. That gave us the opportunity when the project is done to take the unused money and go and use it at other sites.

We are managing our projects more closely now so that we are not over-obligating. We are not putting too much money on a project.

Senator LAUTENBERG. Even though they might need it to get it cleaned up. My good friend, Senator Inhofe, talked about, or others talked about the low-hanging fruit and how the early sites were easy cleanups. That creosote site cost $300 million by your own statements. So how low was that fruit hanging?

Senator INHOFE. Would the Senator yield for a comment?

Senator LAUTENBERG. Sure. It is not my time.

Senator INHOFE. Yes. I would only comment, and that is my point, that so much was spent in a way that violated the normal rules of what you should spend in terms of the incineration, particularly when it was a site that apparently posed no health risk. That is the point I was making.

Senator LAUTENBERG. Thank you very much, Madam Chairman. I assume the record will be held open and we can expect prompt returns from EPA on any questions that we submit in writing.

Senator CLINTON. I am sure that is the case. We will leave the record open and we will look for those prompt responses.

I just have one final question, and that concerns the TCE standard. Last year, the National Academy of Sciences Board on Envi-

ronmental Studies and Toxicology returned its review of TCE to EPA, and recommended that you act expeditiously to release a new TCE health risk assessment that includes vapor intrusion and indoor air standards.

As we were talking earlier, this vapor intrusion problem from TCE is a serious one that we have to address. We have 10 Superfund sites in New York alone with TCE contamination that is already in the groundwater. We have evidence of vapor intrusion.

Has EPA set that standard yet, Administrator Bodine?

Ms. BODINE. What you are referring to is a new IRIS, integrated risk information system, standard that the Office of Research and Development is working on. What the NAS said was that the Office of Research and Development could take not the data that they had used before to set a draft standard, which was based on mouse livers or mouse kidneys, but could take data based on rats and set a standard expeditiously. If the agency did that, then the conclusion would be that TCE is far less potent a risk than folks would have assumed based on data derived from mice as opposed to rats.

So the Office of Research and Development is carefully looking at all of these issues with respect to what data set they are looking at. So an expeditious setting of a standard and doing perhaps what was issued by the NAS could result in a standard that says, no, you can be exposed to much more TCE. So obviously, that Office of Research and Development is being very careful before they draw any conclusions.

Senator CLINTON. Well, Administrator Bodine, I would very much appreciate the chance to have our experts sit down with the EPA staff tasked on this because the NAS found that the evidence on carcinogenic risk and other health hazards from exposure to TCE has strengthened since 2001. Hundreds of waste sites are contaminated. It is well documented that individuals in many communities are exposed to the chemical with associated health risks.

It is very clear in the report that was issued that the Federal agencies were urged to finalize their risk assessment with currently available data so risk management decisions can be made expeditiously. I am now hearing that this is not how the EPA is viewing the data that is available, and I wish to have a thorough briefing on this, and have our experts meet with the requisite staff at the EPA to try to understand what happened between the NAS recommendation and where we are today based on your testimony. Is that appropriate?

Ms. BODINE. That is very appropriate, because the fact that there is a stronger relationship or stronger showing that it is a carcinogen doesn't mean that it is more potent. There is a difference.

Senator CLINTON. I understand that.

Ms. BODINE. And that is why we will get those folks together.

Senator CLINTON. We need to get them together because the National Academies, which I believe have a full understanding of the difference that you are referring to, urged expeditious action. So I think that it is time that we got expeditious about this, because I have a lot of people in my State who are suffering from and worried about the vapor intrusion.

Any other questions?

Senator BOXER.

Senator BOXER. Yes, I do, if no one else does.

Again, I want to get back to the budget. You sort of make a dismissive nod. Our budget is important to the people of the United States of America, and the budget of the Superfund program is very important to the 10 million that live within four miles of a Superfund site, and who are suffering, getting sick, dying early, getting cancer and all of that. And that is why I ask a lot about the budget.

Do you ask division directors to recommend cuts in the Superfund program?

Ms. BODINE. No. We ask them to manage their sites and manage their resources carefully.

Senator BOXER. You don't ask them to come up with cuts?

Ms. BODINE. We ask them to carefully review what their projects are and how much money they need and at what point in time.

Senator BOXER. Well, Madam Chair, I have a document here given to me by the EPA which shows that in fact the division directors were called to a meeting in 2006. They were asked to recommend cuts. Now, you mentioned State grants as you gave your very optimistic opening statement. Are you aware that they are continuing to cut the State grants so that they can come up with more money for remedial actions?

Ms. BODINE. I am aware that we fund State programs through cooperative grants. We also fund State programs through the $50 million that comes out of Brownfields, and that a lot preliminary work onsites can be done using either source.

Senator BOXER. Are you aware that people were called together for a fly in meeting and asked how they could cut their budget? You said you were not aware. How could you not be aware? Aren't you in charge of the Superfund program?

Ms. BODINE. I am not micro-managing the Superfund program.

Senator BOXER. Oh, OK. So cuts coming from your division directors would not be of concern to the person at the top? Is that right? Is that what I am hearing?

Ms. BODINE. That is not.

Senator BOXER. So you don't know. It doesn't sound like you know what is happening, because your own documents that you made available to me show possible disinvestments, asking people how they could cut. They said, well, in order to continue cleanups, we have to cut, slow down the remedial investigations, remedial designs, State programs, the C program, which as I understand it brings in retired people to help with these matters, and across the board cuts.

Madam Chair, this program is not in good shape right now. We have someone here who doesn't even know that the district directors are asked how to cut funds. That says to me, this isn't about micro-managing. These are district directors. These are the people who are close to the problem. I would just suggest to you, we are all Senators here. We have to go back to our States. One of the things we are very aware of is not to lose touch with people. Don't lose touch with your district directors or you cannot do your job.

Thank you.

Senator INHOFE. Madam Chairman.

Senator CLINTON. Senator Inhofe.

Senator INHOFE. Well, first of all, you may not be aware of that, but if you would pass on to whomever made the decision to ask the district directors to find places to cut their budgets, that I applaud them for doing that. I think all government should be doing that, so I think they are doing a good job.

I would say, Madam Chairman, that we have been joined by the Senator from Idaho. Before he is recognized for his questions, I would say to him that we had a discussion between the Superfund sites in Idaho and Oklahoma, and the one in Oklahoma was much more devastating than the one in Idaho. I am sure you will have a chance to ask some questions.

Senator CLINTON. Welcome, Senator Craig.

OPENING STATEMENT OF HON. LARRY CRAIG, U.S. SENATOR FROM THE STATE OF WYOMING

Senator CRAIG. Madam Chairman, thank you very much.

Susan, it is great to have you with us today.

Almost from the time I began my service in the U.S. Congress, a great mining district of Idaho went from being highly profitable and productive to slumping into a depressed metals market that spun it ultimately into a Superfund site. So Madam Chairman, literally for 22 years, I have worked with one of the largest Superfund sites in the Nation, and the EPA our of Region X in Seattle, so thorough and so competently that they even brought people out to establish permanent residency in Idaho to work specifically on that site.

We have had our troubles. It has not all gone well. There were major human factors involved, Madam Chairman, because it was an old smelter site and there was heavy lead in the environment. Over the years and with the frustration involved, I went so far as to ask the National Institute of Health to come in and review. The National Academy of Sciences has been in to review.

I must tell you that EPA in almost every way met the standards. They didn't meet them in the time we would have liked, largely because it was not their fault. It was the fault of the litigation and the law that made it so complicated and so cumbersome that it was in many instances because we were always trying to find the bad buy because of legacy environments, that we spent more time in litigation and in court than we did in cleanup for a time. If we hadn't been looking for bad guys and our purpose was to go out and clean it up and bring everybody in to participate, my guess is the great Silver Valley of Idaho and the Coeur d'Alene mining basin would have been cleaned up years ago.

Having said that, Ms. Bodine, I am very pleased with the progress that EPA is making, and very pleased with the relationship that EPA has with the State of Idaho now. We have established some landmark environments out there, some cooperative relationships that really ought to be a template on how you solve problems, in my opinion. I know that Tony Hardison has worked very hard on this issue. We have what is called the Basin Environmental Improvement Project Commission, State and Federal cooperatively working together.

This is not just a Federal responsibility. We have shown that there is a State responsibility. There is a cooperative effort that

can in fact streamline and make things very productive. So I want to thank you for that.

Talk to me, if you would, and the Committee for a few moments about how you view the relationship between EPA and the Basin Environmental Improvement Project Commission, because in my opinion, that is where a lot of our approaches toward resolution of these Superfund sites ought to move, not just in Idaho, but nationwide.

Ms. BODINE. Thank you, Senator. It is a very good relationship. In fact, it is critical. When you look at the Coeur d'Alene site, in size it is absolutely enormous. It deals with multiple watersheds, multiple basins. When you are addressing a situation like that, it is not just the mine tailings and the environmental impacts. It is the ecological impacts, the human health impacts. It is the entire community involved there. Therefore, you have to have the State as a partner to deal with and to engage, as well as the local community. That is the only way you can address one of these watershed-wide issues. So yes, it is not only a good relationship. It is an absolutely critical relationship.

Senator CRAIG. Madam Chair, let me address one other issue if I may, and I think, Susan, before I got here, touched on it. Clear across the State and over in the toe, in the top of the boot of Idaho, is another major mining area.

Ms. BODINE. Yes.

Senator CRAIG. It is one of the last major phosphate mining areas in the United States. There are a lot of interests out there trying to shut it down, plain and simple. I have been blunt about it, and said, fine, if you want all of your phosphate fertilizers to grow America's food crops imported from China, so be it. That is what will happen if we can't get this right.

EPA, the U.S. Forest Service, because it is Federal land, permitted for the purpose of phosphate mining, with three major mining companies in there, providing a huge supply of America's phosphate fertilizers. And EPA has worked with them.

The downside, Madam Chairman, is one of the minerals that comes from the process is selenium. Selenium in concentrate is poisonous. It has caused some problems. There are tremendous plans, tremendous efforts to bring all of that together with multiple agencies and to keep a phosphate mining industry in the United States.

Can you speak to us about how that cooperative and coordinated effort has gone on?

Ms. BODINE. Again, having that cooperation is critical, particularly as you pointed out, the land is Federal land. Our mission is protection of human health and the environment. We also have to work cooperatively with the Federal land managers. When it is their land, they in fact have the lead with respect to that property.

So again, dealing with this phosphate mine situation, all of the agencies and the State agencies as well, have to work cooperatively together, and that is the case in the phosphate mine cleanups.

Senator CRAIG. Thank you, Madam Chairman.

Susan, thank you.

What I find in Idaho that is an active agriculture State, mining State, now a new technology State, is that we have a cooperative and coordinated relationship with EPA that has at times been

rocky, but in most instances highly successful. In all instances where we have come together cooperatively, we have improved the environment and the condition of human health and life quality substantially from what it was originally.

So I am extremely pleased to date. I would like to redo the Superfund law. I think it is a complicated, cumbersome system that is reflective of the past, and not the current environment. We all ought to be oriented toward cleanups, instead of finding bad guys and sometimes legacies exist that you can't find the bad guy anymore. He or she or they simply don't exist. Our mission ought to be to clean, instead of to litigate.

Thank you.

Ms. BODINE. Thank you, Senator.

Senator CLINTON. Thank you very much, Senator Craig.

We will keep the record open.

Administrator Bodine, I at least will have additional questions for the record. Thank you very much for being here.

We are moving now to our second panel. Obviously, we are pleased to have such a broad cross section of panelists here for this important issue. We are going to move immediately into the statements from the panelists. We would appreciate you keeping to the 5-minute rule. We have your written testimony, and of course it will be in the record. So if you could summarize the high points of what you wish the Committee to hear, that would be extremely helpful.

We will go in the following order. We will start with Rena Steinzor, then Dr. Porter, then Bradley Campbell, then Michael Steinberg, then Lenny Siegel. So as soon as people are settled in, we will begin with Rena Steinzor, the Jacob A. France Research Professor of Law, University of Maryland School of Law, and a scholar at the Center for Progressive Reform.

Thank you very much, Professor Steinzor, for being here.

STATEMENT OF RENA STEINZOR, JACOB A. FRANCE RESEARCH PROFESSOR OF LAW, UNIVERSITY OF MARYLAND SCHOOL OF LAW; SCHOLAR, CENTER FOR PROGRESSIVE REFORM

Ms. STEINZOR. Madam Chairwoman and members of the Committee, thank you for inviting me.

Superfund badly needs your attention, and I congratulate the Committee for reviving the constitutional check and balance of rigorous oversight. I request that our report, The Toll of Superfund Neglect, be included in the hearing record.

Senior EPA political appointees and industry representatives may or may not understand how Superfund is supposed to work. They should understand how it does work. Unfortunately, they are not sharing either explanation with you.

The truth is that Congress intended the program to be a three-legged stool: one, identification of the worst sites; two, a multi-billion dollar fund to prime the pump for cleanup and pay costs at orphan sites; and three, strict joint and several liability to give parties compelling incentives to initiate cleanups.

Over the last several years, EPA's political leadership has sawed the first leg in half, dumping many Superfund sites into the laps

of underfinanced States; removed the second leg of public funding; and left the third leg, enforcement, to rot to its core. No wonder the program is in trouble.

To obscure this dismal reality, EPA officials and industry representatives have created five legends about Superfund. The first legend is that long-neglected Superfund sites are not harming anybody and can safely be neglected. These assertions are ludicrous. Indeed, if the people who advance them truly believe they are true, we would have a more honest debate if the question was whether we should abolish Superfund. No one wants to go there, and for good reason.

Thousands of uncontrolled Federal and State Superfund sites plague communities across the Nation. Most sites are located in or near heavily populated urban or suburban neighborhoods. Many have languished on the Superfund national priorities list for two decades. Often, no more than holes in the ground, they are filled with a noxious mix of chemicals leading into the air, soil or water. The sites sit stop aquifers used for drinking water, spill into rivers and streams used for swimming and recreation, and contaminate soil where children play. Millions of people live close to the sites, including hundreds of thousands of children. Many of these communities are low income and comprised of people of color.

The second legend, contending that cleanup has slowed because EPA did the easy sites first, is half true. It is difficult to complete cleanup at the biggest sites, but up until a few years ago our government rolled up its sleeves and deployed with fervor when confronted with a difficult job. Agencies did not come to Congress urging you to decrease their funding.

This bizarre development brings us to the third legend, that EPA has all the money it needs. The broad-based industry taxes that support the program expired in 1995. President Clinton asked Congress to extend them every year he was in office. The Bush administration not only opposed extension of the tax, it has addressed chronic shortfalls by drawing on general taxpayer revenue and steadily lowering annual appropriations. In constant dollars, Superfund appropriations are 40 percent lower than the amount specified in the last reauthorization.

Glossing over the implication of these missing resources, EPA and industry representatives argue that Superfund taxes are not only unnecessary, but onerous. The truth is that before the taxes expired, they raised revenues that amount to 1.79 percent of the 2006 profits of just six of the Nation's largest oil and petrochemical companies.

As for the last legend, that responsible parties are already shouldering the Superfund burden, we confront another half-truth. At sites where orders were issued before today's enforcement doldrums, responsible parties are moving cleanup along. But at countless other sites, the Nation's most prominent and richest corporations have ignored or stonewalled their obligations. For the sake of those living near these sites across the Country, I urge you to support the reinstatement of Superfund taxes and continue your rigorous oversight of EPA implementation.

[The prepared statement of Ms. Steinzor follows:]

STATEMENT OF RENA STEINZOR, JACOB A. FRANCIS RESEARCH PROFESSOR OF LAW, UNIVERSITY OF MARYLAND SCHOOL OF LAW; SCHOLAR, CENTER FOR PROGRESSIVE REFORM

Madam Chairwoman and members of the Committee, thank you for inviting me to testify today. Superfund badly needs your attention, and I congratulate the Committee for reviving the constitutional check and balance of rigorous oversight.

I have worked on Superfund for 25 years. I was subcommittee counsel for Representative James J. Florio, widely perceived as the "father" of Superfund, when Congress last reauthorized the program. I served as a senior staff person on the National Commission on Superfund, which included the CEOs of all major stakeholders and negotiated a consensus reauthorization of the Superfund statute,[1] only to have its work washed away by the Contract with America. I have represented clients liable at Superfund sites and counseled clients who wanted to avoid that fate. I teach Superfund law to students and have written five scholarly articles on the subject, as well as a report entitled The Toll of Superfund Neglect, which is the focus of my testimony today.[2] The report was released by the Center for Progressive Reform[3] and the Center for American Progress[4] and is available at http://www.progressivereform.org/articles/Superfund—061506.pdf. The report analyzes the environmental conditions and demographics of 50 of the worst sites in the nation's ten most populous states.[5] A list of the sites we studied is attached as Appendix A to my testimony. I respectfully request that the report and its attachments be included in the record for this hearing.

LEGENDS

Senior EPA political appointees and industry representatives may or may not understand how Superfund is supposed to work. They should understand how it does work. Unfortunately, they are not sharing either explanation with you. Instead, they have created five Superfund legends that have little relationship to history or reality:

1. Few if any sites endanger public health.
2. Because EPA has only recently gotten down to the worst, most complex sites, cleanup has slowed, with the construction phase of remedial action[6] completed at only 24 sites in 2007, as compared to 87 sites in 2000.[7]
3. EPA has enough money without renewal of the Superfund tax.
4. Superfund taxes are onerous.
5. Companies that created the sites are paying to clean them up.

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[1]Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 U.S.C. § § 9601 et seq.,

[2]I appreciate the assistance of Margaret Clune, CPR policy analyst, in preparing the original report and my research assistants, Michael Wright and Xochitl Strohbehn, students at the University of Maryland Law School, who helped me prepare this testimony.

[3]The Center for Progressive Reform (CPR) is an organization of 45 academics who specialize in the legal, economic, and scientific issues that surround Federal regulation to protect public health, natural resources, and worker safety. One component of the Center's mission is to circulate academic papers, studies, and other analyses that promote public policy based on the multiple social values that motivated the enactment of our nation's health, safety and environmental laws. We seek to inform the public about scholarship that envisions government as an arena where members of society choose and preserve their collective values. We reject the idea that government's only function is to increase the economic efficiency of private markets. For more information, please see http://progressivereform.org.

[4]The Center for American Progress is a progressive think-tank dedicated to improving the lives of Americans through ideas and action. It is committed to creating a long-term, progressive vision for America—a vision that policymakers, thought-leaders and activists can use to shape the national debate and pass laws that make a difference. For more information, please see http://www.americanprogress.org.

[5]The report selected the 50 sites on the basis of the severity of contamination, their proximity to people, whether construction has been completed at the facility, and other criteria. See pages 157–162 of The Toll of Superfund Neglect for a full description of our selection methodology. In the year since the report was issued, construction has been completed at two sites on the list: the ALCOA (Point Comfort)/Lavaca Bay in Texas and the UGI Columbia Gas Plant in Pennsylvania.

[6]As the Subcommittee is aware, completing construction does not mean that a site is finished, and does not pose a risk to the public. Especially where remedies are temporary, long-term monitoring, operation and maintenance are essential to ensure that risks remain contained.

[7]An EPA chart submitted to the subcommittee shows 47 "construction complete" sites in 2001, 42 in 2002, 40 annually in 2003–2005, and 24 in 2007. These numbers are substantially less than annual figures for the preceding 6 years which were 68 (1993), 61 (1994), 68 (1995), 64 (1996), 88 (1997), 87 (1998), 85 (1999), and 87 (2000).

TRUTH

The truth is that Superfund's creators intended it to be a three-legged stool:

1. systematic identification and prioritization of abandoned toxic waste sites all over the country that require cleanup;

2. creation of a multi-billion dollar fund supported by industry taxes to both prime the pump for cleanup and pay for so-called "orphan" sites; and

3. strict, joint, and several liability that gives responsible parties that created the sites compelling incentives to clean them up and allows Government to recover most of the money spent upfront.

Over the last several years, EPA's political leadership has sawed the first leg in half, removed the second leg, and left the third leg to rot to its core. No wonder the program is in trouble.

The assertion that long-neglected Superfund sites are not harming anybody and can safely be neglected is ludicrous. Indeed, if the people who advance this legend believe it to be true, we would have a more honest debate if we discussed whether we could safely wind down Superfund, ending the program within some fixed timeline. No one wants to go there, and for good reason.

Thousands of uncontrolled Federal and State Superfund sites plague communities across the Nation. Our report offers a snapshot of these conditions. Most of the 50 sites we studied are located in heavily populated urban or suburban neighborhoods. Many have languished on the Superfund National Priorities List for two decades. Often no more than holes in the ground, they leak toxic soups comprised of hundreds of chemicals into the air, soil, or water, including PCBs, creosote, lead, polycyclic aromatic hydrocarbons, chromium, copper, zinc, cadmium, arsenic, mercury, and trichloroethylene. The sites sit atop aquifers used for drinking water, leak toxic chemicals into rivers and streams used for swimming and recreation, contaminate soil where children play with hazardous wastes, and in one particularly tragic and egregious case, provide the foundation for an apartment building that is still occupied.[8]

Millions of people live in the census tracts[9] where the sites are located, including hundreds of thousands of children. Many of these communities are low income and comprised of people of color. Of the 50 sites we studied, 60 percent were located in neighborhoods where households reported median incomes in the range of $40,000 and some 26 percent were in the midst of populations comprised of 40 percent or more racial or ethnic minorities.

The second legend, contending that cleanup has slowed because EPA did the easy sites first, is half true. It is difficult to complete cleanup at the biggest, most contaminated sites, such as (1) the Operating Industries site, a 190-acre municipal landfill in the Los Angeles suburbs where millions of gallons of liquid hazardous waste was poured over densely packed household garbage, producing leachate that contains vinyl chloride, benzene tetrachoroethylene, and heavy metals[10] or (2) the 160-acre Lawrence Aviation Industries site in Suffolk County, New York, where the owner poured unknown quantities of TCE and acid sludges onto the ground and into two unlined lagoons.[11]

But up until a few years ago, our Government rolled up its sleeves and deployed the complicated technology and significant resources that are required to get difficult jobs done. Agencies in charge of such efforts did not come to Congress demanding fewer resources as these challenges became more daunting, as EPA now does.

This bizarre development brings us to the third legend: EPA has all the money it needs to complete cleanup. The broad-based industry taxes that support the program expired in 1995. President Clinton asked Congress to extend them every year he was in office, and every year, the Congress refused the request. The Bush administration opposes extension of the tax and has made up chronic shortfalls by drawing on general taxpayer revenues and steadily lowering annual appropriations. In fiscal year 3, EPA ran through all the money left over from the years when the program was supported by industry taxes and the program has been exclusively supported by general revenues ever since.

Not only are the wrong people paying to support a program that is starved for resources, crucial tasks are increasingly left undone. In constant dollars, revenues

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[8]See page 71 of The Toll of Superfund Neglect for a description of the Normandy Park Apartments site in Hillsborough County, FL.

[9]Census tracks are small geographic areas averaging 4,000 people. See https://ask.census.gov.

[10]See page 38 of The Toll of Superfund Neglect for a description of the Operating Industries site.

[11]See page 60 of The Toll of Superfund Neglect for a description of the Lawrence Aviationsite.

appropriated for the Superfund program now stand at levels 40 percent lower than the amounts Congress specified when it last reauthorized the program in 1986.[12]

As any businessperson knows, it takes money to make money. Not only are there hundreds of sites at the Federal level that need investigation so cleanup plans can be made, thousands of additional sites have ended up in the states' laps. Even if they wanted to, EPA and the states cannot go to court to demand responsible party cleanups without first completing these investigations and writing cleanup plans and, without more money, they have little hope of cleaning up orphan sites where no responsible party is available. Yet EPA has precipitously cut the funding for states to do the technical analysis necessary to determine what should be done about these hazards.[13] The result is that the sites are swept out of sight, getting worse and worse as their public health and environmental implications are buried in a sea of mind-numbing, "don't-worry-be-happy" EPA statistics.

Let me give you another example. I teach at the University of Maryland School of Law in Baltimore. This past spring, Dr. Joshua Sharfstein, the City's Public Health Commissioner, closed a popular baseball field called Swann Park after old documents came to light revealing that in the late 1970's, arsenic from a nearby Allied Signal pesticide plant had blown onto the park, insinuating itself into the soil at toxic levels. The Maryland Department of the Environment managed to overcome the funding gap that has paralyzed its State Superfund efforts, and ordered that the park be remediated. Undoubtedly, the saga of Swann Park is but the dusting of snow on top of the iceberg, as we will learn over the next decades unless we resuscitate both the Federal and State Superfund programs.

The fourth legend is that Superfund taxes are too onerous and corporate responsible parties are already paying their fair share through cleanups ordered by past consent decrees. Glossing over the implications of these missing resources, EPA and industry representatives argue that the Superfund tax would amount to double dipping against these responsible parties.

The truth is that before they expired in 1995, Superfund taxes raised revenues of approximately $1.5 billion annually, or $4 million daily, from taxes on crude oil and chemical feedstocks and through a broad-based corporate tax. As the following chart shows, annual Superfund tax revenues amount to 1.79 percent of the 2006 profits of just six of the nation's largest oil and petrochemical companies. The CEO salaries of these six companies alone would cover almost 6 weeks of missing revenues.

Company Name	2007 Fortune 500 Rank	Money In Millions	% Change from 2005	CEO Name	2006 CEO Compensation ($ In Millions)
Exxon Mobil	2	39,500,000,000	9.30%	Rex Tillerson	4,120,000^^
Chevron	4	17,138,000,000	21.60%	David O'Reilly	8,800,000
ConocoPhillips	5	15,550,000,000	14.90%	James Mulva	31,340,000
Valero Energy	16	5,483,000,000	52.20%	William Klesse	10,910,000*
Marathon Oil	30	5,234,000,000	72.60%	Clarence Cazalot	37,480,000
Sunoco	60	979,000,000	0.50%	John Drosdick	46,190,000
TOTAL		83,884,000,000			163,740,000
Tax Rate Needed To Produce 1.5 Billion		1.79%			
*New CEO (Some Compensation May Reflect Another Executive) Per Forbes.com (visited 10/12/07). http://www.forbes.com/lists/2006/12/Rank_6.html					
^ Prior Year Data http://www.forbes.com/lists/2006/12/Rank_6.html (visited 10/12/07)					

As for the assertion that responsible parties are shouldering the large majority of the burden for cleaning up Superfund sites, we confront yet another half-truth. At sites where cleanup orders were issued well before today's enforcement doldrums, responsible parties are moving cleanup along, often at a clip faster than government-funded cleanups. But at countless other sites, some of the nation's most prominent corporations have backed off their obligations, apparently waiting for Federal and State enforcement officials to come compel them to address their responsibilities.

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[12]See page 3 of the testimony of Katherine N. Probst, Senior Fellow and Director, Risk, Resource, and Environmental Management, Resources for the Future, before this Committee at a Superfund oversight hearing held on June 15, 2006, available at http://epw.senate.gov/public/heating—statements.cfm?id=257181.

[13]For information on State funding shortfalls, see EPA, Office of the Inspector General, Evaluation Report No. 2004-P—00027, Some States Cannot Address Assessment Needs and Face Limitations in Meeting Future Superfund Cleanup Requirements (September 1, 2004), available at http://www.epa.gov/oig/reports/2004/2004—01—2004-P—00027.pdf.

An analysis by the Center for Public Integrity completed in 2007 relied on confidential EPA enforcement material to compile a list of the 100 large companies that have the most Superfund sites, breaking down this data to show the numbers of sites on the list that remain unaddressed years and even decades after listing.[14]

For example, the 75-acre Universal Oil Products site in East Rutherford, New Jersey was first listed in 1983 and is heavily contaminated with 4.5 million gallons of waste solvents and solid chemical wastes. Honeywell, the only responsible party at the site, is leading cleanup efforts, which have crawled along for a quarter century. According to the most recent EPA site description posted on the web this past February, an investigation into contamination of onsite wetlands and creek areas did not begin until 2005 and still are not completed.[15]

CONCLUSION

More than any other environmental program, Superfund is a victim of compassion fatigue and political doublespeak. The Federal Government and responsible parties have dragged their feet on cleanup for so long that it has been impossible for the public at large to maintain the level of outrage that propelled the birth of the program in 1980 and Congress' decision to increase Superfund resources sixfold in 1986. In many locations, cosmetic changes have been made ? rusting barrels have been removed from the surface and vegetation has reemerged on what were moonscapes 20 years ago. Beneath the surface, though, little has really changed. The toxic stews continue to circulate, moldering and spreading, adding chemicals to aquifers, rising to the surface of the soil as the land freezes and thaws, and releasing methane and other volatile gases.

For the sake of those living in the census tracts containing the 50 sites detailed in this report, as well as the untold other people living near hazardous waste sites across the country, CPR urges this Committee to support the reinstatement of Superfund taxes and continue its rigorous oversight of the implementation of this vital program.

Thank you again for inviting me.

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[14]See Center for Public Integrity, Wasting Away, Superfund's Toxic Legacy (2007), a series of reports, all of which are available at http://www.publicintegrity.org/Superfund/.

[15]Universal Oil Products, New Jersey, EPA ID# NJD002005106, available at http://www.epa.gov/region02/superfund/npl/0200101c.pdf.

APPENDIX A – 50 PROFILED SITES

STATE	SITE NAME	HRS SCORE	DATE ADDED TO THE NPL
California	• Aerojet General Corp.	54.63	Sept. 8, 1983
	• Iron Mountain Mine	56.16	Sept. 8, 1983
	• McCormick & Baxter Creosoting	74.86	Oct. 14, 1992
	• Operating Industries Landfill	57.22	June 10, 1986
	• Stringfellow	61.4	Sept. 8, 1983
Texas	• ALCOA (Point Comfort)/Lavaca Bay	50	Feb. 23, 1994
	• Gulfco Marine Maintenance	50	April 30, 2003
	• Jasper Creosoting Company Inc.	50	July 28, 1998
	• R&H Oil/Tropicana	50	Proposed on June 14, 2001
	• Star Lake Canal	50	July 27, 2000
New York	• Computer Circuits	50	May 10, 1999
	• Consolidated Iron & Metal	50	June 14, 2001
	• Lawrence Aviation Industries, Inc.	50	Feb. 4, 2000
	• Liberty Industrial Finishing	50.65	June 10, 1986
	• Old Roosevelt Field Contaminated GW Area	50	May 11, 2000
Florida	• American Creosote Works (Pensacola Pit)	58.41	Sept. 8, 1983
	• Escambia Wood – Pensacola	50	Dec. 16, 1994
	• Normandy Park Apartments	49.98	Proposed on Feb. 13, 1995
	• Reeves Southeast Galvanizing Corp.	58.75	Sept. 8, 1983
	• Stauffer Chemical Corp. (Tarpon Springs)	50	May 31, 1994
Illinois	• Circle Smelting Corp.	70.71	Proposed on June 17, 1996
	• DePue/New Jersey Zinc/Mobil Chem Corp.	70.71	May 10, 1999
	• Indian Refinery – Texaco Lawrenceville	56.67	Dec. 1, 2000
	• Parsons Casket Hardware Co.	55.58	July 22, 1987
	• Sauget Area 1	61.85	Proposed on Sept. 13, 2001
Pennsylvania	• East Tenth Street	67.68	Proposed on Jan. 18, 1994
	• Lower Darby Creek Area	50	June 14, 2001
	• Sharon Steel (Farrell Works Disp. Area)	50	July 28, 1998
	• UGI Columbia Gas Plant	50.78	May 31, 1994
	• Watson Johnson Landfill	71	Sept. 13, 2001
Ohio	• Armco, Inc., Hamilton Plant	69.34	Proposed on April 30, 2003
	• Diamond Shamrock Corp. (Painesville Wks)	50	Proposed on May 10, 1993
	• Dover Chemical Corp.	50	Proposed on May 10, 1993
	• Nease Chemical	47.19	Sept. 8, 1983
	• North Sanitary Landfill	50	May 31, 1994
Michigan	• Barrels, Inc.	42.24	Oct. 4, 1989
	• Bay City Middlegrounds	50	Proposed on Feb. 13, 1995
	• Bofors Nobel, Inc.	53.42	March 31, 1989
	• Rockwell International Corp.	52.15	July 22, 1987
	• State Disposal Landfill, Inc.	42.24	Feb. 21, 1990
New Jersey	• Cornell Dubilier Electronics, Inc.	50.27	July 28, 1998
	• CPS/Madison Industries	69.73	Sept. 8, 1983
	• Universal Oil Products (Chemical Division)	54.63	Sept. 8, 1983
	• Ventron/Velsicol	51.38	Sept. 21, 1984
	• Vineland Chemical Co., Inc.	59.16	Sept. 21, 1984
Georgia	• Brunswick Wood Preserving	54.49	April 1, 1997
	• Camilla Wood Preserving Company	50	July 28, 1998
	• LCP Chemicals Georgia	60.14	June 17, 1996
	• Terry Creek Drdge Spoil Areas/Herc. Outfall	50.18	Proposed on April 1, 1997
	• Woolfolk Chemical Works, Inc.	42.24	Aug. 30, 1990

RESPONSE BY RENA STEINZOR TO AN ADDITIONAL QUESTION FROM SENATOR BOXER

Question. Your 2006 report found that some si1es with potentially responsible parties have waited the longest for cleanup. In your opinion, what accounts for this, since EPA knows who should be responsible for cleaning up these sites?

Response. Our report concludes, and I continue to believe, that EPA lacks the political will and the resources to mount an effective enforcement effort, undermining the liability track of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA or Superfund) and congressional intent that the polluter should pay for cleanup. EPA lacks the political will in the sense that too many career staff believe that they do not the support of political appointees to demand that responsible parties undertake the financial and operational responsibility for cleanup and to go to court if those parties refuse to sign enforceable agreements. The Agency lacks the resources because Superfund taxes expired in 1995, and EPA too often Jacks the funds to assemble the technical in formation to support its case in court.

RESPONSES BY RENA STEINZOR TO ADDITIONAL QUESTIONS FROM SENATOR INHOFE

Question 1. One Thousand two hundred and eleven of the 1,569 sites on the NPL were listed prior to 1991. The Superfund program has been successful at cleaning up many of these sites. Isn't it a result of the program and the addition of State programs that the number of new sites listed in declining?

Response. I believe that EPA and the states have consciously decided not to list additional sites because they do not want to increase their Superfund responsibilities. These decisions are made not on the basis of environmental conditions, but rather on the basis of bureaucratic convenience. The program has achieved notable success. The trend toward lower numbers of listings do not provide reliable evidence that the need for a robust program to continue is waning.

Question 2. In your testimony you comment of the argument (sic) that 10 reinstate the Superfund taxes on the oil and chemical industries would be "double dipping. " To rebut this you point to the salaries of the CEOs as justification. Do you believe because these companies pay their CEOs high salaries, they should be subject to unfair taxes?

My testimony observes that requiring specific companies to pay to clean up sites, and also asking some of those same companies to pay taxes to support the program, is exactly the scheme that Congress in tended and does not constitute "double dipping" as some industry representatives have argued. Congress decided that it was fair to impose costs on industry. especially the oil and chemical industries, because they played a large role in creating the sites initially and avoided the costs of safer waste disposal. Congress rejected the idea that these costs should be borne primarily by the general taxpayer. Oil companies are enjoying a period of enormous, windfall profits, and pay their CEOs very large salaries. The large size of those profits and salaries shows that they can easily afford reinstatement of Superfund taxes.

Question 3. In your testimony, you refer to a "bunch of mind numbing 'don't-worry-be-happy' EPA statistics" that EPA allegedly uses to conceal risks to human health. Can you give some specific examples of this?

Response. Ample examples of this phenomenon can be found in fiscal year Superfund Annual Report, Building on Success: Protecting human Health and the Environment, available at http://www.epa.gov/oerrpage/superfund/accomp/pdfs/sf annual report 2007.pdf

Senator CLINTON. Thank you very much, Professor.

We move now to Dr. J. Winston Porter, President of the Waste Policy Center.

STATEMENT OF J. WINSTON PORTER, PRESIDENT, WASTE POLICY CENTER

Mr. PORTER. Thank you, Madam Chairman.

It is a real pleasure to be here today. I used to run this program, as some of you know, a number of years ago, including Senator Lautenberg certainly. I want to talk a little bit about what I see needs to be done to improve the program.

Certainly, ever since my day, there has been an issue of the pace of the program. I would say in general sites take too long and cost too much to get cleaned up. My background is project management engineering and things of that nature, so I want to come at it from that angle in terms of my remarks.

Superfund is not an exact science and a lot of engineering judgment is required to clean up the sites. So I am going to talk about three phases, very briefly: the study phase of Superfund; the selection of remedy phase; and the construction phase.

Now, at two thirds of the sites, construction is complete, so we have done something right because two thirds of the sites have been actually completed. On the study phase, the most important thing is to set deadlines. Amazingly, on a program of this type, we don't seem to have firm deadlines for cleaning up the site. I think that is fundamental. I grew up in the engineering world, and I think we should share with the world, and I tried to do it in my way, is to put in memo form for everyone to see what is my deadline for site X, Y, and Z. I have a lot of respect for Susan, and I think I would like to see them do more of that.

It is very important to identify alternatives. There are only three or four alternatives in a Superfund site, or maybe five or six. There are not thousands. It is important early in the game to identify the alternatives and for the responsible parties and others to get together and set deadlines to deal with the work.

Let me give you a couple of quick examples of catching somebody doing something right, as they used to say. The Rocky Flats site near Denver is a large Federal facility site. It was scheduled to finish in something like 2040 or 2030, and cost billions and billions and billions of dollars. The engineering firm got together with the Department of Energy and the State and others and they agreed to finish in 2005. So from 1995 to 2005, they worked toward a specific deadline. They made it. Everyone was happy and they saved billions of dollars. So it can be done.

I would like to see us actually work harder at identifying where things have gone right. Some things have gone right. So that is a good example.

We need to have much more sense of urgency. The PRPs, responsible parties, should do the work. I would like to make a little bit of a sad commentary on the industrial people. That is, I would like to see more senior management involved with these companies. When I go to these sites, I see a lot of scientists and a few engineers and lots of lawyers, and that is all fine. We need all those people, but I think those sites would move much more quickly if the senior management of those companies was more involved in the cleanup. The theme I am trying to weave here is responsibility put on real individuals. That is the way you finish projects.

I believe the removal program, as Susan said, is very important because it has in fact worked. Nine thousand removals have been done. That means going out and dealing with obvious problems. There is often an obvious problem at these sites, leaking barrels or things of that nature.

As far as selection of remedy, I would like to also make another suggestion in terms of responsibility. Since my day and others' days, the decisionmaking power has been delegated down further

and further into the EPA regions. I would like to see the regional administrators, the political appointees by the President, be it Clinton or Bush or whomever, to have a person who is their agent to get that site cleaned up and to deal with that site. I think we need to go back to that. That person should have a broad overview. That person may not be able to deal with all the technical factors, the micro-management, but the Superfund law requires things like community acceptance, like cost-effectiveness, State impacts, et cetera. They can talk about the role of land use.

Another quick example is the Rocky Mountain Arsenal near Denver that I worked at quite a few years ago. The Army decided they were going to make that huge arsenal into a wildlife refuge, as opposed to putting houses there. That immediately made the site much more quickly cleaned up. If you go out to Denver nowadays, you will find a very nice wildlife refuge at that site. It would probably not be finished until now if we had tried to put houses there.

The construction phase let me close with that. The $1.2 billion which was mentioned this morning has been around for a while, and Rena is certainly right. In constant dollars, it is not as great as it used to be, but we have also cleaned up two thirds of the sites. This program doesn't need to have a flat budget in perpetuity. We need to put more and more focus on finishing the sites.

I would like to be sure that Susan and others are really doing it, and I am a big fan of hers, but really doing a good job of being sure that the money is going toward cleanups. There are 3,000 staff members at EPA working on Superfund. That is one out of every four or five EPA employees working on Superfund. I am not sure it is one fourth of the problems in this Country environmentally speaking, so that caught my attention a little bit.

Congress might want to consider supplemental appropriations for specific projects if they need it, but I don't think a wholesale more money is needed. If anything, Superfund has had a lot of money over the years. I used to get $2 billion year in and year out for that and other hazardous waste programs. What I think we have done is frankly created a fairly large bureaucracy in the program and we need to be much more focused on the job at hand.

In summary, I want to offer results over process. Speeding the pace has many benefits. The public is much happier. Hundreds of times I have heard in my official capacity and my consulting practice how upset the public is. Why does it take so long, in California or New York or wherever? I think they will be much happier if we look like we are really focusing on finishing. The costs to industry and taxpayers are less. Time is money. Sites that take 10 or 15 or 20 years obviously cost more than a site that is completed in three or four or 5 years.

And finally, the benefits. If these sites are so bad, and some of them are, why do we take forever to clean them up? It seems to me kind of counter-intuitive. If a site is bad enough to get on the NPL, the national priorities list, we should try to move in a matter of years, not decades, to get it cleaned up.

So that is my testimony, Madam Chairman. Thank you.

[The prepared statement of Mr. Porter follows:]

STATEMENT OF J. WINSTON PORTER, PRESIDENT, WASTE POLICY CENTER

Madame Chairman, my name is J. Winston Porter, and I am president of the Waste Policy Center in Leesburg, VA. The WPC is a private research and consulting organization which deals with management, policy, and technical issues in the areas of solid and hazardous waste management, as well as other environmental matters. From 1985 to 1989, I was the EPA's Assistant Administrator for Solid Wastes and Emergency Response.

It is a pleasure to be here today to provide testimony on the pace of the cleanup of Federal Superfund sites. I will make a number of recommendations to improve this pace.

In my testimony I will draw on over 20 years of Superfund experience, including management of the EPA program as well as consulting activities with various Federal agencies and states and numerous private parties. My professional background also includes the fields of chemical engineering and project management. I will start with a brief background statement, followed by my recommendations related to Superfund's study, remedy selection, and remedy construction phases in relation to improving the pace of the cleanup program.

BACKGROUND

Briefly, the current status of EPA's Superfund program is that about two-thirds of the 1,550 national priority list sites have reached the construction completed (remedy installed) phase, about 400 sites are in the remedy design or construction phases, and approximately 150 sites are in the study phase.

In addition, many thousands of "emergency removals" have been conducted at Superfund sites in order to directly and cost effectively deal with obvious problem areas. This program has been perhaps Superfund's biggest success story.

It is also important to note that the EPA has a significant number of Superfund sites in the remedy construction phase for which both potentially responsible party (PRP) and Federal funds are limited.

In addition to the EPA, both the Departments of Energy and Defense have major Superfund-related programs underway. The DOE work primarily involves a few dozen very large facilities, most of which have been components of the nuclear weapons program. The DOD sites are much more numerous, although usually less complex, and include both Superfund and base closure activities.

So, a large amount of work is underway or has been completed by dedicated Federal and State personnel as well as PRPs and various private contractors. Much has been achieved under the Superfund program, but much remains to be done. For this remaining work it is important to improve program efficiency in order to ensure timely and technically sound cleanups in a more cost-effective manner.

As we strive to improve the Superfund program, let me first make several general observations which will serve as the bases for my later recommendations.

First, Superfund is not an "exact science." Science and technology are very important in addressing Superfund waste sites, but selecting a sound remedial action at a site requires a good dose of common sense and "engineering judgment" since no two sites are the same. The Superfund regulations themselves require decision-makers to consider such elements as cost effectiveness, implementability, and State and community acceptance in selecting a remedy. These are not primarily technical issues.

Second, while much has been accomplished by Superfund, site study and remedial activities generally take too long and cost too much.

Third, the trend in recent years to use the Superfund program for only the most complex and hazardous sites is sound. Most waste sites in the country can now be managed under other EPA or State programs, brownfields activities, and various voluntary cleanup processes. The voluntary cleanup programs should, in particular, be emphasized.

Most of the following recommendations will be directed at the EPA Superfund program, but will also have important implications for other Federal agencies. My comments will be divided into study, remedy selection, and construction phases.

THE STUDY PHASE

While the study projects related to Superfund sites are a decreasing part of the overall program, such activities are still very important to overall program success. Superfund projects usually begin with a "remedial investigation/feasibility study" (RI/FS). This complex study process is described in some detail in Superfund's primary regulation ? the National Contingency Plan.

Very briefly, the RI portion calls for characterization of the site in terms of its natural features, as well as the amount and location of contamination and likely risks of such contamination to both public health and the environment. The FS part involves identification of alternative remedial actions, and then comparison of such alternatives against a set of nine remedy selection criteria.

Based on the RI/FS process, as well as substantial stakeholder input, EPA then selects a remedy for the site through a "record of decision" (ROD) process.

In general, the RI/FS process has become steadily more complex and lengthy over the years, for almost all types of sites. My recommendations for conducting faster, less costly, and more technically sound RI/FSs are as follows:

1. Most importantly, timeframes for completing the study phase should be agreed to by the EPA and other key participants, such as PRPs.

Unfortunately, at many sites the study work simply meanders around for many years without much focus or mid-course corrections, leading to wasted time and money, and ,in some cases, an unimaginative or non-cost-effective remedy selection. Frankly, part of this lengthy process has to do somewhat with the fact that Superfund has become something of a "jobs program" for various consultants, lawyers, and governmental agencies. All of these specialists are needed, but their work needs to be more directed toward results rather than complex processes.

Stated differently, there is often little sense of urgency in completing the study phase due, in part, to the lack of a senior "champion(s)" to complete the work. This is, or course, very frustrating to the communities involved. I would like to see such "completion champions" developed in both the governmental and private sectors at Superfund sites.

Some very complex Federal and private sites will require longer study periods, but for most sites about 2–3 years should be adequate to produce a sound RI/FS.

To improve matters, early in the RI/FS process the EPA, PRPs, and other relevant organizations, should work together to set a clear goal to complete the study activities. This end date can be modified if necessary, but it is important for all to understand that, like almost every other type of engineering project, schedule (and budget) are key factors and should be adhered to.

There are a number of examples of the success of target setting in Superfund, but perhaps the most dramatic has been the DOE Rocky Flats Closure Project, near Denver. For this site the "completion contractor," Kaiser-Hill, and the DOE agreed upon a 2005 target date for all study and remedy implementation work to be completed. If successful, the contractor was to receive a completion bonus. Not only was the project completed on time, but billions of dollars and many decades of time were saved. This work, of course, required good cooperation among the DOE, EPA, the State of Colorado, local stakeholders, and the contractor. The firm completion target date greatly focused this cooperation.

Finally, this project illustrates the importance, for both study and construction work, of the site personnel developing what I have referred to as a "culture of completion."

2. When the RI/FS process begins one of the first orders of business should be to use experienced staff and key stakeholders to quickly identify about 4–7 major remedial action alternatives.

During this phase use should be made of EPA's list of "presumptive remedies" for many types of problems, as well as experience gained at similar Superfund sites.

The selected set of alternatives can always be modified during the study phase, but the current process which often involves "taking data" for many years before detailed focus on remedial options often leads to overly costly information, much of which may not be needed. Also, since the data collection is often not focused on comparing alternative remedies, the key information to compare such alternatives is sometimes missing.

An iterative approach should be used where information collection and analysis of remedial alternatives work cooperatively in order to achieve sound comparisons of options, leading to a good remedy selection.

Even more importantly, the identification of key options early in the study process allows the decisionmakers and stakeholders to begin their dialog on the non-technical factors which are contained in the remedy selection criteria. These include such items as cost-effectiveness, implementability, and State and community accept-

ance. Many times these types of factors are at least as important as the strictly technical matters, such as precise levels of contamination for dozens of substances.

3. Significantly streamline the process for developing the myriad of deliverables at Superfund sites.

While certain documents are clearly needed to guide the RI/FS activities, the long, tedious process of developing complex draft and final work plans, for example, should be expedited. This is also true of dozens of other "deliverables" which take so much time at Superfund sites, many of which should be quite standard by now. It might be helpful to revisit the need, or at least the complexity, of such deliverables.

To increase the pace of Superfund site cleanups, we need to develop a "culture of completion," as opposed to a "culture of deliverables." It might even make sense to develop incentives of some type to encourage such completions.

There are several perverse effects which have led to such lengthy periods for document development and review. One has to do with the fact that Superfund is about the only Federal environmental program where responsible parties have to pay for additional oversight beyond that which salaried regulators normally provide. Thus, if a group of PRPs are forced to give EPA, say, $5 million for oversight, then EPA can retain contractors to provide hundreds of pages of "comments" on such items as the aforementioned work plans. So, we now have dueling contractors battling over many pages of detailed text, before work can even begin.

One near term answer would be for review periods and oversight dollars to be reduced substantially, so participants can focus more on results than elaborate processes.

4. The PRPs should be encouraged to conduct the RI/FSs themselves with their own contractors and under EPA's overall supervision.

While this concept has been largely accepted and successfully promoted by the EPA, more could be done to encourage PRPs to do the study work, particularly where PRPs would commit to more reasonable timeframes than EPA often takes for its own studies.

A key aspect of PRP-conducted studies has to do with selection of appropriate consulting firms to conduct the necessary RI/FS activities. Such contractors have a difficult role in that they need to be responsive to their client, the PRPs, but must also provide the objective and professional work needed by EPA to allow selection of a sound and cost-effective remedy for the site in question.

The key is for the EPA, the relevant state, and the PRPs and their consultants to develop a cooperative and results-oriented relationship for the site work.

THE SELECTION OF REMEDY PHASE

The RI/FS process discussed above presents the decisionmaker with detailed comparisons of alternative remedial actions, from which this person must select a remedy, present it to the public for comment and make a final determination. The selection of protective, cost-effective remedies is, of course, a key to the overall success of the Superfund program. My suggestions in this area are as follows:

1. The decisionmaker should be a very senior EPA official who can oversee all of the considerations which go into remedy selection. As noted earlier, technical factors are very important in this process, but non-technical factors are also key. For example, if there is very strong community opposition to a particular remedial action, or if a remedial option is not cost-effective, such factors must be considered by the decisionmaker.

During my tenure as an EPA assistant administrator I made a number of ROD decisions, mainly at "nationally significant sites." Most decisions I delegated to the ten EPA regional administrators (RAs). However, over the years the ROD decision responsibility has, in most cases, been delegated further down the line in the EPA regions.

My own view is that the RA should usually be the decisionmaker in this important process since he or she is the one who can speak for the region and has the position and stature to consider all aspects of the problem, while "pushing" the staff to provide the necessary information to complete remedy selection expeditiously.

2. The role of expected land use should be an important factor in selecting a remedy.

While all remedies should be protective, it does not make much sense to demand that a cleanup be sufficient for, say, a children's daycare center, when the site is slated for use as a golf course, or a factory, or a wildlife preserve. All of these uses have their own requirements, so we do not need a one-size-fits-all approach to waste sites. The goal should be for a site to always be protective, so the remedial action may need to be modified at a later date if the site use changes dramatically.

During Superfund's history one of the better examples of the role of land use in remedy selection has to do with the DOD's Rocky Mountain Arsenal in Colorado. For this site, the DOD decided ultimately that the land use would be for a wildlife refuge, not residential housing. Once this decision was made the DOD, Shell Oil, EPA, and the State and local stakeholders worked together to select the remedy and move quickly into the implementation phase, and a important wildlife refuge is the result.

Another DOD example may also be instructive with respect to the land use issue. This has to do with the DOD's Superfund-related remediationsites versus those conducted under the base closure program. Simply stated, the base closure cleanups, including the selection of remedy, seem to proceed much faster than those related to Superfund. One of the reasons, I believe, has to do with the fact that local communities and others are usually highly motivated to finish base closure cleanups in order to bring the affected land into productive use. The same time pressure often does not exist with Superfund remedial activities.

THE CONSTRUCTION PHASE

As noted earlier, the major activity these days has to do with the construction phase at Superfund sites. About 400 sites are in the phase where the selected remedy is being either designed or constructed. Currently, this is also the most controversial phase in that EPA apparently does not have sufficient funds to expeditiously complete all of the construction work now planned.

This is particularly true for so-called fund-financed sites where EPA must install the remedy itself as there are insufficient willing and able PRPs to conduct this work at some sites. This issue is further compounded by the views of some that at a significant number of sites the community may not be fully protected since construction funds are not readily available.

The following are my recommendations on these construction-phase issues:

1. The roughly $1.2 billion dollars which is annually appropriated to EPA by Congress should be looked at very carefully by EPA senior management to ensure that the highest priority is given to protecting human health and the environment by ensuring that Superfund sites are completed.

2. If Congress is satisfied that EPA has done all it can do to squeeze out funding for as many construction sites as possible, then it might consider a supplemental appropriation to EPA to focus on additional construction activities.

3. The EPA might selectively revisit the ROD decisions made at selected sites to see if some savings can be made based on new information or technology.

4. Although I suspect that this is already being done, that portion of the site which may provide actual, near term risk to the community should receive very high priority for funding.

5. While aiming at the highest risks is always the most important priority, I personally believe that where sites can be finished for modest sums of money, such funding should be considered, as there are usually site "carrying charges" which can then be reduced.

6. The EPA and others should be creative in finding non-Federal funds for completing sites. In some cases, local developers or others may be so interested in having access to a completed site that they may be interested in helping financially. This type of financial driver has, of course, been instrumental in dealing with brownfields sites, which can often be very valuable when cleanup measures are completed.

7. Other creative measures should be pursued in the future to minimize costs and to develop more creative financing. A good example is the joint EPA and Army Corps of Engineers eight pilot programs referred to as the "urban rivers restoration initiative." In this program the EPA and the Corps, along with State and other agencies, work together to achieve a better and more cost-effective restoration program than by using Superfund alone.

8. Finally, it was mentioned earlier in this testimony that the emergency removal program has been one of Superfund's major successes. This program can deal with obvious contamination problems anytime during the Superfund process, with much less process costs than the remediation program. Given, this program's success, Congress might consider allowing EPA to spend more than the current limit on individual removal actions.

Implicit in all the above is the fact that I don't believe that the chemical and petroleum feedstock taxes should be renewed on Superfund. These taxes are unfair in that they target only two industries, which together account for much less than half of Superfund's contamination problems. Also, Superfund sites are a broad societal problem which has been created by many types of industries; local, state, and Federal agencies; and even individuals.

Therefore, I believe the current process of requiring directly responsible parties at a site to fund the necessary work at that site is the best approach. For those sites, where responsible parties are not available, willing, or able financially to conduct the work general revenues are the most equitable approach, given the widely varied causes of contamination at such sites. EPA also has strong legal authorities to seek reimbursement from known responsible parties who are able, but not willing, to do the work in question.

Madame Chairman, I hope my remarks will be helpful to Congress in dealing with this important program, and I will be happy to answer any questions which you might have.

RESPONSES BY J. WINSTON PORTER, TO ADDITIONAL QUESTIONS FROM SENATOR INHOFE

Question 1. Do you believe there are certain decisions related to Superfund sites that shouldbe made by high level EPA officials rather than career staff in the regions?Why?

Response. Yes, I do believe that certain decisions related to Superfund should be made by highlevel EPA officials, usually the Assistant Administrator or Regional Administrators.These officials have much more authority to set priorities than the career staff and abetter overview of the situation. Having said that, the input of the career staff is veryimportant and should be listened to carefully by the senior officials.

Question 2. Why do you think the pace of cleanups was apparently faster during the ClintonAdministration?

Response. The pace of the cleanups was somewhat faster during the Clinton Administration for two primary reasons: (a) The Assistant Administrator during much of the Clinton Administration was Tim Fields who made it clear that his major priority was completing construction at Superfund sites. Tim, who formerly reported to me when I was the AA during the Reagan Administration, is very knowledgeable about Superfund and pushed hard with the staff to complete sites and (b) the push to complete sites during the Clinton days did lead to concentration on ″easier″ sites to finish. Many of the current sites are more complex ones.

Question 3. Would more money for EPA be a significant factor in speeding up cleanups?

Response. I don't think more money would make much difference in the pace of Superfund cleanups. It is more important in my opinion to place more emphasis on completing sites and to be sure significant funding is not spent on non-site, administrative activities, which are usually large in the Superfund program. Also, the number of remaining sites in Superfund are getting smaller and $1.2 billion, or so, annually is still a lot of money. I am somewhat afraid that more money will yield more bureaucracy, not faster cleanups.

Question 4. What are the one or two items which you think would be the most helpful inincreasing the pace of Superfund cleanups?

Response. The two items which would be most helpful in increasing the pace of Superfundcleanups are: (a) setting visible deadlines for completing sites, and (b) having senior EPAofficials directly involved in pushing the pace of cleanup, and held accountable for theresults.

Senator CLINTON. Thank you very much, Dr. Porter.

Next, Bradley Campbell. Mr. Campbell was very active at the EPA and the Council of Environmental Quality in the 1990's. We appreciate your being here.

STATEMENT OF BRADLEY M. CAMPBELL, PRINCIPAL, BRADLEY M. CAMPBELL, LLC

Mr. CAMPBELL. Thank you, Madam Chair.

Senator CLINTON. And the Commissioner of New Jersey.

Mr. CAMPBELL. Thank you, Madam Chair and members of the Subcommittee. It is a pleasure to be here, and I am grateful that this Subcommittee is focused on what I view as a vital program for protecting public health in our communities.

As the Chairman suggested, my background includes more than 18 years of work on this program in various roles as regional administrator and White House lead counsel for the Clinton administration Superfund reforms, and as a State commissioner having to work cooperatively with EPA to get sites cleaned up.

I think from those perspectives, I can say with some certainty that the flaws that the members of this Committee have identified in this hearing are very clearly the flaws of the program today. It is badly managed, it is underfunded, and enforcement is on the wane in the last 6 years of this Administration.

With all due respect to Administrator Bodine and certain members of the Committee in terms of the pace of cleanup, the composition of the national priorities list and the list of sites and actions that are in the funding queue didn't change overnight in 2000. However, the management of the program did and the pace of cleanup did, going in half from more than 85 site completions over the 4-years immediately preceding, to 42 or less ever since. That is an enormous change. The list didn't change, but the management did.

Second, on funding, it is obviously very difficult to decipher sometimes the language of Superfund. You have to know the code. There are numerous times when sites are ready to fund, simple excavations are ready to fund, but you will see on an EPA site that is in engineering or in design. Frankly, in New Jersey at some of the sites I will discuss, there are simple excavation remedies that have been in design for the length of time it would take a high school senior to get an engineering degree.

I think in those cases, it is fair for members of this Committee in their oversight, and as Senator Lautenberg knows well, to infer that something else is going on, and that something else is typically a funding shortfall obscured by the bureaucratic language suggesting that there is still work to be done before it is ready to fund.

Of course, these are reinforced by failures of enforcement, which has occurred at numerous sites in New Jersey, which I discuss in my testimony.

Each of these factors—the failures of enforcement, the failures of funding, the failure to manage, to complete protection of the community at these sites—is mutually reinforcing. If management isn't sending the message from the top that these sites have to be completed, there is little institutional incentive to take needed enforcement action. There is little need for funding because essentially management is not sending the signals. Those failures have very real impacts for public health and the environment.

I highlight in my testimony a number of sites where cleanup actions are ready to fund, but the communities are still waiting after

years and years for cleanup to begin. The Imperial Oil facility, which I mention in my testimony, repeatedly EPA representations that a simple excavation remedy, removing contaminated soils that are adjacent to densely populated communities, are still being designed; in that case, 8 years to design a simple remedy. It is simply not credible.

In the case of the Cornell-Dubilier site, with open dumps of capacitors containing PCBs in the midst of an area where there are hundreds of families. I have a chart that just gives you some sense of the levels of contamination. These are onsite soils. The offsite soils are relatively similar. This is the State standard to protect public health. These are the levels at the site, and yet there are numerous actions at the site that are waiting to be done and are unfunded.

At the Roebling Steel site, literally a site that has been in hiatus for years, very simple remedy, not a complex complicated remedy that takes years to decide, but one where the cleanup actions have been decided and have been decided for years. And yet for 4 years, the cleanup actions that were ready to go simply were in the funding queue and the public was told that they were awaiting design, even more devastating, in those sites that affect low-income and minority communities. I applaud the Chair for her bill linking the environmental justice issues to the Superfund cleanup issues.

In the Ringwood site, which Senator Lautenberg has visited numerous times, a Native American community waited and waited for EPA to respond to its calls to remove contamination from in and around their homes. When EPA failed to enforce, I took action and in 3 days we removed more material under State law from around the homes than EPA had been able to remove in 30 years. And even now, as the community has asked for more actions by the Ford Motor Company, EPA, to my chagrin, continually sides with the company over the community and over my successor, Commissioner Jackson, in terms of the studies that are needed; in terms of the needed actions to protect human health.

An even sadder story on the Passaic River. We have levels of dioxin that are creating enormous risks for low-income, mostly non-English speaking communities along the Passaic River. And yet year after year, EPA's decision is to do more studies. Only after the State took action under its enforcement authorities, funded its own remedy, did EPA begin to move away from a schedule that contemplated a decision no earlier than 2011, with remedies coming in 2013.

Each of these circumstances I think highlights those three flaws of this program. They are not a function of more complex sites. They are not a function of the changed nature of the NPL. They are functions of bad management and a failure to commit to the funding that is needed and the enforcement that is needed to protect public health in our communities.

[The prepared statement of Mr. Campbell follows:]

STATEMENT OF BRADLEY M. CAMPBELL, PRINCIPAL, BRADLEY M. CAMPBELL, LLC

Madam Chairman and Members of the Subcommittee, I am pleased to appear before you this morning to testify on the Superfund program's capacity to protect public heath. I am Bradley M. Campbell, currently an environmental attorney and consultant and president of Bradley M. Campbell LLC and Minotaur Consulting LLC.

My testimony today is informed by more than 18 years of work with the Superfund program spanning the administrations of three Presidents. As an attorney with the United States Department of Justice from 1990 to 1995, I tried or participated in many of the seminal liability cases under statute, and also served as the Department's lead attorney for Superfund reauthorization and reform during the 103d Congress. As Associate Director of the White House Council on Environmental Quality (CEQ), I helped coordinate the Clinton administration's positions on Superfund and brownfield legislation during the 104th Congress. While at CEQ, I also worked directly with the Environmental Protection Agency to develop and implement the Clinton administration's Superfund reform and brownfields initiatives.

In 1999, President William Jefferson Clinton appointed me Regional Administrator of EPA's Region 3, where I was responsible for oversight and implementation of the Superfund program in Delaware, Maryland, Pennsylvania, Virginia, West Virginia, and the District of Columbia. I served as regional administrator until the change of administration in 2001.

In 2002, I was nominated by the Governor of New Jersey and confirmed by the New Jersey Senate as Commissioner of New Jersey's Department of Environmental Protection, a position in which I served for 4 years ending in January 2006. In this role, I was responsible for protection of human health and the environment in a State that has more sites in Superfund's National Priority List (NPL) than any other.

Currently, I am in private practice as an attorney and consultant, where I continue to interact with the program on behalf of municipalities, responsible parties, and environmental and community organizations.

In these varied roles, I have seen firsthand how important the Superfund program can be in protecting communities from toxic threats, in returning contaminated sites to productive use, and in renewing the economy and fabric of communities. I also have understood, through the work of Members of this Committee and the testimony of those who live near Superfund sites, many distinct failures of the program throughout its history.

SUPERFUND TODAY: THREE AGENCY FAILINGS

1. Overview

There has been a common thread in both Superfund's successes and its failures. Simply put, this is a program that is highly sensitive to EPA's agency leadership on cleanup pace, to levels of funding, and to the program's enforcement emphasis.

In the first years of the Superfund program, Congress responded directly to program failures of leadership, funding, and enforcement in the Superfund Amendments and Reauthorization Act of 1986. Four years later, Administrator William K. Reilly initiated the "90-day review," which resulted in additional reforms and the start of an "enforcement first" policy that accounted for the first significant increase in the pace of remedial work under the program.

When the 103d Congress failed to enact President Clinton's broadly supported proposals for Superfund reauthorization and reform legislation, Administrator Carol Browner implemented a sweeping set of management and policy reforms to address the broad range of challenges identified during the legislative process. This second wave of reform included, among other achievements, EPA's highly successful Brownfields Program.

While the number and scope of these reforms are beyond the scope of this testimony, they can be fairly described in the mantra that all of us working on those reforms heard and repeated often: Superfund cleanups had to be faster, cheaper, and fairer. The success of the effort was easy to document, however, in the sustained increase in the pace of Superfund cleanups that resulted unfortunately, over the last six and a half years, the program has suffered from the current administration's approach to management, funding, and enforcement.

- Pace of Cleanup: EPA has effectively abandoned any management focus on maintaining a reasonable pace of cleanup completion. By EPA's own statistics, the pace of cleanup progress has been cut roughly in half as measured by construction completions. While the use of this program measure has had its critics, the agency's failure to manage the program to maintain the pace of cleanup is documented by other measures as well.
- Funding: Closely linked to the pace of cleanup is the level of funding. Over the past 6 years, shortfalls in funding at sites where remedial work is ready to start have been more numerous and more pronounced. As a consequence, bureaucratic delay in the cleanup process has been encouraged, or has been used as a veil to obscure funding shortfalls.

• Loss of enforcement ethic: In the absence of clear and transparent goals for cleanup completion, and in the absence of funding for the agency to assume the lead for cleanups when responsible site polluters are uncooperative, EPA has been far less willing to use the powerful enforcement tools the statute confers on the agency, and less willing to compel responsible polluters to perform more thorough or more comprehensive cleanups.

2. Pace of Cleanup

Through a combination of Administrator Browner's program reforms, imposition of clear management goals, and the full funding of the Superfund through the Superfund tax, EPA achieved a remarkable pace of 85 or more construction completions each year in the 4 years ending in fiscal year 2000. In the preceding 4 years, as a consequence of Administrator Reilly's "enforcement first" program and Administrator Browner's early leadership, the annual number of construction completions averaged more than 65.

By contrast, in the 4 years ending in 2006, the current administration has achieved construction completion at 41 or fewer sites each year.[1]

This decline in program efficacy was as sudden as it has been stunning in magnitude. In response, EPA leaders and others have suggested that the decline in construction completions is attributable to the fact that remedial remaining NPL sites cleanups are larger and more complex than those in preceding years.

This explanation is deficient for a number of reasons. First, the composition of the NPL did not change overnight in 2000, but the pace of cleanup and the agency leadership clearly did.

Second, some of EPA's most ambitious and complex site cleanups, such as the Hooker Chemical or Love Canal site, were among the sites at which the agency achieved construction completion and, in the case of Love Canal, deletion from the NPL.

Third, any change in the complexity or scale of cleanup challenges at sites where communities still await construction completion is offset by EPA's increasing reliance on institutional or engineering controls in lieu of permanent remedies, compared to earlier phases of the program. Institutional controls typically reduce both the cost and time required for major cleanups to achieve construction completion. While EPA's dependence on institutional controls gives rise to serious concerns about the reliability of Superfund remedies and long-term protection for affected communities,[2] it is beyond dispute that the expanded use of institutional controls enables EPA to maintain the pace of cleanup even if, as current agency leaders assert, remaining cleanup challenges are more complex or larger in scale.

Fourth, as some of the examples in the second half of my testimony help illustrate, many of the cleanups that await completion are utterly commonplace in nature, presenting no unusual challenges of complexity or scale.

I acknowledge that "construction complete" is an imperfect measure of program success in protecting public health, as some of the programs most trenchant analysts have noted.[3] Yet whatever the limitations of "construction complete" as a program measure, it is the only readily available and transparent indicator of program success. It remains the measure that the current administration itself holds out as an appropriate measure of success, and so it should remain among the standards by which the performance of the agency leadership is judged.

Moreover, other significant indicators of program efficacy reinforce this measure. In New Jersey, for example, more than half of the sites that lack construction completion have uncontrolled human exposure pathways or uncontrolled groundwater migration, risks that are almost always eliminated by construction completion. While there is no longitudinal data to determine how this figure has changed over time, it tends to reinforce the virtue of using "construction complete" as a milestone of program efficacy.

These broad observations about the changed pace of the program are borne out by the very different approaches to the program that I experienced first as an EPA Regional Administrator in 1999—2001 and that I experienced later as DEP Commis-

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[1]Source: EPA 2007. See also Katherine N. Probst and Diane Sherman, Success for Superfund: A New Approach for Keeping Score (Resources for the Future, 2004)(Probst & Sherman) at 2 ("the number fo new construction complete sites has decreased quite dramatically in the new millennium").

[2]See Jophn Pendergrass and Katherine N. Probst, Estimating the Cost of Engineering Controls (Environmental Law Insitute and Resources for the Future 2005).

[3]Probst & Sherman 6—9.

sioner from 2002–2006 in New Jersey, the State with more Superfund NPL sites (140) than any other.

During my tenure as an EPA regional administrator, EPA's national Superfund program goals were clearly communicated by the agency's national leadership and incorporated in regional and site-specific management of the program. These goals also were reflected in our cooperative work with our State counterparts. As a consequence, everyone at EPA from headquarters to the field learned to focus on resolving impediments to clean up and, where consistent with public health protection, to accelerate the pace of cleanup.

When I became DEP commissioner in 2002, it was apparent in working with the Superfund program that EPA had little or no agency initiative or senior management emphasis on maintaining or improving the pace of cleanup. New Jersey's requests for EPA to step up the pace at particular sites were generally unproductive. Conversely, EPA rarely requested State action to hasten cleanup progress or accelerate construction completion, requests I made often during my own tenure at EPA.

3. Funding Shortfalls

The pace of cleanup is closely tied to the availability of funding. There has been long recognition due to EPA's success in the late 1990's at achieving a construction completion rate of 85 or better that the Superfund would have to be replenished and funding expanded. This was reflected both in President Clinton's repeated calls to reinState Superfund taxes, and in budget proposals that included significant expansion of program funding to meet the accelerated pace of cleanup.

During my tenure as a Regional Administrator, I never had to delay or defer cleanup actions because funding was unavailable. During my later tenure as DEP Commissioner, EPA repeatedly told me that cleanup would be delayed because of funding shortfalls. In addition, there were numerous occasions in which proposed remedies were rejected for trivial or pretextual reasons because funding was not available to proceed with cleanup. In one case, EPA staff shared with me internal emails in which they were directed to find a technical basis to reject a remedy because funding was not available. In other cases, the message was less explicit but no less clear, as some of the examples in the second half of my testimony illustrate.

4. Diminished Enforcement

Even with clear management goals for cleanup pace and adequate funding, the pace of the Superfund program depends vitally on strong enforcement.

This principle was embedded in EPA policy as "enforcement first" during the tenure of Administrator Reilly, and this policy shift transformed the program from one in which approximately two-thirds of cleanups were led by EPA using Superfund resources, to one in which responsible polluters took the lead in funding and performing cleanup at two thirds of NPL sites.

With responsible parties in the lead at the majority of NPL sites, use of enforcement tools is essential to maintaining the pace and quality of cleanup. EPA must be willing to use its unilateral order authority to compel responsible polluters to perform protective and expeditious cleanups, and must be prepared to use the threat of treble damages if EPA must assume control of the cleanup in place of the responsible party.

EPA's willingness to use its enforcement tools is critical not merely for completing cleanups, but also to compelling interim measures to control hazardous substances and to cutoff pathways to human exposure. My experience in dealing with EPA as New Jersey's DEP Commissioner was that EPA's willingness to use the enforcement tools Congress has given the agency has waned significantly over the past 6 years. At several New Jersey NPL sites, I had to threaten enforcement action under State law in order to prompt responsible parties to enter a consent order with EPA to implement interim measures to stop ongoing pollution to ground and surface waters.

Of course, the agency's enforcement posture in the cleanup context is difficult to quantify and generally opaque to the public. My experience, both as New Jersey DEP Commissioner and subsequently as a private attorney, as the examples in the second part of my testimony suggest, has been that the current EPA leadership is rarely willing to order responsible parties to perform remedial activities at an accelerated pace or to order remedies that are more protective than those that the responsible polluters are willing to perform.

Of course, these three failings of the current program are closely related. In the absence of clear management oversight to maintain or accelerate the pace of cleanup, there is little institutional incentive at EPA to take aggressive enforcement action. When funding is short, the resources to support potential enforcement litiga-

tion are more limited, the ability to resolve enforcement disputes through the use of mixed public and private funding is eliminated, and the credibility of EPA's most potent threat, that of taking over the disputed cleanup and asserting treble damage liability against the responsible polluter, is greatly diminished.

SUPERFUND TODAY: THE EXPERIENCE ON THE GROUND

The combination of management failure, funding shortfalls, and diminished enforcement now manifest in EPA's administration of the Superfund program are not abstract failures to meet bureaucratic program measures. Rather, they are failures that have direct and grave implications for public health in our communities, for economic growth and renewal in communities saddled with contaminated sites, and for the quality of life in communities that already have waited far too long for Superfund's promise of protective cleanups.

Moreover, there is a "downstream" effect of these failures on hundreds of sites beyond those on the NPL. For years, State agencies like New Jersey had enormous leverage to compel prompt cleanup at NPL-caliber sites because responsible polluters sought to avoid the greater cost, public attention, and stigma associated with NPL listing and remediation under Federal requirements of the National Contingency Plan (NCP). As the Federal program has become less focused on cleanup completion, hampered by funding shortfalls, and less willing to use enforcement tools, the potential for listing on the NPL is no longer a strong driver for responsible polluters to complete protective cleanups under State law.

The following examples, drawn from my experience over he past 6 years, should highlight how the broad program trends outlined in the first part of my testimony directly and adversely impact New Jersey's communities.

1. Passaic River Dioxin (Diamond Alkali)

Nearly 27 years after the passage of Superfund, and more than 23 years after site listing on the NPL, dioxin deliberately and unlawfully dumped in the Passaic River from the Diamond Alkali site in Newark, New Jersey continues to spread down the river and throughout the Newark Bay estuary. With each tide, the dioxin spreads further throughout the system. With each tide, and with each year of sediment, the cleanup challenge becomes more difficult and more expensive. To date, EPA has proposed no interim or final action to address the dioxin contamination in the river.

The toxic threat presented by this site has not been cured by fish advisories, even though DEP took the lead in posting more effective warning signs, and in funding extensive outreach to communities to make them aware of dioxin risks. Scores of New Jerseyans, predominantly in non-English-speaking communities, continue to take the crabs as subsistence, failing either to understand or to heed warnings in multiple languages. On the New York side of the estuary, no warnings or take prohibitions are posted at all. Levels of dioxin in blue claw crabs are such that one could only safely eat one crab in 20 years. In a risk estimate developed at DEP and reviewed by EPA, cancer risks for those taking the crabs for consumption were estimated to exceed one hundred percent, meaning the exposed populations were at risk of multiple cancers over their lifetime. Prior to my start at DEP, neither EPA nor DEP made any significant effort to publicize these risks or to compel the responsible companies to address the dioxin contamination.

For decades, EPA's pattern had been to do years of studies, take years to review the studies, and then order additional rounds of studies on the basis that newer data was needed, never asking more than the responsible polluter was willing to do early in my tenure as Commissioner of DEP, I joined with EPA and other Federal agencies in a "Passaic River Restoration Initiative" or PRRI, authorized by Congress with the stated intention of accelerating remedial work on the river. In the context of that initiative, New Jersey repeatedly urged EPA to accelerate the development of remedial options, to no avail. EPA consistently interposed the need for more study, and cited the failure to fund the legislative initiative as an additional cause of delay.

I then personally met with the leading regional scientists who had studied the contamination. They presented a clear and strong consensus that the data needed for a remedial decision was available and delay for further study would only allow the extent of contamination to expand. When I renewed my press for early action to address the contamination, EPA circulated a revised draft schedule promising a remedial decision in 2013 and remedial action in 2015.

New Jersey then made clear to EPA that we intended to issue our own order under State authority requiring the principal responsible party to develop, design and engineer an appropriate remedial measure to reduce dioxin loadings within a

year, making clear that our decided preference was for EPA to act or for EPA and the State to develop an order together. Again, EPA refused, even as they asserted that their own intention was to develop remedial options within a year.

Throughout the process, EPA cited the lack of funding available to proceed with the process if a major dispute were to arise with the responsible parties, and exhibited a steadfast unwillingness to use its enforcement tools to compel the responsible parties to design remedial measures within a reasonable timeframe.

Only after New Jersey issued its independent order, retained outside counsel to enforce the order, and committed its own funds to the design of a remedy, did EPA finally begin to pursue a reasonable schedule for the cleanup they had neglected for nearly thirty years. Happily, Governor Jon Corzine took office and expanded the funding for this effort under my able successor, Commissioner Lisa Jackson.

But the pattern of delay has not ended. Just recently, EPA once again postponed long-overdue remedial action on the river by deferring, until next spring, a review of its remedial options by the agency's remedy review board. The dioxin will spread further, remedial options will be made more expensive by another year of sedimentation, the day when fish and shellfish will be healthy to eat will recede further into the future. And, most tragically, the health of scores of New Jerseyans will remain at great risk for years to come.

2. Ringwood Mines

For years, the Ford Motor Company dumped paint sludge from its manufacturing operations in old mine shafts and uncontrolled dump sites in Ringwood, New Jersey, leaving waste bearing lead and other toxins over more than 500 acres in the small Borough of Ringwood. The population of Ringwood numbers 13,000, and still fewer—less than a hundred ? live in the immediate vicinity of the waste, but runoff from the sites migrates to the Wanaque Reservoir, which serves more than 2 million New Jersey residents.

Ringwood and the predominantly low-income families living near the waste had long complained about the adequacy of Ford's cleanup effort, but EPA and DEP ignored these complaints for years.[4] As a result of effective advocacy by the Borough and local residents, and a superb investigative series by the Bergen Record newspaper, the community called my attention to the failures of the cleanup at the site. New Jersey DEP undertook a renewed investigation, and found enormous volumes of paint waste left in plain sight, adjacent to and inside the yards of local families, where toxic exposure has been a fact of life for these residents for decades.

The regulatory failure at both the Federal and State levels that allowed this site to be de-listed from the NPL is a tragedy of terrible proportions, and one not attributable to the current program. I credit EPA and its Regional Administrator, Alan Steinberg, for responding to our calls to visit the site, for promptly recognizing that this site should be re-listed on the NPL, and for requiring Ford to initiate a new and more comprehensive cleanup.

Yet even in the aftermath of extraordinary agency failure, and EPA's recognition of the programmatic failure that left a distressed community at risk for years after the site was deleted from the NPL, the cleanup process at Ringwood is hampered in this second cleanup by funding shortfalls and lax enforcement.

Despite the earlier failure to give the community an adequate voice in the cleanup, EPA from the outset refused our request for technical assistance grants that would enable to community effectively to participate in the cleanup. Despite Ford's clear responsibility for the site and its earlier failures to perform an adequate cleanup, EPA has repeatedly sided with Ford and against the citizens and the Borough in the cleanup process.

For example, both the community and current DEP Commissioner Lisa Jackson have asked for seismic studies to determine the impact of the waste and the cleanup process on local ground stability, because local residences have been plagued with sinkholes in the area of the contamination. Rather than compel Ford to perform this needed work, EPA sided with Ford and against DEP and the community in deeming the work unnecessary.

When Ford responded to the re-listing of the site by asserting liability against the tiny Borough that had helped bring the egregious failures by Ford and EPA to light, EPA again sided with Ford, and to this day has failed to enter a settlement that would appropriately limit the Borough's exposure to hostile litigation by Ford.

Here as elsewhere, EPA has demonstrated little willingness to compel more cleanup work than the responsible polluter is willing to offer its taxpayers, has been un-

[4] I must note my disagreement with the recent conclusion, by EPA's Inspector General, that the past failures had nothing to do with minority and low-income composition of the community.

willing to use its enforcement tools to ensure complete cleanup or to protect the Borough, and has not provided or required Ford to provide the funding needed for the community to participate fully in the cleanup.

The long-suffering Borough of Ringwood and its residents, it appears, will suffer still longer.

3. Imperial Oil

The Imperial Oil/Champion Chemical site encompasses 15 acres surrounded by residential neighborhoods in Monmouth County, New Jersey. Past operations at the site included waste oil reprocessing and agricultural chemical production, and the legacy of those operations include waste oil, PCBs, and arsenic contamination. This contamination has extended offsite and into a nearby creek. While there has been some removal of contaminated soils from areas outside the fenced-in boundary of the site, the remediation of the onsite contamination at the site of the former Imperial Oil facility has been continually postponed due to lack of funding. EPA has relied primarily on a fence to protect the local community and curious children from onsite contamination at the facility.

The impact of funding shortfalls in the Superfund program has been especially apparent in EPA's management of the third phase or "operable unit" of the cleanup (Operable Unit 3 (OU3). The Record of Decision (ROD) for OU3, which finally determines the cleanup plan, was signed in 1999. New Jersey DEP assumed the lead for the design and engineering of OU3, and this work was substantially completed in 2001.

From 2002 onward, EPA continually rejected completed design work for OU3 on trivial or pretextual grounds, while making clear the funding was unavailable for the site even if EPA were to approve the designs. EPA staff inadvertently forwarded to DEP staff internal correspondence in which EPA technical staff were directed to find a technical basis to reject DEP's OU3 design, because funding would not be available for some time. Over time, New Jersey's complaint over this impasse and the funding shortfall became more vocal, joined by members of New Jersey's congressional delegation.

In 2006, EPA simply took over the lead for the site. Notably, but not credibly, the agency reports on its website that it is still "designing" the relatively straightforward excavation remedy provided by OU3.

This is a site that is entirely dependent on adequate funding by the Superfund program, the responsible parties being largely insolvent or defunct. While EPA's public descriptions of the site suggest that it has taken the last 8 years for two different agencies to design and agree to a remedy for a simple soil excavation, the reality is that the cleanup delays are attributable to inadequate funding and failure to manage for construction completion.

4. Roebling Steel

Another site where cleanup depends entirely on program funding and has been delayed repeatedly is the sprawling Roebling Steel site, encompassing five hundred acres along the Delaware River in Florence Township, New Jersey. All of the funding available from the responsible party was recovered in a Chapter 11 bankruptcy proceeding in 1992.

The site is at the heart of the Township's plans for economic redevelopment, a fact highlighted by EPA's award of a $100,000 planning grant for reuse of the site and its stated willingness to enter a prospective purchaser agreement (PPA) with potential redevelopers. But neither the modest planning grant nor a PPA can overcome the principal obstacle to redevelopment of the site: protracted delays in EPA's cleanup of the site.

Despite repeated requests by DEP and the Mayor of Florence to EPA to fully fund cleanup at the site, remedial activity at the site went into an extended hiatus throughout my 4 years as commissioner. EPA staff privately attributed the hiatus to funding shortfalls, whereas EPA's public summaries of cleanup progress suggest that delays are due to design of the relatively straightforward remedial action selected for the site. Here again the remedy "design" process serves as a veil to obscure the agency's current failures of management and funding. Here again, the remedy still-to-be funded is a simple excavation, presenting no unusual complexity.

As at Imperial Oil and Cornell-Dubilier (discussed below), the relatively uncomplicated nature of the remedial work that remains to be funded belies EPA's claims that construction completions have slowed due to the nature of the remedy rather than management failure or funding shortfalls.

EPA's own portrayal of the site on its web pages illustrates starkly the extent of delay. The third remedial action selected for the sight was completed in 1994. EPA currently projects that design, not construction, of the fourth remedial action will be completed in the fall of 2007 ? 13 years later. While other work, including a revetment along the river, has been completed in the interim, little or no work occurred for more than 5 years.

Given this pattern of funding shortfalls and cleanup delays over the past 6 years, the Township of Florence can have no optimism as to whether and when the site will be available for redevelopment and returned to productive use. Prospective purchasers have little or no reason to choose redevelopment of this site over available greenfield sites. And the site continues to be a source of toxic loadings to the adjacent Delaware River.

5. Berry's Creek/Universal Oil Products

As the Passaic River example illustrates, the failures of management, funding, and enforcement that mark the current Superfund program appear especially pronounced at contaminated sediment sites, even where (as on the Passaic) the contamination at issue is primarily attributable to a single polluter. Current program failures at these sites adversely affect not only surrounding human and natural communities, but also hamper the good-faith efforts of responsible companies to complete their cleanup work and resolve their liability.

The Berry's Creek Superfund provides a New Jersey example of this problem. At this site, remedial actions for the land portion of the site progressed, but the cleanup process for the mercury contamination of marsh and river sediments has languished for years. At this site, one of the responsible parties repeatedly sought to accelerate the pace of remedial investigation and feasibility studies, but found that after many years EPA had done little more than have the responsible party fund a literature search.

In response, the responsible party took the unusual step of asking New Jersey DEP to assume the lead for the cleanup and undertake an accelerated remedial effort. While New Jersey DEP's own program for hazardous site cleanup already was overburdened, the good faith of the company in making this overture persuaded me to make the request of EPA, either to have the State take over the lead or to jointly develop an accelerated approach with EPA. EPA flatly rejected this request, but the fact of the request demonstrates the level of frustration with the current program pace even among responsible parties.

EPA did finally begin remedial investigation of the marsh and creek in 2005, but there is little prospect of a remedial decision in this decade if current program approaches continue.

5. Cornell-Dubilier

The severity of Superfund funding shortfalls is further illustrated by the fact that even sites with ongoing human and ecological suffer long delays in the queue for funding.

Located in South Plainfield New Jersey, the Cornell-Dubilier Electronics site has more than 540 residents living within one quarter of a mile of the site, and the site includes direct surface water connections to ecologically sensitive tributaries of the Bound Brook.

EPA has undertaken numerous emergency response and remedial actions at the site, but funding shortfalls have delayed a number of major remedial actions called for by the record of decision signed in 2004. In particular, there is an open and uncontrolled dump of capacitors that comprises, by EPA's own description, the most contaminated portion of the site.

This phase of the cleanup should have proceeded no later than 2005, but due to funding constraints and the cleanup of the capacitor disposal area is not projected by EPA to take place until later this year. In addition, expanded cleanup of commercial and residential areas has progressed at an unduly slow pace ? by all accounts because of inadequate funding.

In the interim, both the public and sensitive natural resources are being exposed to PCBs, heavy metals, and toxic organic compounds.

CONCLUSION

Both broad statistics and the experience of states on the ground are consistent: the Superfund program has lost its focus on completing cleanup work, is hamstrung

by funding shortfalls, and is unwilling to make full use of the enforcement tools Congress as given the agency.

The consequences for public health and the economy of affected communities in New Jersey are profound. So too, are the consequences for New Jersey DEP, already managing far more hazardous sites than its resources permit.

I am grateful to the subcommittee for focusing its attention on this vital public health and environmental challenge.

Senator CLINTON. Thank you very much, Mr. Campbell.

Next, Michael Steinberg, Senior Counsel of Morgan, Lewis and Bockius, and Outside Counsel to the Superfund Settlements Project.

STATEMENT OF MICHAEL W. STEINBERG, SENIOR COUNSEL, MORGAN, LEWIS AND BOCKIUS LLP, AND OUTSIDE COUNSEL, SUPERFUND SETTLEMENTS PROJECT

Mr. STEINBERG. Thank you, Madam Chairman and members of the Subcommittee. It is a pleasure to be here this morning on behalf of the Superfund Settlements Project.

Superfund is far from perfect, but I believe it functions more effectively today than it has during most of its life. Today, responsible parties are cleaning up most of the sites on the NPL and they are paying the full cost of those cleanups. It hasn't always been that way. At the orphan sites, where there are no responsible parties, EPA uses the so-called trust fund to pay for cleanups.

This morning, I would like to address three issues: health risks, financial management, and listing sites on the NPL.

First, Superfund is doing a better job than you might think in reducing risks to public health. In fact, most NPL sites no longer pose current health risks. How do we know this? Because Superfund has already eliminated human exposure to unsafe levels of contamination at those sites. Without exposure, there is no risk.

Now, that is a pretty basic point, but it sometimes gets overlooked. For example, the report issued last year by Professor Steinzor looked at 50 NPL sites and said that they all posed major health risks. In fact, that report looked at proximity, not exposure. Again, proximity alone is not the same as exposure. Half of those 50 sites are listed by EPA as having human exposure under control. That means EPA found no exposure to unsafe levels of contamination at those sites—not in the air, not in the soil, and not in the groundwater or the surface water or the sediment. Again, without exposure, there is no risk.

Of course, no one is suggesting that we walk away from those sites. They still need to be cleaned up. But when we look at the competing needs of other Federal programs that protect public health and we try to establish priorities for getting things done, we need to remember that most NPL sites no longer pose current health risks.

Second, if we look at how EPA runs the Superfund program, I would echo some of the comments made earlier that there is a pressing need for stronger financial management. My written statement offers a few recommendations that would conserve EPA's appropriation for use at sites where there are no responsible parties. I would like to focus this morning on just one of those recommendations.

A big chunk of EPA's Superfund appropriation each year is consumed by support offices that are not involved in cleanup. I am not talking about administrative overhead. I am talking about things like the Office of Inspector General, and the Office of the Chief Financial Officer. These offices provide what are basically shared services to all of EPA's programs. Superfund alone has its appropriation raided to pay for those services, and these raids add up to some $200 million each year, again some 15 percent of EPA's budget for Superfund, going to offices that are not involved in cleanups.

We would urge that this spending be sharply reduced beginning in Fiscal Year 2008. This is the most direct and logical way to free up more money for the program's core mission of working on NPL sites that lack responsible parties.

Third and last, let's look at the NPL. Listing a site on the NPL creates a long-term financial obligation for Superfund. So before a site is listed, we should ask whether other approaches might work just as well or even better. For example, the State's voluntary cleanup program might encourage responsible parties to move forward with a faster and more efficient cleanup. EPA agrees in concept, and that is why they call the NPL the tool of last resort. But it is difficult to tell whether EPA is looking at those other approaches before it lists a site.

If you open the Federal Register and you look at a proposed listing, you will notice that EPA never says why it wants to list the site. It doesn't say whether it has looked at other approaches. This means that communities and interested parties can't submit meaningful comments on proposals to add sites to the list.

Whatever EPA's reasons for listing sites, the real need here is for transparency. Every proposed listing should say why EPA wants to list the site and whether it looked at other approaches besides the NPL. This way we will ensure that EPA is considering alternatives and we will avoid using Superfund resources for sites that can be addressed effectively through other programs.

Thank you very much.

[The prepared statement of Mr. Steinberg follows:]

STATEMENT OF MICHAEL W. STEINBERG, SENIOR COUNSEL, MORGAN, LEWIS AND BOCKIUS LLP, AND OUTSIDE COUNSEL, SUPERFUND SETTLEMENTS PROJECT

EXECUTIVE SUMMARY

Superfund today is a mature program that has addressed most of its original workload. Construction of the remedy has been completed at most of the sites on the National Priorities List, and even more NPL sites have human exposure under control.

Today, private parties are cleaning up most of the sites on the NPL, and they are paying the full cost of those cleanups. The Trust Fund is used to pay for the "orphan sites" where no responsible parties can be found to perform the work.

Despite Superfund's many accomplishments, there is still room for improvement. By strengthening its financial management controls, EPA can and should do more with its annual Superfund appropriation.

Specifically, EPA should conserve more of its annual appropriation for the core mission of the Superfund program—completing long-term cleanup at NPL "orphan sites." Among the key steps EPA should take are these:

• spend less money on support services from EPA offices that are not involved in actual site cleanups;

• provide all stakeholders a meaningful opportunity to comment on proposed additions to the NPL;

• exercise centralized management control over remedy selection decisions that shape Superfund's long-term financial obligations;
• spend less money on oversight of work performed by experienced private parties; and.
• spend less money on non-emergency removal actions.

INTRODUCTION

The Superfund Settlements Project ("the Project") appreciates the opportunity to share with the Subcommittee some industry perspectives on the Superfund program as it operates today. The Project is a not-for-profit association of major companies from various sectors of American industry. It was organized in 1987 in order to help improve the effectiveness of the Superfund program by encouraging settlements, streamlining the settlement process, and reducing transaction costs for all concerned.

The members of the Project share an extraordinary degree of practical, hands-on experience with the Superfund program. They have been involved at literally hundreds of Superfund sites across the country over the last 25 years. Representatives of the Project have testified before Congress on many occasions regarding various aspects of the Superfund program. The Project has also played an active leadership role in the national policy debate over many Superfund issues, and has been a strong supporter of EPA's Superfund Administrative Reforms since they were announced in 1995.

Collectively, the Project's members have spent well over six billion dollars onsite cleanups and site studies since 1980. That spending covered not only the companies' own shares of liability, but also sizable shares attributable to other parties that were defunct, insolvent, or otherwise unable to pay their fair shares. On top of that, these companies also paid out hundreds of millions of dollars more in Federal Superfund taxes during the first 15 years of the program's life. All told, these companies have paid far more than any fair or equitable measure of their actual responsibility for the contamination at these sites.

OVERVIEW

Superfund is a mature program that has largely accomplished its goals, albeit at a cost that was not always justified by the risks being addressed.[1] The gaps in environmental regulatory programs that led to the creation of many Superfund sites have been filled by the Clean Water Act, the Resource Conservation and Recovery Act, and the Toxic Substances Control Act. Given the substantial deterrent effect of those statutes, Congress has a right to expect that fewer sites are being created that will require remediation in the future, and this is consistent with our experience.

Today, private parties are cleaning up most of the sites on the National Priorities List ("NPL"), and paying the full cost of those cleanups. The Superfund Trust Fund is paying for cleanups at the "orphan sites" where no responsible party exists.[2]

Superfund has also largely addressed its original workload. Significantly, construction of the remedy has already been completed at most of the sites on the NPL. Today, Superfund is working on the remaining NPL sites, which include some of the largest, most complex, and most challenging sites.

In this statement, we first describe the evolving partnership between EPA and industry that has enabled the Superfund program to achieve notable successes, particularly since EPA's announcement of major administrative reforms in October of 95. Then we turn to some of the pressing challenges currently facing Superfund.

The central theme that connects all of these challenges is the need for EPA to manage its annual appropriation more effectively than it does today.[3] Currently, EPA:

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[1]EPA considers "cost-effectiveness" only to a limited extent. 40 C.F.R. 300.430(f)(1)(ii)(D) (2006). EPA does not consider the more fundamental questions as to the relative costs and benefits of alternative remedial actions. See generally State of Ohio v. United States EPA, 997 F.2d 1520, 1532 (D.C. Cir. 1993) ("there is nothing in section 121 [of CERCLA] to suggest that selecting permanent remedies is more important than selecting cost-effective remedies").

[2]This includes "orphan sites" where the responsible party is insolvent, or has been exempted from liability by Congress. The Trust Fund is also paying for general informational and outreach programs such as technical assistance to community groups, research and development, remedial and brownfields policy development, and public participation.

[3]The Superfund budget is about 50 percent bigger than the budget for the Food Safety and Inspection Service, which protects the nation's meat, poultry, and egg products.

• transfers a significant fraction of its appropriation each year to EPA support offices that are not involved in actual cleanup work;
• assumes new long-term financial obligations each year with little transparency and limited review by senior management; and
• spends money each year on projects that are not high priorities and activities that are not essential.

In sum, EPA is not yet managing its Superfund "income" or "expenses" as well as it can. In the spirit of constructive criticism, we offer today a series of recommendations aimed at helping EPA address these challenges. In particular, EPA should:

• conserve more of its annual Superfund appropriation for long-term cleanup work at NPL sites that have non-performing PRPs;
• provide greater transparency for its new NPL listings;
• exert greater management control over the key cleanup decisions that increase Superfund's long-term financial obligations; and
• reduce unnecessary spending on oversight and non-emergency removal actions.

I. SUPERFUND TODAY REFLECTS A HIGHLY SUCCESSFUL PARTNERSHIP BETWEEN EPA AND INDUSTRY.

Although the Superfund program has generated extraordinary levels of controversy and criticism, EPA has, over time, developed institutional capability and expertise, solved problems, improved relationships, and ultimately established a program that performs a critical function in society. To be more specific:

• tens of thousands of contaminated sites have been evaluated;
• short-term removal actions have been taken at several thousand of those sites;
• longer-term remedial actions have been completed at most of the non-Federal sites on the NPL;
• construction is underway at most of the remaining NPL sites; and
• human exposure is under control at most NPL sites.

Superfund—once a topic of intense public concern, dominated by controversy and emotion—has fundamentally achieved its objectives and accordingly has receded in the public focus. Today a general public recognition exists that at most sites, the actions that should be taken are being taken.

In the process and in recent years, EPA has also worked to improve relationships with Potentially Responsible Parties ("PRPs") and has minimized its previously confrontational approach to private parties. For the most part, there now exists an atmosphere of cooperation and mutual respect. EPA should be commended for its accomplishments in this field.

It should also be recognized that industry has made major contributions to the success of this program. At site after site across the country, companies rose to the challenge. They organized PRP groups, established committees within those groups, investigated the conditions of contamination, and developed action proposals. Once EPA selected the remedies, those companies carried out remedial actions, and today they are managing long-term operation and maintenance at most sites. They provided the leadership, the technical resources, and the funding to perform required work at an ever-increasing percentage of contaminated sites. That percentage is now greater than 70 percent of NPL sites.

Welcoming the more cooperative spirit that EPA has demonstrated since adoption of the administrative reforms in 1995, those companies have themselves taken pride in the results of this program. They have earned the right to be regarded as constructive partners in the achievement of success under Superfund. They will continue to be constructive partners in addressing other sites through other cleanup programs.

Despite Superfund's notable successes, however, the program still has considerable room for improvement. In particular, EPA can and should be more efficient with the money it receives each year from Congress. Accordingly, in the spirit of constructive criticism, we describe below several ways in which EPA can direct more of its annual Superfund appropriation to the core mission of completing long-term cleanup at NPL "orphan sites." Importantly, all of the measures that we recommend here are steps that EPA can take without the need for legislative action or rulemaking.

II. EPA SHOULD CONSERVE MORE OF ITS SUPERFUND APPROPRIATION FOR CLEANING UP NPL "ORPHAN SITES."

Currently, some $200 MM/yr of EPA's annual Superfund appropriation is directed not to the Office of Solid Waste and Emergency Response ("OSWER"), but to other EPA offices that provide varying degrees of indirect support to the Superfund program. These other offices include:

- Office of Research and Development ("ORD");
- Office of Administration and Resource Management ("OARM");
- Office of the Chief Financial Officer ("OCFO");
- Office of Inspector General ("OIG");
- Office of Policy and Environmental Information; and
- Office of General Counsel ("OGC").

The net effect of these transfers is that nearly one-fifth of the total Superfund appropriation is diverted to other EPA offices that are not actually involved in cleaning up any Superfund sites. Congress should find this unacceptable, for several reasons.

First, $200 million is a lot of money, particularly in comparison to the total amount that EPA actually spends on cleanup work. For example, the amount transferred to other offices in fiscal year was about the same as the total amount that EPA spent that year on Remedial Design and Remedial Action at NPL sites—the core mission of the Superfund program. In essence, Superfund has been spending about as much on indirect support in non-Superfund offices as it has been spending on actual cleanup of NPL sites.

Second, the dollar amounts of these annual transfers to other offices were established years ago. These amounts apparently have not been revisited in light of the current level of program support that is actually needed from these other offices. Thus, it is not clear that these allocations reflect Superfund's current needs, or that they reflect sound management decisions about the wisest use of public funds.

Third, we know of no sound policy reason why the Superfund program should pay for the support of OARM, OCFO, and OIG, among others. These support offices provide shared services to EPA's many programs, which is why these offices are directly funded by Congress as part of EPA's annual appropriation. The current practice of having the Superfund program pay for these shared services is a glaring departure from the normal practice, both at EPA and throughout the Federal Government.

Finally, apart from the magnitude of these transfers to other offices, the transfers are open-ended, in the sense that any funds not actually used by the offices receiving the transfer apparently remain available for their use in subsequent fiscal years. Any funds not actually used in a given year should be returned to OSWER at the end of that year, so that they may be used on cleanups.

For all of these reasons, we recommend that EPA scrutinize its use of the annual Superfund appropriation and conserve more of that money for the core mission of the Superfund program.

III. EPA SHOULD MAKE ITS NPL LISTINGS FOCUSED AND TRANSPARENT.

Each new site listed on the NPL imposes long-term financial obligations on the Superfund budget for many years to come. We believe that new sites should be listed on the NPL only after (1) a specific finding that they require Federal intervention because no other options will work ("the tool of last resort"), and (2) a transparent process that allows the public to comment fully on the listing. We address these two points in turn.

A. NPL LISTING SHOULD REMAIN THE "TOOL OF LAST RESORT."

In thinking about the purpose and scope of the NPL, it is helpful to bear in mind the lessons learned during the past 25 years in three main areas:

- the universe of contaminated sites;
- the alternatives available for addressing those sites; and
- the strengths and weaknesses of the Superfund NPL program.

We briefly address each of these points below, before explaining why the NPL is, and should remain, the "tool of last resort."

First, experience has dramatically changed our knowledge about the number and character of contaminated sites throughout the country, as well as the risks associ-

ated with them. Rather than facing a few hundred sites, each of which was initially believed to pose severe threats to public health, it now is clear that we have a great many sites, most of which pose relatively small, if any, risks. For example, one EPA count of potential Brownfield sites indicated over 600,000 sites perceived to be affected by contamination, the great majority of which either are being addressed through State programs or pose no severe or immediate risk to human health or to the environment. These factors mean that instead of "making a Federal case" out of each site, the framework for response should emphasize state, local, and private efforts, rather than "making a Federal case" out of each site.

Second, there are now more ways to address contaminated sites than when Superfund was enacted in 1980. Virtually all states have developed their own "mini-Superfund" programs and voluntary cleanup programs that have achieved success. In addition, at the Federal level, EPA's RCRA corrective action program governs thousands of operating facilities, and another program covers underground storage tanks.

Third, Superfund has attached a lasting stigma to some sites and the communities that surround them. In many cases, Superfund has also imposed excessive operational, legal, and financial restrictions on these sites that will interfere with their future reuse or redevelopment. Moreover, the cost at which Superfund has achieved results ? some $35 billion in EPA appropriations alone since 1980, and at least that much more in private sector spending—is widely viewed as far higher than necessary or justified in light of the risks being addressed.

In hindsight, it seems clear that many sites addressed under Superfund did not present major risks to human health or the environment.[4] Instead, sites were listed on the NPL based on fairly crude assessments of their potential risks. Once a site is listed on the NPL, however, the focus shifts from risk reduction to "cleanup," where progress is much slower and completion is maddeningly elusive. Ironically, this focus on "cleanup" often delays or limits the risk reduction that should be Superfund's focus.

In light of this experience, it is clear that the NPL should be the tool of last resort—a tool that because of its unique nature should only be used in those situations that require such a high-cost, inefficient mechanism. EPA adopted this term—"the tool of last resort"—some years ago as its unofficial policy, but then failed to communicate this policy clearly in its actual NPL listings. As we show below, the resulting lack of transparency makes it difficult for local communities or other interested parties to understand why some sites are listed and others are not.

The circumstances warranting use of the Superfund NPL as "the tool of last resort" include sites that:

- are severely contaminated; and
- pose immediate or severe risks; and
- have no near-term prospect of cleanup by viable PRPs.

Apart from the sites that meet the above criteria for NPL listing, nearly all other sites should be managed under other programs, including the RCRA corrective action program and the full range of State cleanup programs. If those other programs are viewed as deficient in some respects, then those programs should be improved, rather than shifting sites to Superfund and thereby removing the incentive to remedy the perceived shortcomings of those other Federal and State programs.[5]

Importantly, it is fully expected that PRPs—private companies, as well as governmental departments and agencies—will continue to perform and fund cleanups at sites they have contaminated. The point here is simply that Superfund is not the appropriate mechanism to address most of these sites.[6]

We now turn to the process that EPA uses to list sites on the NPL, with a focus on the need for transparency regarding the reasons why sites are being listed at all.

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[4]See, e.g., U.S. General Accounting Office, Environmental Protection ? Meeting Public Expectations With Limited Resources 17—18 (1991) (GAO/RCED—91—97) (health risks from contaminated sites ranked relatively low by EPA scientists, but relatively high by the public).

[5]This same approach should also govern NPL delistings or deletions. It makes little sense to keep a site in the NPL universe once it no longer meets the listing criteria.

[6]Similarly, EPA should discontinue its "Superfund Alternative Approach," which brings sites into a parallel program where they compete with NPL sites for resources.

B. EPA SHOULD GIVE ALL STAKEHOLDERS A MEANINGFUL OPPORTUNITY TO COMMENT ON LISTINGS THAT ARE TRANSPARENT.

When it comes to transparency in government, more is better. Yet considering the importance of NPL listings, EPA's approach is relatively opaque—EPA never explains why it lists sites on the NPL.

EPA adds sites to the NPL each year. Yet EPA does so without offering any explanation of what it seeks to accomplish by listing the new sites, what other option(s) it considered for addressing those sites, or why it believes the other option(s) were inadequate.[7] Because EPA refuses to reveal its thinking, local communities and other interested parties have no opportunity to submit meaningful comments on proposed NPL listings.

To address this deficiency, EPA should include in each proposed NPL listing a statement that describes the other approaches that EPA considered for addressing the site (e.g., State voluntary cleanup program). EPA should also explain why it believes NPL listing is the best approach for each site.

Based on that statement, the public could then submit comments that address the full range of possible approaches to a site. Such comments might point out the availability of other approaches to getting the site cleaned up. EPA would then consider those comments before making a final decision on whether or not to list the site. The net result would be a huge increase in transparency, without any added cost or delay.

In sum, strong centralized management of the NPL listing process will help insure that the NPL remains "the tool of last resort," so the Superfund will be conserved for orphan sites. Second, greater transparency in the listing process will help ensure that EPA has considered all viable options for addressing a site.

IV. SENIOR MANAGERS AT EPA HEADQUARTERS SHOULD BE ACTIVELY INVOLVED IN KEY DECISIONS ABOUT SITE CLEANUPS.

After NPL listings, the next most important decisions in the Superfund program are the selection of final cleanup plans for NPL sites. Each year, EPA issues new Records of Decision ("RODs") that select remedies for NPL sites around the country.

As a practical matter, each new ROD imposes financial obligations on the Superfund budget for years to come. If a site has no viable PRPs, or if the PRPs fail to step forward, then EPA eventually ends up paying for the cleanup. In this way, each new ROD effectively controls some of Superfund's future spending. Given the high cost of some cleanups, these "commitments" can amount to tens of millions of dollars.

Because the RODs are so important in shaping Superfund's long-term financial needs, the senior program officials at EPA Headquarters should review them closely before the final decisions are made. But that is not the norm today. Instead, EPA's Regional Offices usually have the final say on these cleanup decisions.

Specifically, under an EPA delegation of authority dating back to 1994, most new RODs are signed by Division Directors in the 10 Regional Offices. Review by senior program management at EPA Headquarters is typically quite limited. For all practical purposes, EPA Headquarters does not actively manage the rate at which the Superfund program takes on new financial obligations each year.

We recommend that EPA take several actions to address this problem:

- revise its delegation of authority so that senior managers at EPA Headquarters review new RODs before they are signed;
- expand its National Remedy Review Board so the Board can review more sites and help insure that future remedy decisions are consistent with decisions at similar sites, technically sound, and, as required by section 121(a) of CERCLA, cost-effective; and
- revisit and expand its use of the Fund-balancing ARAR waiver, the "inconsistent applications of State standard" ARAR waiver, and the Technical Impracticability ARAR waiver to facilitate the selection and prompt implementation of cost-effective remedies.

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[7]EPA's Federal Register notices give the names and locations of the sites EPA proposes to list on the NPL, but they never explain what EPA hopes to accomplish by listing the sites. See, e,g., 72 Fed. Reg. 53,5—(September 19, 2007) (proposing to list 12 new sites on the NPL without giving any reasons for doing so).

V. EPA SHOULD SPEND LESS ON OVERSIGHT OF WORK PERFORMED BY EXPERIENCED PRIVATE PARTIES.

A decade ago, then-EPA Administrator Carol Browner recognized that EPA devotes excessive contractor dollars and excessive full-time equivalent personnel to duplicative technical work and to monitoring the studies and cleanup work performed by private parties ("oversight"). In a 1995 Administrative Reform, and again in guidance a year later, Administrator Browner pledged a 25 percent reduction in oversight at sites with capable and cooperative PRPs.

Despite that 1995 proclamation, however, EPA has yet to implement the necessary across-the-board reduction in oversight spending, or even institute a tracking system for its own oversight spending. In fact, EPA only recently embraced the general policy of tailoring oversight levels to reflect the experience of the private party and its contractor, the complexity of the site, the nature and strength of any public concern, etc.[8] In our experience, EPA typically performs the same amount of oversight of PRPs that have successfully performed numerous cleanups at other sites as it did many years ago when those PRPs were just beginning to work on Superfund sites. Clearly EPA could free up additional resources for remedial construction at NPL sites by fulfilling its 10-year old pledge to reduce substantially its oversight of work performed by experienced private parties.

VI. EPA SHOULD REFOCUS THE REMOVAL PROGRAM ON ITS ORIGINAL PURPOSE OF ADDRESSING EMERGENCY SITUATIONS.

The Superfund removal action program was designed primarily to address emergency situations that required an immediate response. Yet today, relatively few removal actions involve emergencies.

In fact, most removal actions now consist of so-called "time-critical" actions, where EPA believes that work should be commenced within 6 months, and "non-time-critical" actions, where there is even less urgency involved. Of the 2,440 removal actions that EPA selected during the period from fiscal year through fiscal year 9, a total of 1,892 (77.5 percent) were either "time-critical" or "non-time-critical" actions.[9] Thus, less than one-fourth of all removal actions involved emergency situations.

Given the availability of other Federal and State cleanup programs, it appears that spending some $250 MM/yr to perform primarily non-emergency actions is not a wise use of the Superfund budget. Superfund removal actions should focus on those sites, orphan or otherwise, that need immediate action to address actual emergencies.

The point here is not to launch a debate over the precise contours of the term "emergency." Rather, the idea is to limit the removal program to sites that present an emergency under some reasonable definition of that term. Most Superfund removal actions today, by EPA's own definitions, do not involve emergencies in any sense of the term. Accordingly, the removal program should be refocused on its original purpose.

RESPONSE BY MICHAEL W. STEINBERG TO AN ADDITIONAL QUESTION FROM SENATOR BOXER

Question 1. The Superfund statute gives EPA the role of helping to protect the public interest by ensuring that cleanups are done right, so that families can safely raise their children and communities can safely use their land. In your testimony, you call for reducing such oversight. How would inadequate cleanups be addressed if reduced oversight results in problems with cleanup?

Virtually all potentially responsible parties ("PRPs") recognize and agree that appropriate oversight of investigative and cleanup work performed by PRPs constitutes an essential safeguard toward assuring proper performance of the work and enhancing public confidence. That said, however, the manner in which oversight has been performed under Superfund has long been a source of friction between EPA and PRPs.

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[8]See Using RCRA's "Results-Based Approaches and Tailored Oversight Guidance" When Performing Superfund PRP Oversight (December 22, 2006). Having belatedly embraced the policy of "tailored oversight," EPA now needs to develop training and communications tools to ensure that this new policy takes hold in the 10 Regional offices. This will be made more difficult by the bureaucratic reality noted earlier: the EPA Regions are accustomed to a highly decentralized system where Headquarters has delegated most of the key decisionmaking authority.

[9]K. Probst, et al., Superfund's Future—What Will It Cost? at 25, Table 2—4 (2001).

EPA's Superfund program grants to the Remedial Project Managers in the Regions extremely broad discretion to tailor their level of oversight activities based on a host of site-specific variables, including the complexity of the site, the particular phase of the Remedial Investigation of Feasibility Study ("RlfFS") or Remedial Design of Remedial Action ("RDfRA") work involved, and the caliber of the PRP technical team that is performing the work. Despite this inherent flexibility, however, EPA oversight spending has frequently reached excessive levels in relation to the scope and cost of the work being performed. Of particular concern are direct contract expenditures to pay for the services of EPA's oversight contractors.

In general-and recognizing that major differences exist from Region to Region and from site to site—EPA project managers have failed to maintain effective control over the outside contractors who actually perform the vast majority of oversight activities. Those contractors often determine how much oversight, and what kind of oversight, is performed—even though the contractors have a direct financial interest in maximizing such oversight.

EPA PLEDGES TO REDUCE OVERSIGHT

The clamor for oversight reform was one of the reasons that EPA's 1995 Superfund Administrative Reforms featured a reform entitled "Reduce Oversight for Cooperative Parties." Specifically, Administrator Carol M. Browner declared that EPA would "reward [cooperative] parties by significantly reducing or tiering oversight while continuing to exercise sufficient oversight to ensure that the work is performed properly and in a timely manner."

In explaining this reform, EPA stated:

As the Superfund program has matured, parties have developed a considerable body of experience in conducting response activities at sites. Some not only have used this experience to perform high quality work but have acted cooperatively with EPA throughout the cleanup and enforcement processes. In recognition of this development, and to promote further cooperativeness, EPA will reward such parties by significantly reducing or tiering oversight while continuing to exercise sufficient oversight to ensure that the work is performed properly and in a timely manner. Reduction of such oversight will result in decreased transaction costs for EPA and cooperating parties.

On July 31, 1996, EPA's two lead Superfund offices jointly issued guidance on the implementation of this new reform. The guidance contained several key directives.

First, it established a specific numerical goal for reducing oversight. According to the oversight activities." Moreover, "EPA's overall goal is for a nationwide 25 percent reduction in oversight costs over the next year at these 100 sites."

Second, the 1996 gUidance also called for expanding the reform beyond the initial 100 sites. It directed the Regions to evaluate "every site where the PRP is performing the RifFS, the RD/RA, or the [EE/CA] and response action for non-time-critical removals" to determine whether "the level of oversight can be reduced without reducing the level of protection at a site." Where such reductions could be achieved, the guidance specifically directed that "[reductions in oversight costs should be implemented as soon as possible."

Third, the 1996 guidance directed that "[a]t the time of annual billing, Regions should provide PRPs with an estimate of the oversight costs for the next year."

In May of 1997, the General Accounting Office ("GAO") reported to Congress on EPA's implementation of the 1995 administrative reforms. With respect to the "Reduced Oversight" reform, GAO stated:

According to EPA's annual report on administrative reforms and other agency documents, EPA has reduced or plans to reduce its oversight of potentially responsible parties at over 100 sites. Although EPA stated that such reduced oversight lowers litigation costs for EPA and cooperating parties, EPA officials could provide us with no data to demonstrate such results to date.

At about the same time that GAO issued its report, Dr. J. Winston Porter, former Assistant Administrator of the Office of Solid Waste and Emergency Response ("OSWER"), issued a proposal for "Simplifying Superfund." Dr. Porter described the oversight problem (and the solution) as follows:

Another prime reason why site studies take so long is that regulators, particularly EPA and their contractors, conduct overly tedious and lengthy reviews of every aspect of work by PRPs or others. These reviews include such repetitive "process" items as work plans, sampling plans, and quality assurance plans.

It is first recommended that the amount of money allocated to regulatory oversight be reduced in order to truncate the process.

Second, EPA should sharply curtail the number of documents requiring EPA or other regulatory review.

That was more than a decade ago. Today, EPA still does not track how much it spends on oversight. As a result, it is impossible to determine whether oversight has actually been reduced, as Administrator Browner pledged in 1995.

TAILORED OVERSIGHT

To its credit, EPA did issue Superfund guidance last year that incorporated a "Tailored Oversight" guidance document previously issued by the RCRA corrective action program. Conceptually, tailoring oversight to the needs of particular sites ensures that cleanups are done right, while freeing some of EPA's limited resources for other important tasks.

It remains to be seen what impact this recent Headquarters guidance document will have in a program as heavily decentralized as Superfund. It would be important to know, for example, whether program managers at EPA Headquarters have undertaken any concrete initiatives to encourage the Regions to apply the Tailored Oversight approach, or to monitor and track future Regional decisions regarding oversight.

RELATIONSHIP TO CLEANUPS

With this background, it must be emphasized that the possibility of an "inadequate cleanup" being performed at a site is not a sound reason to maintain the current regime of virtually unlimited oversight. First, most PRPs already have every incentive to develop and perform sound cleanups. They seek to be responsible corporate citizens and community members. PRPs also know full well that their legal liability does not end when they finish the cleanup.

Second, if a cleanup is "inadequate," it is apt to be because new information has come to light that was previously unknown to both EPA and the PRPs. Perhaps some contamination was not detected, or perhaps new scientific information is released about a particular compound that was detected. This sort of thing happens occasionally, but infrequently. The key point is that it cannot be prevented by piling on oversight resources on the front end.

Third, if a cleanup is found to be "inadequate," the PRPs typically remain legally responsible for any additional work that is needed. Section 122(f) of CERCLA severely limits the terms of cleanup.

RESPONSE BY MICHAEL W. STEINBERG TO AN ADDITIONAL QUESTION FROM SENATOR INHOFE

Question 1. Many think that when the Superfund tax was in effect it was some kind of "polluter pays" tax. Is this how the Superfund tax worked and if reinstated today how would it work?

Response. In answering this question, we first address the rationale for the Superfund taxes, and then explain why Superfund today is a "polluter pays" program even though the taxes expired over a decade ago.

THE RATIONALE FOR THE SUPERFUND TAXES

When Congress enacted Superfund in 1980, it was generally expected that EPA would perform most of the cleanups, using public funds to pay for them. A typical Superfund site was expected to be an abandoned dumpsite.

In that context, the Superfund taxes seemed a natural mechanism to shift financial responsibility for the cleanups to the sectors of society that were perceived to have largely caused the problem. In the early 1980's, EPA in fact did most of the investigations and cleanups. For many companies, their tax payments in those years far exceeded their payments for work at sites, and EPA used its Superfund budget to clean up many sites that had been contaminated mainly by industry.

During the 1980's, however, EPA began to successfully use the law's Draconian liability provisions both to recover its costs from PRPs and, more importantly, to require PRPs to perform cleanup work themselves. This evolution in EPA's enforcement approach led to a better understanding of the problems that gave rise to Superfund sites in the first place.

As EPA began to identify and confront the responsible parties at sites, it became evident that the original assumption that Superfund sites were created by oil, chemical, and large manufacturing and service companies was clearly in error. In fact,

the responsible parties include many medium and small businesses and many industrial sectors not subject to substantial—or any—Superfund taxation, as well as local and State governments, defunct and unidentifiable parties, and, in a surprising number of cases, the Federal Government itself.

In 1989, a Senate committee report urged EPA simply to find a few deep-pocket PRPs at each site and force them to do the work, using the strong-arm liability power of Superfund. At about that same time, EPA issued its "Enforcement First" policy, which was intended to put the responsibility for investigation and cleanup on the PRPs at every site where viable PRPs could be found, thereby saving the Superfund budget for sites without viable PRPs.

EPA's dramatic change in practice is documented in the table below, which is reprinted from page 43 of Superfund's Future: What Will it Cost?, published in 2000 by Resources for the Future ("RFF"). From 1980 to 1986, PRPs performed the key RifFS studies at only 24 percent of the sites, and they performed the cleanup remedy at only 33 percent of the sites. But from 1991 through 1999, when EPA's "Enforcement First" policy was in effect, these figures roughly doubled. PRPs performed 46 percent of the RIfFSs, and 73 percent of the actual cleanups. EPA understood that this trend allowed it to leverage its Superfund budget far more effectively, and so EPA has worked hard to have PRPs do the work at every site where liable parties can be found.

Table 3-2. Comparison of Leads for Remedial Pipeline Actions by Time Period (Percentage)

	RIIFS		Remedial design		Remedial action	
Period	Fund–lead	PRP-lead	Fund-lead	PRP-lead	Fund-lead	PRP-lead
FY 1980–FY 1986	76%	24%	63%	37%	67%	33%
FY 1987–FY 1990	52%	48%	49%	51%	54%	46%
FY 1991–FY 1999	54%	46%	28%	72%	27%	73%

Source: Data provided to RFF by EPA, October 2000.

As a result of "Enforcement First," PRPs perform the cleanups and reimburse EPA for its response costs at most sites. For a smaller number of sites that have viable PRPs, EPA has done the work and the PRPs have reimbursed EPA for its expenditures, including its oversight costs and its indirect costs.

Today, virtually the only NPL cleanups that EPA actually pays for are those where no viable PRPs exist—the so-called "orphan" sites. These sites generally were not contaminated by the companies formerly targeted by the three Superfund taxes. Instead, these sites were contaminated by companies that are defunct or insolvent, or by other types of generators, such as municipalities. EPA's narrowly limited role in paying for cleanups is a fundamental change from the original expectations. It has resulted from the tenacious and successful efforts of EPA to implement its "Enforcement First" policy. And it has eroded the basic rationale for imposing the Superfund taxes in the first place.

COMPANIES RESPONSIBLE FOR CONTAMINATION ARE PAYING FOR CLEANUP, SITE BY SITE

For more than a decade, companies whose wastes contaminated sites have been held directly responsible for cleanup costs, one site at a time. Through payments to investigate and remediate sites at which they are PRPs, such companies are paying their fair share to address the national problem. In fact, at many sites they are paying far more than their fair share, due to the joint and several liability feature of Superfund.

At most sites, it is impossible to identify the origin of much of the waste, so the PRPs that are identified must divide up the total costs among themselves. This means that each viable PRP typically pays far more than its proportionate, fair share of the costs to investigate and remediate the site.

Another factor that increases each PRP's liability is that the allocations of responsibility usually take place 30 to 50 years after the waste disposal occurred and a number of the identified PRPs no longer exist. The wastes generated by such defunct parties are referred to as the "orphan" share. Under joint and several liability, the viable companies have to pay that share.

In 1995, EPA partially recognized the inequity of that result and agreed to absorb part of the orphan share, subject to severe limitations. EPA now absorbs part of the orphan share in certain settlement agreements, but only up to 25 percent of the cost of the work to be performed under the settlements, and only if that amount can be written off against EPA's claim for past costs at the same site. The Agency recognized that these constraints meant that responsible parties would still be asked to pay excessive shares. EPA, "Interim Guidance on Orphan Share Compensation for Settlors of Remedial Design/Remedial Action and Non-Time-Critical Removals" (June, 1996).

At the same time, EPA also committed to join parties in an equitable manner rather than focus on a few deep-pocket PRPs. But in our experience, EPA enforcement efforts continue to focus mainly on the larger private sector parties alleged to be involved at sites.

In a nutshell, existing large corporations responsible for past disposal of hazardous waste are typically required to pay the full costs of cleaning up the sites where their wastes were sent—including the "orphan" share. Under this approach, their obligations are discharged in full and then some. Indeed, at least some of these companies have paid three times—once as PRPs to remediate their sites, again as the larger viable parties forced to absorb the orphan shares, and yet again as corporate taxpayers to support the general Superfund program. They have more than paid their fair share.

THE SUPERFUND TAXES ARE NOT NEEDED TO IMPLEMENT "POLLUTER PAYS"

Because viable PRPs are already paying for cleanups, the Superfund taxes are not needed to maintain the "polluter pays" principle. Superfund is already overwhelmingly a "polluter pays" program. It is typically only at "orphan" sites, where no responsible parties exist, that EPA performs cleanups using general revenues. This is entirely fair, because the companies formerly targeted by the Superfund taxes did not create those "orphan" sites.

It must also be recognized that there are other important respects in which the "polluter pays" principle has been departed from under Superfund. That is because EPA and Congress have elected to release certain groups of responsible parties from their full liability as PRPs, either by providing preferential settlements (as in the case of municipalities or very small private parties) or by granting full exemptions (as in the case of scrap dealers, certain small businesses, and lenders). In many instances the shares of liability that would have fallen on these parties have been imposed on the remaining PRPs. These dynamics have distorted any pure application of the "polluter pays" principle. They have instead substituted a "Deep Pocket-Easy Target" policy. Government should not further compound this distortion of "polluter pays" by reimposing the taxes on a group that has paid, and is paying, more than its fair share.

2. When the Superfund tax was in effect, did it correlate to the amount of money that EPA spent on cleanups?

The short answer is "no." This fact was documented by the U.S. Government Accountability Office, which in 2005 reported that "total funding for the Superfund and

Brownfields programs and the Superfund-related programs of the ATSDR and NIEHS, in current year dollars, remained relatively constant from fiscal year 1993 to fiscal year 2005." U.S. Government Accountability Office, Hazardous Waste Programs: Information on Appropriations and Expenditures for Superfund, Brown fields, and Related Programs 2 (June 30,2005) (GAO–05–746R) (emphasis supplied). In other words, Congress appropriated roughly the same amount for Superfund in each of those 13 consecutive fiscal years, from fiscal year to fiscal year 5. For example, Congress appropriated almost the same amount (in current year dollars) in fiscal year 5, the last year that the three Superfund taxes were still in effect, as it did in fiscal year 6, a decade after those taxes had expired.

3. Why do you think there is a decline in the number of cleanups from the 1990's?

There has certainly been a decline in the average number of sites listed by EPA each year as being "Construction Complete," i.e., physical construction of the remedy has occurred. This decline is widely misunderstood.

First, the enactment and implementation of the Resource Conservation and Recovery Act, the Toxic Substances Control Act, and other environmental statutes that impose liability for releases of hazardous substances has already achieved the desired end result: fewer sites that require remediation are being created. To presume that the number of sites requiring cleanup under CERCLA should remain constant, or even increase, is to ignore the positive effects of these other environmental statutes.

Second, investigating and cleaning up a site on the National Priorities List ("NPL") typically takes about a decade and, for complex sites, several decades. That process is sometimes referred to as the "remedial pipeline." EPA has calculated that the average duration of this process from start to finish (not counting post-construction operation and maintenance) is 8.1 years. RFF, on the other hand, found that a more accurate average duration is over 11 years. And even when "Construction Complete" is achieved, long years of operation and maintenance still lie ahead.

Thus, the number of sites that reach "Construction Complete" in any given year is only one measure of progress, and frequently not the most useful one. An exclusive focus on that factor can obscure an accurate evaluation of total progress being made, including the full range of intermediate and ultimate milestones being reached, at all of the Superfund sites where work is underway.

Superfund in fact has made great progress in cleaning up the sites on the NPL. After many years of tedious efforts to move sites through the initial stages of the remedial pipeline, EPA has achieved "Construction Complete" at more than 1,000 NPL sites. With over two-thirds of the NPL sites now having accomplished this objective, it should come as no surprise that at some point there would be a reduced number of sites crossing that particular checkpoint each year. This in no way suggests that there has been a decline in the overall level or pace of cleanup activity.

Another factor, perhaps less obvious, helps to explain the reduced numbers of "Construction Completes" in recent years. EPA made a deliberate policy choice in the early 1990's to focus first on those NPL sites that could be completed relatively quickly—the "low-hanging fruit" of the Superfund program—and to defer work on many of the larger, more complex NPL sites.

The payoff from this policy choice was record high numbers of "Construction Completes" throughout the 1990's. But in a way, EPA was robbing Peter to pay Paul. EPA now faces a smaller portfolio that is dominated by larger and more complex NPL sites—and a public that has grown accustomed to those atypically high completion rates.

The numbers can be looked at in many ways. In the first 20 years of the program, 757 sites reached the point of "Construction Complete," 411 of them in the 5 years from 1996 through 2000. Those statistics yield an average of 82 completions per year for those 5 years, but an average of 38 completions per year for the 20-year period as a whole. Neither "average" is very meaningful, however, because at any given point in time, so much work is being done at so many sites that simply is not reflected in the number of sites that happen to reach any single milestone in any particular year.

4. What are some ways that EPA could better manage their current budget of $1.24 billion dollars?

The Superfund program today faces a range of financial management challenges. The central theme that connects them is the pressing need for Superfund to live within its means. Currently, the Superfund program:

- loses a large part of its annual appropriation each year to other EPA offices that do not perform cleanups;
- takes on new long-term financial obligations each year without strong management review, as new NPL sites are listed, new Superfund Alternative ("SA") sites are designated, and new Records of Decision are signed;
- spends money each year on projects that are not high priorities and activities that are not essential; and
- fails to maximize the use of private sector funds by failing to offer incentives for private companies to perform cleanups.

Taken together, these weaknesses mean that the Superfund program is not yet effectively managing either its "income" or its spending to the extent necessary for the program to live within its means. The following recommendations fall into categories that match up closely with these weaknesses.

Specifically, EPA should:

1. CONSERVE FUNDS FOR OSWER

Currently, some $220 MM/yr of EPA's annual Superfund appropriation is transferred to other EPA offices that provide varying degrees of support for the Superfund program.

These include:

- Office of Research and Development ("ORO");
- Office of Administration and Resource Management ("OARM");
- Office of the Chief Financial Officer ("OCFO");
- Office of Inspector General ("OIG");
- Office of Policy and Environmental Information; and
- Office of General Counsel.

The net effect of these transfers is that nearly one-fifth of the total Superfund appropriation is redirected "off the top" to other EPA offices that are not involved in cleaning up sites. This is deeply troubling, for several reasons.

First, the amount of money involved here is very large, particularly in comparison to the total amount that EPA actually spends to clean up sites. For example, the amount transferred to other offices in fiscal year is about the same as the total amount that EPA spent on RD/RA at NPL sites, the most important elements of the Superfund cleanup program. To put it another way, Superfund is spending as much on administration and indirect support—most of it provided by offices outside of OSWER—as is spent on actual cleanups of NPL sites.

Second, the dollar amounts of these transfers were established years ago, and have not been revisited in light of the level of program support currently provided by these other offices. Thus, there is no basis to believe that the allocations reflect current program needs.

Third, and last, there is no sound policy reason for the Superfund program to pay for the support services of OARM, OCFO, and OIG, among others. These support offices provide shared services to EPA's many programs, and so they are directly funded by Congress as part of EPA's annual appropriation. The practice of having the Superfund program pay for these services is a glaring departure from the normal practice, both at EPA and throughout the Federal Government.

Finally, apart from the magnitude of these transfers to other offices, the transfers are currently open—ended, in the sense that funds not actually used by the offices receiving the transfer remain available for their use subsequent fiscal years. Any unused funds should be returned to OSWER at the end of each fiscal year so they can be used for cleanups.

2. LIMIT GROWTH OF SUPERFUND DOCKET TO SITES THAT CANNOT BE ADDRESSED THROUGH OTHER PROGRAMS

Each new site listed on the NPL—and each new site designated as a SA site pursuant to EPA guidance—effectively imposes long-term financial obligations on the Superfund budget for years to come. New sites should not be listed or designated absent a clear showing that no viable PRPs are willing to perform or fund the work; the sites require Federal intervention; and no other alternative programs will work ("the tool of last resort").

Currently, EPA lists sites on the NPL (and designates sites as SA sites) without making these findings. Sites are added to the Superfund docket even though viable PRPs exist. Sites are added based upon very limited data. Sites are added without attempting to quantify the actual risks they may pose.

Moreover, EPA's current NPL listing process is not very transparent. As a result, some 20–30 sites are typically added to the NPL each year with little explanation of what other options were considered or why those options were judged inadequate. (EPA recently began including in the docket a brief statement about the "Need for NPL Listing," but this alone does not permit stakeholders to evaluate, or comment on, EPA's decision—making.) Similarly, the SA designations are made pursuant to poorly defined criteria and are shielded from public review and scrutiny.

Greater EPA Headquarters management control over the NPL listing process and the SA designation process is mandatory in order to control the growth of the Superfund docket, which is an essential element of managing Superfund's total "debt" load into the future. Greater transparency in both processes is also critically needed.

3. REDUCE UNNECESSARY SPENDING

The total amount actually available for cleanup each year is further limited by the fact that EPA spends more money than is necessary on remedial actions and on oversight. This situation could be improved in several ways.

A. Remedial Actions

Each new Record of Decision ("ROD") selects a remedy for a Superfund site, effectively imposing long—term financial obligation on the Superfund budget for years to come. Yet dozens of new RODs are issued each year, and they are signed by EPA's Regional Offices (pursuant to delegations of authority), with little involvement by the Superfund program management at EPA Headquarters. In practical terms, then, program management is not managing the rate at which the program takes on new financial obligations each year.

EPA should take several actions to address this problem:

• EPA Headquarters should review most new RODs before they are signed;

• the National Remedy Review Board should be given more authority to ensure that future remedy decisions are both technically sound and, as required by section 121 (a) of CERCLA, cost-effective;

• EPA should expand its use of the Fund-balancing Applicable or Relevant and Appropriate Requirement ("ARAR") waiver, the "inconsistent applications of State standard" ARAR waiver, and the Technical Impracticability ARAR waiver to facilitate the selection and prompt implementation of cost-effective remedies;

• Superfund's approach to risk assessment should emphasize current land uses, realistic exposure scenarios, and sound science.

B. Oversight of Cleanups Performed by Private Parties

As discussed above at pages 1–4, EPA could quickly free up additional resources for remedial construction by fulfilling its 12-year old pledge to reduce its oversight of work performed by PRPs.

4. FOCUS ON PUBLIC HEALTH THREATS

CERCLA authorizes the President to take actions to protect public health and the environment. Section 104(a)(1) of CERCLA, however, directs the President to "give primary attention to those releases . . . [that] may present a public health threat." Despite this statutory directive, the Superfund program continues to devote some of its scarce dollars to projects that present no "public health threat," and indeed may pose no significant risks to human health at all, but instead pose purely ecological risks. EPA should prioritize its spending so that all of the NPL sites with significant human health risks are addressed before any resources are directed toward sites that present only ecological risks.

5. MAXIMIZE USE OF PRIVATE SECTOR FUNDS

Finally, the success of the Superfund program is heavily dependent upon leveraging the resources of PRPs so that most cleanups are performed by PRPs rather than by EPA. Although EPA has made progress in this regard, it has yet to maximize the use of PRP resources. Indeed, given recent court decisions that restrict the ability of private PRPs to file contribution claims against other liable parties, EPA needs to do far more than it has done in the past simply to maintain the current level of PRP-Iead cleanups.

To maximize the number of PRP-Iead cleanups, EPA should provide PRPs with greater incentives to reach settlements. Among the many potential incentives are the following:

• meaningful orphan share funding, where EPA agrees to either pay part of the costs, or to waive some or all of its claim for past costs, in order to account for orphan shares;

• expanded access to special site accounts, which typically contain money collected from small parties that should be disbursed to the performing parties at the site;

• "carve-outs" whereby EPA pursues non-settlers for portions of site work and/or EPA past costs; and

• consent decree language that is more flexible and balanced than the provisions of the Model RD/RA Consent Decree.

In closing, it was a pleasure to be able to testify before the Subcommittee at the October 17, 2007 hearing. If you or your colleagues have any questions about this letter, or require any additional information, I would be pleased to be of assistance.

Senator CLINTON. Thank you very much, Mr. Steinberg.

Our final witness is Lenny Siegel, Director of the Center for Public Environmental Oversight.

STATEMENT OF LENNY SIEGEL, DIRECTOR, CENTER FOR PUBLIC ENVIRONMENTAL OVERSIGHT

Mr. SIEGEL. Senator Clinton, members of the Subcommittee, I appreciate the opportunity to appear before you today to relate what I have learned about Superfund from communities throughout the United States.

Last week, when I contacted grassroots activists from the communities that I am featuring in my testimony, they responded promptly, and were in fact excited that their stories might be told in the Nation's Capital.

Over the past quarter century, the Comprehensive Environmental Response, Compensation and Liability Act, commonly known as Superfund, has been an important instrument for protecting public health and the environment in the United States. Today, with the Superfund account depleted, seriously contaminated sites suffer from inadequate cleanup, inefficiencies, and inequities.

I highlight four sites in my community plus three others, which I have visited within the past year, to illustrate what the shortage of fund money means to the people who live, work or attend school on or near some of the Nation's most contaminated properties. These include sites on the Superfund national priorities list, as well as many that should be. My focus today is onsites that are dependent upon the Superfund itself.

At the Orion Park Military Housing Area in Mountain View, California, the shortage of resources has severely handicapped U.S. EPA's ability to address offsite sources, preventing it from requiring the Navy to conduct onsite cleanup, and forcing NASA's adjacent Ames Research Center to expend its own resources on contamination migrating from the site.

Contamination prevented the development of new military housing on the site, and the military personnel at the planned Armed Forces Reserve Training Complex will be a long-term risk from vapor intrusion and the migration of subsurface contamination into buildings.

I might add there are no current exposures there. They evicted all the residents. A local paper wrote, "the Army's plan to build a huge training center at Moffett Field on a site it knows is contaminated with carcinogenic gas should be halted at least until warnings from local environmentalists are acknowledged and the dangers are mitigated."

In Victor, NY, trichloroethylene from apparent illegal dumping has poisoned private wells and released toxic vapors into homes. A fund-led cleanup could protect the impacted families, but the Superfund does not have enough money for it to make much sense even to add the site to the NPL. Earlier this month, Jackie Barry, whose family home has been directly impacted, recently sent a message to "anyone who cares" on the Internet: "it has been 6 months since news broke of the contamination. It has been 17 years that it existed. Why would we think that anything could be accomplished? I sit here in my home with my family and pray

every day that someone will listen. For God's sake, there has been death and illness and who knows what else is here."

In Ambler, PA, EPA successfully capped two asbestos waste piles 14 years ago, but exposed piles not on the National Priorities Listed are slated for redevelopment, with neighbors fearing that the current exposures will be increased with the release of development-associated asbestos dust, and would like EPA to list the site and fund the response. But as long as the fund is depleted, this appears unlikely. In my written testimony, I have a picture of what they call a removal action at that site. It says "don't create dust." It is a sign.

Sharon McCormick, who lives within breathing distance of the piles, asked: "If you can make your presentation to the Senate, now would be a good time because we are desperate down here. Development on asbestos waste of this magnitude has never been done before. Please help me."

There is consensus support for the dredging of polychlorinated biphenyls from New Bedford Harbor, Massachusetts, a Superfund mega-site. This is a place where I have been in a room where all the agencies do get together. However, inadequate funding has forced an inefficient start-and—stop cleanup that is currently slated to stretch out a quarter century. Henry Bousquet, who grew up near the harbor, explained: "My little girls, Phoebe and Payton, are very young, 3 years and 11 months respectively. At the current rate of $15 million a year for the Acushnet River Superfund remediation, Phoebe will be 29 years old, just 3 years younger than I am now, before it is clean enough for parents to feel safe about it."

Today, both sites are already dependent upon EPA funding, and those that should be added to the National Priorities List, cleanup is slow and inefficient, and expenses are often borne by third parties. Replenishing the fund would be a giant step forward in recognizing, investigating and remediating the most contaminated sites in America.

I think it is important to go beyond the statistics, go out and visit these communities, see what it means to people's homes, to their families, to their property, the fact that we are not acting quickly enough to remediate these sites. We aren't even putting them into the pipeline because there is not enough money. Go out and talk to them and then come back and decide whether we need money in the Fund or not.

Thank you.

[The prepared statement of Mr. Siegel follows:]

STATEMENT OF LENNY SIEGEL, DIRECTOR, CENTER FOR PUBLIC ENVIRONMENTAL OVERSIGHT

EXECUTIVE SUMMARY

Over the past quarter century, the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), commonly known as Superfund, has been an important instrument for protecting public health and the environment in the United States. Its tools—addressing response, compensation, and liability—are like the proverbial three-legged stool. At many sites, CERCLA collapses when one of those tools is missing. Across the country, since the Superfund account was depleted, seriously contaminated sites have suffered from inadequate cleanup, inefficiencies, and inequities.

I highlight four sites, all of which I have visited within the past year, to illustrate what the shortage of Fund money means to the people who live, work, or attend school on or near the some of the nation's most contaminated properties.

• At the Orion Park Military Housing Area, Mountain View, California, the shortage of Fund resources has severely handicapped U.S. EPA's ability to address offsite sources, preventing it from requiring the Navy to conduct onsite cleanup and forcing NASA to expend its own resources on contamination from the site. Contamination prevented the development of new military housing on the site, and military personnel at the planned Armed Forces Reserve training complex will be at long-term risk from vapor intrusion, the migration of subsurface contamination into buildings.

• In Victor, New York trichloroethylene (TCE) from apparent illegal dumping has poisoned private wells and released toxic vapors into homes. A Fund-led cleanup could protect the impacted families, but the Superfund does not have enough money for it to make much sense even to add the site to the National Priorities List (NPL).

• In Ambler, Pennsylvania, EPA successfully capped two asbestos waste pile sites 14 years ago, but remaining piles, not on the NPL, are slated for redevelopment. Neighbors, fearing that current exposures will be increased with the release of development-associated asbestos dust, would like EPA to list the site and fund the response, but as long as the Fund is depleted, this appears unlikely.

• There is consensus support for the dredging of polychlorinated biphenyls (PCBs) from New Bedford Harbor, Massachusetts, a Superfund "mega-site." However, inadequate funding has forced an inefficient start-and-stop cleanup that is currently slated to stretch out a quarter century.

Today, both at sites already dependent upon EPA funding and those that should be added to the National Priorities List, cleanup is slow and inefficient, and expenses are often borne by third parties. Replenishing the fund would be a giant step forward in recognizing, investigating, and remediating the most contaminated sites in America.

CERCLA: A THREE-LEGGED STOOL

The Comprehensive Environmental Response, Compensation, and Liability Act, commonly known as Superfund, is imperfect, but over the past quarter century it has been an important tool for protecting public health and the environment in the United States. It provides tools for determining environmental cleanup strategies and technologies, assessing and assigning responsibility, and providing the resources to remove, treat, and prevent contact with hazardous substances.

All three tools—addressing response, compensation, and liability—are necessary. Like the proverbial three-legged stool, CERCLA collapses when one of its legs is missing. Across the country, since the Superfund account was depleted, seriously contaminated sites have suffered from inadequate cleanup, inefficiencies, and inequities.

From my recent visits to communities with seriously contaminated sites, I have selected four examples. In each of these cases, community members have strong reason to believe that public health and the environment are at risk, and—whether or not the site is currently on the NPL—that the insufficiency of the Superfund is a major factor. I believe that these four case studies each represents many more sites in the NPL universe.

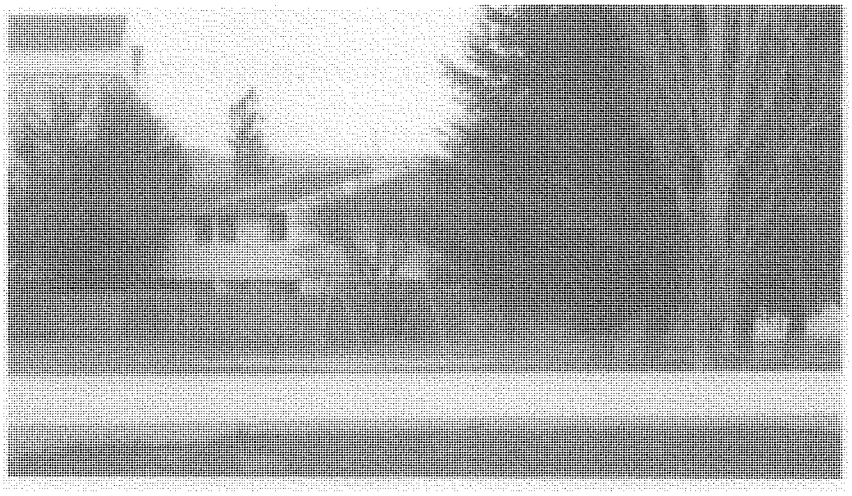
Orion Park Military Housing Area, Moffett Field, California

The Army's plan to build a huge training center at Moffett Field on a site it knows is contaminated with a carcinogenic gas should be halted, at least until warnings from local environmentalists are acknowledged and the dangers are mitigated.—*Mountain View Voice,* September 14, 2007.

This site, in my own community of Mountain View, California, is particularly complicated. Originally part of the Moffett Naval Air Station, its 72 acres sit between NASA Ames Research Center and Stevens Creek. It was transferred to the Air Force as a result of the 1991 Base Realignment and Closure (BRAC) round and retransferred to the Army after BRAC 1995. Despite the earlier discovery of other local groundwater plumes of (VOCs), the Orion Park plume escaped detection until 1999, when NASA detected trichloroethylene under its adjacent, downgradient property. Subsequent sampling found widespread TCE readings in the hundreds of parts per billion range, in the top two aquifers.

Though the Navy argued that the contamination did not pose a risk to the hundreds of military families who lived above the plume, U.S. EPA conducted its own sampling, demonstrating that vapors from the groundwater plume were rising into an unknown percentage of the homes. This probably contributed to the Army's decision to replace the housing in partnership with a private builder, under the Residential Communities Initiative. However its private partner decided not to build homes at Orion Park, because of the contamination.

As an alternative, the Army proposed—and the 2005 BRAC Commission agreed—to construct an Armed Force Reserve Center training complex—on thirty acres at Orion Park. 413 full-time employees will staff the facilities, which will also sup port a total of 1,500 Soldiers for weekend classroom and administrative training. To resist the intrusion of toxic vapors, the Army plans to build engineering controls into all of its new buildings, but there is no cleanup planned for the site. In fact, no complete investigation is planned. Meanwhile, NASA is planning a major treatment system, an air—sparging barrier to intercept the toxic chemicals as they flow onto Ames Research Center property y. This will cost over $1 million, plus long-term operation and maintenance expenses.



Orion Park Military Housing Area, Moffett Field, California

Why has the Orion Park response stalled? After all, within a few miles of my house there are at least a dozen National Priorities List sites, including Moffett Field. At those sites, the regulators, responsible parties, and the community have worked together successfully to address the contamination. But Orion Park is an exception.

For one, the Navy does not accept EPA's determination that Orion Park is part of the Moffett NPL site. More important, it argues that all of the contamination originates offsite, south of Bayshore Freeway (U.S. 101), probably from abandoned businesses. Most of the other stakeholders, including NASA, EPA, and community activists, have concluded from site sampling that TCE and other poisons were released both at Orion Park and south of 101. Before EPA considers trying to force the Navy to follow CERCLA at the site, it believes the offsite area needs to be thoroughly assessed. The Navy says it cannot legally conduct upgradient groundwater sampling, so the task has fallen to EPA.

TRICHLOROETHYLENE (TCE)

Breathing small amounts may cause headaches, lung irritation, dizziness, poor coordination, and difficulty concentrating.

Drinking small amounts of trichloroethylene for long periods may cause liver and kidney damage, impaired immune system function, and impaired fetal development in pregnant women, although the extent of some of these effects is not yet clear.—U.S. Agency for Toxic Substance and Disease Registry

The evidence on cancer and other health risks from TCE exposure has strengthened since 2001....—National Research Council, July 2006

And that's where the Superfund comes into play. EPA must pay for any sampling it conducts from the Fund. But there isn't enough money to pay for the required investigation. And for sure, there is not enough money to prevent additional contamination from migrating under the freeway to Orion Park. EPA cannot insist that the already recalcitrant Navy—or the current owner, the Army—undertake cleanup until it addresses the offsite source.

Thus, the long-term protection of Army personnel who will work above a shallow groundwater plume on an NPL site is handicapped because the Superfund cupboard is bare. Furthermore, NASA's Ames Research Center continues to spend its own Federal money to address contamination that should have been captured and treated by other Federal agencies.

Modock Road Springs Site, Victor, New York

It's been six months since news broke of the contamination. It's been 17 years that it existed. Why would I think that anything would be accomplished? I sit here in my home, with my family and pray every day that someone will listen. That someone will care. That *someone* has the *compassion* to do something about this. *For God's sake*, there has been death, illness and who knows what else is here. My family has been called names, told we exaggerate, are trying to stain this town's image, issued directives to, and for what? Is this not serious enough for you? Is this some kind of joke? It isn't a joke. It is serious. This is our lives.... — Jackie Barry, Victor, New York.

Earlier this year, the Rochester, New York Democrat and Chronicle headlined that private wells in Victor, New York were still contaminated by TCE. Furthermore, as at Orion Park and many other sites across New York State and across the country, contamination was also volatilizing into local homes. The contamination, apparently caused by illegal dumping at the Syracusa Sand & Gravel mine, was first detected and confirmed in 1999!

This year New York's Department of Environmental Conservation (NY DEC) began to pay more attention to the site. But progress has been handicapped by the absence of a viable responsible party, to pay for required investigation and cleanup. That is, DEC has finally interrupted the most egregious pathways, but actual cleanup is a long way off.

Apparent source of the Victor, New York TCE plume

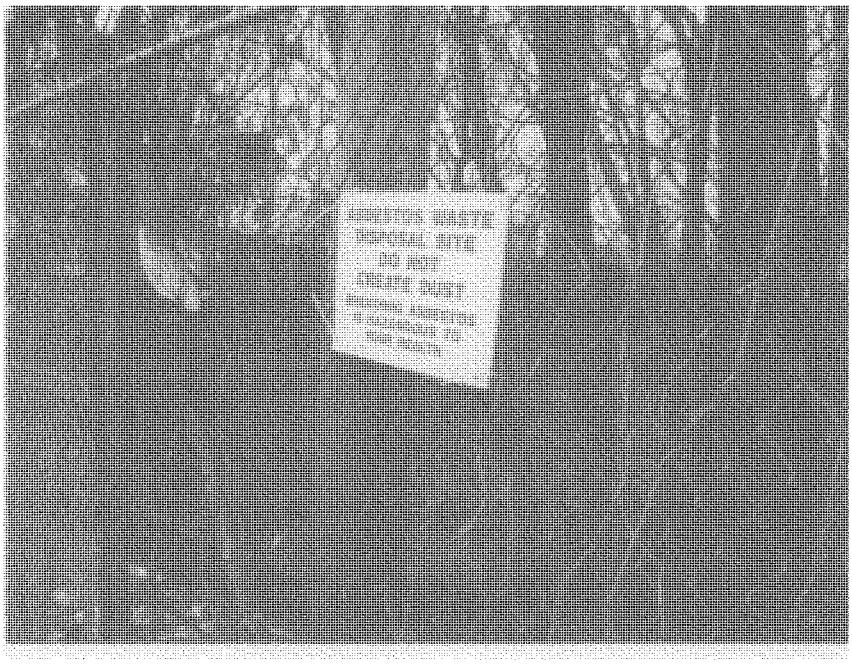
In March, therefore, the area's Congressman called upon EPA to step in and "take the lead." EPA, according to the newspaper, said that it was "poised to help if the situation warranted it." An impacted resident reported: "We recall a meeting that I held at my home with our State Senator. In this meeting he described his experience in several environmental litigation cases as a lawyer (prior to being an elected official) and his knowledge of the EPA, National Priorities List and the Federal Superfund. He wondered why the site hadn't been put on the NPL and then went on to suggest that even if we had, that right now it was best to have the DEC doing the work because of minimal resources in the Federal Superfund."

In Victor and many other sites in the U.S., people are exposed in their own homes to serious levels of harmful substances released by polluters, in many cases decades ago. We have a program for dealing with that: CERCLA. But today impacted communities are told time and time again: Joining that program won't help because Superfund has no money.

BoRit Asbestos Piles, Ambler, Pennsylvania

If you can make your presentation to Congress and the Senate, now would be a good time because we are desperate down here. Development on asbestos waste of this magnitude has never been done before. Ambler can not afford an experiment of this type, especially if it goes awry. *Please help me.* - Sharon McCormick, Ambler, Pennsylvania

Ambler, Pennsylvania, 15 miles northwest of Philadelphia, is the birthplace of the American asbestos industry. Ambler itself grew up as a company town for the Keasby and Mattison Company (K&M), one of the nation's leading manufacturers of asbestos products such as electrical insulation, brake linings, piping, roofing shingles, and cement siding. K&M operated in Ambler from 1897 to 1962. K&M disposed of defective products and manufacturing wastes at several locations within the community. In 1986 EPA placed the piles on Locust Street and at the K& M main plant on the NPL—listed aptly as the Ambler Asbestos Piles—and it completed the response, primarily cap ping, in 1993.



BoRit Pile with McDonalds barely visible in background

ASBESTOS

Significant exposure to any type of asbestos will increase the risk of lung cancer, Mesothelioma and nonmalignant lung and pleural disorders, including asbestosis, pleural plaques, pleural thickening, and pleural effusions....
Health effects from asbestos exposure may continue to progress even after exposure is stopped.—U.S. Agency for Toxic Substance and Disease Registry

However, no action was taken at the similar 38-acre BoRit site, three parcels along the eastern bank of Wissahickon Creek, less than a mile from the piles on the NPL. A developer owns a six-acre parcel just across a small creek, Tannery Run, from three commercial buildings: Sons of Italy, an auto repair shop, and McDonalds. The second parcel is a reservoir currently owned by the Wissahickon Watershed Authority. The Wissahickon Valley Watershed Association hopes to acquire the reservoir and improve it as a waterfowl preserve. To the northwest of the reservoir is the former Wissahickon Whitpain Park, owned by the adjacent township of Whit pain. This triangular park was closed more than twenty y years ago because of asbestos releases.

Wissahickon Whitpain Park with housing just across the street

Over the past year or so, EPA's Environmental Response Team and the Pennsylvania Department of Environmental Protection have been investigating the site. Residents have told me that the entire site is proposed for redevelopment, and that the environmental response would take place under the brownfields model. Frequently passing signs warning not to create dust, they are concerned that any earth movement would release hazardous chrysotile asbestos into their neighborhood as well as the creeks, which feed into Philadelphia's water supply. They favor capping, as at the nearby NPL site. But there is no plan to place the piles on the NPL, apparently because EPA doesn't have the money to contain the risk. A local activist explained, "I was told both by my Congresswoman and by my EPA region that listing BoRit on the Superfund list wouldn't help, because Superfund has no money."

EPA did its job at the nearby NPL site, but it doesn't have the resources to do it here. Inadequate Superfund funding is forcing a brownfields-type response, placing the public at risk.

New Bedford Harbor, Massachusetts

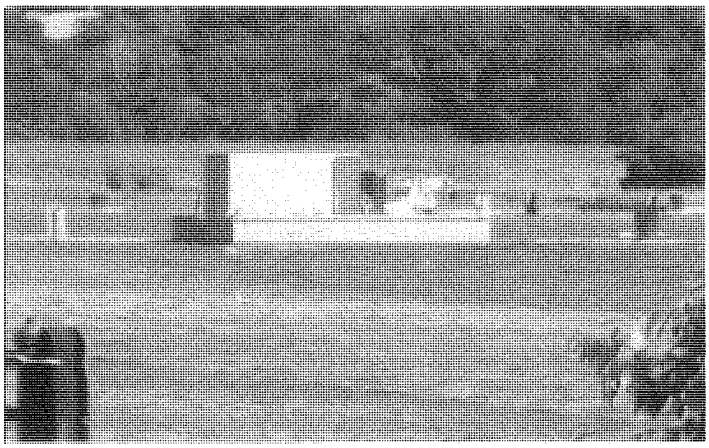
My little girls Phoebe and Payton are very young, three years and eleven months respectively. At the current rate of $15 million a year for Acushnet River Superfund remediation, Phoebe will be twenty-nine years old, just three years younger than I am now, before it's clean enough for parents to feel safe about it. So they won't have childhood memories of playing amongst the rocks at the hurricane barrier like I do. Those are some of my fondest childhood memories, too.—Henry Bousquet, New Bedford, Massachusetts.

One of the nation's Superfund "mega-sites," the 18,000-acre New Bedford Harbor's sediment contains high concentrations of polychlorinated biphenyls (PCBs) in several areas. Over 100,000 people live within three miles of the site. Though there were many sources, the largest appears to have been Aerovox, a manufacturer of electrical capacitors and transformers, which operated on the harbor's edge from

about 1940 to 1977. There are supposed to be signs along the waterfront warning people not to eat fish, but they often disappear and must be replaced.

Each summer sediment is dredged, de-sanded, de-watered, and shipped to a licensed PCB-landfill in Michigan. The Army Corps of Engineers, under contract to U.S. EPA, started dredging harbor hotspots as early as 1994. The Corps is just finishing its fourth year of full-scale dredging, with only about 40 days in the field each year. Based upon the numbers I was given when I visited, this year the Corps removed 25,000 cubic yards of contaminated sediment, treated 20-million gallons of water, and shipped 16,000 tons of residue by train to Michigan.

There is consensus support for the remedy, but this is far from a success story. Community members express serious concern at the anticipated duration of the project. At the current rate, dredging will continue for an estimated 25 years. The problem isn't capacity or weather, but money.



In New Bedford Harbor, Massachusetts the dredge is towed by cables from the shore

Over the life of the project, EPA has spent over $235 million for "planning, engineering, and construction" at New Bedford Harbor. Reportedly, over $100 million has come from private responsible parties. However, the remaining funding—nearly $300 million more—will have to come from EPA's depleted Superfund. At $15 million per year, the project proceeds slowly and suffers significant inefficiencies from the imposed start-and-stop response.

Activists are concerned about continuing public exposures to PCBs through water, air, and food chain pathways. Even though the entire inner harbor and thousands of acres of the outer harbor have been closed to shellfish harvesting and fishing since 1979, residents are known to harvest and eat fish, lobster and shellfish from the harbor, exposing themselves to potential risks from PCB ingestion. Local residents would like subsistence fishing to resume safely. And they point out that as long as the harbor is contaminated, the once valuable lobster fishery and hard shell clam industry—which brought in some five million dollars to the regional economy—will remain sidelined and the comprehensive redevelopment of otherwise attractive shoreline brownfields properties will be difficult in New Bedford and other communities on the harbor.

POLYCHLORINATED BIPHENYLS (PCBs)

In summary, PCBs have been demonstrated to cause a variety of serious health effects. PCBs have been shown to cause cancer and a number of serious non-cancer health effects in animals, including effects on the immune system, reproductive system, nervous system, and endocrine system. Studies in humans provide supportive evidence for the potential carcinogenicity and non-carcinogenic effects of PCBs. The different health effects of PCBs may be interrelated, as alterations in one system may have significant implications for the other regulatory systems of the body.—U.S. EPA

Conclusion

While U.S. EPA's CERCLA program has always had significant room for improvement, it has protected public health and improved the natural environment in hundreds of communities across the United States. Today, however, both at sites already dependent upon EPA funding and those that should be added to the National Priorities List, cleanup is slow and inefficient, and expenses are often borne by third parties. Many vapor intrusionsites—with completed pathways but without responsible parties—are not getting the attention they deserve. Replenishing the fund would be a giant step forward in recognizing, investigating, and remediating the most contaminated sites in America.

RESPONSES BY LENNY SIEGEL TO ADDITIONAL QUESTIONS FROM SENATOR BOXER

Question 1. Please describe your experience in working with EPA and State cleanup programs on the need to address vapor intrusion at toxic waste sites?

Response. The practice of the various states, and even EPA regions, vary significantly. For example, New York State and EPA Region Nine activity evaluate hazardous waste sites—even sites with remedies in place—to determine whether a full vapor intrusion study is necessary. Other states, such as Texas and Michigan, seem unwilling to consider vapor intrusion even when preliminary data suggest a need to investigate.

There seem to be two primary reasons for the foot—dragging in certain jurisdictions:

First, in the absence of detailed policies in most states, the only pertinent guidance is U.S. EPA's 2002 Draft Vapor Intrusion Guidance. Some agencies are unwilling to rely upon that because it was never finalized. For example, at a state—led Superfund site in Arizona, the State Department of Environmental Quality reportedly told community members that a proposed vapor intrusion investigation could not move forward because EPA's 2002 guidance remained in draft form. I have heard that EPA has decided not to finalize that guidance, despite its important as policy and the ongoing technical work that agency staff have carried out in support of that goal.

Second, the most common contaminant at sties that appear to pose the greatest vapor intrusion risk is trichloroethylene (TCE). EPA has not only failed to complete its 2001 draft Human Health Risk Assessment, but it provides no national interim guidance for screening levels for TCE in indoor air. This allows some states to use enormously unprotective standards, and it creates confusion at many other sites. The absence of standards based upon current science is more than a theoretical problem. People are being exposed to TCE at levels that I consider unsafe, in their homes, schools, and workplaces.

For years I have been attending workshops and conferences about vapor intrusion. Usually I'm the only community representative there, among scores or even hundreds of consultants, regulators, and others, I have therefore urged EPA to organize forums for public stakeholders, in which members of impacted communities would learn about the state—of—the—science in vapor intrusion and offer grounded—in—reality feedback to the experts. EPA recently agreed, inviting five representatives of impacted neighborhoods to the first National Stakeholders' Forum on Vapor Intrusion in San Diego in March 2008. The event was a success, but most of those present were the "usual suspects" from consulting firms, Government agencies, and universities. I am working with other at EPA to organize a larger conference, hopefully to be held in Fall 2008. However, thus far we have not identified a source for essential funding for travel scholarships.

Question 2. Do you believe that EPA has lived up to the National Academy of Sciences' recommendation in 2006 "that Federal agencies finalize their risk assessment with currently available data so that risk management decisions can be make expeditiously"?

Response. Clearly EPA has not moved forward expeditiously. The public has seen nothing substantive from EPA since the Academy recommendation. Part of the problem is that since 2003 the risk assessment mission has been moved from EPA to an Ineragency Working Group, which is made up of representatives from the White House, EPA the three Federal polluting agencies: NASA, the Defense Department, and the Energy Department. This working group sponsored the Academy study; in fact, the Academy's recommendation, cited in the question, mistakenly ascribes EPA's statutory responsibility to "Federal Agencies," presumably NASA, DOD, and Energy, all of which have a conflict of interest. EPA should stop meeting privately with the other agencies, and it should develop interim screening and action levels for TCE in indoor air while it accelerates the timeline of studies required to issue a final risk assessment.

RESPONSES BY LENNY SIEGEL TO ADDITIONAL QUESTIONS FROM SENATOR INHOFE

Question 1. It is actually a misrepresentation to call the Superfund a "trust fund" since the money collected from it went directly into the general treasury and then EPA received funding through the appropriations process. If reinstated what assurances do we have that the money would go directly to Superfund cleanup?

Response. It's my understanding the EPA has spent more on the Superfund program than it collected in Superfund taxes. I have no reason to believe that would change after reinstatement. If the point of the question is whether the money will go directly to site remediation, I believe that the program expenditures on research, technology transfer, technical assistance, and cooperation with State and tribal Governments, as well as other entities, are a wise use of funds. Were it not for such expenditures, EPA would be throwing money at the cleanup program without the benefit of all the technological and policy developments that have occurred since enactment of CERCLA.

Question 2. Historically, can you point to a correlation between the money received from the Superfund tax and the money spent on cleaning up Superfund [sites]?

Response. I have not done a statistical analysis, but I know that a large share of money spent at National Priorities List (NPL) sites comes from both Federal and non-Federal responsible parties, EPA-funding activity—sometimes recovered after the fact—makes such efforts possible. I know anecdotally that since the Fund was depleted that cleanup has been slowed—creating financial inefficiencies at sites such as the New Bedford Harbor, Masschussetts—and there has been significant pressures to keep Superfund-caliber sites off the NPL because there isn't enough money to address them properly.

Question 3. Do you agree that the sites left today are larger and more complicated, requiring more time and attention to ensure community acceptance of the remedies and proper cleanup?

Response. Most of the large, complex sites that have been on the NPL for some time have a long way to go before completion. At some of these sites, interim measures have provided temporary protection of public health and the environment, but significant contamination remains. In particular, sites with contaminated groundwater can be made safe for surface use, especially if vapor intrusions is investigated and mitigated, but full groundwater cleanup is technically challenging and lengthy in most geologic settings. However, there are other, smaller or simpler sites that have been added to the NPL relatively recently, either because the level of contamination was recently discovered or remediation under other programs has not been adequate.

Senator CLINTON. Thank you very much, Mr. Siegel. You raise a very important additional aspect of this. I ask unanimous consent that we submit all the written testimonies of the panelists for the record.

Senator CLINTON. I would like to ask several of the witnesses to respond to what they have heard, both from Administrator Bodine and from the other panelists. It would be helpful if it were possible to give us your top three recommendations about what you think

needs to be done with respect to Superfund. It may be hard to fit all of that in, but having heard what you have heard, I think it is important that the Committee get guidance as to what you believe we should be focusing on.

Professor Steinzor, would you start please?

Ms. STEINZOR. That is a great question. First and foremost, reinState the tax; second, prioritize enforcement. There are too many sites where potentially responsible parties who have ample resources are not working to clean the sites up. And third, change the attitude toward Superfund, because that is actually the root of its problems. This program is the one that everybody loves to hate. It has no respect and no credibility, and yet everybody should acknowledge that the problems it addresses are real and profound. This change in attitude needs to start at the top, because the States are struggling with the sites that have been dumped in their laps and the ones they have found. The EPA needs to changes its fundamental perspective.

Senator CLINTON. I would ask unanimous consent to submit Professor Steinzor's report, along with Margaret Clune, entitled, The Toll of Superfund Neglect, for the record.

[The referenced document can be found on pages 102-258.]

Senator CLINTON. Professor Steinzor, when you refer to reinstating the Superfund polluter pay tax, would you do it exactly the same way as it was done before? Or do you have a specific set of suggestions as to how it could be better targeted or better structured?

Ms. STEINZOR. I think the rate may need to be raised. It is a very broadly based tax. It focuses on the oil and chemical industries, which are the two industries most involved at Superfund sites. There also is a broad-based corporate tax that spreads the burden across many firms.

I have real questions in my mind whether more money is needed than was committed in the last reauthorization. As I said in my testimony, in constant dollars that amount is 40 percent lower than what Congress said.

Senator CLINTON. Thank you very much.

Dr. PORTER.

Dr. PORTER. Yes, Madam Chairman. I would say my big three would be, No. 1, set deadlines, whether they are studies or completion, but very visible deadlines. Projects tend to get done when there are deadlines, or at least people know what is the reason it is not being done.

I would like to coin a term this morning. I would like to see these sites as kind of a subset of the first point. I would like to see more of a culture of completion at sites. What we have now is a culture of deliverables. There are 15 or 18 reports due at every site, and those are all important documents, but it has gotten to be a very legalistic process-oriented situation where it is a culture of deliverables. It is like, you can't blame me because I got the work plan done on time, or you can't blame me because I did something else on time.

No, we can blame you because you were supposed to get the whole project done in 3 years or whatever. So the first one is set deadlines.

The second is fix responsibility a little more clearly. It thinks the regional administrator is the primary person. Susan obviously is in a key role. In fact, she may need to make some of those decisions herself. In my day, I made the Love Canal decisions, because I felt that was a nationally significant job. I made the Times Beach decision personally because I felt like that was nationally significant, and a few others.

And then finally, I would say more dollars for cleanup, not necessarily what Rena is saying that we need more dollars, period, but within the budget, try mightily within the budget we now have, which in the PRP work I would try to get more dollars directly related to clean up. I am a little taken aback by this 3,000 people at EPA working on Superfund. I know you have to go one by one through and decide if everybody is doing something useful, because I am sure they are all doing something useful, but I do think that we need to be sure that money is going to clean up.

As kind of a subset of that is have the PRPs take more responsibility for their own sites and setting their own goals. They should be, it seems to me, time is money and I would like to see the responsible parties step up themselves, the CEO or someone says we are going to get that site cleaned up and let's do it in 3 years or 4 years or whatever.

Senator CLINTON. Thank you.

Mr. CAMPBELL.

Mr. CAMPBELL. Thank you.

My recommendations would track very closely those of the previous speakers, but let me give you a level of detail. First in terms of fully funding the program, I think that is essential. I think it requires reinstating the tax, as members have recognized.

I also think it means recognizing the other agency roles in this process, not just EPA's budget, but for example there is currently a statutory prohibition on using the fund to do ecological risk assessments by Fish and Wildlife Service and the like. I think expanding that funding to ensure cleanups are fully funded is essential.

Second, in terms of the efficiency of the program, is really making sure EPA is more transparent about the status of these cleanups. They are simply not forthright in terms of saying that the cleanups that remain are too complex and that funding is adequate currently. When it is fully funded, you will see that there are many, many actions in the cleanup queue that are ready to start.

And third, to make sure that this funding extends to enforcement. In the current climate, there has been too little enforcement and too often EPA or the Department of Justice asserts that it is because the funding isn't there. I think fully funding the enforcement program is going to be a critical key.

And the other critical key I think is one of leadership. You need different leadership in this program that is going to set completion of protective cleanups as a foremost goal, as it was during President Clinton's Administration, as it was under Administrator Reilly before that.

Senator CLINTON. I am over my time. I want to ask both Mr. Steinberg and Mr. Siegel to submit your top three priorities in writing for the record, if you would.

Senator BARRASSO.

Senator BARRASSO. Thank you very much, Madam Chairman.

So I am wondering, this is a fascinating thing, saying, give me your best three. And even though it takes too long, I think that is a great way to approach that stuff, so I would go to Mr. Steinberg and Mr. Siegel for those top three.

Mr. STEINBERG. Thank you, Senator.

The theme that connects my top three is financial management. First: is direct more of the current appropriation to clean up. A very large amount of the current appropriation does not go to clean up or to things that are related to clean up. I mentioned the $200 million that goes to support offices. Again, that is an easy place to look for money to redirect.

There is also duplicative spending on technical studies that are being done by PRPs at the sites. EPA does shadow studies that don't need to be done in many cases. There is oversight that is excessive. There are lots of dollars spent from the appropriation that could be better spent. So doing more with what we have would be step one.

Second, I think there is a disconnect between the senior management of the program here in Washington and the fundamental decisions that are made at sites around the country about what kind of cleanup plan is appropriate and how much money we are going to commit to be spent. Whether it is fund spending or PRP spending, those are important decisions that shape the long-term financial picture for Superfund. They are being made today in the regions, not here in Washington. There is no political accountability in Washington for those decisions. So I would echo Dr. Porter's recommendation that we restore centralized management over remedy selection decisions.

Third and last, as I mention in my testimony, listing a site on the NPL should be the last resort. We should be looking aggressively at other options, not simply moving sites that are problematic or awkward onto the NPL, because that again bogs down the program in long-term financial obligations.

Thank you.

Mr. SIEGEL. Thank you.

First, obviously I think the fund should be replenished. It is not just at the remediation phase where funds are important, but in the whole idea that sites aren't even being ranked because there is no money to clean them up even if we investigate them.

Second, Senator Clinton you mentioned trichloroethylene, there is a problem where standards are being set under this Administration in consultation with the world's largest polluters, the Departments of Defense and Energy. I think they are entitled to come to the table like I am, but they have a conflict of interest. The Interagency Working Group should be dropped so that trichloroethylene and other chemicals can be regulated in a normal way.

Third, and this is what I work on, is community involvement, technical assistance. On Monday, I visited the Information Technology High School in Long Island City in Queens. This is a school that was built on a toxic site. It is not on the NPL right now, but the community was given these tables showing what the indoor air

sampling showed for the trichloroethylene and perchloroethylene in the building. They had no idea what it meant. They were scared.

I came and I tried to interpret it for them, pro bono, but the fact is if communities are going to intelligently and constructively take part in the process, as they have in my community where we have more expertise, where we have EPA technical assistance grants, they are going to need that kind of support. You can't only fund the actual cleanup. You have to fund the communities. Otherwise, they are just going to sit in the audience and throw tomatoes at EPA and whatever responsible parties are there.

Senator BARRASSO. Mr. Steinberg, people, I think, believes that it is really a polluter pay system, but I am not convinced that the tax actually worked that way. Could you explain to me how the tax worked and if the Superfund tax was in effect, when it was in effect, did it really correlate to how the money was spent on EPA and on cleanups?

Mr. STEINBERG. The taxes that were in place correlated poorly with the industry sectors involved at Superfund sites. In particular, the corporate excise tax surcharge aspect is keyed to how profitable and how structured a company is, not even to what industry sector it is in. So companies that paid a high corporate excise tax automatically paid more into Superfund, whether they ever had any connection to waste generation or waste dumping at all.

The point was made earlier that the balance in the trust fund in any given year had no connection to the amount of the appropriation, which has stayed relatively level in constant dollars over much of the life of this program. So the notion that there would be more money spent on Superfund if the taxes were reinstated I think is essentially illogical.

Senator BARRASSO. Mr. Porter, following up on your firm deadlines in getting things accomplished, would more money for the EPA really be a significant factor in speeding this up?

Mr. PORTER. I don't think so, Senator. I really believe they have a fair amount of money. They have a lot of people working on the program. Certainly, there may be selected areas where they need more money, but I am just a little afraid if you throw too much more money at it, you just get more bureaucracy. I think right now with two thirds of the sites cleaned up, we need to focus like a laser on those that aren't cleaned up. Most of them, as Mike as indicated, are begun by private parties. They have the money to pay for it.

So I am not a big fan of just sending money. They need some targeted money. I certainly agree with several of my colleagues here that I would like to see the money more directed toward cleanup within the money you are giving them.

Senator BARRASSO. Thank you.

Thank you, Madam Chairman.

Senator CLINTON. Thank you very much, Senator.

I am going now to turn to Senator Lautenberg. He will continue to chair the hearing. I thank the panelists very much for being here.

Senator LAUTENBERG.

[Presiding] Thanks very much, Madam Chairman. Thank you for having done the good job that you did during your question periods.

We seem to be running, and I won't need this. They are an orderly group.

[Laughter.]

Senator LAUTENBERG. Thanks.

The conflicting views of whether or not more money is going to be useful, there is kind of a trite expression used around here, well, look at all the waste. And that is the way you cover up things that you can't explain in direct language, just look at all the waste.

Winston Porter, it is nice to see you again. I didn't realize how much we disagreed.

[Laughter.]

Mr. PORTER. Not on everything, Senator.

Senator LAUTENBERG. You are a good person to have on the team, I can say. And all of you had testimony that triggered thoughts and, in many cases, I think conflict of views.

Mr. Steinberg, you point to the fact that a lot of the money that is available is not used on cleanup directly. You say it is used on other areas. You identify some of the areas where funds are used. Would you abolish those functions?

Mr. STEINBERG. No, Senator. I think that the support services that benefit Superfund as well as other EPA programs should be funded independently. Other EPA programs don't contribute a share of their budget to fund, for example, the Office of Inspector General. Congress funds the IG directly. The same should be true with the IG employees who work on Superfund. There is no reason that money should come from the Superfund appropriation.

Senator LAUTENBERG. Well, I think it gets us down to the basics that we have heard from several of your table mates, and that is that the program needs more money. No matter how it is disguised and how it is identified, the fact is that there has not been enough money to conduct the programs that are required.

Mr. Steinberg also, you made a fairly bold statement. You said there are no health risks at any of the Superfund sites. Am I correct?

Mr. STEINBERG. No. What I said was that most of the NPL sites do not pose current health risks. That is based on the fact that EPA has listed some 85 percent of them as meeting the indicator called human exposure under control, meaning no exposure to unacceptable levels in any environmental medium.

Senator LAUTENBERG. Well, I thought I heard you be more specific than saying most. I thought you were using a much broader term than that.

Mr. STEINBERG. Well, it is a very high percentage, but it is not all.

Senator LAUTENBERG. But those that do pose health risks, should these things be approached on the kind of a basis that we alert fire alarms, alarms for other threatening conditions? Shouldn't there be some haste associated with these things? I have been to Ringwood, as Brad Campbell says. That is I think the only site that was delisted and now is re-listed.

Mr. STEINBERG. Correct.

Senator LAUTENBERG. The site is awful. You walk through there and you have these paint slugs all over the place, and a lot of cancer. People are frightened for their children, but they can't afford

to go other places. This was largely a Native American community. One of the things that happened is, in my conversations with a couple of people there, is that they said they couldn't even fish in the reservoir anymore because it was so contaminated, but also security was keeping them out of there. It was a source of nutrition for them and their families.

So there are broader effects on those who are even some distance from the Superfund site, and affect public health in a very significant way.

Mr. STEINBERG. And even at that site, Senator, we know that the Inspector General spent $500,000 after the fact to issue a report criticizing the cleanup. So that comes out of Superfund's appropriation—criticism.

Senator LAUTENBERG. Well, we can't restructure EPA at this moment. But the fact of the matter is that shouldn't there be someone looking over—we have people in IG jobs who look over people's shoulders as their function.

Mr. STEINBERG. Certainly, but the other programs that the IG looks at don't pay for the IG's work force. And the IG has a very large work force now devoted to Superfund, and the question is why are we using Superfund dollars to fund that large work force?

Senator LAUTENBERG. Well, I don't want to get hung up on technicalities.

Professor Steinzor.

Ms. STEINZOR. I would just point out that I am not sure that we can have much confidence in EPA's declaration that the sites don't pose a health risk, when it is very clear that the same people that are making that declaration are very committed to tamping the program down, making do with less money, explaining that really they don't need any more resources. So I would question that statistic. I think that it would be better if the agency had more credibility and was really making an honest effort to assess what the problems were.

One of the subjects that came up is State funding. The States don't even know themselves what the status is. I asked the people in Maryland to help me by telling me what their funding levels had been. They could tell me Maryland's level, but they couldn't tell me what had been going on around the Country.

In the absence of EPA funding for the States to do site assessments, we have no idea if the sites are being addressed at all under other authorities, much less under Superfund. We found increasing numbers of abandoned properties that have reemerged, just like that site was re-listed, the one that you mentioned.

So I would just urge us to have some caution about these don't worry, be happy statistics.

Senator LAUTENBERG. They can't make me happy.

[Laughter.]

Senator LAUTENBERG. Brad, you were with Jim Florio, I think, at the time. He authored much of the Superfund law and that was 1980. Again, it was a lame duck session I think in which this was passed, and a very important contribution to America's well-being.

Brad, your experience with EPA regarding public notification and communication with the State about the asbestos contamination at the Hamilton Township, New Jersey site, how would you assess

EPA's communications with State and public notification at other Superfund sites in the State of New Jersey?

Mr. CAMPBELL. I would give it a very poor ranking in terms of the level of communication. I think there is often a link between that issue and funding. They are much less willing to recognize a problem if it looks like it may be an expensive problem, or if it may require, as in the case you know at Ringwood, funding the community with a technical assistance grant to give them a voice in the cleanup.

One of the concerns I have, Senator, and here I think there is some common ground among the panelists. Many of my panelists have talked about efficiency, while Professor Steinzor and Mr. Siegel and I have talked about cleanup. Well, there is nothing more inefficient than a stop and start cleanup. At the Roebling site or Imperial Oil or Cornell-Dubilier, which thanks to your leadership was highlighted recently. You have the agency mobilizing to do one bit of cleanup, demobilizing, and then waiting to re-mobilize. That is enormously inefficient and it shows that this under-funding and management failure that has occurred over the last 6 years is only making these problems worse and making the cleanups more inefficient because they are stop and start.

Senator LAUTENBERG. It is very difficult to understand how Ms. Bodine was so content with the funding level, and refused to give any credence to my question about were more funds necessary. I think that pervades the agency. They are there to protect themselves from public scorn or question.

So, the people who are largely voiceless, powerless, who live in these communities because many of them, as we have discussed here, are low-income minority communities. I have lived in a couple of them. The Passaic River was our river. My mother swam in that river in her younger days. Now, you can just about walk on it.

Mr. Campbell, I want to ask you a question. In response to the claims that the Superfund tax was inefficient, that had little purpose in its being, and Professor Steinzor or Mr. Siegel also, any of you who would like to comment on that assertion about the fact that this tax really wasn't appropriate as a source. Is it inappropriate?

Mr. CAMPBELL. I would like to comment. I think it is very appropriate. Let me explain, and certainly others know the legislative history as well or better than I do, but when Superfund was crafted, the polluter pays principle essentially had two components: the liability scheme, strict joint and several; and the tax. They weren't created in isolation. There were a lot of cross-connections between the two. I will give you one.

One is that the oil and petrochemical industry bear a large portion of the tax when it was in place. On the other side of the ledger, they got the petroleum exclusion in the liability scheme. Now, they are off the hook both on the liability scheme and in the tax structure.

There are many ways you can design a tax, as you know. There may not be one that achieves all virtues. But to suggest that the polluter pays principle is only in the liability scheme and the tax is unrelated to that really flies in the face of the legislative history and the way the burden of these cleanups has been distributed.

Senator LAUTENBERG. Mr. Siegel.

Mr. SIEGEL. Yes. Senator, I pay local taxes that go to my fire department, and yet the fire department has never been out to my house. Is that inequitable? It is not a fee for a service. It is a tax, so you never know exactly which taxpayer is going to benefit from the funding. Nevertheless, that is the way we have to fund services when you don't know over a period of time that is actually going to need it.

Mr. STEINBERG. May I respond to Mr. Siegel briefly?

Senator LAUTENBERG. Yes.

Mr. STEINBERG. I want to endorse his comment that this is a tax and not a fee, and we should be straightforward and call it a tax, because that is what it is.

I also think it is important to realize that when we are looking at sites that have no responsible parties, that there is no basis on which to say that a particular industry or a particular segment of industry was responsible for the creation of that site. In many cases, there is little information about where the waste originally came from. In many cases, these were open dumps that were used widely by people in a community, and for that to be treated as a shared societal cost seems to me to be totally equitable. So no polluters are off the hook.

Mr. CAMPBELL. If I can respond just briefly to Mr. Steinberg?

Senator LAUTENBERG. Yes, please do, before I do.

Mr. CAMPBELL. Senator Inhofe earlier identified a site in New Jersey that had extensive oil and petrochemical contamination in soils, and the reason those soils were removed was to avoid vapor intrusion in the homes of innocent residents who lived nearby. I don't think there is any doubt from which industry sector the oil and petrochemicals came from. There is doubt because of the liability exemption that you can recover from those parties. The legislative bargain that was created at the time was that the petroleum exclusion was justified because we had the tax on the other side of the ledger. The tax has now fallen out and it is the public, including the residents immediately threatened by that pollution that are picking up the tab.

Mr. STEINBERG. The exemption that my colleague is referring to was an exemption intended to cover crude oil and petroleum product. It does not exempt all——

Senator LAUTENBERG. What would you suggest, Mr. Steinberg, as a funding source to clean up these sites? Or shouldn't there be any?

Mr. STEINBERG. I would say that if you believe that more money is needed, and that is not a belief that I am prepared to endorse at this time, but if you believe more money is needed——

Senator LAUTENBERG. How about the flat world? Do you go for that?

Mr. STEINBERG. I believe that within the current $1.24 billion appropriation, there is money available to be redirected toward more important goals than it's currently being used for.

Senator LAUTENBERG. Is it enough?

Mr. STEINBERG. Well, I heard numbers like $100 million and $200 million a year mentioned earlier. There certainly is that much money within the current appropriation.

Senator LAUTENBERG. Well, there is lots of disagreement. The fund was at one point $3.8 billion, and it was used to accelerate the pace of cleanup and became a very effective program. It took a long time to train the people to the assignments they had. It was new venture for us. If you remember when there was a threat that Superfund was going to close down and people took off and found themselves other jobs so that they could take care of their families. It was hard to get ramped up again.

Professor Steinzor.

Ms. STEINZOR. Yes, I would just like to point out a couple of things. First of all, from a historical perspective, the design of the tax was advocated by industry. It was ARCO that invented the broad-based corporate tax.

Second, the alternative that nobody is saying is that the people that will pay for the orphaned sites are the general taxpayers, so we are being told the paradoxical statement that on the one hand we shouldn't be asking industries that were not involved to pay, and on the other hand it is OK to ask the general taxpayer to pay.

And the third thing I would just like to say is, as our report tried to point out, this tax is so small in comparison to the profits, particularly in the oil sector. The broad-based tax is so small that its portrayal as a burden is really illogical.

Mr. PORTER. Senator, could I just add one point here? As somebody who has followed this program a long time, if you look at all the Superfund sites in the Country, individuals have caused Superfund sites. We have thrown people in jail in various States who all by themselves caused a Superfund site, a very bad one. Cities have caused Superfund sites. States have caused Superfund sites. Federal facilities have caused sites.

So as Mike Steinberg is saying, I would largely want to associate myself with, and that is I want the polluter to pay, but what we are saying with respect to the chemical industry is the polluter must pay twice. You pay for your own site and you pay for the automobile industry site down the street, or the city site.

Senator LAUTENBERG. We can find, in my view, isolated examples of where there is not a direct cost for the activity of a company or individuals, but it is good for the general population. It is for the health of the Country. And you can't always isolate these things as being responsible for health problems. If you look at global warming right now, you see that we are going to have to spend a heck of a lot more money than we ever thought we would in order to get rid of greenhouse gases. Everybody is going to pay, the average citizen, the companies, the building owners, et cetera.

So life changes. As a consequence, and I was naive, I am not a lawyer, and I didn't understand how since there was no law about companies that were polluting the environment, how they could be taken to task. I found out that under common law that there is, and it was upheld in the courts. So there is no question about their sharing liability for spoiling their neighbors' lake.

Mr. SIEGEL. Senator.

Senator LAUTENBERG. Yes.

Mr. SIEGEL. Senator, yesterday I visited the Hopewell Precision Superfund site in Hopewell Junction New York. There is a company there. It is still in business. It is the polluter. EPA is not re-

covering money from that company because they say the company can't afford it. What do you do?

Well, the idea is to go after the company that sold the trichloroethylene through the tax to that company, because that trichloroethylene is ending up in the home of my friend. I think under the circumstances, you not only have to look at what is equitable, but where you can get the money. You can't squeeze it out of these companies, the polluters that don't have money, so you have to go after the ones that do.

Senator LAUTENBERG. That is why we have the orphan fund.

Mr. SIEGEL. The company is still there, but EPA says, OK, I don't want to put them out of business. That is fair, but you have to get the money from someplace, rather than from the health and safety of the people down the gradient.

Senator LAUTENBERG. Yes. They pay for their poor health if they have any money, and they pay much more serious price than money.

Mr. Steinberg, and I want to close with this because while we are all having such a good time here, we have other things that we have to do, how many Superfund sites, Mr. Steinberg, are members of the Superfund Settlements Project and directly responsible for the pollution and for their contribution to the Superfund condition?

Mr. STEINBERG. If I understood the question, how many sites are on the dockets of the members of the Project?

Senator LAUTENBERG. Yes.

Mr. STEINBERG. It is hundreds and hundreds. I don't have a precise number. That would include Federal NPL sites, Federal removal sites, State sites, voluntary cleanup sites, brownfield sites, and underground storage tank sites.

Senator LAUTENBERG. We are going to call this hearing to a close. The questions for the record will be submitted, and we would ask your response as quickly as you can be. I thank each of you for your testimony, even if it is obvious that I don't agree with everything you say.

The hearing is concluded.

[Whereupon, at 12 p.m. the subcommittee was adjourned.]

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

Madame Chairman, thank you for holding this hearing today.

The Superfund Program is important to the health and safety of the American public. Superfund sites are scattered across the nation's landscape. The old industrial backbone of our country, though, was centered in the Northeast and Midwest. These parts of America have a disproportionately large number of Superfund sites as part of that legacy.

In Maryland, for example, we have 17 sites on the Superfund National Priorities List and dozens of additional sites where removal actions have taken place. The majority of these sites are located in close proximity to some my state's biggest population centers.

For the health and safety of Maryland's 5.6 million residents, we need a Superfund program that is well funded and well managed. I fear that we don't have that today.

Madame Chairman, I am concerned:

- that the Superfund program is being starved for cash,
- that the pace of cleanups is declining rapidly, and
- the health of our citizens continues to be at risk.

EPA's mid-Atlantic region encompasses five states, including Maryland. In this region, total funding for Superfund:

- response programs,
- enforcement programs, and
- management is at a 17 year low.

The peak funding was $360 million annually in 1992. Funding for Region III leveled off at $350 million annually through the 1990's. Since 2000—under the current administration—that figure fell to $319 million in 2007.

Human exposure to potentially dangerous chemicals and others substances is not yet under control at 111 Superfund sites in 33 states.

Maryland has 2 such sites: Ordnance Products in Cecil County and Aberdeen Proving Ground—Edgewood in Harford County.

This hearing is a timely one, Madame Chairman:

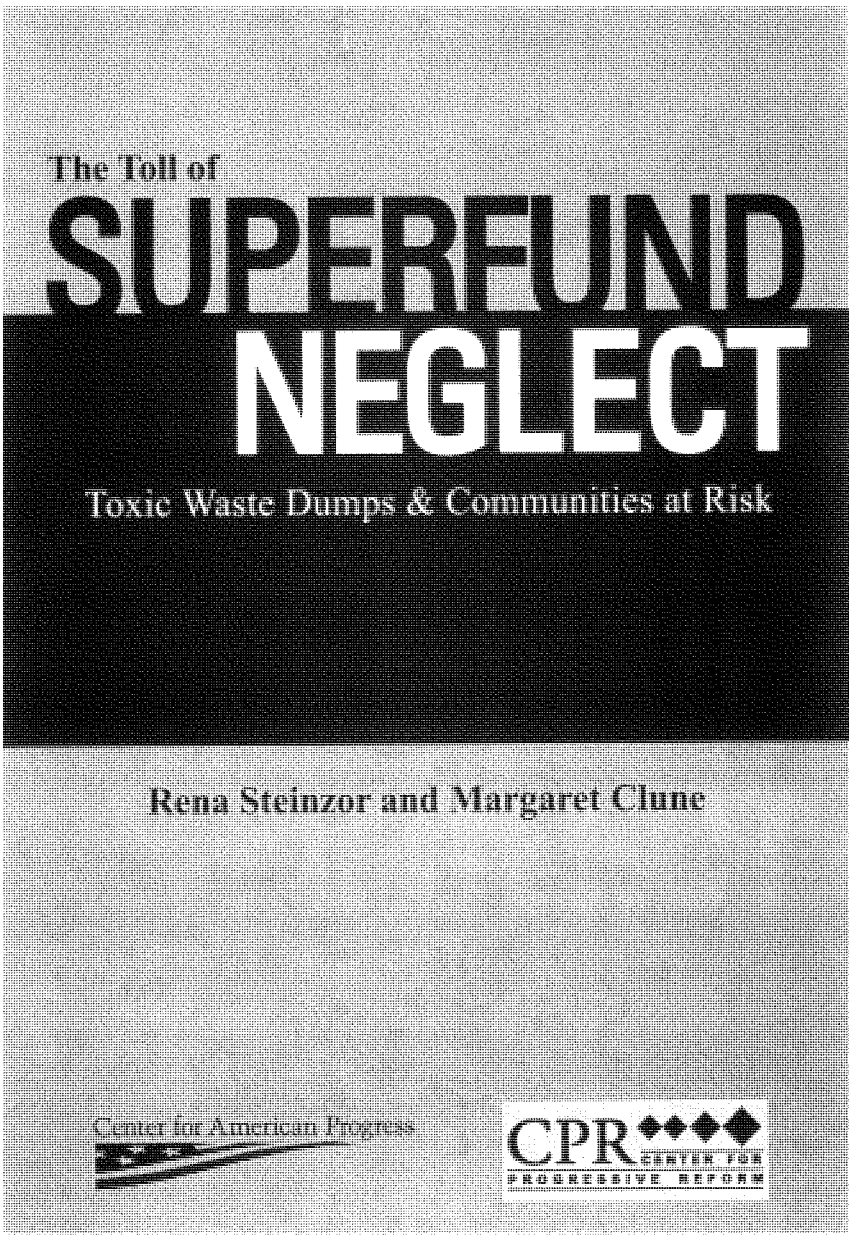
- We need a Superfund program that is protecting our citizens' health.
- We need a program that is restoring our environment.
- And we need a program that is actively returning old Superfund sites back to productive economic use.

In short, Madame Chairman, America needs—and Maryland needs—a Superfund Program that is healthy.

I am anxious to hear from EPA about the current pace of cleanups.

I also want to hear from our other witnesses about how that rate can be accelerated and how we can put this program put back onto firm footing. And then I hope we will move quickly to put those recommendations into action.

Thank you, Madame Chairman.


The Toll of
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NEGLECT
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Toxic Waste Dumps & Communities at Risk

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EXECUTIVE SUMMARY

Twenty-six years ago, just as President Ronald Reagan took office, Congress created the "Superfund," a multi-billion dollar environmental program designed to inventory and clean up the nation's worst abandoned toxic waste sites, beginning with the infamous Love Canal. Today, the Superfund National Priorities List (NPL) includes 1,244 sites awaiting cleanup. Many have languished on the list for well over a decade and some have awaited cleanup for almost a quarter century, as lack of resources, industry opposition, technical challenges and mismanagement plagued the program.

Superfund's plight threatens public health across the country. One in four Americans live within three miles of a Superfund site,[1] and approximately three to four million children, who face developmental risks from exposure to environmental contaminants, live within one mile.[2]

Over the last decade, cleanups have slowed to a crawl because the program lost its stable "polluter pays" funding base in 1995. A series of Republican-controlled Congresses allowed the industry taxes that support the program to expire and ignored yearly requests by the Clinton administration to reinstate them.

When President George W. Bush took office, the principle that polluters need not pay went from de facto to official public policy. The largest beneficiaries of this policy are oil and petrochemical companies whose record profits and outsized CEO compensation packages are front-page news nationwide (see Figure 4 on page 19). In addition to the "pain at the pump" caused by high gas prices, the American people are hurting from tax policy that places the interests of wealthy corporations over public health.

In the absence of political commitment and resources, the number of completed Superfund cleanups fell abruptly in 2001 to 50 percent of previous annual totals. Cleanups were completed at just 40 sites in each of the last three years, as shown in Figure 1.

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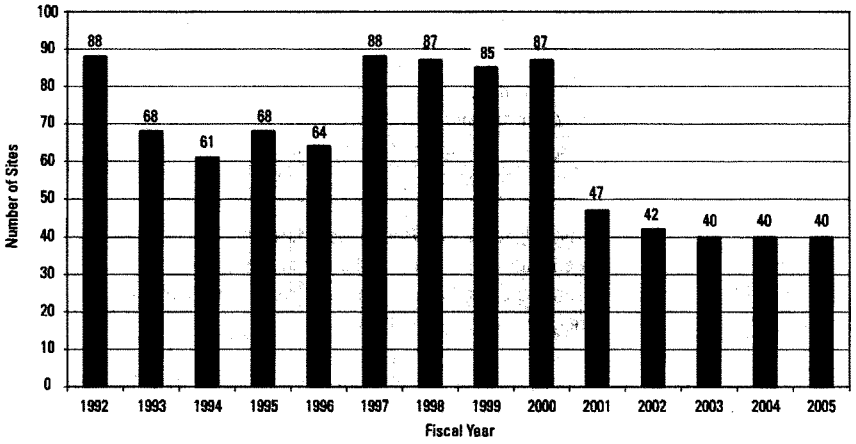
[1] U.S. ENVTL. PROT. AGENCY, *Superfund's 25th Anniversary: Capturing the Past, Charting the Future, available at* http://www.epa.gov/superfund/25anniversary/ (last visited March 23, 2006) [hereinafter, EPA, *Superfund's 25th Anniversary*].

[2] Martina E. Cartwright, *Superfund: It's No Longer Super and It Isn't Much of a Fund*, 18 TUL. ENVTL. L. J. 299, 318 (2005) (citing Philip Landrigan *et al.*, *Chemical Wastes, Children's Health, and the Superfund Basic Research Program*, 107 ENVTL. HEALTH PERSPECTIVES 423, 423 (1999)).

Figure 1: Annual Superfund Cleanups[3]

Construction Completions by Fiscal Year, 1992-2005



To explain the human and environmental implications of this Superfund neglect, this report spotlights five of the worst NPL sites in each of the 10 most populous states: California, Texas, New York, Florida, Illinois, Pennsylvania, Ohio, Michigan, New Jersey and Georgia.[4] As of April 2006, none of these sites had completed the cleanup process.[5] Detailed information on the 50 sites, the types of communities where they are located and the people who live near them is presented in the second portion of this report, starting on page 29. Looking across these examples produces the following observations:

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[3] Data for Figure 1 obtained from U.S. ENVTL. PROT. AGENCY, *Number of NPL Site Actions and Milestones by Fiscal Year, available at* http://www.epa.gov/superfund/sites/query/queryhtm.nplfy.htm (last visited March 28, 2006) [hereinafter, EPA, *NPL Milestones by FY*].

[4] UNITED STATES CENSUS BUREAU, *Census 2000 PHC-T-2. Ranking Tables for States: 1990 and 2000: Table 1. States Ranked by Population: 2000, available at*: http://www.census.gov/population/cen2000/phc-t2/tab01.pdf (last visited April 11, 2006) [hereinafter, CENSUS, *Ranking Tables*].

[5] Construction complete status last verified April 13, 2006. For more detailed information on the significance of the "construction complete" designation, *see infra* notes 20-21 and accompanying text.

- **People of color were disproportionately represented around a significant number of sites.** Thirteen of the profiled sites are located in census tracts where the population is at least 40 percent racial or ethnic minority, including four sites where the percentage is greater than 70. These findings are not the product of a statistically valid examination of Superfund sites on the whole, and the 50 sites profiled in this report make clear that Superfund sites endanger communities of all types. However, on a site-specific basis, these findings echo concerns long expressed by scholars and other commentators that hazardous waste sites disproportionately affect minority and low-income populations.

- **These sites have awaited cleanup for many years.** The 50 profiled sites were used by manufacturers to dispose of liquid and solid toxic wastes for many decades. Some sites date back as far as the turn of the last century. They have been included on the NPL for long periods of time, with the oldest having been listed on the very first NPL in 1983,[8] and the most recent listed in 2001, at the same time that annual construction completions dropped by half.

- **A number of sites remain in Superfund limbo.** Some of the sites, although proposed to the NPL between five and 13 years ago, remain in "proposed" status, meaning they are ineligible for long-term federal "remedial action" funding and are not a priority for enforcement actions that would compel responsible parties to clean them up.[9]

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[8] EPA published the first NPL, containing 406 sites, on Sept. 8, 1983. 48 Fed. Reg. 40658 (Sept. 8, 1983). Eight of the 50 sites profiled in this report were on that first NPL: Aerojet General (CA); Iron Mountain Mine (CA); Stringfellow (CA); American Creosote Works (Pensacola Pit) (FL); Reeves Southeast Galvanizing Corp. (FL); Nease Chemical (OH); CPS/Madison Industries (NJ); and Universal Oil Products (Chemical Division).

[9] EPA classifies some of the proposed NPL sites profiled in this report (specifically, Normandy Park Apartments (FL), Circle Smelting Corp. (IL), Dover Chemical Corp. (OH) and Terry Creek Dredge/Spoil Areas/Hercules Outfall (GA)) as "NPL-equivalent sites." Katherine N. Probst, *et al.*, *Appendix B FY 2000 Status of 52 Sites Proposed to the NPL as of the End of FY 1999* in SUPERFUND'S FUTURE: WHAT WILL IT COST? A REPORT TO CONGRESS, 165-167 (2001) (data provided to RFF by EPA) [hereinafter, Probst, *et al.*, SUPERFUND'S FUTURE]. EPA defines NPL-equivalent sites as those at which responsible parties perform cleanup under EPA enforcement authority and with EPA oversight, but without being listed as final on the NPL. *Id.* at 40. For more information on how EPA classified the sites that were proposed to (but not made "final" on) the NPL prior to RFF's 2001 analysis, *see id.* at 165-167. Additional information concerning the status of the proposed NPL sites may be available in the site descriptions maintained by their respective EPA regional offices, *available at* http://www.epa.gov/superfund/sites/npl/npl.htm (click on state of interest, then follow site name hyperlinks).

- **The 50 profiled sites are among the most hazardous in the nation.** The substances disposed at these sites can cause everything from cancer to birth defects to brain damage. EPA calculates a hazard score, on a scale of 0 to 100, to determine whether to add a site to the NPL. To qualify for an NPL listing, a site must have a score of 28.5 or higher. The 50 sites profiled in this report were assigned scores ranging from 42.24 to 74.86, placing them among the most dangerous sites to human health and the environment.

- **These sites contain an array of hazardous substances.** The 10 most common contaminants at the 50 sites include polychlorinated biphenyls (PCBs), lead, polycyclic aromatic hydrocarbons, chromium, copper, zinc, cadmium, arsenic, mercury and trichloroethylene. Some sites contain extraordinarily toxic chemicals, some of which (e.g., creosote and lead) are now banned for most purposes. Most often, these chemicals are invisible, tasteless and odorless, giving little warning when they are present in drinking water, the air or soil.

- **Large numbers of people, including children and the elderly, live near these sites.** Most of the 50 profiled sites are located in heavily populated urban or suburban neighborhoods. According to EPA, between 205,349 and 803,100 people live within one mile of these sites.[6] As of 2000, some 235,000 people lived in the census tracts where they are located, including 34,127 children aged nine and younger and 14,068 persons aged 75 and older.

- **Lower-income Americans disproportionately reside around these sites.** In stark contrast to the wealthy corporate beneficiaries of the Superfund tax windfall detailed in this report, residents of 30 of the 50 census tracts reported a median household income for 1999 (the most recent tabulation of data available at the tract level, for Census 2000) below that of the nation as a whole, that is, below $41,994.[7] Nonetheless, a significant number of sites are surrounded by middle income or even wealthy populations, testifying to the fact that Superfund sites endanger a wide variety of communities.

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[6] EPA's Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) provides ranges for the number of people living within 1 mile of NPL sites. Information for specific sites can be accessed through CERCLIS online, *available at* http://cfpub.epa.gov/supercpad/cursites/srchsites.cfm.

[7] UNITED STATES CENSUS BUREAU, *Census 2000 Demographic Profile Highlights, available at* http://factfinder.census.gov/servlet/SAFFFacts?_submenuId=factsheet_1&_sse=on (last visited April 28, 2006) [hereinafter, CENSUS, *2000 Highlights*].

- **Some of the sites that have waited longest for cleanup are owned by viable, profitable companies.** Sites sometimes lack a "responsible party"; for example, the company responsible for contamination may be out of business. These sites are to be cleaned up using Superfund dollars. Where there is a responsible party, the company is supposed to pay for cleanup. Yet in a number of cases, sites have languished on the NPL even though a responsible party has been identified. This includes, for example, a New Jersey site owned by Honeywell, which in 2005 ranked number 75 on the Fortune 500, with profits topping $1.2 billion. This site was among the first Superfund sites listed in 1983, but still has not been cleaned up.

At many Superfund sites, cosmetic changes have been made — rusting barrels have been removed from the surface, and vegetation has reemerged on what were moonscapes 20 years ago. Beneath the surface, though, the toxic stews continue to circulate, moldering and spreading, adding chemicals to aquifers, rising to the surface of the soil as the land freezes and thaws, and releasing methane and other volatile gases. The senior federal officials now responsible for the program provide political spin instead of solutions. They tell us that Superfund does not need the tax money it was intended to have, and that the popular "polluter pays" principle still applies even though the tax on oil and chemical companies has expired. There is no better way to illustrate the bankruptcy of such claims than to get back to basics and look at the nation's worst sites, the dangers they pose and the paralyzed cleanup response.

Vulnerable Populations

The arguments over facts and figures related to financing Superfund reverberate outside Washington and throughout the country, where NPL sites stagnate and pose continuing risks to human health and the environment.[10] In observing the 25th anniversary of the Superfund law in December 2005, EPA reminded the public that, "even today, 1 in 4 Americans live within 3 miles of a Superfund site."[11] Approximately three to four million children live within one mile of a Superfund site, and due to their unique physical susceptibilities, are at greater risk to the effects of exposure from environmental contaminants.[12]

Among those at risk from the NPL sites around the country that still await cleanup are the people living near the 50 sites profiled in this report. Specifically, the report highlights five sites in each of the top 10 most populous states: California, Texas, New York, Florida, Illinois, Pennsylvania, Ohio, Michigan, New Jersey and Georgia (ranked by size of population).[13]

As of the 2000 Census (the most recent tabulation of data available at the census tract level), 234,524 people lived in the census tracts containing one of the 50 profiled sites. Of those, 34,127 are children aged nine and younger. An additional 14,068 are persons aged 75 and older. In 30 of the 50 census tracts (60 percent of tracts), the median household income for 1999 (again, the most recent tabulation of data available at the census tract level) was below that for the nation, that is, below $41,994.[14]

This report also provides the percentage of "minority" (that is, the percentage not classified as "one race, white") and "Hispanic" populations around each of the 50 sites. The Census Bureau considered race and Hispanic origin to be "two separate and distinct concepts" for the 2000 census (as explained further in Appendix B). Thirteen of the profiled sites are located in census tracts where the population is at least 40 percent racial minority or Hispanic, including four sites where the percentage is greater than 70.

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[10] Cartwright, *supra* note 2, at 318 (explaining that, "EPA's existing backlog, combined with the emergence of additional sites, prolongs the health risks currently borne by communities adjacent to Superfund sites").

[11] EPA, *Superfund's 25th Anniversary*, *supra* note 1.

[12] Cartwright, *supra* note 2 (citing Philip Landrigan *et al.*, *Chemical Wastes, Children's Health, and the Superfund Basic Research Program*, 107 ENVTL. HEALTH PERSPECTIVES 423, 423 (1999)).

[13] CENSUS. *Ranking Tables*, *supra* note 4.

[14] CENSUS, *2000 Highlights*, *supra* note 7.

Figure 2: Profiled Sites

STATE	SITE NAME	HRS SCORE	DATE ADDED TO THE NPL
California	• Aerojet General Corp.	54.63	Sept. 8, 1983
	• Iron Mountain Mine	56.16	Sept. 8, 1983
	• McCormick & Baxter Creosoting	74.86	Oct. 14, 1992
	• Operating Industries Landfill	57.22	June 10, 1986
	• Stringfellow	61.4	Sept. 8, 1983
Texas	• ALCOA (Point Comfort)/Lavaca Bay	50	Feb. 23, 1994
	• Gulfco Marine Maintenance	50	April 30, 2003
	• Jasper Creosoting Company Inc.	50	July 28, 1998
	• R&H Oil/Tropicana	50	Proposed on June 14, 2001
	• Star Lake Canal	50	July 27, 2000
New York	• Computer Circuits	50	May 10, 1999
	• Consolidated Iron & Metal	50	June 14, 2001
	• Lawrence Aviation Industries, Inc.	50	Feb. 4, 2000
	• Liberty Industrial Finishing	50.65	June 10, 1986
	• Old Roosevelt Field Contaminated GW Area	50	May 11, 2000
Floride	• American Creosote Works (Pensacola Pit)	58.41	Sept. 8, 1983
	• Escambia Wood – Pensacola	50	Dec. 16, 1994
	• Normendy Park Apartments	49.98	Proposed on Feb. 13, 1995
	• Reeves Southeast Galvanizing Corp.	58.75	Sept. 8, 1983
	• Stauffer Chemical Corp. (Tarpon Springs)	50	May 31, 1994
Illinois	• Circle Smelting Corp.	70.71	Proposed on June 17, 1996
	• DePue/New Jersey Zinc/Mobil Chem Corp.	70.71	May 10, 1999
	• Indian Refinery – Texaco Lawrenceville	56.67	Dec. 1, 2000
	• Parsons Casket Hardware Co.	55.58	July 22, 1987
	• Sauget Area 1	61.85	Proposed on Sept. 13, 2001
Pennsylvania	• East Tenth Street	67.68	Proposed on Jan. 18, 1994
	• Lower Darby Creek Area	50	June 14, 2001
	• Sharon Steel (Farrell Works Disp. Aree)	50	July 28, 1998
	• UGI Columbia Gas Plant	50.78	May 31, 1994
	• Watson Johnson Landfill	71	Sept. 13, 2001
Ohio	• Armco, Inc., Hamilton Plant	69.34	Proposed on April 30, 2003
	• Diemond Shamrock Corp. (Painesville Wks)	50	Proposed on May 10, 1993
	• Dover Chemical Corp.	50	Proposed on May 10, 1993
	• Nease Chemical	47.19	Sept. 8, 1983
	• North Sanitary Landfill	50	May 31, 1994
Michigen	• Barrels, Inc.	42.24	Oct. 4, 1989
	• Bay City Middlegrounds	50	Proposed on Feb. 13, 1995
	• Bofors Nobel, Inc.	53.42	March 31, 1989
	• Rockwell International Corp.	52.15	July 22, 1987
	• State Disposal Landfill, Inc.	42.24	Feb. 21, 1990
New Jersey	• Cornell Dubilier Electronics, Inc.	50.27	July 28, 1998
	• CPS/Madison Industries	69.73	Sept. 8, 1983
	• Universal Oil Products (Chemicel Division)	54.63	Sept. 8, 1983
	• Ventron/Velsicol	51.38	Sept. 21, 1984
	• Vineland Chemical Co., Inc.	59.16	Sept. 21, 1984
Georgia	• Brunswick Wood Preserving	54.49	April 1, 1997
	• Camilla Wood Preserving Company	50	July 28, 1998
	• LCP Chemicals Georgia	60.14	June 17, 1996
	• Terry Creek Drdge Spoil Areas/Herc. Outfall	50.18	Proposed on April 1, 1997
	• Woolfolk Chemical Works, Inc.	42.24	Aug. 30, 1990

These findings are not the product of a statistically valid examination of Superfund sites on the whole, and the 50 sites profiled in this report make clear that Superfund sites endanger communities of all types. However, on a site-specific basis, these findings echo concerns long expressed by scholars and other commentators that hazardous waste sites disproportionately affect minority and low-income populations.

Detailed information on the 50 sites and the people who live near them is presented in the state-specific sections set forth in the next part of this report, beginning on page 29.

Health Risks

To qualify for listing on the NPL, a site must have a Hazard Ranking System (HRS) score of 28.5 or higher. As shown in Figure 2, the 50 sites profiled in this report were assigned scores ranging from 42.24 to 74.86, placing them among the worst of the worst, yet most have nonetheless languished on the NPL for many years. HRS scores depend on a variety of factors that reflect the dangers posed by the sites, including:

- quantity of toxic chemicals dumped at the site;
- toxicity of the chemicals with respect to both human and animal exposures;
- people potentially exposed to these hazards;
- environmental loss caused by the site (e.g., loss of underground drinking water supplies, destruction of fishing beds or other fragile ecosystems); and
- pathways by which people and the environment are directly exposed (e.g., contamination of water, land, or air).[15]

The disposal practices utilized at the 50 sites profiled in this report resulted in toxic mixtures of hazardous substances that individually cause everything from cancer to birth defects to brain damage when they seep into drinking water, are emitted into the air, or lace the soil on the sites and in surrounding communities. The 10 most common contaminants at the 50 sites profiled in this report include polychlorinated biphenyls (PCBs), lead, polycyclic aromatic hydrocarbons, chromium, copper, zinc, cadmium, arsenic, mercury and trichloroethylene. Most often, these chemicals are invisible, tasteless and odorless, giving little warning when they are present in amounts far above what is safe, for people and for wildlife. Details on the health risks posed by these contaminants are set forth in Figure 3.[16]

As bad as exposure to individual chemicals can be, their effects when they interact with each other have yet to be documented. Equally troubling, Superfund sites represent just one of the many sources of environmental contaminants present in surrounding communities. Once again, our understanding of the cumulative effects of such exposures is preliminary at best.

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[15] For more information on the HRS, *see* ENVTL. PROT. AGENCY, APPENDIX A TO PART 300—THE HAZARD RANKING SYSTEM, 40 C.F.R. Pt. 300, App. A.

[16] Information concerning health effects of exposure is drawn (and additional information may be obtained) from the Agency for Toxic Substances and Disease Registry's (ATSDR) *Frequently Asked Questions about Contaminants Found at Hazardous Waste Sites* (ToxFAQs). As noted by ATSDR in the preface to each of its ToxFAQs summaries, "[t]he effects of exposure to any hazardous substance depend on the dose, the duration, how you are exposed, personal traits and habits, and whether other chemicals are present." UNITED STATES AGENCY FOR TOXIC SUBSTANCES AND DISEASE REGISTRY, *Frequently Asked Questions About Contaminants Found at Hazardous Waste Sites, available at* http://www.atsdr.cdc.gov/toxfaq.html (information on individual contaminants may be located by searching by initial letter in name).

Figure 3: Five Contaminants Found Most Frequently at the 50 Profiled Sites

Contaminent	Profiled sites where found	Health effects of exposure
Polychlorinated Biphenyls (PCBs)	• Stringfellow (CA) • Star Lake Canal (TX) • Consolidated Iron & Metal (NY) • Sauget Area 1 (IL) • Watson Johnson Landfill (PA) • East 10th Street (PA) • Lower Darby Creek (PA) • Sharon Steel (Farrell Wks Disp Area) (PA) • Armco, Inc., Hamilton Plant (OH) • North Sanitary Landfill (OH) • Rockwell International (MI) • Bay City Middlegrounds (MI) • Barrels, Inc. (MI) • Universal Oil Products (Chemical Division) (NJ) • Cornell Dubilier Electronics (NJ) • LCP Chemicals Georgia (GA)	• Skin conditions such as acne and rashes • Liver damage
Lead	• Aerojet General (CA) • Stauffer Chemical (Tarpon Springs) (FL) • Normandy Park Apartments (FL) • DePue/New Jersey Zinc (IL) • Circle Smelting (IL) • Sauget Area 1 (IL) • North Sanitary Landfill (OH) • Barrels, Inc. (MI) • State Disposal Landfill, Inc. (MI) • Universal Oil Products (Chemical Division) (NJ) • CPS/Madison Industries (NJ)	• Decreased function of nervous system • Increases in blood pressure • Anemia • Brain and/or kidney damage • In pregnant women, can cause miscarriages
Polycyclic Aromatic Hydrocarbons (PAHs)	• McCormick & Baxter Creosoting (CA) • ALCOA (Point Comfort)/Lavaca Bay (TX) • Jasper Creosoting (TX) • Star Lake Canal (TX) • American Creosote Works (Pensacola Pit) (FL) • Stauffer Chemical (Tarpon Springs) (FL) • Sauget Area 1 (IL) • Indian Refinery – Texaco Lawrenceville (IL) • UGI Columbia Gas Plant (PA) • Sharon Steel (Farrell Wks Disp Area) (PA) • Camille Wood Preserving (GA)	• Animal studies indicate potential for reproductive difficulties and birth defects; "it is not known whether these effects occur in people"
Chromium	• Stringfellow (CA) • Iron Mountain Mine (CA) • Aerojet General (CA) • Star Lake Canal (TX) • Liberty Industrial Finishing (NY) • Stauffer Chemical (Tarpon Springs) (FL) • Armco, Inc., Hamilton Plant (OH) • Diamond Shamrock Corp (Painesville Works) (OH) • State Disposal Landfill, Inc. (MI) • Brunswick Wood Preserving (GA	• Breathing large amounts of chromium (VI) can cause irritation to the nose • Ingesting large amounts of chromium (VI) can cause stomach upsets, ulcers, convulsions, kidney and liver damage and even death • Skin contact with chromium (VI) compounds can cause skin ulcers
Copper	• Iron Mountain Mine (CA) • Aerojet General (CA) • Star Lake Canal (TX) • Stauffer Chemical Co. (Tarpon Springs) (FL) • Circle Smelting (IL) • Sauget Area 1 (IL) • Parsons Casket Hardware (IL) • State Disposal Landfill, Inc. (MI) • CPS/Madison Industries (NJ) • Brunswick Wood Preserving (GA)	• Breathing high levels can cause nose and throat irritation • Ingesting high levels can cause nausea, vomiting and diarrhea • Very high doses can cause liver and kidney damage and can even cause death

Lagging Cleanups

Once a site requires no additional cleanup activities, it may be deleted from the NPL.[17] Of the 1,553 sites that had been added to the NPL as of April 2006, only 309, or 20 percent, had been deleted.[18] According to EPA, however, measuring success by simply looking at the ratio of deleted NPL sites to total sites on the NPL fails to "recognize the substantial construction and reduction of risk to human health and the environment that has occurred at NPL sites not yet eligible for deletion."[19] So, in 1990, to "communicate more clearly to the public the status of cleanup progress" among NPL sites, EPA established the new category of "construction complete" as its main indicator of program success.[20] Sites are considered "construction complete" when any necessary physical construction and engineering work is complete, even if final cleanup goals have not been achieved.[21] In addition to the sites deleted from the NPL, another 600 or so have achieved the "construction complete" designation.[22]

As of April 2006, none of the 50 sites profiled in this report had progressed far enough in the cleanup process to be designated "construction complete."[23] Some of the sites, although proposed to the NPL between five and 13 years ago, have never even been made "final" NPL sites.[24] "Final" sites have been added to the National Priorities List through the issuance of a final rule in the Federal Register and are the only sites at which EPA can use Trust Fund monies to pay for long-term remedial actions.[25] In contrast, proposed NPL sites are not eligible for

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[17] Katherine N. Probst & Diane Sherman, *Success for Superfund: A New Approach for Keeping Score*, at 1 (April 2004), *available at* http://www.rff.org/rff/Documents/RFF-RPT-SuperfundSuccess.pdf (last visited March 28, 2005); 40 C.F.R. § 300.425(e).

[18] U.S. ENVTL. PROT. AGENCY, *NPL Site Totals by Status and Milestone as of April 25, 2006*, *available at* http://www.epa.gov/superfund/sites/query/queryhtm/npltotal.htm (last visited May 1, 2006).

[19] U.S. ENVTL. PROT. AGENCY, OSWER DIRECTIVE 9320.2-09A-P, CLOSE OUT PROCEDURES FOR NATIONAL PRIORITIES LIST SITES 3-1 (2000), *available at* http://www.epa.gov/superfund/resources/closeout/pdf/guidance.pdf (last visited March 28, 2005) [hereinafter, EPA, CLOSE OUT PROCEDURES FOR NPL SITES].

[20] Probst & Sherman, *supra* note 17, at 1; U.S. ENVTL. PROT. AGENCY, *Final Rule on National Oil and Hazardous Substances Pollution Contingency Plan*, 55 Fed. Reg. 8666, 8699 (March 8, 1990).

[21] EPA, CLOSE OUT PROCEDURES FOR NPL SITES, *supra* note 19 at 3-1. Sites also qualify as construction complete when "EPA has determined that the response action should be limited to measures that do not involve construction," or when the site qualifies for deletion from the NPL. *Id.*

[22] Katherine N. Probst, *Whither Superfund? Is Superfund Withering?*, ENVTL. FORUM, July/Aug. 2005 at 21 [hereinafter, Probst, *Whither Superfund?*].

[23] Construction complete status last verified April 13, 2006. For more detailed information on the significance of the "construction complete" designation, *see supra* notes 20-21 and accompanying text.

[24] *See supra* note 9.

[25] *See, e.g.*, Probst, *et al.*, SUPERFUND'S FUTURE, *supra* note 9, at 39, 271; 40 C.F.R.

long-term federal "remedial action" funding, nor do EPA or the states typically make them a priority for enforcement actions. Most of the 50 sites categorized as "proposed" have been in that status for a decade or longer. In some instances, EPA claims that the states in which they are located are "taking the lead" on pursuing them or it says that because responsible parties are being "cooperative," it has deferred a decision to finalize the listing.[26] Neither rationale explains why the sites have languished for so long.

Rather, funding shortages appear to be largely responsible for the lagging cleanup of these and other NPL sites. In 2002, EPA's Office of Inspector General reported that the agency granted funds 23 percent below what its regional offices requested for remedial construction activities at NPL sites.[27] Five sites received less funding than the regional office administering the site requested, and seven sites received no funding at all.[28] Among the sites that received no funding was Jasper Creosoting in Texas, one of the 50 sites featured in this report. Region 6 officials stated that the lack of funding at this site presents "long-term risks to human health and the environment," noting that without funding to implement a permanent remedy, the contaminated groundwater plume migrating from the site will eventually reach the water well for the City of Jasper, Texas.[29] Three years later, in its FY 2004 Superfund Annual Report, EPA reiterated that "[t]he Superfund program faces a backlog of new cleanup projects ready to begin construction."[30] And, for FY 2005, EPA reported that it did not have enough resources to fund new projects that were ready for construction at nine sites.[31]

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§ 300.425(b)(1).

[26] *See supra* note 9.

[27] *See* Letter from Nikki L. Tinsley, U.S. ENVTL. PROT. AGENCY, Office of the Inspector Gen., to James Jeffords, Chairman, U.S. Senate Comm. on Env't and Pub. Works 1 (Oct. 25, 2002) *available at* http://www.epa.gov/oig/reports/2002/boxer.pdf (last visited April 4, 2006).

[28] *Id.* at 3. The sites (and states in which they lie) for which actual funding fell short of requests were: Atlas Tack Corp. (MA), Elizabeth Mine (VT), Jennison-Wright Corporation (IL), Continental Steel Corp. (IN), Central Wood Preserving Co. (LA), Hart Creosoting Company (TX), Jasper Creosoting Company (TX), Basin Mining Area (MT), Upper Tenmile Creek Mining Area (MT), Gilt Edge Mine (SD), and Lorentz Barrel & Drum Co. (CA). *Id.* at Enclosures 1 and 2. Gilt Edge Mine received less funding than requested for both remedial action construction activities (Enclosure 1) and long-term response actions (Enclosure 2). *Id.*

[29] *Id.* at 3-4.

[30] U.S. ENVTL. PROT. AGENCY, EPA-540-R-05-001, FY 2004 SUPERFUND ANNUAL REPORT 20 (2005), *available at* http://www.epa.gov/superfund/action/process/pdfs/fy2004/fy2004.pdf (last visited April 4, 2006).

[31] U.S. ENVTL. PROT. AGENCY, *Superfund National Accomplishments Summary Fiscal Year 2005 as of November 22, 2005*, http://www.epa.gov/superfund/action/process/numbers05.htm (last visited April 7, 2006). For a list of the nine sites that did not receive new construction funding in fiscal year 2005, please *see* http://www.epa.gov/superfund/accomp/factsheets05.htm#not_funded (last visited April 7, 2006).

These developments have taken a drastic toll on Superfund cleanups. As shown in Figure 1, the number of construction completions dropped precipitously beginning in 2001.[32] One explanation for the decline is that during the 1990s, EPA's regional offices focused on cleaning up less complex sites first, in order to achieve high targets for construction completions.[33] Accordingly, "EPA is now left with many of the sites that require more complex, lengthy, and expensive cleanups, which take more work overall and a longer amount of time to reach construction complete status."[34] Nonetheless, funding shortfalls — including those which prevent some cleanup projects from even being started — undoubtedly play a significant role in EPA's recent lackluster record in moving sites to "construction complete."[35]

Site Examples

Superfund sites come in many guises. Most of the 50 sites are located in heavily populated urban or suburban neighborhoods and contain a toxic soup of harmful chemicals with direct routes of exposure — e.g., contaminated water, soil or air — for the people who live in surrounding communities. The sites were used by manufacturers to dispose of liquid and solid toxic wastes for many decades. Some sites date back as far as the turn of the last century. They have been included on the NPL for long periods of time, with the oldest having been listed on the very first NPL in 1983[36] and the most recent listed in 2001, at the same time that annual construction completions dropped by half. Inexplicably, some of the sites that have waited the longest for cleanup are owned by companies that remain viable, even profitable. For example:

- **Universal Oil Products** (Chemical Division), a 75-acre site in **Bergen County, New Jersey**, was added to the NPL in 1983 and was used to manufacture a variety of toxic chemicals from 1932-79. Approximately 4.5 million gallons of liquid waste heavily laced with such volatile organic compounds as vinyl chloride, benzene and trichloroethylene were dumped in unlined lagoons, resulting in contamination of soil, surface water and groundwater. The runoff of waste polluted the nearby Hackensack River Basin, which is used by local residents for recreation. Allied Signal, now

[32] EPA, *NPL Milestones by FY*, *supra* note 3.

[33] Probst & Sherman, *supra* note 17, at 3.

[34] *Id.*

[35] *Id.*, note 7 (noting that "there may be other reasons as well for the decrease in the number of construction complete sites, including funding shortfalls.").

[36] EPA published the first NPL, containing 406 sites, on Sept. 8, 1983. 48 Fed. Reg. 40658 (Sept. 8, 1983). Eight of the 50 sites profiled in this report were on that first NPL: Aerojet General (CA); Iron Mountain Mine (CA); Stringfellow (CA); American Creosote Works (Pensacola Pit) (FL); Reeves Southeast Galvanizing Corp. (FL); Nease Chemical (OH); CPS/Madison Industries (NJ); and Universal Oil Products (Chemical Division).

Honeywell, has been identified as a responsible party at the site and has been conducting cleanup activities. In 2005, Honeywell was ranked number 75 on the Fortune 500, with profits topping $1.2 billion.[37]

- The 85-acre **Bofors-Nobel** site in **Muskegon County, Michigan**, was first listed in 1988, and responsible parties include American Cyanamid, Akzo-Nobel, Bissell Corporation, DuPont, Eli Lilly, General Electric, IBM and Union Carbide, most of which either are or were listed on the Fortune 500. Unlined lagoons were used for disposal of the wastes generated by the production of alcohol-based detergents, saccharin, pesticides, herbicides and dye intermediaries. Final cleanup plans were completed in the early 1990s, but negotiations with the companies listed above, among others, slowed implementation until the late 1990s, and even then, federal funding was used to construct groundwater treatment facilities. The census tract in which the site is located has a median household income of about $38,000.

Several of the 50 sites were owned by companies that used extraordinarily toxic chemicals, some of which (e.g., creosote and lead) are now banned for most purposes. Over decades, excess chemicals and metals spilled or dropped onto the bare ground, where they seeped into underground aquifers or were washed by rain into adjacent storm sewers, rivers, or creeks. For example:

- The **American Creosote Works** (Pensacola Pit) site in **Escambia County, Florida**, was used from 1902-1981 for wood preserving. Creosote was used until 1950, when pentachlorophenol became the chemical of choice. Ponds set up to "percolate" these highly toxic liquids overflowed, spilling into Bayou Chico and the Pensacola Bay. The census tract encompassing the site is 48 percent minority, with a median household income of $23,000.

- The **Lawrence Aviation Industries** site in **Suffolk County, New York**,covers 160 acres and was used to manufacture titanium sheeting for the aeronautics industry. In 1980, the site owner crushed over 1,600 drums of trichloroethylene, acid sludges and other toxics, spilling their contents onto the unprotected soil. It also poured wastes into surface waters and two unlined lagoons.

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[37] Fortune 500, 1955-2005, CNNMoney.com, *available at* http://money.cnn.com/magazines/fortune/fortune500_archive/snapshots/2005/634.html (last visited May 8, 2006).

- The **DePue/New Jersey Zinc/Mobil Chemical Company** in **Bureau County, Illinois,**was used by a series of companies to smelt zinc for close to a century, creating waste piles, lagoons and cooling ponds filled with toxic wastes that now threaten a community with a median household income of $37,000, as well as the nearby DePue Lake, which houses a fishery, state wildlife refuge and numerous wetlands.

Other sites served as dumping grounds for multiple companies, many of which have changed their names, metamorphosing into other businesses or simply disappearing.

- One of the oldest and most notorious sites on the NPL, the 17-acre **Stringfellow** site, is located in a canyon near **the southern California town of Glen Avon**. It served as a hazardous waste disposal facility from 1956-1972, accepting over 34 million gallons of waste from metal refinishing, electroplating and pesticide manufacturing companies. This waste was dumped into surface evaporation ponds. Rainfall caused the ponds to overflow, sending streams of heavily polluted water into nearby neighborhoods. The population of the census tract around the site is 52 percent minority and has a median household income of $43,000.

- Similarly, the **Lower Darby Creek Area** in **Delaware County, Pennsylvania,** consists of two separate dumps, the Clearview Landfill and the Folcroft Landfill and Annex, where a combination of hospital waste, demolition debris and municipal waste were disposed of by several companies and local governments. Clearview was covered and re-vegetated in 1976, and the Philadelphia Redevelopment Authority constructed hundreds of homes on its eastern and southern borders. Years later, EPA discovered that the covers were eroding and contaminated runoff was seeping into nearby Darby Creek.

- The 550-acre **LCP Chemicals** site in **Glynn County, Georgia**,was used for seven decades as an oil refinery, paint manufacturing plant, power plant and chlor-alkali factory. Five major companies have been identified as responsible parties at the site: ARCO, Georgia Power Company, Dixie Paints and Varnish Company (currently O'Brien Company), Allied Chemicals, Inc. (now Allied Signal, or Honeywell) and the Hanlin Group, a subsidiary of LCP Chemicals-Georgia, Inc. EPA estimates that more than 380,000 pounds of highly toxic mercury was "lost" in the area between 1955-1979 and, as a result, commercial fishing has been banned in the area. The census tract in which the site is located is 63 percent minority, with a median household income of $24,000.

At several of the 50 sites profiled in this report, hundreds of acres of ordinary household garbage served as the foundation for disposal of millions of gallons of liquid industrial waste. At the time, engineers theorized that the garbage would serve as a sponge, soaking up the corrosive liquid and holding it in place. But the sponge became saturated and began leaking into the ground. Far from solving the problem of what to do with these heavily contaminated liquids, the garbage, which covered dozens — even hundreds — of acres, just spread it around. For example:

- In **Montgomery County, Ohio**, the 102-acre **North Sanitary Landfill** sits atop an aquifer used for drinking water, which is composed of highly transmissive sands and gravel. Portions of the site have caught fire several times. It is located in a census tract with a median household income of $25,000.

- Another glaring example is the 190-acre **Operating Industries** site in **Monterey Park, California**, located in the heart of the densely populated Los Angeles metropolitan area where millions of gallons of liquid industrial waste were poured over huge landfills containing ordinary household garbage. Leachate from the site includes vinyl chloride, benzene, tetrachloroethylene and various heavy metals. The surrounding census tract is 61 percent minority, with a median household income of $47,000.

Lastly, as mentioned earlier, some of the 50 sites were proposed for the NPL, but have never been converted to final status, meaning that they are ineligible for long-term federal remedial funding. For example:

- The **Dover Chemical Corp.** site in **Tuscarawas County, Ohio**, was proposed for listing in May 1993, but has not been added to the final NPL. Dover Chemical has operated a manufacturing facility at the site since 1950, which produces products that are used to manufacture extreme pressure lubricants, plasticizers and flame retardants for vinyl products.

- The **Normandy Park Apartments** site in **Hillsborough County, Florida**, was proposed for listing in February 1995, but has never been finalized. The site is the former home of a recycling operation that involved crushing batteries and smelting lead. The company, Gulf Coast Recycling, ultimately leveled the buildings used for these purposes and constructed apartment homes on the site, which remain occupied.

POLLUTERS PAY NO MORE: CORPORATE TAX WINDFALLS & THE FATE OF THE SUPERFUND PROGRAM

The 'Polluter Pays' Framework

In the late 1970s, the nation came to know the town of Love Canal, New York. Built on top of a massive toxic waste dump, town residents suffered from severe illness and birth defects caused by chemical exposures. Ultimately, 1,000 families were relocated and homes along the "Canal" were demolished.[38]

After the revelations about Love Canal and similar sites won widespread media attention, the need for a comprehensive program to address the country's toxic waste crisis was clear. However, there remained the question of who would pay. Environmentalists argued that because companies profited from cheap waste disposal methods, it was they who should pay to clean up the resulting mess.[39] The chemical industry retorted that society as a whole had benefited from the disposal methods in the form of less expensive products, so society as a whole should pay for the cleanup.[40]

The law that was ultimately enacted (officially titled the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)) took a two-pronged approach that affirmed, and then reaffirmed, the "polluter pays" principle.[41] The choice of which prong to pursue was left up to EPA, both in general and on a site-specific basis. First, it created a liability scheme to get "responsible parties" to pay for the cleanup of contaminated sites themselves — known colloquially as "lawyers first, shovels later."[42] Responsible parties who did not honor the government's request that they clean up "voluntarily" were subject to "treble damages" — three times ultimate cleanup costs — as punishment for their recalcitrance.[43]

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[38] A. Theodore Steegmann, Jr., *History of Love Canal and SUNY Buffalo's Response: History, the University Role, and Health Research*, 8 BUFF. ENVTL. L. J. 173, 175 (2001); *See also* ROBERT V. PERCIVAL, ET AL., ENVIRONMENTAL REGULATION: LAW, SCIENCE AND POLICY, 263 (3rd ed. 2000).

[39] Cartwright, *supra* note 2, at 303 (citing CONG. Q., INC., *Congress Clears 'Superfund' Legislation*, 36 CONG. Q. ALMANAC 584, 587 (1980)).

[40] *Id.* (citing CONG. Q., INC., *Congress Clears 'Superfund' Legislation*, 36 CONG. Q. ALMANAC 584, 587 (1980)).

[41] President Carter signed the Comprehensive Environmental Response, Compensation and Liability Act into law on Dec. 11, 1980. Pub. L. No. 96-510 (codified as amended at 42 U.S.C. §§ 9601-9675).

[42] Katherine N. Probst, *Superfund at 25: What Remains to Be Done*, RESOURCES, Fall 2005, at 20 (2005) [hereinafter, Probst, *Superfund at 25*]; 42 U.S.C. § 9606(a), CERCLA § 106(a) (authorizing EPA to issue an administrative order or secure a court order to force responsible parties to undertake cleanup measures necessary to abate contamination posing an "imminent and substantial endangerment to the public health or welfare or the environment").

[43] *Id.*

Second, the statute created a multi-billion dollar trust fund (known generally as the "Superfund," but to avoid confusion with the program itself, referred to here as the "Trust Fund" or the "Fund") that the federal government could use to pay for site cleanups where responsible parties "could not, or would not, foot the bill."[44] The law further provided that the government could recover those costs from any responsible parties it could later find, leading to the colloquial label "shovels first, lawyers later."[45] To finance the Trust Fund, Congress levied taxes on those industrial sectors most likely to have contributed to the hazardous waste sites.

The two tracks were integrally related to one another — without the resources provided by the Trust Fund, the government could not investigate sites, prosecute responsible parties, or use government-funded cleanup to abate threats to public health. Conversely, enforcement actions replenished the Trust Fund. Although Congress never anticipated that the Trust Fund would become self-supporting given the costs of administering the program and the likelihood that some sites would prove to be "orphans" with no responsible parties around, the two tracks ensured that thousands of identifiable polluters would end up either paying now, or paying later.

Transition to 'Let the People Pay'

Superfund taxes generated $1.5 billion a year, or $4 million per day.[46] These funds were significant — and vital to the health of the program — but they accounted for only a small fraction of oil, chemical and other industry profits. Indeed, this amount represents *2 percent of the 2005 profits* earned by *just six of the nation's top petroleum and petrochemical producing companies* — which paid the largest share of Superfund taxes — and the *compensation paid to the six companies' CEOs* would cover over *a month's worth of lost tax revenue* (see Figure 4).

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[44] Probst, *Superfund at 25, supra* note 42, at 20.

[45] 42 U.S.C. §§ 9607(a)(4)(A)-(D), CERCLA §§ 107(a)(4)(A)-(D) (authorizing recovery of cleanup costs from responsible parties).

[46] U.S. ENVTL. PROT. AGENCY, THE FACTS SPEAK FOR THEMSELVES: A FUNDAMENTALLY DIFFERENT SUPERFUND PROGRAM, at 6, *available at* http://www.epa.gov/superfund/whatissf/sf_fact4.pdf (last visited March 27, 2006); *see also* Mark Reisch, *Superfund Reauthorization Issues in the 105th Congress*, Cong. Research Serv. Issue Brief No. 97025 (1998), *available at* http://ncseonline.org/NLE/CRSreports/waste/waste-17.cfm (last visited March 29, 2006).

Figure 4: Petroleum Profits

Company Name	Fortune 500 Rank	2005 Profits ($ in millions)	CEO Name	2005 CEO Compensation
Exxon Mobil	1	$36,130	Lee R. Raymond	$25,773,000
Chevron	4	$14,099	David J. O'Reilly	$8,170,000
ConocoPhillips	6	$13,529	James J. Mulva	$16,789,000
Valero Energy	15	$3,590	William E. Greehey	$44,875,000
Marathon Oil	23	$3,032	Clarence P. Cazelot, Jr.	$4,839,000
Sunoco	66	$974	John G. Drosdick	$33,436,000
		Total: $71,354		Total: $133,882,000

Nonetheless, industry lobbied fiercely against the Superfund tax, and following the Republican takeover of Congress in 1995, the tax was allowed to expire.[47] At the time, the Fund still had an unobligated balance of nearly $4 billion, as well as continual deposits from interest payments, cost recoveries, fines and penalties.[48] As a result, the lapse in taxing authority had little initial effect on the ability to fund the program.[49]

Although EPA had enough money to keep up a reasonable pace for cleanup initially, the Clinton administration recognized that the long-term stability of the program required that the fund be replenished continually, and President Clinton faithfully recommended reinstatement of the Superfund taxes in his annual budget submissions.[50]

Year after year, however, Republican-controlled Congresses resisted these requests, and, as EPA received appropriations without any revenue from taxes replenishing these amounts, the Trust Fund's balance continued to erode. In 1998, Congress asked the General Accounting Office (GAO, subsequently renamed the Government Accountability Office) for reassurance that there was no legal prohibition on shifting the entire burden onto general taxpayers. Answering narrowly, GAO replied that such an approach was legal.[51] Nonetheless, the

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[47] *Id.*

[48] James E. McCarthy, *Superfund Taxes or General Revenues: Future Funding Options for the Superfund Program*, Cong. Research Serv. Report No. RL31410 (2005) at at 2-3, *available at* http://ncseonline.org/nle/crsreports/05mar/RL31410.pdf (last visited March 29, 2006).

[49] *Id.* at 3.

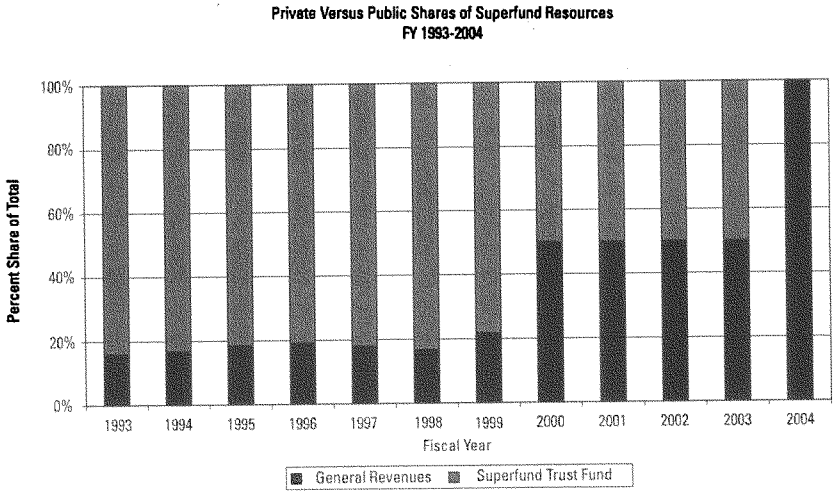
[50] *See id.*

[51] U.S. GEN. ACCOUNTING OFFICE, GAO/RCED-98-152R, SUPERFUND: STATUS OF THE SUPERFUND TRUST FUND 1-2, 4 (1998), available at http://archive.gao.gov/paprpdf2/160233.pdf (last visited March 30, 2006). The GAO discussed the issue with officials from the Congressional Budget Office, EPA and the Office of Management and Budget and none "identified any provisions of law or the congressional budget resolution that would preclude funding the Superfund program entirely from general revenues"). *Id.* at 4.

shift was a profound break with the statute's underlying premise that polluting industries, not citizens, should support this burden.

As shown in Figure 5, from FY 1993-1999, the share of the Superfund program funded by general taxpayers remained constant at $250 million, less than 20 percent of the overall appropriation.[52] In 1999, that amount increased to $325 million, and from FY 2000-2003, rose to more than $600 million per year — around 50 percent of the total appropriations.[53] By 2004, general revenues accounted for 100 percent of appropriations to EPA for the Superfund program because by the end of FY 2003, the Trust Fund's balance was zero.[54]

Figure 5: Ratio of Polluter and Individual Taxpayer Contributions to Trust Fund[55]



[52] U.S. GEN. ACCOUNTING OFFICE, GAO-04-787R, SUPERFUND PROGRAM: BREAKDOWN OF APPROPRIATIONS DATA 3 (2004), available at http://www.gao.gov/new.items/d04787r.pdf (last visited March 31, 2006) [hereinafter, GAO, BREAKDOWN OF SUPERFUND APPROPRIATIONS].

[53] *Id.*

[54] *Id.*; McCarthy, *supra* note 48, at 4-5 (citing Budget of the United States Government, Appendix, Fiscal Years 1996-2005).

[55] Data set forth in *Sources and Amounts of Appropriations to the Superfund Program, Fiscal Years 1993 through 2004* in GAO, BREAKDOWN OF SUPERFUND APPROPRIATIONS, *supra* note 52, at 3.

Funding Shortages

The process of cleaning up heavily contaminated hazardous waste sites is complex, resource-intensive and time consuming. Specifically, "major Superfund cleanups can cost millions or even hundreds of millions of dollars" and "can involve complex remedies such as excavation and treatment of large amounts of soil, lengthy treatment of polluted underground water, or even dredging and removal of contaminants from underwater sites."[56]

Coinciding with the decline of the Trust Fund balance, yearly appropriations for Superfund have fallen well below program needs. During the spring and summer of 1999, staff on the relevant Congressional committees "tried unsuccessfully to determine how much money the Superfund program would need over the next few years and when a decrease in needed appropriations was likely to occur."[57] Recognizing that more detailed analysis was needed, Congress requested that Resources for the Future (RFF) conduct an independent study.[58] After analyzing all major elements of the program, the report's authors presented their best estimate as to future funding requirements, along with alternative low and high case scenarios to reflect uncertainties about factors used in their model.[59] The authors concluded that *the program would not be in a position to "ramp down" in the next decade.*[60]

Congress did not heed this warning, cutting actual appropriations to a point far short of RFF's estimates.[61] A comparison of enacted appropriations and RFF's base and low case estimates appears in Figure 6. Specifically, cumulative appropriations for FY 2000-2005 fell short of RFF's base case estimate of costs for the same period by $1.75 billion.[62] Compared against RFF's low case estimate, actual appropriations still fell $1.3 billion short.[63]

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[56] Meredith Preston, *With Trust Fund Depleting, Battle Brews Over Whether to Reinstate Industry Taxes*, 33 ENV'T REP. (BNA) 1078 (May 10, 2002) [hereinafter, Preston, *Trust Fund Depleting*].

[57] Probst, *et al.*, SUPERFUND'S FUTURE, *supra* note 9, at 3 (2001).

[58] *Id.* at 33 (citing Departments of Veterans Affairs and Housing and Urban Development, and Independent Agencies Appropriations Act, 2000, Conference Report 106-379).

[59] *Id.* at 121.

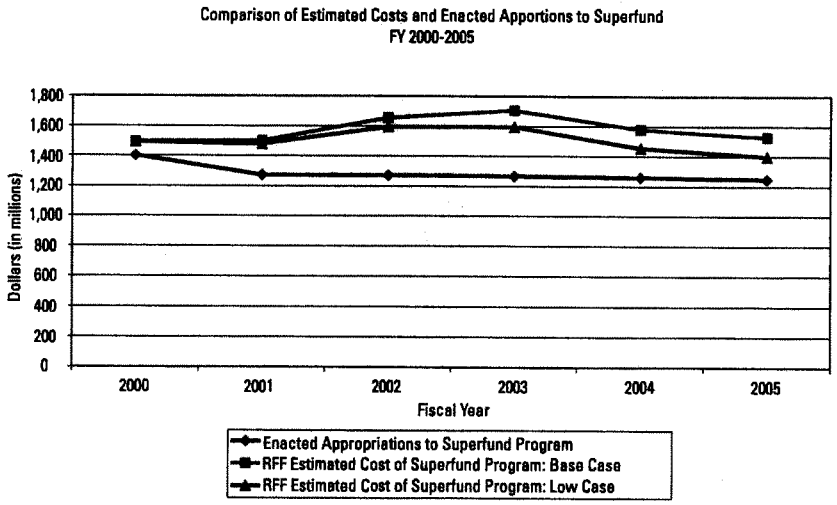
[60] *Id.* at 157; *see also* Probst, *Whither Superfund?*, *supra* note 22.

[61] *See* notes 62-63, *infra*, and accompanying text; *see also* Preston, *Trust Fund Depleting, supra* note 56 (quoting Kate Probst, co-author of the RFF report: "[i]f you look at our numbers, they've (EPA) been underfunded since FY 2000").

[62] Data for enacted appropriations to the Superfund program for fiscal years 2000 – 2004 were obtained from GAO, BREAKDOWN OF SUPERFUND APPROPRIATIONS, *supra* note 52, at 3. For fiscal year 2005, the enacted appropriation figure was obtained from U.S. ENVTL. PROT. AGENCY, *Superfund Appropriation History, available at* http://www.epa.gov/superfund/action/process/budgethistory.htm (last visited April 4, 2006) [hereinafter, EPA, *Superfund Appropriation History*]. RFF's base case estimates appear in Table 7-4, *Estimated Total Annual Cost to EPA of Superfund Program: Base Case FY2000-2009 (Millions of 1999$)* in Probst, *et al.*, SUPERFUND'S FUTURE, *supra* note 9, at 158.

[63] Data for enacted appropriations to the Superfund program for fiscal years 2000 – 2004 were ob-

Figure 6: Superfund's Resource Gap[64]



When measured in nominal dollars, funding for the Superfund program has remained relatively constant over the last few years. However, when adjusted for inflation, funding for the program has been steadily declining.[65] This trend appears to be continuing. The President's FY 2007 Budget Request for Superfund is $1.259 billion — $20 million less than the FY 2006 request — all of which will come from general revenues.[66]

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tained from GAO, BREAKDOWN OF SUPERFUND APPROPRIATIONS, *supra* note 52, at 3. For fiscal year 2005, the enacted appropriation figure was obtained from EPA, *Superfund Appropriation History*, *supra* note 62. RFF's low case estimates appear in Table H-8, *Estimated Total Annual Costs to EPA of Superfund Program: Three Scenarios, FY2000-2009 ($1999)* in Probst, *et al.*, SUPERFUND'S FUTURE, *supra* note 9, at 264.

[64] Data for enacted appropriations to the Superfund program for fiscal years 2000 – 2004 were obtained from GAO, BREAKDOWN OF SUPERFUND APPROPRIATIONS, *supra* note 52, at 3. For fiscal year 2005, the enacted appropriation figure was obtained from EPA, *Superfund Appropriation History*, *supra* note 62. The estimates presented are RFF's totals, which appear in Tables 7-4, *Estimated Total Annual Cost to EPA of Superfund Program: Base Case FY2000-2009 (Millions of 1999$)* (base case estimates); and H-8, *Estimated Total Annual Costs to EPA of Superfund Program: Three Scenarios, FY2000-2009 ($1999)* (low case estimates), in Probst, *et al.*, SUPERFUND'S FUTURE, *supra* note 9, at 158, 264.

[65] For a comparison of Superfund appropriations in nominal dollars and constant 1987 dollars, *see* Probst, *Superfund at 25*, *supra* note 42, at 22.

[66] Subcommittee on Water Resources and Environment, House Committee on Transportation and Infrastructure, Hearing on Agency Budgets and Priorities for FY 2007, *available at* http://www.house.gov/transportation/water/03-08-06/03-08-06memo.hml (follow "Background" hyperlink).

Superfund Opponents Spin

Despite these precipitous drops in the Trust Fund's balance, efforts to reinstate the Superfund taxes have failed repeatedly, largely as a result of unrelenting opposition by the petroleum and chemical industries and their allies in the Bush administration.[67] Instead of seeking additional resources, the administration has opted for a slowdown in cleanups. Indeed, in response to Superfund's financial troubles, one high-ranking EPA official even suggested that the agency could stop adding new sites to the NPL until work on current projects is completed.[68] Conveniently, this approach would not only prevent sites from becoming eligible for federal cleanup monies — and in effect bury information about sites that threaten public health and the environment[69] — but would gradually create the impression that the entire program could be abolished.

Superfund's opponents make two deceptive claims against reinstatement of the corporate tax. First, they argue that the "polluter pays" principle is already at work due to the statute's liability scheme and the contributions of responsible parties for site cleanup. And second, they claim the Trust Fund bears no relationship to program funding for Superfund.

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[67] *See e.g.*, Preston, *Trust Fund Depleting*, *supra* note 56 (noting measures to reinstate Superfund taxes planned by Sen. Robert Torricelli (D-N.J.) and proposed by Rep. Frank Pallone (D-N.J.)); Linda Roeder, *Insufficient Funds for Cleanup Operations, Supreme Court Decision Lead EPA Concerns*, 36 ENV'T REP. (BNA) S-14 (Jan. 14, 2005) (reporting that bills to reintroduce the tax in the 108th Congress failed to win approval and that Sen. Barbara Boxer (D-Calif.) and Rep. Frank Pallone (D-N.J.) planned to reintroduce measures reinstating Superfund taxes) [hereinafter, Roeder, *Insufficient Funds*]; Linda Roeder, *Legislation Introduced in House to Reinstate Corporate Income Tax to Finance Trust Fund*, 36 ENV'T REP. (BNA) 2293 (Nov. 11, 2005) (examining legislation introduced in November 2005 by Rep. Sherwood Boehlert (R-N.Y.) to reinstate the corporate environmental income tax) [hereinafter, Roeder, *Legislation Introduced*]; Linda Roeder, *EPA Cites Challenge of Cleaning Up Sites While Contending With Limits on Funding*, 37 ENV'T REP. (BNA) S-17 (Jan. 20, 2006) (describing bill introduced by Reps. Maurice Hinchey (D-N.Y.) and Christopher Shays (R-Conn.) that would restore both the excise taxes on the petroleum and chemical industries as well as the corporate environmental income tax).

[68] Thomas Dunne, *Remarks; Superfund Seminar; Charlottesville, Virginia* 9 (Dec. 2, 2004), *available at*: http://www.epa.gov/oswer/docs/2004_1202_dunne_sf_speech.pdf (last visited April 7, 2006) (posing the question, "would Superfund benefit, and would the public approve, if EPA stopped listing new sites, or didn't begin cleanup at any newly eligible orphan sites, until current work in the pipeline was completed?") [hereinafter, Dunne, *Remarks*]; *see also* Linda Roeder, *Insufficient Funds*, *supra* note 67 (quoting Thomas Dunne, then EPA Acting Assistant Administrator for Solid Waste and Emergency Response); Meredith Preston, *Agency Seeking Ways to Control Costs, Manage Available Finances, Official Says*, 36 ENV'T REP. (BNA) 861 (April 29, 2005) (quoting Samuel Coleman, Director of the Superfund Division, EPA Region 6 as stating that EPA is considering not adding any more sites to the NPL "unless they pose a significant risk to human health").

[69] Roeder, *Insufficient Funds*, *supra* note 67 (noting opposition by environmental organizations and Congressional Democrats).

Superfund Spin, Part 1: 'Polluters Already Pay'

The Bush administration has endorsed the view long promoted by the oil and chemical industries that the Superfund tax is unfair because polluters already pay for cleanups. Administration officials point out that 70 percent of cleanups are paid for by responsible companies, not the Trust Fund.[70]

Yet as explained above, when Congress enacted the Superfund law, it intended not only that specific polluters pay to clean up wastes at the individual sites they contaminated, but also that those industries most likely to have profited from cheap disposal practices shoulder the financial burden of cleaning up "orphan" sites.[71]

In the absence of the Superfund corporate tax, tax revenues from average citizens are now being used to replenish the Trust Fund — just as the Fund is expected to finance an increasing share of cleanups. Indeed, EPA regional managers predict cleanups financed by the Trust Fund will increase from 28 percent to 43 percent[72] in coming years because, according to Resources for the Future, "states are now addressing the majority of single-party sites and sites with cooperative responsible parties . . . leaving EPA the orphan sites and sites with recalcitrant PRPs — that is, the sites more likely to have Fund-lead actions."[73]

The Trust Fund also helps ensure that responsible parties pay. The 70 percent statistic derives from EPA's evaluation of the success of its "Enforcement First" policy, which it adopted following the agency's publication of its 1989 "90-Day Study."[74] In the early years of Superfund, EPA frequently performed cleanups using Fund money and then sued responsible parties to recover costs — in FY 1987, only 30 percent of remedial actions were conducted by responsible parties.[75] In 1989, however, EPA committed to using a "lawyers first, shovels later" approach.[76] Under

[70] *See, e.g.*, COUNCIL ON ENVIRONMENTAL QUALITY, *Cleaner Lands*, *available at* http://www.whitehouse.gov/ceq/clean-lands.html (last visited May 22, 2006).

[71] *See* McCarthy, *supra* note 48, at 2.

[72] Probst, *et al.*, SUPERFUND'S FUTURE, *supra* note 9, at 103. Estimates by the regional managers applied to the "next five years," based on planning data for remedial action starts as well as projections through FY 2005. *Id.*

[73] *Id.* at 103-04.

[74] U.S. ENV'T PROT. AGENCY, OSWER 9201.101A, 90-DAY STUDY: A MANAGEMENT REVIEW OF THE SUPERFUND PROGRAM (Jan. 1, 1989). The study focused on a variety of common concerns associated with Superfund, such as enforcement, cleanup response time, and community participation. U.S. ENV'T PROT. AGENCY, *Superfund Reforms; Round 1*, http://www.epa.gov/superfund/programs/reforms/rounds/round1.htm (last visited April 7, 2006) [hereinafter, EPA, *Superfund Reforms: Round 1*].

[75] *Id.*

[76] U.S. ENV'T PROT. AGENCY, OSWER 9201.101A, 90-DAY STUDY: A MANAGEMENT REVIEW OF THE SUPERFUND PROGRAM (Jan. 1, 1989). The study focused on a variety of common concerns associated with Superfund, such as enforcement, cleanup response time, and community participation.

this approach, EPA pursued financial settlements with responsible parties before using Trust Fund money to begin cleanups.[77] As a result, by FY 1992, the share of remedial actions conducted by responsible parties had jumped to 70 percent.[78]

Today, however, the incentive for responsible parties to settle with EPA — and pay for cleanups — is substantially weakened. Because the money available in the Fund has dwindled, EPA now lacks sufficient funding to credibly pursue responsible parties. If funding is not restored, it inevitably will become easier for sites to "hide in the weeds," in the lexicon of the program, and avoid cleanup obligations.[79]

To ensure that EPA is able to both handle the anticipated increase in Fund-financed cleanups and achieve settlements with responsible parties, it needs not only sustained but increased levels of program funding — funding that ought to come from a reinstated industry tax.

Superfund Spin, Part 2: 'The Trust Fund Bears No Relationship to Program Funding'

Every penny raised by Superfund corporate taxes, before they expired, went directly into the Trust Fund. The law does not authorize either Congress or the executive branch to spend this money for any other purpose. Nor is EPA allowed to withdraw these revenues directly; instead, it must wait for a Congressional appropriation. In sum, unless and until Congress appropriates money from the Fund, tax revenues remain in the bank, accruing interest but sequestered from any other uses.

Bush administration officials frequently distort these fundamental realities in defending their opposition to the Superfund tax.[80] Because Congress must

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U.S. ENV'T PROT. AGENCY, *Superfund Reforms; Round 1*, http://www.epa.gov/superfund/programs/reforms/rounds/round1.htm (last visited April 7, 2006) [hereinafter, EPA, *Superfund Reforms: Round 1*].

[77] *See* Memorandum from John Suarez, Office of Enforcement and Compliance Assurance & Marianne Horinko, Office of Solid Waste and Emergency Response to Regional Administrators 1 (Sept. 20, 2002), *available at*: http://www.epa.gov/compliance/resources/policies/cleanup/superfund/enffirst-mem.pdf (last visited April 7, 2006).

[78] EPA, *Superfund Reforms; Round 1*, *supra* note 76.

[79] Lack of funding also affects enforcement litigation – without funding adequate to conduct site investigations, EPA loses its ability to issue cleanup orders under CERCLA. *See* 42 U.S.C. § 9606(a), CERCLA § 106(a); *see also* Lois J. Schiffer, *How Litigation Shaped Superfund*, ENVTL. FORUM, July/Aug. 2005 at 24 (noting that the funding problem affects enforcement litigation in several ways, including that "EPA has less money to investigate sites so that it can move the process forward").

[80] Another argument is that a better alternative to reinstating the taxes is to increase efficiency within EPA's Superfund program. *See* Linda Roeder, *Legislation Introduced*, *supra* note 67 (quoting EPA Administrator Stephen L. Johnson). Velma Smith, Senior Policy Analyst at the National Environ-

appropriate money from the Trust Fund, the administration argues that the Fund's balance is irrelevant to the amount of funding available for the Superfund program[81] — even though the Trust Fund is permanently reserved to support the program. Marianne Lamont Horinko, who headed the Superfund program before briefly serving as acting EPA administrator after Christine Todd Whitman resigned, explained this argument in a 2004 speech[82]:

> The link between the Superfund Tax and EPA's cleanup budget is one of those urban myths, like giant alligators in the sewer system. There are no alligators, and there is no link. EPA's Superfund budget is appropriated each year by Congress. Over the past 10 years the amount appropriated to EPA for Superfund has remained remarkably consistent, roughly between $1.1 and $1.4 billion per year. But it's unrelated to the Superfund tax and Trust Fund balance. The Superfund budget is subject to the same kind of funding pressures as all other federal programs. In 1996, for example, the Trust Fund balance was $3.8 billion, while our appropriation was only $1.4 billion. I expect appropriations for Superfund cleanups will continue steady into the future, no matter what the balance in the Trust Fund. Even if the Superfund taxes were reimposed tomorrow, money collected would not flow directly to EPA. It would be subject to Congressional appropriations, and our Superfund budget would not necessarily increase. That budget is controlled by Congress, pure and simple.[83]

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mental Trust, has commented that looking for efficiencies in the operation of the Superfund program in order to address the funding shortfalls is like "taking the couch pillows out and scrounging around for change in order to pay this month's mortgage." Velma Smith, Remarks at the Panel Discussion, "Superfund Enforcement at 25: Learning from the Past and Looking to the Future," at the International Trade Center, Ronald Reagan Building Amphitheater, Washington, D.C. (Dec. 13, 2005).

[81] Amena H. Saiyid, *EPA Continues to Oppose Reinstatement of Corporate Taxes to Replenish Trust Fund*, 27 ENV'T REP. (BNA) 498 (March 10, 2006). As the president of the American Petroleum Industry explained to Congress in 1999, because Superfund is a discretionary domestic program subject to the budget rules that apply to all discretionary spending, it is "the discretionary spending caps, rather than the Trust Fund balance, [that] control the Superfund program's spending level." *The Superfund Completion Act of 1999: Hearing Before the Senate Committee on Environment and Public Works*, 106th Cong. (1999) (statement of Red Cavaney, President, American Petroleum Institute), *available at*: http://epw.senate.gov/107th /cav_5-25.htm (last visited April 7, 2006).

[82] Remarks by Marianne Lamont Horinko, Baker Botts Annual Environmental Seminar (Feb. 5, 2004), *available at* http://www.epa.gov/superfund/action/congress/02-05-04.htm (last visited April 7, 2006).

[83] *Id. See also* Dunne, *Remarks*, *supra* note 68, at 2-3 (arguing that amounts appropriated to the Superfund program "bear little or no relationship to the balance in the Trust Fund. If the tax were reimposed tomorrow, our budget would not necessarily go up one dime").

Yet as anyone familiar with the program realizes, Congress has had $1.45 billion per year *less* to allocate among budget priorities since Superfund taxes expired.[84] If the taxes were reinstated, the overall appropriations "pie" would increase, and Superfund would have a better chance of getting the bigger "slice" it so greatly needs. At the very least, even if Congress were to keep funding levels constant, it would likely revert to drawing about 80 percent of the Superfund program's appropriation from the Fund's corporate tax revenues.[85] Such an arrangement would not only free up an equivalent amount of general revenues for other programs, but also restore the "polluter pays" principle to Superfund.

Conclusion

Efforts to reauthorize CERCLA have, in the past, exhausted those involved in the process, and "few have the stomach" to face another attempt at reauthorization.[86] For the sake of those living near the 50 sites detailed in this report, as well as the millions of others living near hazardous waste sites across the country, Congress must take a collective deep breath and resolve to once again tackle reauthorization of CERCLA. At a minimum, Congress must dig beneath the administration's pat arguments against reinstating the Superfund taxes and reclaim the critical revenue they generate. Next, it must follow through and ensure that increased amounts of money in the Trust Fund result in increased appropriations to the Superfund program. Adequate funding may not, on its own, solve all the problems plaguing the Superfund program, but it is unquestionably a critical component to ensuring the cleanup of the nation's toxic waste sites.

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[84] *See* McCarthy, *supra* note 48, at 3.

[85] Money in the Fund may only be used for purposes related to the Superfund program as spelled out in CERCLA. 42 U.S.C. § 9611, CERCLA § 111. Accordingly, if Congress wants to include any of the money in the Fund in its annual budget, it must appropriate it for Superfund. History demonstrates that Congress indeed uses the money in the Fund. From FY 1993-1999, about 80 percent of program funding was drawn from the Fund. *See supra*, note 52, accompanying text, and Figure 5.

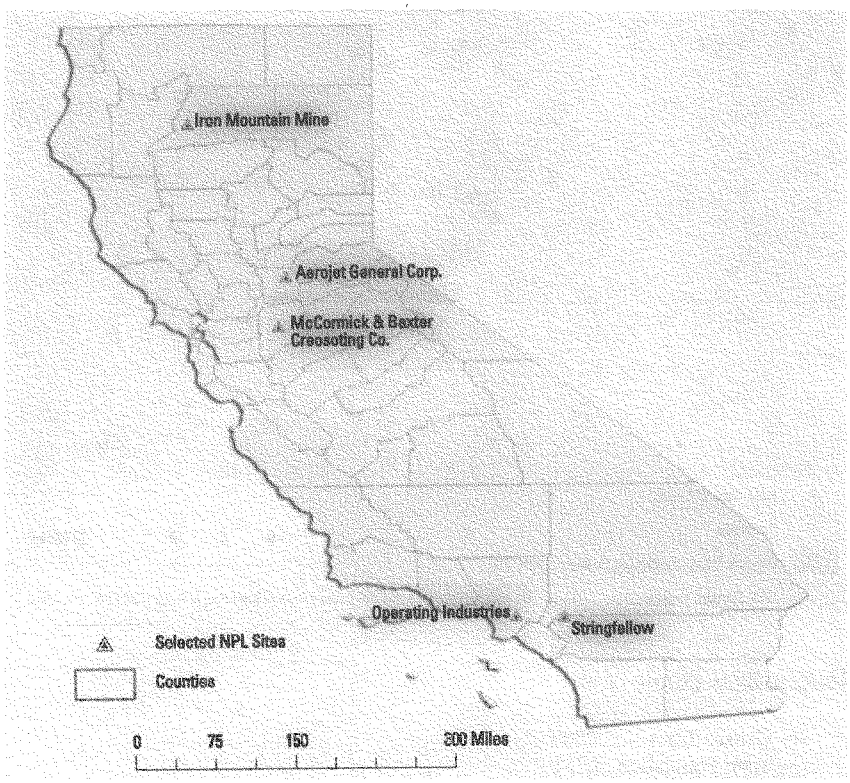
[86] Probst, *Whither Superfund?*, *supra* note 22.

50 Sites in 10 States

The Human and Environmental Costs of Superfund Neglect

To bring the threat to public health and natural resources to life, this report examines the status of the five worst National Priorities List (NPL) sites in each of the country's 10 most populous states. A complete list of these sites, along with demographic data and chemicals present, can be found in Appendix A. An explanation of the methodology used to select and analyze these sites can be found in Appendix B.

CALIFORNIA

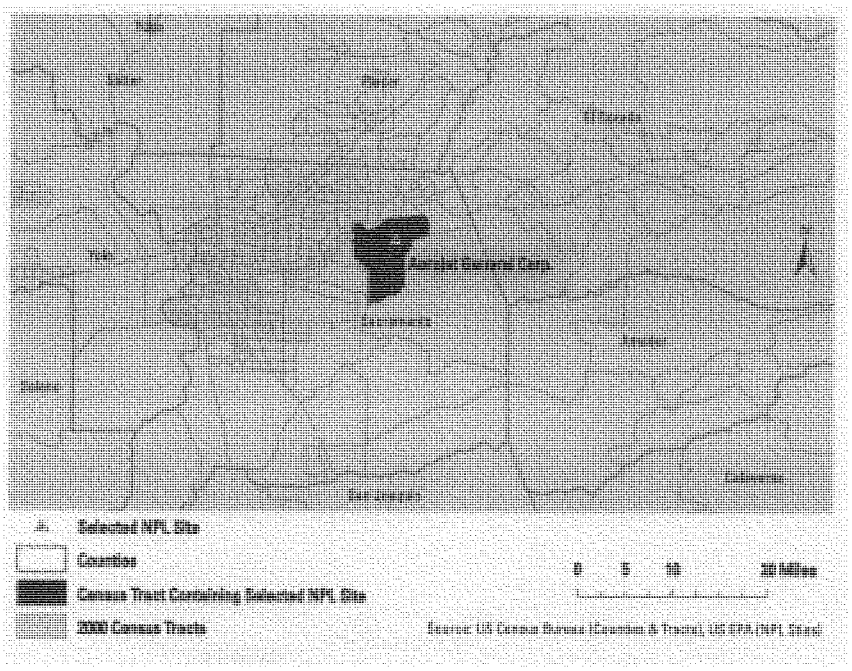


Source: US Census Bureau (States & Counties), US EPA (NPL Sites)

As of the 2000 Census, 22,453 Californians lived in the census tracts containing the five profiled NPL sites. Of those, 3,228 were children aged nine and younger. An additional 1,227 were persons aged 75 and older. In two of the five census tracts, the median household income for 1999 was below that for the nation.

AEROJET GENERAL CORP.

Sacramento County, California
HRS Score: 54.63



Demographic Profile

Census Tract No.: 0087.01
Total Population: 4,751
Median Age: 42.5
Children 9 and under: 582
Persons 75 and older: 339
Percent Minority: 22.6
Percent Hispanic: 4.4
Median Household Income in 1999: $84,740

Site Description[87]

Added to the NPL on September 8, 1983, Aerojet General Corp. is a 5,900-acre site near Rancho Cordova, 15 miles east of Sacramento and a half-mile from the American River. Since 1953, Aerojet and its subsidiaries manufactured liquid and solid propellant rocket engines and formulated various other agricultural, pharmaceutical and industrial chemicals. A second chemical manufacturing complex operated on the site from 1974-1979. The companies disposed of unknown quantities of hazardous waste using surface impoundments, landfills, deep injection wells, leachate fields and open burning. These practices released various chemicals and processing wastes into groundwater and surface water. In 1979, volatile organic compounds (VOCs) were found off-site in private wells and in the American River in 1983. Perchlorate, a component of rocket fuel, was found in drinking water wells off-site in 1997. Soils were also contaminated with metals including arsenic, cadmium and lead.

Throughout the area, groundwater is used extensively to supply municipal, domestic, industrial and irrigation water. Nearby Lake Natoma and Alder Creek are used for recreational activities. The American River is used for public water supplies. Communities potentially affected by this site are Rancho Cordova, population 55,000; Carmichael, population 49,000; and Sacramento, population 407,000. The closest residence is about 500 feet away from the site. Contaminated public and private drinking water supply wells have been closed.

Contaminants Present

Ground and surface water:

- volatile organic compounds (VOCs), including Trichloroethylene (TCE) and Perchloroethylene (PCE)
- 1,1-Dichloroethylene
- 1,1-Dichloroethane
- 1,2-Dichloroethylene
- 1,2-Dichloroethane
- 1,1,2-Trichloroethane
- Carbon Tetrachloride
- Vinyl Chloride
- Chloroform
- Freon-113
- Other rocket propulsion waste products or components, such as Perchlorate and N-Nitrosodimethylamine (NDMA)

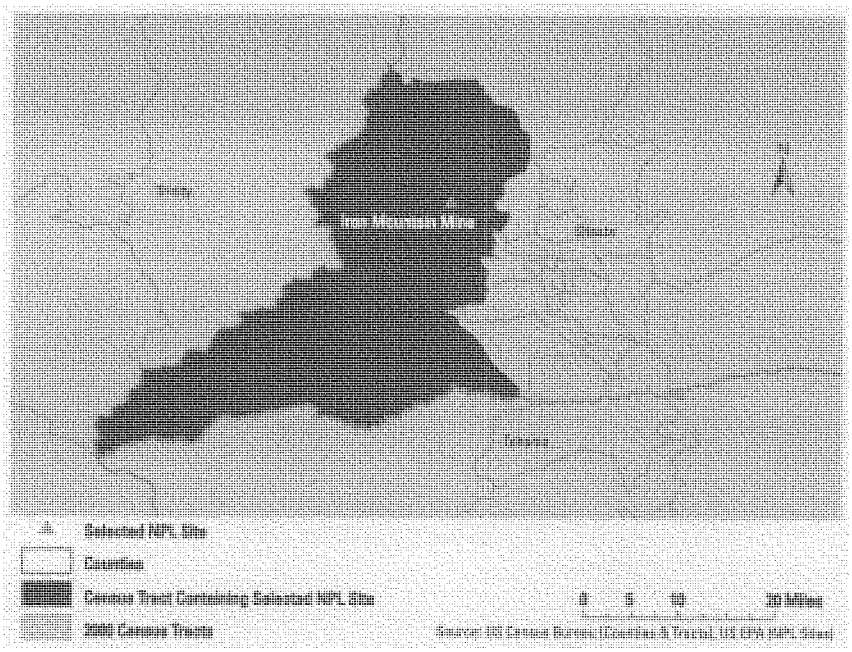
[87] Site description and contaminant information obtained from NPL site fact sheet, *available at* http://www.epa.gov/superfund/sites/npl/ca.htm (follow "list of all NPL Sites in California, by County" hyperlink, then follow "Aerojet General Corp." hyperlink) (updated Nov. 8, 2005).

Soil:

- VOCs
- Perchlorate
- Metals including arsenic, beryllium, cadmium, chromium, cobalt, copper, lead, nickel and zinc

IRON MOUNTAIN MINE

Shasta County, California
HRS Score: 56.16



Demographic Profile

Census Tract No.: 0124
Total Population: 3,863
Median Age: 43.8
Children 9 and under: 387
Persons 75 and older: 204
Percent Minority: 8.4
Percent Hispanic: 3.6
Median Household Income in 1999: $41,607

Site Description[88]

Added to the NPL on September 8, 1983, Iron Mountain Mine (IMM) is a 4,400-acre site that was mined for iron, silver, gold, copper, zinc and pyrite from the 1860s until 1963. Currently, underground mine workings, waste rock dumps, piles of mine tailings and an open mine pit remain at the site. Historic mining activity has fractured the mountain, exposing minerals to surface water, rain and oxygen. As a result, sulfuric acid formed and runs through the mountain, leaching copper, cadmium, zinc and other heavy metals into surface water. These contaminants are then channeled into Spring Creek Reservoir and are released into Keswick Reservoir periodically to coincide with diluting releases from Shasta Dam.

About 70,000 people use surface water within three miles of IMM as a source of drinking water. Upon listing in 1983, California estimated that a daily average of 2,350 pounds of zinc, 300 pounds of copper and 50 pounds of cadmium were carried into Keswick Reservoir from the IMM site. Uncontrolled spills from Spring Creek Reservoir release harmful quantities of heavy metals into the Sacramento River. Since 1940, numerous fish kills have occurred in the Sacramento River from IMM metals. In 1994, the Winter Run Chinook Salmon was listed as an endangered species and its critical habitat includes the affected waterways. Potential health risks include ingestion of or direct contact with mine drainage and contaminant accumulation in local fish.

Contaminants Present

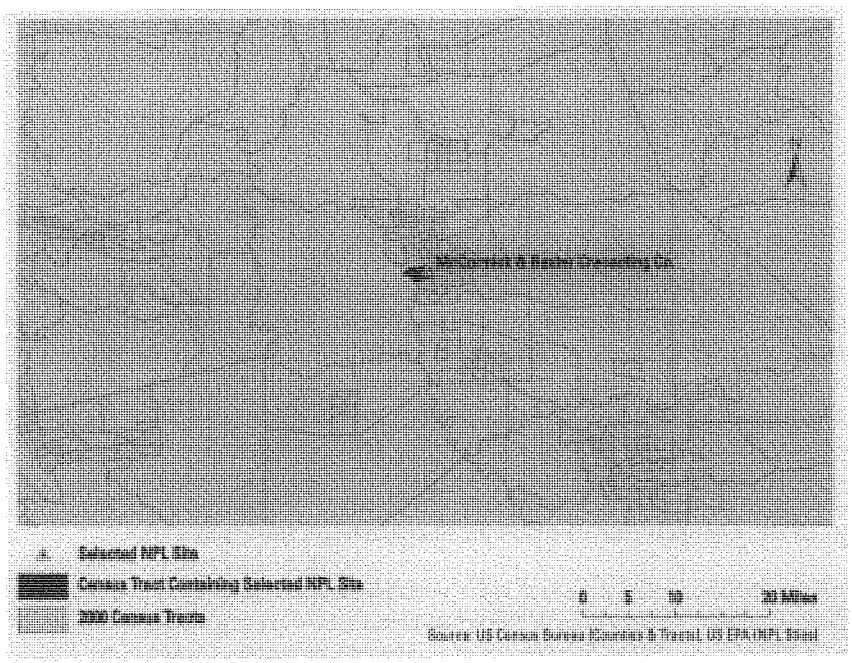
Surface water:

- sulfuric acid
- copper, zinc and cadmium

[88] Site description and contaminant information obtained from NPL site fact sheet, *available at* http://www.epa.gov/superfund/sites/npl/ca.htm (follow "list of all NPL Sites in California, by County" hyperlink, then follow "Iron Mountain Mine" hyperlink) (updated Sept. 27, 2005).

MCCORMICK & BAXTER CREOSOTING CO.

San Joaquin County, California
HRS Score: 74.86



Demographic Profile

Census Tract No.: 0008
Total Population: 1,525
Median Age: 27.1
Children 9 and under: 306
Persons 75 and older: 58
Percent Minority: 71.7
Percent Hispanic: 68.3
Median Household Income in 1999: $22,348

Site Description[89]

Added to the NPL on October 14, 1992, the McCormick & Baxter Creosoting Co. site is a 29-acre former wood-preserving facility near the Port of Stockton. It is bordered on the north by Old Mormon Slough, a tributary to the San Joaquin River. People currently fish in both the Slough and San Joaquin River. Between 1942 and 1990, McCormick & Baxter treated utility poles and railroad ties with creosote, pentachlorophenol (PCP) and compounds of arsenic, chromium and copper. Wood-treating chemicals were stored in tanks and treatment waste was deposited in unlined ponds and concrete tanks.

In 1978, following a fish kill from PCB-contaminated storm water runoff traced to the site, McCormick & Baxter installed two storm water collection ponds and a perimeter dike around the site. In 1983 and 1984, soil on the site was found to be contaminated with arsenic, chromium, copper, PCP and polycyclic aromatic hydrocarbons (PAHs). The soil contamination extended to 40 feet below ground surface ("bgs"). In addition, a shallow aquifer beneath the site is contaminated to 175 feet bgs. This aquifer connects to a deeper aquifer within four miles of the site, which provides drinking water to about 97,000 people. In 1989, arsenic and PCP air particulates were detected on the site.

Approximately 105,000 people live and work within four miles of the site. Contaminants have been found in locally caught fish, which may be consumed by fishermen and their families. The contaminants also pose a threat to local aquatic organisms.

Contaminants Present

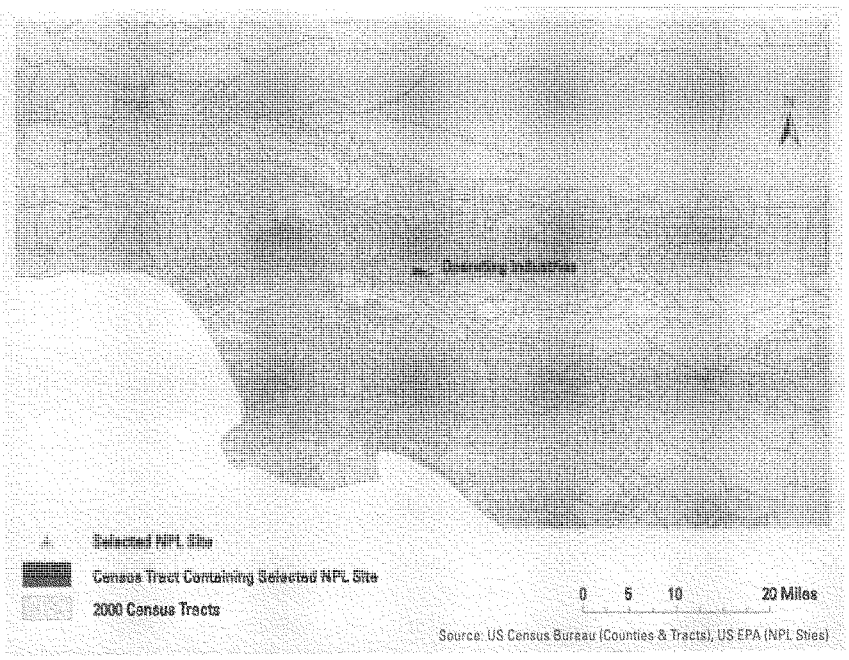
Soil and groundwater:

- Pentachlorophenol (PCP)
- dioxin
- polycyclic aromatic hydrocarbons (PAHs) (constituents of creosote, arsenic, chromium and copper)
- non-aqueous phase liquids (NAPLs) are widespread beneath the site

[89] Site description and contaminant information obtained from NPL site fact sheet, *available at* http://www.epa.gov/superfund/sites/npl/ca.htm (follow "list of all NPL Sites in California, by County" hyperlink, then follow "McCormick & Baxter Creosoting Co." hyperlink) (updated Jan. 27, 2006).

OPERATING INDUSTRIES

Los Angeles County, California
HRS Score: 57.22



Demographic Profile

Census Tract No.: 4828
Total Population: 4,309
Median Age: 39.1
Children 9 and under: 462
Persons 75 and older: 364
Percent Minority: 61.1
Percent Hispanic: 46.4
Median Household Income in 1999: $46,708

Site Description[90]

Added to the NPL on June 10, 1986, the Operating Industries site is a residential, commercial, liquid and hazardous waste landfill on 190 acres in Monterey Park, California, about 10 miles east of downtown Los Angeles. Pomona Freeway bisects the site into a northern 45-acre portion and a southern 145-acre portion. The landfill's leachate (liquid that percolates through the waste) contains several contaminants, including vinyl chloride, benzene-type compounds, tetrachloroethylene and heavy metals.

The Operating Industries site is adjacent to a large residential area. About 23,000 people live and use wells within three miles of the site as a source of drinking water, and 2,100 people live within 1,000 feet of the landfill. Potential health threats include gas inhalation and direct contact or accidental ingestion of contaminated groundwater, soils or leachate. There is also the potential for explosion or fire.

Contaminants Present

Air, groundwater, soil & leachate:

- various organic and inorganic compounds

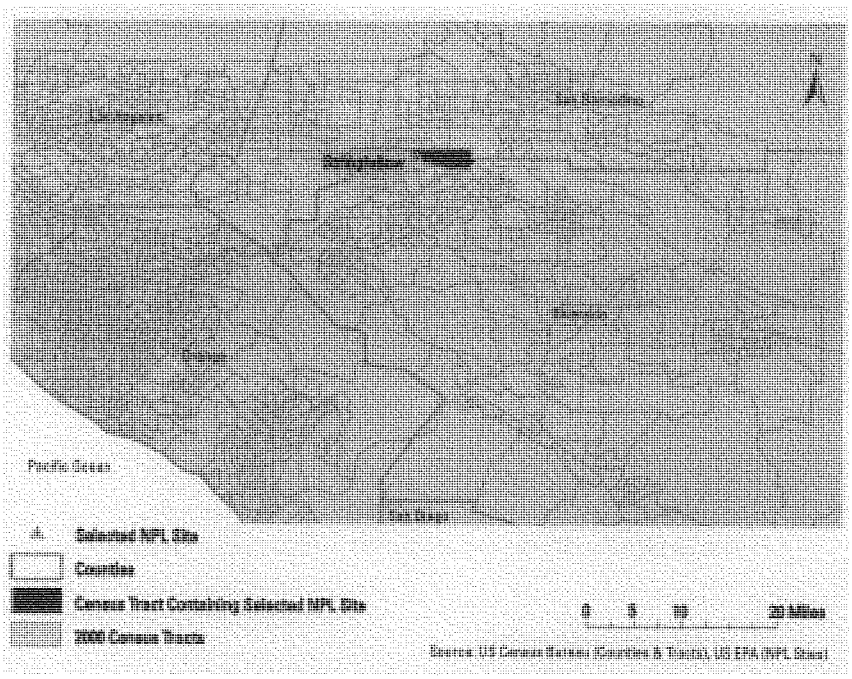
Air:

- various organic compounds

[90] Site description and contaminant information obtained from NPL site fact sheet, *available at* http://www.epa.gov/superfund/sites/npl/ca.htm (follow "list of all NPL Sites in California, by County" hyperlink, then follow "Operating Industries, Inc." hyperlink) (updated Jan. 27, 2006); and NPL Site Narrative, *available at* http://www.epa.gov/superfund/sites/npl/nar932.htm.

STRINGFELLOW

Riverside County, California
HRS Score: 61.4



Demographic Profile

Census Tract No.: 0401
Total Population: 8005
Median Age: 28.7
Children 9 and under: 1,491
Persons 75 and older: 262
Percent Minority: 52.5
Percent Hispanic: 58.4
Median Household Income in 1999: $43,132

Site Description[91]

Added to the NPL on September 8, 1983, the 17-acre Stringfellow site is located in a canyon near the Southern California town of Glen Avon and served as a hazardous waste disposal facility from 1956 until 1972. During this period, over 34 million gallons of waste, mostly from metal finishing, electroplating and pesticide production, were deposited in surface evaporation ponds. To decrease the volume of wastes in the ponds, spray evaporation procedures were used. In 1969 and again in 1978 excessive rainfall caused the disposal ponds to overflow.

As a result, the soil was contaminated with pesticides, spent acid, PCBs, sulfates and heavy metals. Over the years, heavy rains caused overflow and contamination of nearby water bodies with VOCs and several heavy metals, including cadmium, nickel, chromium and manganese. This contaminated groundwater plume potentially affected private drinking water wells for approximately 10,000 nearby residents, but since 1989, the community has received water from public utilities and no longer relies on groundwater. The original disposal area was covered by a clay cap, fenced and guarded by security services.

Contaminants Present

Groundwater:

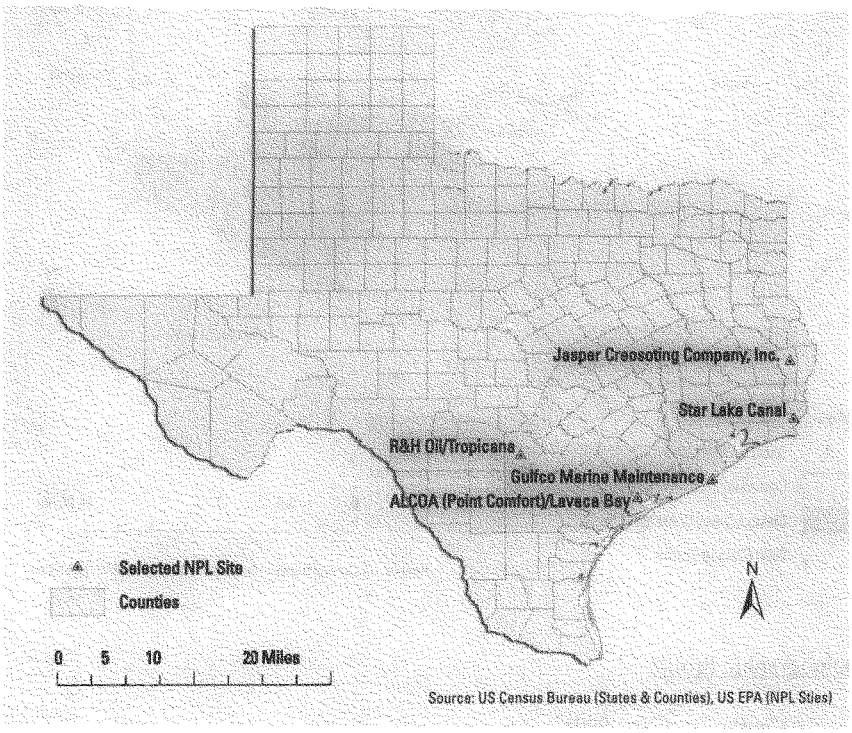
- VOCs
- cadmium
- nickel
- chromium
- manganese

Soil:

- pesticides
- polychlorinated biphenyls (PCBs)
- sulfates
- heavy metals

[91] Site description and contaminant information obtained from NPL site fact sheet, *available at* http://www.epa.gov/superfund/sites/npl/ca.htm (follow "list of all NPL Sites in California, by County" hyperlink, then follow "Stringfellow" hyperlink) (updated Oct. 26, 2005).

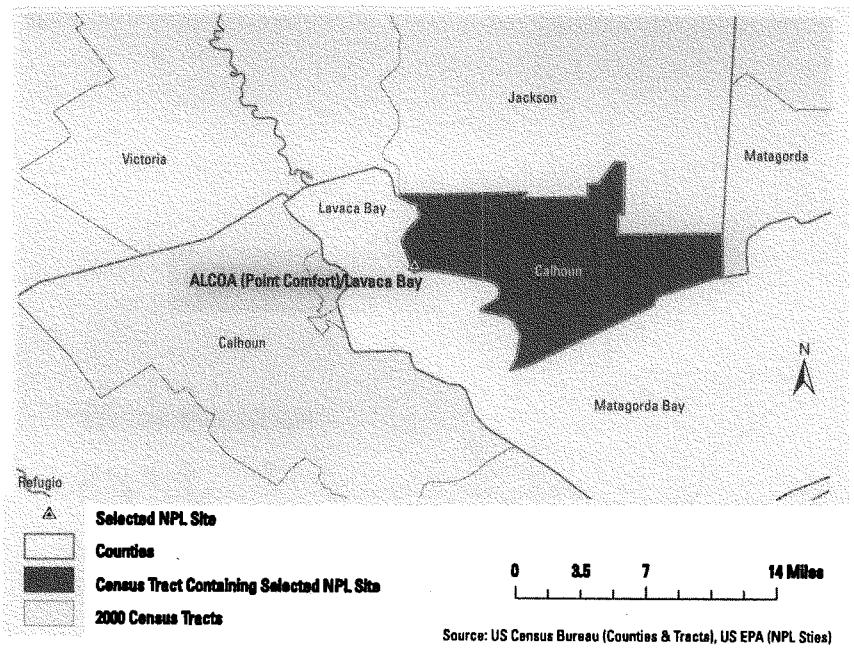
TEXAS



As of the 2000 Census, 21,009 Texans lived in the census tracts containing the five profiled NPL sites. Of those, 3,420 were children aged nine and younger. An additional 1,092 were persons aged 75 and older. In all five census tracts, the median household income for 1999 was below that for the nation.

ALCOA/POINT COMFORT/LAVACA BAY

Calhoun County, Texas
HRS Score: 50



Demographic Profile

Census Tract No.: 9903
Total Population: 1,515
Median Age: 38.1
Children 9 and under: 220
Persons 75 and older: 86
Percent Minority: 7.39
Percent Hispanic: 14.59
Median Household Income in 1999: $40,300

Site Description[92]

Added to the NPL on February 23, 1994, the ALCOA/Lavaca Bay site is located in Southeast Texas along the Gulf of Mexico. It consists of the ALCOA PCO Plant, an associated dredge-spoil island, and portions of Lavaca Bay and western Matagorda Bay. The plant, located on the shore of Lavaca Bay, covers about 3,500 acres in an industrial area 1.5 miles from Point Comfort and four miles from Port Lavaca. About 1,100 people live in Point Comfort and 10,000 people live in Port Lavaca. The dredge-spoil island covers about 420 acres. The island contains a 91-acre gypsum lagoon and five lagoons in a 50-acre dredge-spoil area.

In 1965, ALCOA opened a plant that produced chlorine gas and sodium hydroxide through a process that utilized mercury cathodes. During the plant's operation, wastewater containing mercury was discharged into Lavaca Bay through outfalls on the gypsum lagoon. Dredge spoils contaminated with mercury were disposed of in several areas on the site. EPA found high concentrations of mercury in sediment samples from Lavaca Bay in 1992.

The bay was used for both commercial and recreational fishing and serves as a habitat for a number of endangered aquatic and bird species. There are prohibitions on taking finfish and crabs from a part of Lavaca Bay due to the levels of mercury in the fish tissue.

Contaminants Present

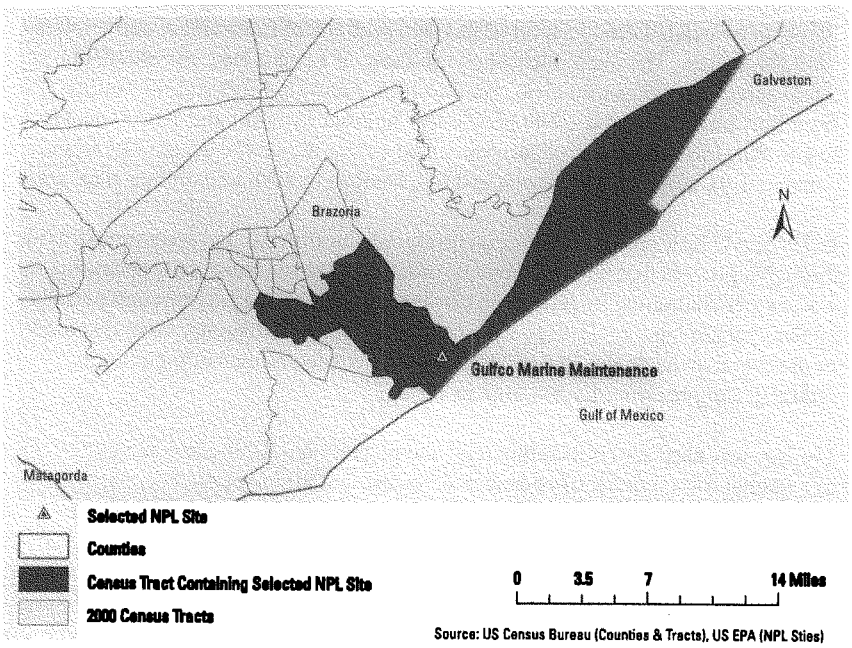
Lavaca Bay sediments:

- mercury
- PAHs

[92] Site description and contaminant information obtained from NPL site fact sheet, *available at* http://www.epa.gov/earth1r6/6sf/pdffiles/0601752.pdf (updated Feb. 15, 2006).

GULFCO MARINE MAINTENANCE

Brazoria County, Texas
HRS Score: 50



Demographic Profile

Census Tract No.: 6642
Total Population: 2,307
Median Age: 39.3
Children 9 and under: 286
Persons 75 and older: 65
Percent Minority: 10.62
Percent Hispanic: 10.92
Median Household Income in 1999: $38,542

Site Description[93]

Added to the NPL on April 30, 2003, the 40-acre Gulfco Marine Maintenance site served as a barge cleaning, sand blasting and repair facility from 1971 until 1998. As part of site operations, residual product recovered from the barges was stored in tanks and sold. Wash waters from barge cleaning were stored in three surface impoundments in the north area until they closed in 1982. Wastewater was then stored in a floating barge or storage tanks at the site, which contain VOCs including benzene and chloroform.

Other contaminants present include PAHs, pesticides, chlorinated hydrocarbons and metals. Direct contact with these chemicals or contaminated soils poses potential health risks. The contaminants also pose environmental risks to the adjacent wetlands via surface runoff or contaminated groundwater migration. Approximately 78 people live within one square-mile of the site and 3,392 people live within 50 square miles.

Contaminants Present

Surface storage tanks:

- benzene,
- chloroform,
- dichloroethane,
- trichloroethylene

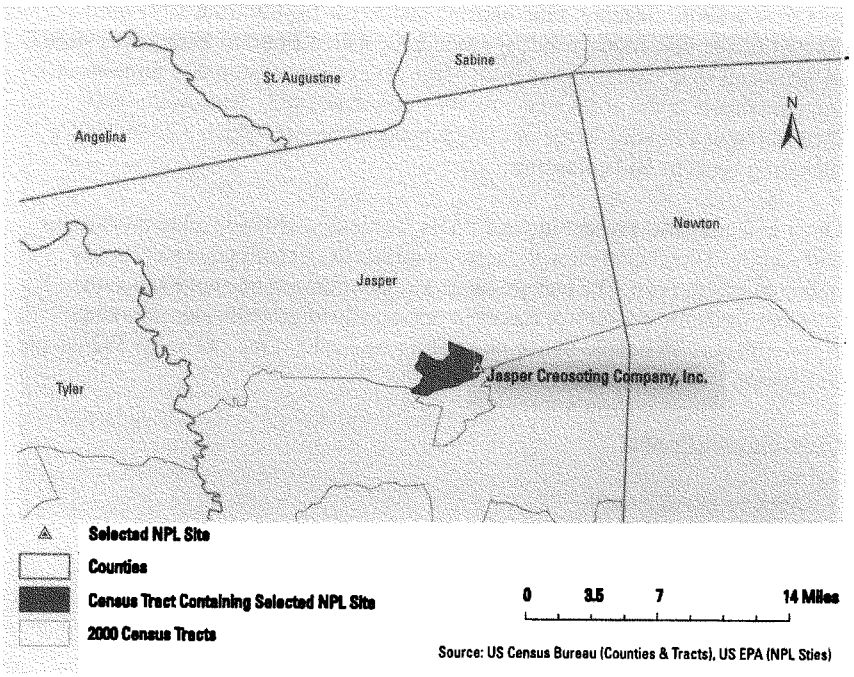
Elsewhere:

- PAHs
- Pesticides
- chlorinated hydrocarbons
- metals

[93] Site description and contaminant information obtained from NPL site fact sheet, *available at* http://www.epa.gov/earth1r6/6sf/pdffiles/0602027.pdf (updated Feb. 2006).

JASPER CREOSOTING CO.

Jasper County, Texas
HRS Score: 50



Demographic Profile

Census Tract No.: 9502
Total Population: 3,685
Median Age: 37.3
Children 9 and under: 543
Persons 75 and older: 261
Percent Minority: 44.48
Percent Hispanic: 7.06
Median Household Income in 1999: $27,926

Site Description[94]

Added to the NPL on July 28, 1998, Jasper Creosoting is a former wood treatment facility that utilized coal-tar creosote and PCP. Wood treatment operations contaminated the soil, surface water and sediment on the site (including a wetland area) with PAHs, PCP and dioxins/furans. The site occupies 11 acres of a 21-acre tract and is surrounded by suburban and rural land uses.

The population of the City of Jasper is about 8,247 people and approximately 1,100 people live within a one-mile radius of the site. The site is located on the outcrop of the Jasper Aquifer, a 1,200-foot deep aquifer that serves as the primary source of drinking water for residential users. There are 27 drinking water wells located within four miles of the site.

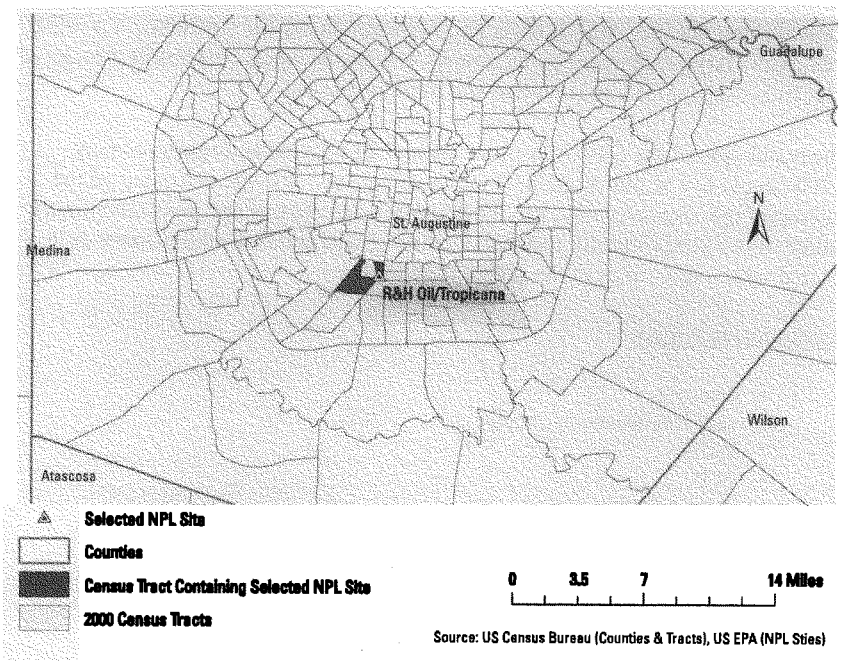
Contaminants Present

- creosote
- semi-volatile organic compounds (SVOCs)
- PAHs
- PCP
- dioxins/furans

[94] Site description and contaminant information obtained from NPL site fact sheet, *available at* http://www.epa.gov/earth1r6/6sf/pdffiles/0601735.pdf (updated Feb. 2006).

R&H OIL/TROPICANA

Bexar County, Texas
HRS Score: 50



Demographic Profile

Census Tract No.: 1609
Total Population: 8,292
Median Age: 27.6
Children 9 and under: 1,602
Persons 75 and older: 362
Percent Minority: 39.58
Percent Hispanic: 93.96
Median Household Income in 1999: $24,200

Site Description[95]

Proposed to the NPL on June 14, 2001, this seven-acre site has not yet been added to the final NPL. The site contains an inactive petroleum refinery and a gasoline blending facility in a densely populated area of San Antonio, Texas. Several spills and other releases of petroleum-related waste have contaminated groundwater and threatened nearby municipal drinking water wells.

Petroleum refining operations occurred at the site from 1938 to 1978. The refinery produced petroleum products including gasoline, fuel oils and ink oil. The site was briefly used to blend gasoline in 1988 and 1989. During this time, ethanol and various gasoline components were blended for sale. At the time the site was proposed to the NPL, structures remaining on the site included 40 above ground storage tanks, piping, dozens of drums, a machine used to separate oil and water, an earthen sump and several areas of contaminated soil. Sludge and tar were present around the tanks and separator. Drums contained combustible or flammable liquids, acid, oil mixtures and chlorinated solvents. An EPA-funded removal action to address these items was completed as of March, 2002.[96] Remedial action has not yet commenced.[97]

A plume of contaminated groundwater floats in an aquifer beneath the site. The plume includes benzene, toluene, arsenic, barium and zinc. Although the contaminated aquifer is not currently used as a water supply, it is underlain by the Edwards aquifer, which is one of the most permeable and productive Karst aquifers in the United States. The Edwards aquifer has been designated as a sole-source water supply for San Antonio. Karst aquifers are susceptible to the natural creation of underground cavities and channels and, as such, are extremely vulnerable to contaminant migration.

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[95] Site description and contaminant information obtained from the pre-cleanup NPL site narrative, *available at* http://www.epa.gov/superfund/sites/npl/tx.htm (follow "list of all NPL Sites in Texas, by County" hyperlink, then follow CERCLIS ID (numeric) hyperlink for "R&H Oil/Tropicana") (updated March 2, 2006).

[96] Information on cleanup progress and funding obtained from EPA's *List 9 – Active CERCLIS Sites*, Region 6 at 392-93 (December 2005). List 9 and other Superfund products may be obtained in CD format without cost by submitting orders online, *at* http://www.epa.gov/superfund/sites/phonefax/products.htm.

[97] *Id.*

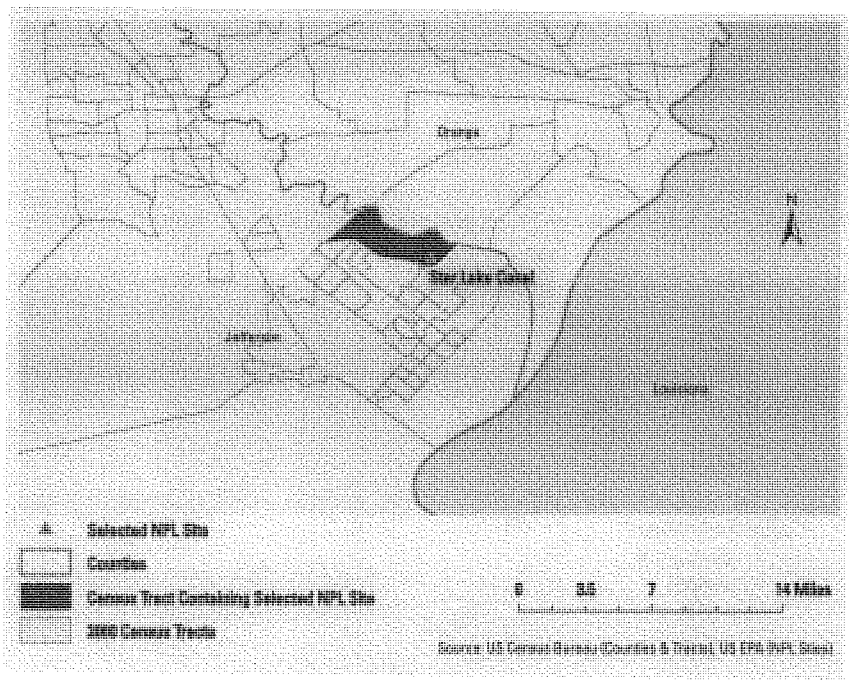
Contaminants Present

Ground water:

- Benzene
- Toluene
- Ethylbenzene
- 2-Methyl Naphthalene
- Naphthalene
- Xylenes
- arsenic
- barium
- zinc

STAR LAKE CANAL

Jefferson County, Texas
HRS Score: 50



Demographic Profile

Census Tract No.: 0108
Total Population: 5,210
Median Age: 35.2
Children 9 and under: 769
Persons 75 and older: 318
Percent Minority: 4.32
Percent Hispanic: 5.68
Median Household Income in 1999: $41,890

Site Description[98]

Added to the NPL on July 27, 2000, this site consists of the lengths of two industrial canals — Star Lake Canal and Jefferson Canal — that were constructed in the late 1940s as industrial wastewater and storm water outfalls. The canals are currently utilized for industrial and storm water purposes by local chemical and other manufacturing facilities.

Hazardous substances, including chromium, copper, PAHs and PCBs have migrated or could potentially migrate to Molasses Bayou, Star Lake Canal, Neches River, Sabine Lake and their associated wetlands. Contaminated surface water sediments have been found in the Molasses Bayou wetlands, which are known as habitat for the white-faced ibis, a state-designated threatened species. Toxaphene and PCP have also been found in the sediments of the Jefferson Canal. Moreover, surface water flows from the canals down Neches River to Sabine Lake, which is used as a fishery. In 1996, Sabine Lake produced over one million pounds of fish and shellfish.

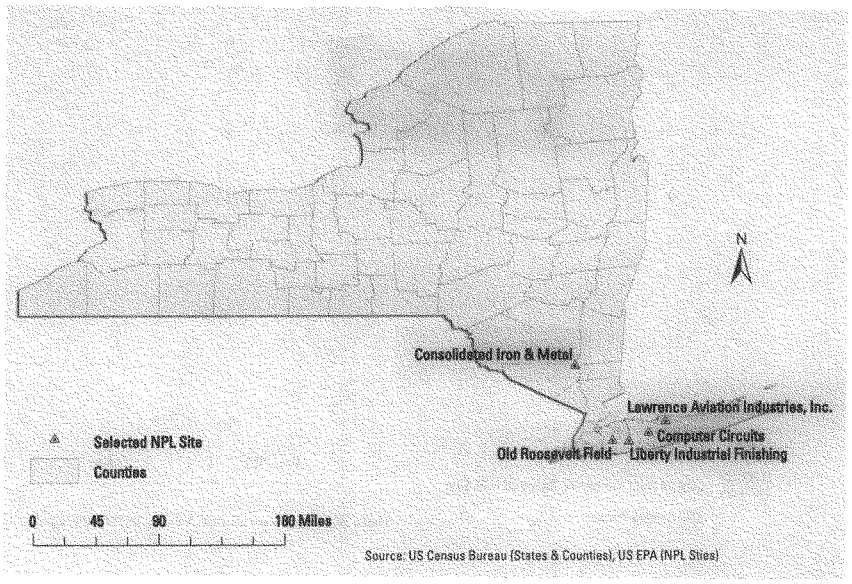
Contaminants Present:

Canal Sediments:
- chromium
- copper
- PAHs
- PCBs

Molasses Bayou Wetlands:
- copper
- PAHs
- pesticides

[98] Site description and contaminant information obtained from NPL site fact sheet, *available at* http://www.epa.gov/earth1r6/6sf/pdffiles/0605043.pdf (updated Feb. 2006).

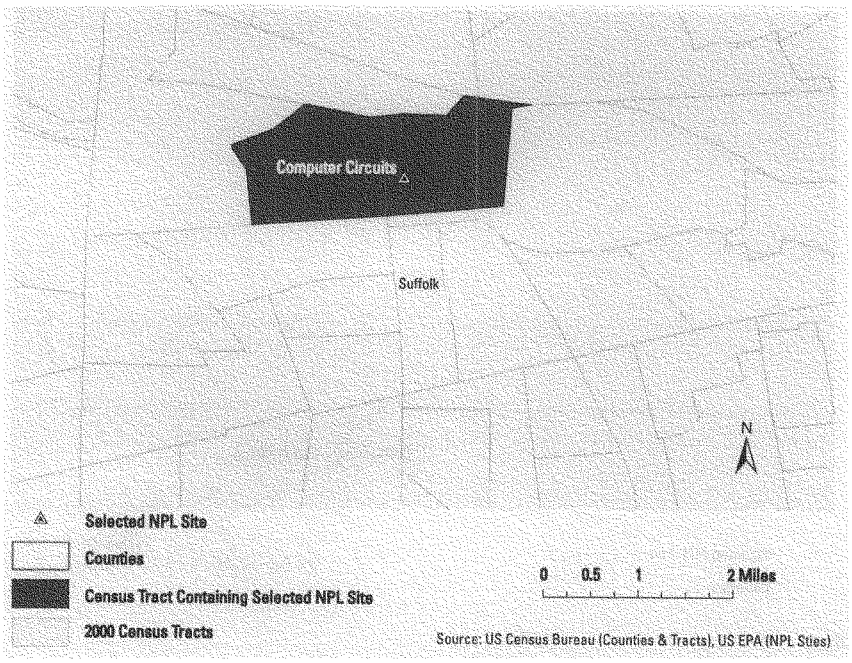
New York



As of the 2000 Census, 22,790 New Yorkers lived in the census tracts containing the five profiled NPL sites. Of those, 3,767 were children aged nine and younger. An additional 1,170 were persons aged 75 and older. Median household income in 1999 was below that of the nation in one of the five census tracts.

COMPUTER CIRCUITS

Suffolk County, New York
HRS Score: 50



Demographic Profile

Census Tract No.: 1352.06
Total Population: 1,844
Median Age: 40.7
Children 9 and under: 212
Persons 75 and older: 61
Percent Minority: 7.86
Percent Hispanic: 4.12
Median Household Income in 1999: $78,725

Site Description[99]

Added to the NPL on May 10, 1999, the Computer Circuits site consists of a one-story building (about 0.4 acres) on a 1.7-acre lot in a mixed industrial and commercial area. Computer Circuits occupied the building between 1969 and 1977, where it manufactured printed circuit boards for military and commercial applications. Waste liquids from this process were discharged into six cesspools near the building.

Sampling of the cesspools found copper and lead in quantities above permit levels. The cesspools were excavated and backfilled in 1976 and 1977. A 1976 inspection revealed that the site was littered with broken barrels, spilled piles of chemicals and blue and green sludges. Groundwater samples from monitoring wells had significant levels of copper and VOCs.

The site overlies the Upper Glacial/Magothy aquifer system. All nearby residents obtain drinking water from public-supply wells, 60 of which are located within four miles of the site. Exposure to contaminated groundwater through direct contact, ingestion or inhalation may pose a health threat. No private wells are allowed.

Contaminants Present

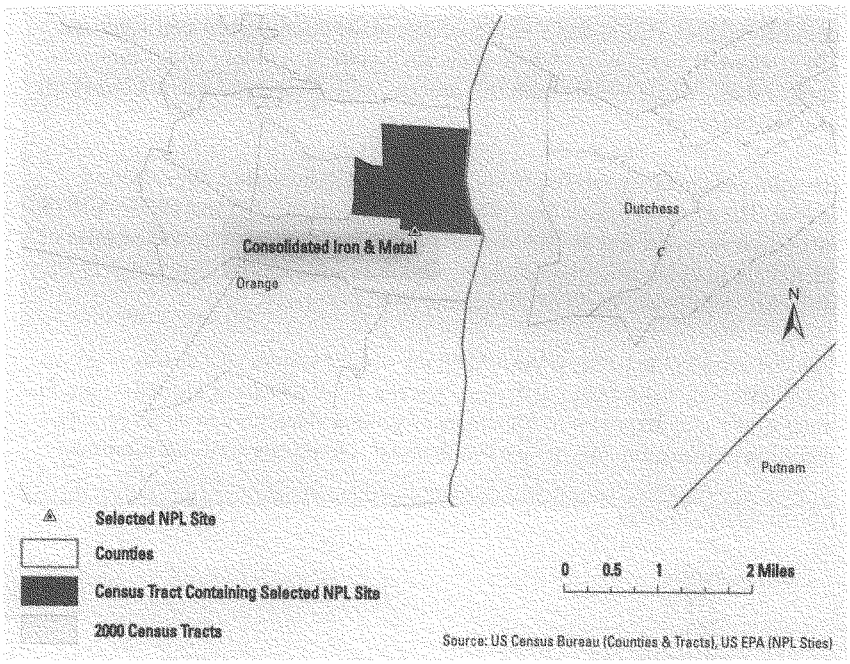
Groundwater:

- VOCs
- TCE
- inorganics

[99] Site description and contaminant information obtained from NPL site fact sheet, *available at* http://www.epa.gov/region02/superfund/npl/0202636c.pdf.

CONSOLIDATED IRON & METAL

Orange County, New York
HRS Score: 50



Demographic Profile

Census Tract No.: 0004
Total Population: 5,587
Median Age: 25.8
Children 9 and under: 1,278
Persons 75 and older: 173
Percent Minority: 74.15
Percent Hispanic: 23.27
Median Household Income in 1999: $25,016

Site Description[100]

Added to the NPL on June 14, 2001, Consolidated Iron and Metal is a seven-acre inactive car and scrap metal junkyard bordering the Hudson River in a mixed industrial, commercial and residential area. Scrap metal processing and storage took place at the site for about 40 years, during which time various scrap metals were received, including whole automobiles, automobile engines, transmissions and batteries, keypunch machines, computer parts, appliances and transformers. A smelter operated on the site between 1975 and 1995 and melted aluminum and other materials, resulting in ash/slag byproduct that is contaminated with lead. Oil and other wastes on facility soils and in storm water were discharged into the Hudson River without testing or permits.

Prior to an EPA clearing operation in 2003, the site contained: a tire pile; a staging area and smelter; a compactor and metal shear; office space and garages; and various scrap metal piles. Although the removal action eliminated the immediate risks to nearby residents (such as dispersal of windblown contaminants or propagation of West Nile virus), surface and subsurface soils on the site are contaminated, as is the Hudson River adjacent to the site.

Contaminants Present

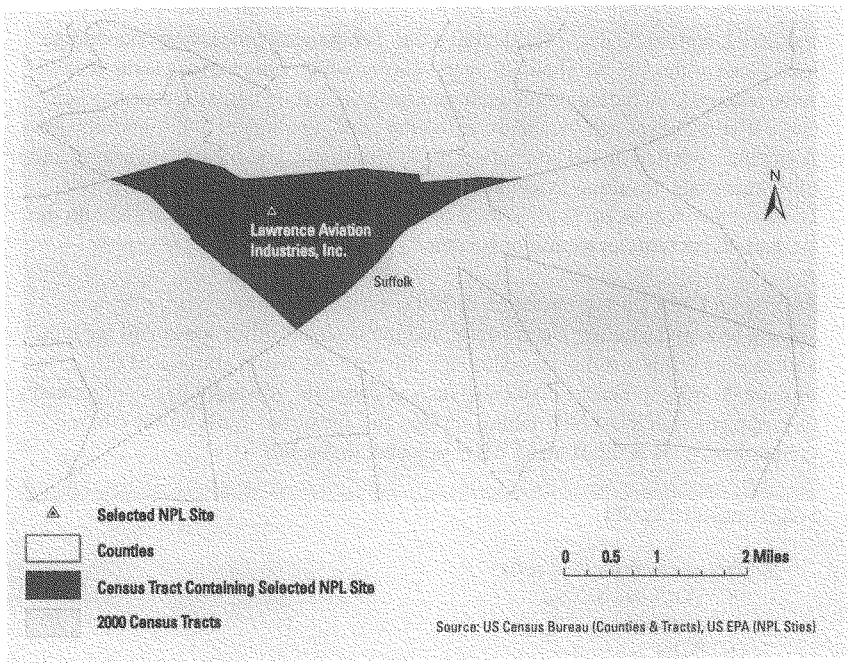
Surface and subsurface soils:
- VOCs and SVOCs
- pesticides
- PCBs
- metals

Hudson River:
- PCBs
- metals

[100] Site description and contaminant information obtained from NPL site fact sheet, *available at* http://www.epa.gov/region02/superfund/npl/0204175c.pdf.

LAWRENCE AVIATION INDUSTRIES

Suffolk County, New York
HRS Score: 50



Demographic Profile

Census Tract No.: 1582.02
Total Population: 7527
Median Age: 35.9
Children 9 and under: 1,111
Persons 75 and older: 359
Percent Minority: 11.58
Percent Hispanic: 9.10
Median Household Income in 1999: $57,330

Site Description[101]

Added to the NPL on February 4, 2000, this 160-acre site was used to manufacture titanium sheeting for the aeronautics industry. It sits on a topographic high point such that groundwater flows toward Port Jefferson Harbor, an outlet to Long Island Sound. Groundwater from the underlying Upper Glacial/Magothy aquifer is the only source of drinking water in the vicinity. Forty-seven public supply wells serve an estimated 120,500 people within four miles of the site.

Past disposal practices and releases from leaking drums resulted in contamination of soil and groundwater. For example, in 1980 the company crushed over 1,600 drums containing TCE, PCE, acid sludges, salt wastes, oils and others wastes and allowed the liquid contents to spill onto unprotected soil. Numerous discharges to the ground surface and two unlined lagoons also occurred. Monitoring wells on the site's perimeter and nearby residential wells have shown that TCE, PCE, nitrates and fluoride contaminate the groundwater.

Contaminants Present

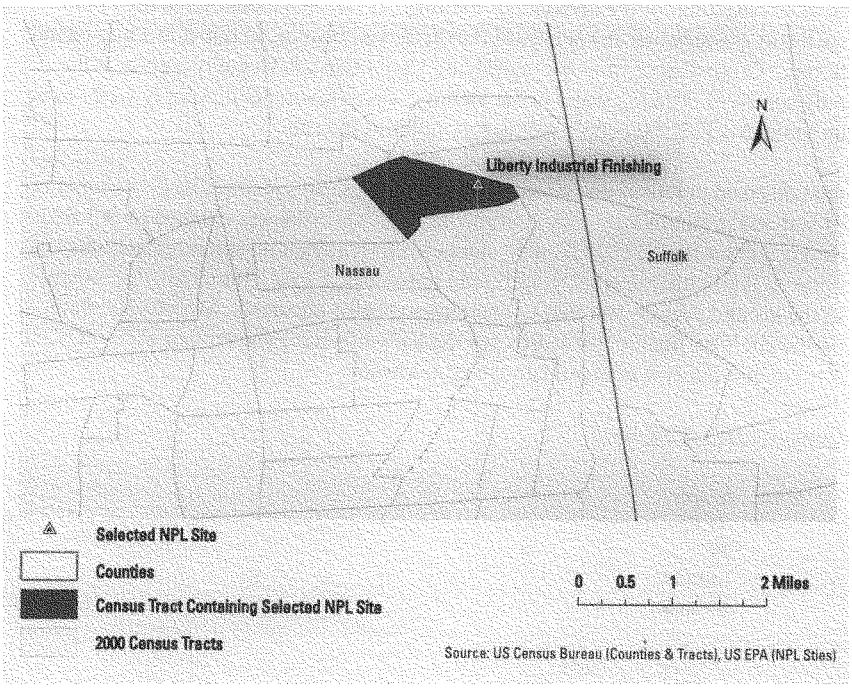
Groundwater:

- TCE
- PCE
- nitrates
- fluoride

[101] Site description and contaminant information obtained from NPL site fact sheet, *available at* http://www.epa.gov/region02/superfund/npl/0201335c.pdf.

LIBERTY INDUSTRIAL FINISHING

Nassau County, New York
HRS Score: 50.65



Demographic Profile

Census Tract No.: 5205.01
Total Population: 3,728
Median Age: 38.2
Children 9 and under: 517
Persons 75 and older: 226
Percent Minority: 7.56
Percent Hispanic: 6.12
Median Household Income in 1999: $69,482

Site Description[102]

Added to the NPL on June 10, 1986, this 30-acre site is located in the Village of Farmingdale, Town of Oyster Creek. During World War II and the Korean War, the site was used for airplane parts manufacturing and associated metal finishing activities. In the 1950s, it was converted to an industrial park. Thereafter, a variety of industrial operations were conducted, including metal plating and fiberglass product manufacturing.

Since the 1980s, the site has been used for light manufacturing and warehousing. A groundwater plume contaminated with organic and inorganic substances underlies the former industrial area and extends approximately one mile to the south. Portions of the Massapequa Nature Preserve, located about one-half mile away, are also contaminated. A separate plume of organic contamination originates to the north of the site and eventually commingles with the other plume.

There are no private drinking wells in the site vicinity. People living nearby obtain their drinking water from local water utilities, which routinely test their supplies to ensure compliance with state and federal drinking water standards. In 1998, under EPA oversight, the PRPs installed "sentinel" wells between the Liberty site and drinking water wells of the local water districts. The "sentinel" wells serve as an early warning system should any plume of contamination migrate close to the well fields.

Contaminants Present

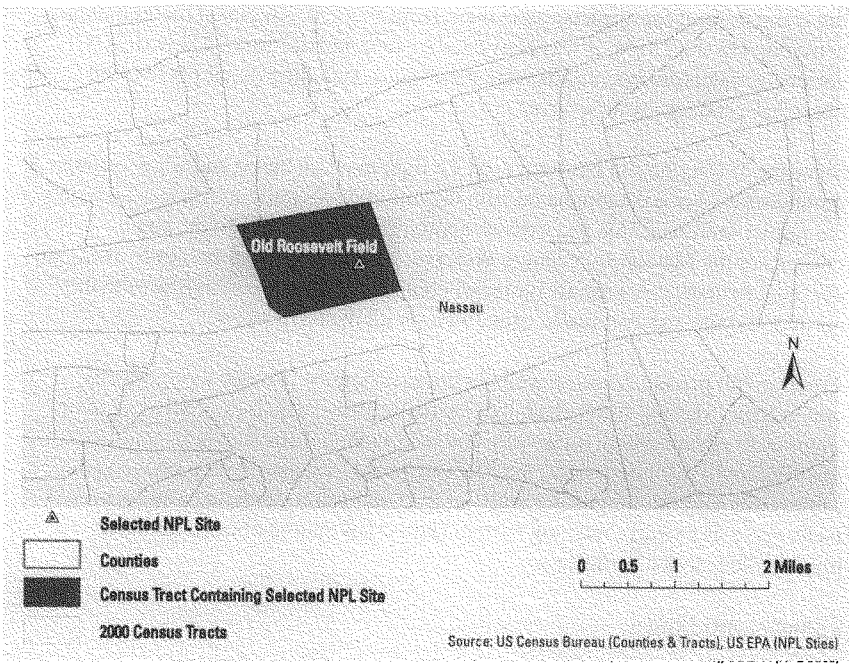
Groundwater and soils:

- cadmium
- chromium
- VOCs (including dichloroethene, trichloroethene and tetrachloroethene)
- PCBs

[102] Site description and contaminant information obtained from NPL site fact sheet, *available at* http://www.epa.gov/region02/superfund/npl/0201184c.pdf.

OLD ROOSEVELT FIELD CONTAMINATED GW AREA

Nassau County, New York
HRS Score: 50



Demographic Profile

Census Tract No.: 4066
Total Population: 4,104
Median Age: 41.5
Children 9 and under: 649
Persons 75 and older: 351
Percent Minority: 5.85
Percent Hispanic: 2.63
Median Household Income in 1999: $102,525

Site Description[103]

Added to the NPL on May 11, 2000, Old Roosevelt Field Contaminated Ground Water Area is a contaminated groundwater plume located on part of Roosevelt Field, which was used for aviation activities from 1911 to 1951. Part of the field was sold for use as a racetrack. The other part reverted to use as a commercial airport until it closed in 1951.

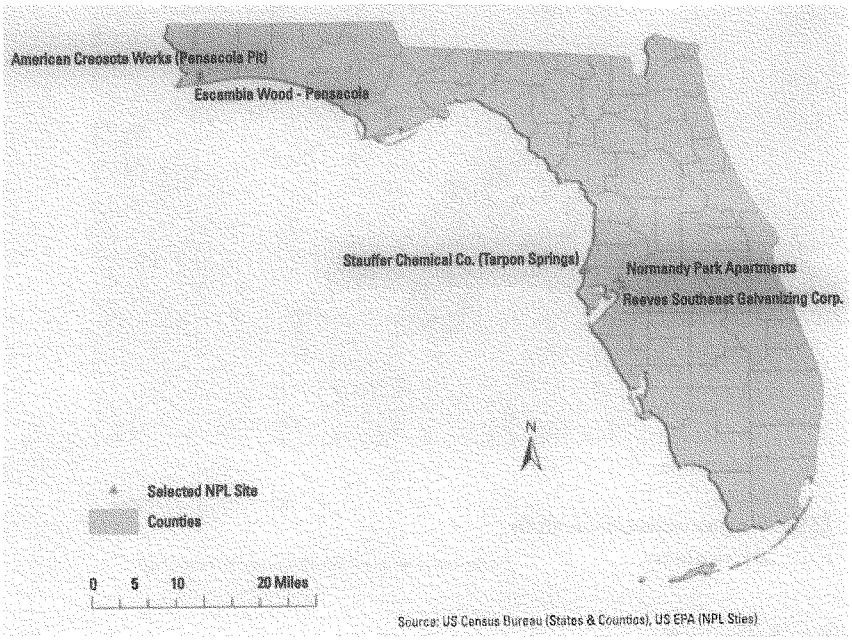
Today the Roosevelt Field Shopping Mall and Garden City Plaza occupy the former airport area. Two public supply wells were installed in 1952 and put into use in 1953. The population served by each well is about 3,400 people. Since they were first sampled in the late 1970s and early 80s, both wells have shown the presence of tetrachloroethene (PCE) and trichloroethene (TCE), and concentrations of these chemicals have increased since then. In 1987, a treatment system was installed to remove VOCs from raw water being pumped from the wells.

Contaminants Present

- PCE
- TCE

[103] Site description and contaminant information obtained from NPL site fact sheet, *available at* http://www.epa.gov/region02/superfund/npl/0204234c.pdf.

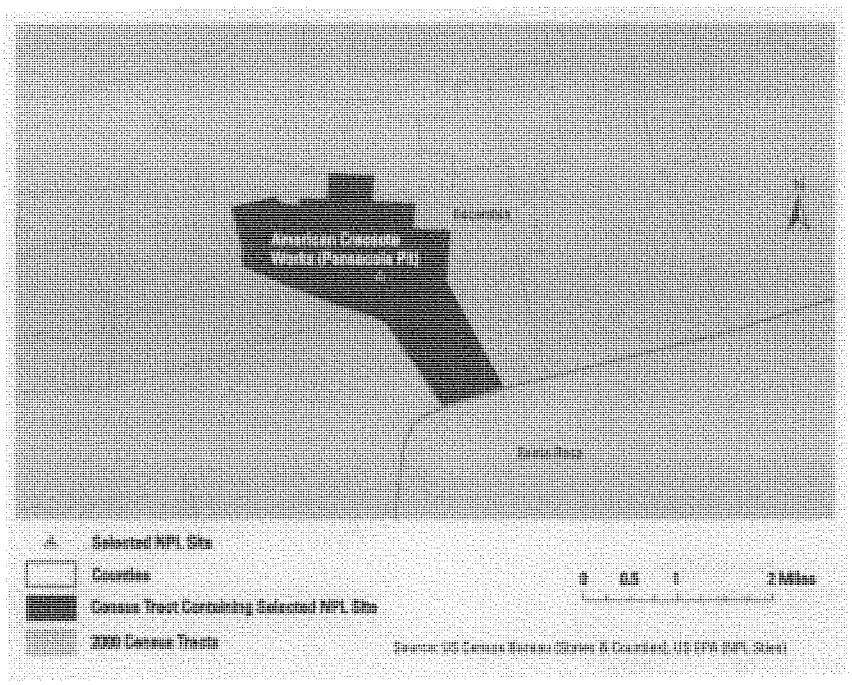
FLORIDA



As of the 2000 Census, 21,517 Floridians lived in the census tracts containing the five profiled NPL sites. Of those, 2,626 were children aged nine and younger. An additional 978 were persons aged 75 and older. In three of the five census tracts, the median household income for 1999 was below that for the nation.

AMERICAN CREOSOTE WORKS (PENSACOLA PIT)

Escambia County, Florida
HRS Score: 58.41



Demographic Profile

Census Tract No.: 0003
Total Population: 3,131
Median Age: 38.3
Children 9 and under: 392
Persons 75 and older: 308
Percent Minority: 48.07
Percent Hispanic: 1.95
Median Household Income in 1999: $23,164

Site Description[104]

Added to the NPL on September 8, 1983, American Creosote Works, Inc. is an 18-acre site one-quarter mile north of where Pensacola Bay converges with Bayou Chico. From 1902 to 1981, it was operated as a wood-treating facility. Prior to 1970, the company discharged liquid process wastes into two unlined 80,000-gallon percolation ponds. Creosote was the primary preservative chemical until 1950, when pentachlorophenol (PCP) became the preferred chemical. The percolation ponds were allowed to overflow through a spillway and follow a drainage course into the nearby Bayou and Bay. Later, workers periodically drew wastewaters off the ponds and discharged them into designated "spillage areas" on the site. Additional discharges occurred when heavy rains flooded the ponds, causing them to overflow.

Currently, the site is surrounded by a predominantly residential area that is served by municipal water supplies, but numerous residents and businesses operate private irrigation wells. The soil, sediment and groundwater are contaminated mostly with VOCs, PAHs, PCP and dioxin from the former wood-treating processes.

Contaminants Present

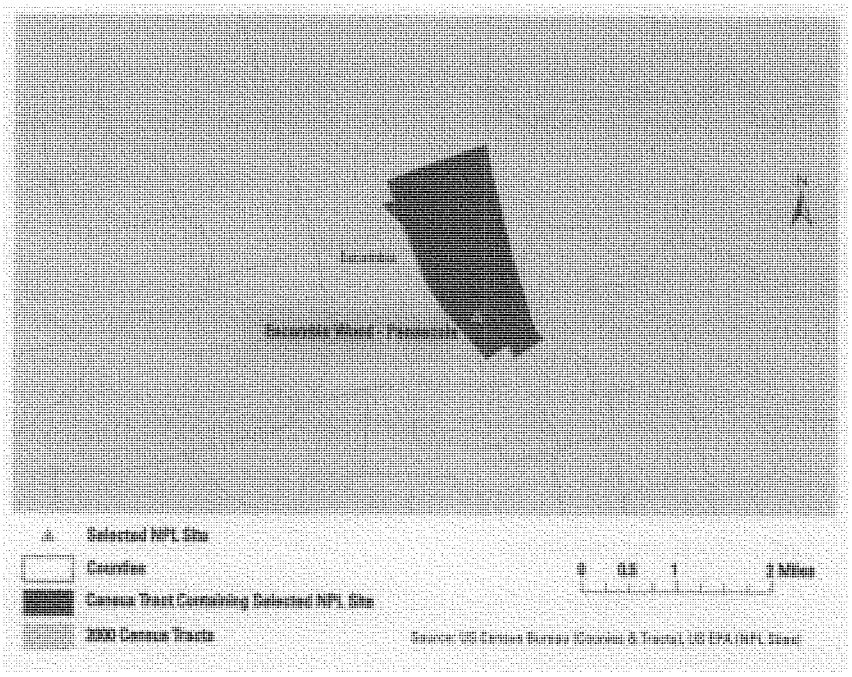
Soil, sediment and groundwater:

- VOCs
- polycyclic aromatic hydrocarbons (PAHs)
- PCP
- dioxin

[104] Site description and contaminant information obtained from NPL site fact sheet, *available at* http://www.epa.gov/region4/waste/npl/nplfln/acwpenfl.htm.

ESCAMBIA WOOD – PENSACOLA

Escambia County, Florida
HRS Score: 50



Demographic Profile

Census Tract No.: 0014.01
Total Population: 5,481
Median Age: 20.4
Children 9 and under: 410
Persons 75 and older: 69
Percent Minority: 17.48
Percent Hispanic: 1.77
Median Household Income in 1999: $22,150

Site Description[105]

Added to the NPL on December 16, 1994, the Escambia Treating Company site is a 26-acre abandoned wood preserving facility that treated wood products with creosote and PCP from 1942 until it closed in 1982. After it closed, three open surface impoundments remained on the facility, along with a backfilled surface impoundment.

The site is located in a mixed industrial and residential area. Groundwater and soil on-site are contaminated with wood treating chemicals such as creosote and pentachlorophenol. The primary source of groundwater in Escambia County, the Sand-and-Gravel aquifer, lies beneath the facility. As of 1994, this aquifer served about 129,330 people. Approximately 20 public water supply wells and numerous private wells are located within four miles of the site. The nearest public supply well is one mile northeast of the site.

In 1992, EPA completed a removal action, which entailed excavation of 225,000 cubic yards of contaminated material, currently stockpiled under a secure cover on-site. In 1995, the site became part of a National Relocation Evaluation Pilot to help EPA determine when relocation should be used in addressing the health threats posed by Superfund sites. By January 2002, the government had acquired or obtained agreements to acquire all of the 170 properties in Rosewood Terrace, Oak Park and Goulding subdivisions, including 158 single family homes, a 200-unit apartment complex and 11 vacant residential lots. Over 500 persons have been relocated to comparable replacement housing in the Pensacola and surrounding areas.

Contaminants Present

Groundwater:

- PCP
- numerous other creosote constituents detected at elevated concentrations

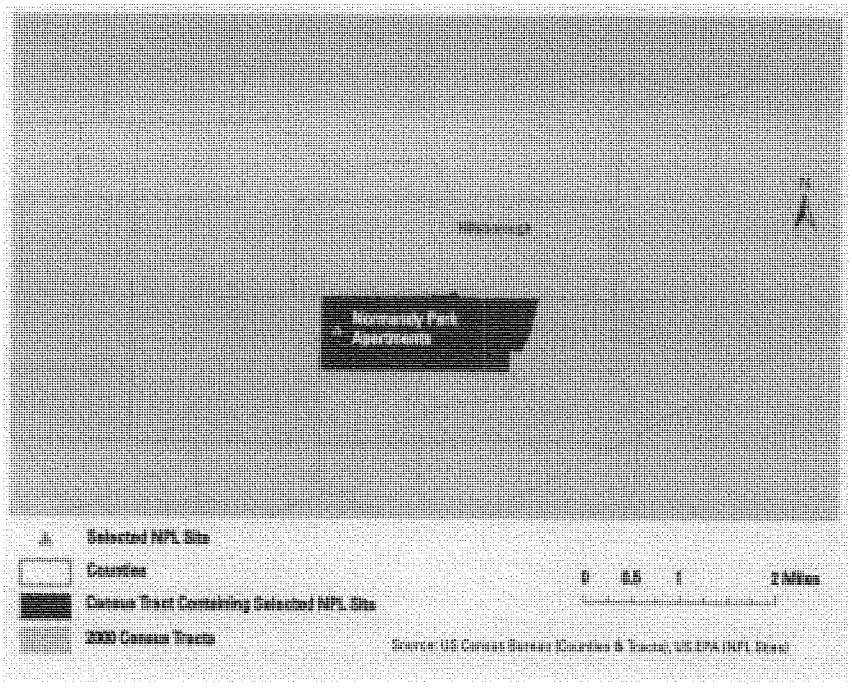
Surface soil, subsurface soil:

- PCP
- several other organic and inorganic analytes detected

[105] Site description and contaminant information obtained from NPL site fact sheet, *available at* http://www.epa.gov/region4/waste/npl/nplfln/escwodfl.htm; and NPL Site Narrative, *available at* http://www.epa.gov/superfund/sites/npl/nar1435.htm.

NORMANDY PARK APARTMENTS

Hillsborough County, Florida
HRS Score: 49.98



Demographic Profile

Census Tract No.: 0107.01
Total Population: 6,149
Median Age: 36.5
Children 9 and under: 851
Persons 75 and older: 264
Percent Minority: 22.23
Percent Hispanic: 12.72
Median Household Income in 1999: $58,607

Site Description[106]

Proposed to the NPL on February 13, 1995, the Normandy Park Apartments site has never been finalized on the NPL. From the early 1950s through 1963, Gulf Coast Recycling, Inc. operated a battery breaking and lead smelting facility at the site location. In 1963, Gulf Coast ceased operations and demolished on-site buildings. The property was used as an open dump until approximately 1968, when Gulf Coast built the Normandy Park Apartments.

The Apartments occupy 8.25 acres, with a northern adult section and a larger southern family section. Overall, 12 residential buildings house about 283 residents. Other amenities include tennis courts, a playground, swimming pools and an office building. Gulf Coast's sampling in 1992 revealed high concentrations of lead at and below the soil surface, as well as elevated concentrations of lead in groundwater.

In June 1992, Gulf Coast entered into an agreement with EPA to investigate the site and address immediate threats to the residents. With EPA oversight, Gulf Coast placed two concrete caps over contaminated soil in the northern complex and constructed a wooden deck over contaminated soil in the southern courtyard.

Contaminants Present

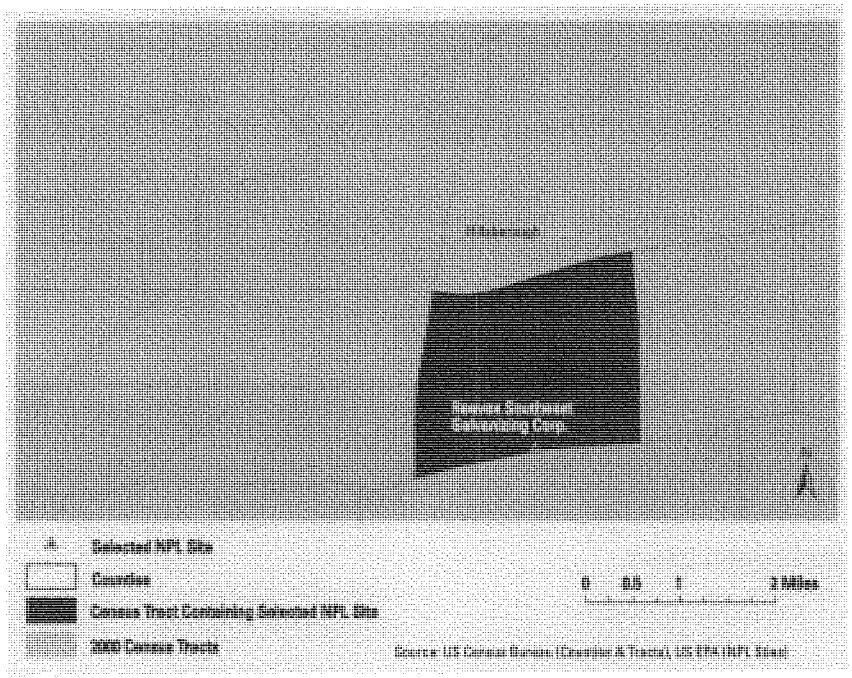
Soil and groundwater:

- lead

[106] Site description and contaminant information obtained from NPL site fact sheet, *available at* http://www.epa.gov/region4/waste/npl/nplfls/normanfl.htm.

REEVES SOUTHEAST GALVANIZING

Hillsborough County, Florida
HRS Score: 58.75



Demographic Profile

Census Tract No.: 0121.03
Total Population: 3,760
Median Age: 31.1
Children 9 and under: 617
Persons 75 and older: 110
Percent Minority: 11.30
Percent Hispanic: 9.04
Median Household Income in 1999: $33,044

Site Description[107]

Added to the NPL on September 8, 1983, this 28-acre site includes two areas: the Reeves Southeastern Galvanizing (SEG) facility (17-acres) and the Reeves Southeastern Wire (SEW) facility (11-acres). Beginning in the 1960s, the SEW and SEG facilities generated caustic, rinse, acid process and perhaps plating wastes. These wastes were neutralized and then discharged into storage ponds, contaminating both ground and surface waters.

About 56,000 people live within three miles of this site, with public water supply wells located about one mile upland. The area also includes residential neighborhoods, light manufacturing facilities, warehouses and a refuse-to-energy plant. Groundwater was contaminated with heavy metals such as zinc. Prior to EPA involvement, soil, sediment and surface water were also contaminated with heavy metals such as zinc and lead. Hillsborough County issued a notice of violation in 1974 and the company responded by upgrading its wastewater treatment facility. This system neutralized acid and removed 90 percent of the heavy metals. Sampling has shown municipal and private wells not contaminated, but people who come into contact with or accidentally ingest contaminated surface water or soils may be at risk.

Contaminants Present

Groundwater:

- heavy metals such as zinc

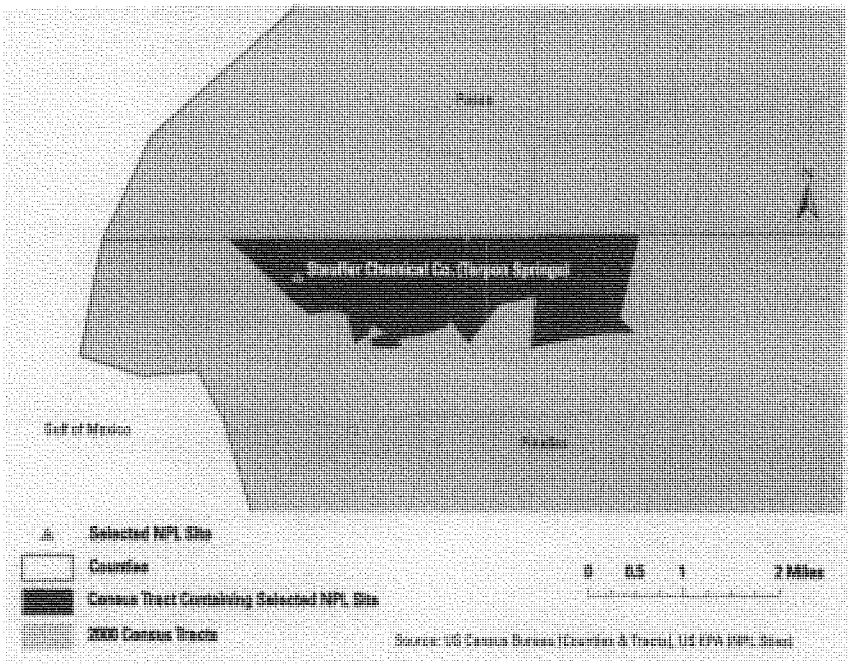
Surface water and soils:

- heavy metals, primarily zinc

[107] Site description and contaminant information obtained from NPL site fact sheet, *available at* http://www.epa.gov/region4/waste/npl/nplfln/reevesfl.htm.

STAUFFER CHEMICAL CO. (TARPON SPRINGS)

Pinellas County, Florida
HRS Score: 50



Demographic Profile

Census Tract No.: 0273.08
Total Population: 2,996
Median Age: 42.7
Children 9 and under: 356
Persons 75 and older: 227
Percent Minority: 9.15
Percent Hispanic: 4.37
Median Household Income in 1999: $46,855

Site Description[108]

Added to the NPL on May 31, 1994, the 160-acre Tarpon Springs plant produced elemental phosphorous using phosphate ore mined from deposits in Florida. Victor Chemical Company constructed the plant and began production in 1947. Stauffer Chemical Company obtained the plant in 1960 and continued to manufacture elemental phosphorous until closing in 1981. Over 500,000 tons of chemical process wastes were disposed of on the site between 1950 and 1979. Stauffer removed 33,000 gallons of elemental phosphorous contained in above-ground tanks in 1997-98. However, on-site monitoring wells remain contaminated.

Currently land use surrounding the site is a combination of light industrial, residential, recreational and commercial. About 8,500 people in the Tarpon Springs area receive drinking water from 23 public wells and three private wells located within four miles of the site. Because of the depths of the aquifers, all drinking water wells within four miles of the site are potential targets.

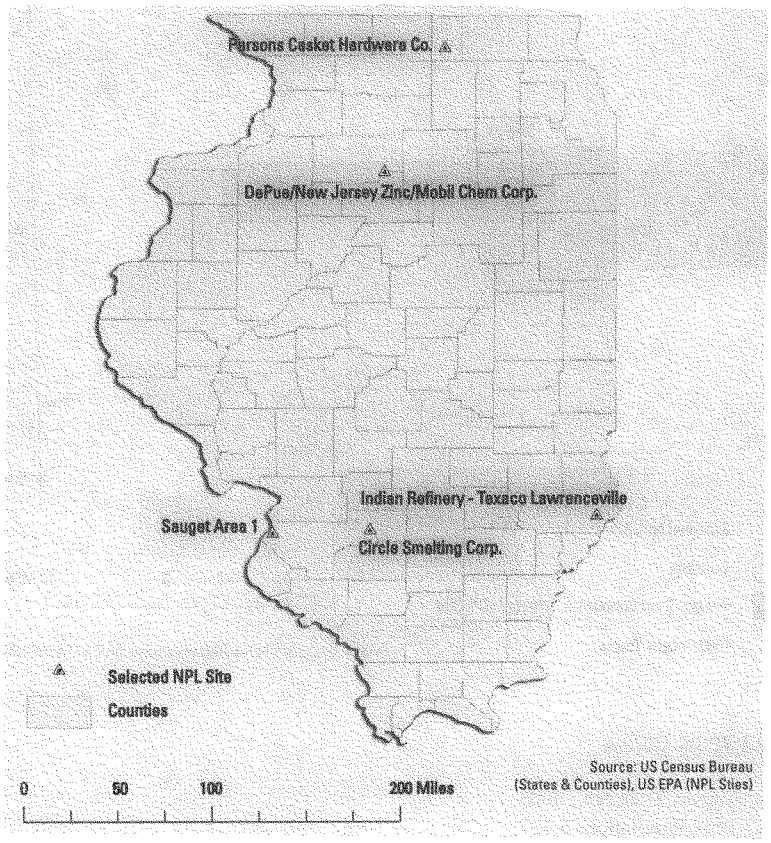
Contaminants Present

On-site soils, on-site waste ponds and ground water:

- heavy metals (barium, chromium, lead, vanadium, zinc, copper and arsenic)
- radio nuclides
- PAHs
- elemental phosphorous

[108] Site description and contaminant information obtained from NPL site fact sheet, *available at* http://www.epa.gov/region4/waste/npl/nplfln/stautsfl.htm.

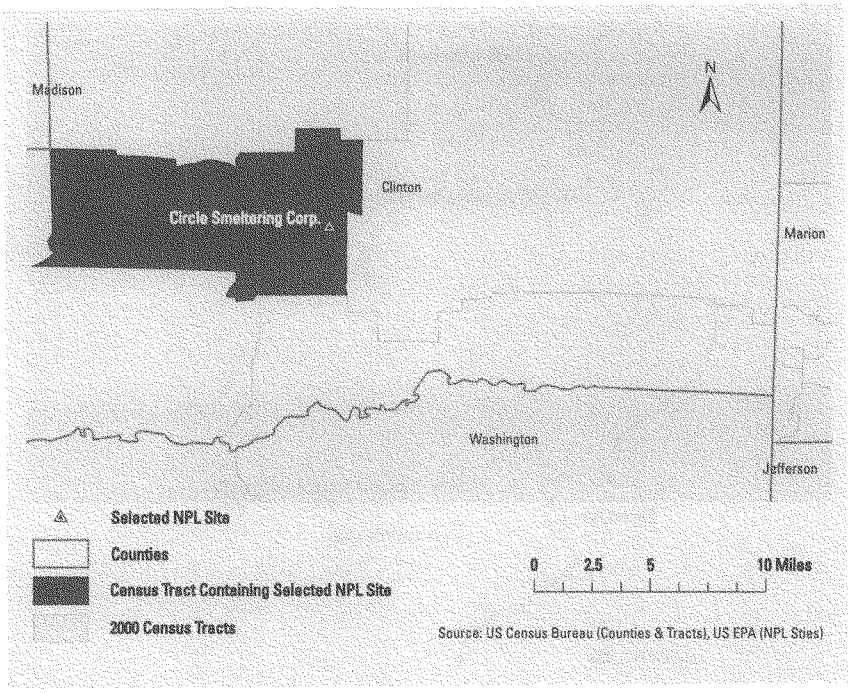
ILLINOIS



As of the 2000 Census, 28,931 Illinoisans lived in the census tracts containing the five profiled NPL sites. Of those, 4,729 were children aged nine and younger. An additional 2,031 were persons aged 75 and older. In four of the five census tracts, the median household income for 1999 was below that for the nation.

CIRCLE SMELTING CORP.

Clinton County, Illinois
HRS Score: 70.71



Demographic Profile

Census Tract No.: 9003
Total Population: 6,427
Median Age: 35.4
Children 9 and under: 973
Persons 75 and older: 453
Percent Minority: 1.24
Percent Hispanic: 1.10
Median Household Income in 1999: $46,859

Site Description[109]

Proposed to the NPL on June 17, 1996, the Circle Smelting Corp. site has not been finalized on the NPL. In 1904, the Circle Smelting Corp. facility was constructed as a zinc smelter and began recovering zinc from scrap metals.

Three separate sources have been identified at the site: two large areas of contaminated soil and a 17-acre slag pile that has high concentrations of zinc, nickel, lead, cadmium and copper. There are also piles of residual metals and coal cinders. Surface waters were contaminated when the hazardous substances migrated to Beaver Creek. Smelting operations also generated air emissions that included metal oxides.

At the time of proposal to the NPL, an estimated 460 people lived near the site and 21 people still worked at the Circle Smelting facility. About 230 children attended a public elementary school located in the contaminated area.

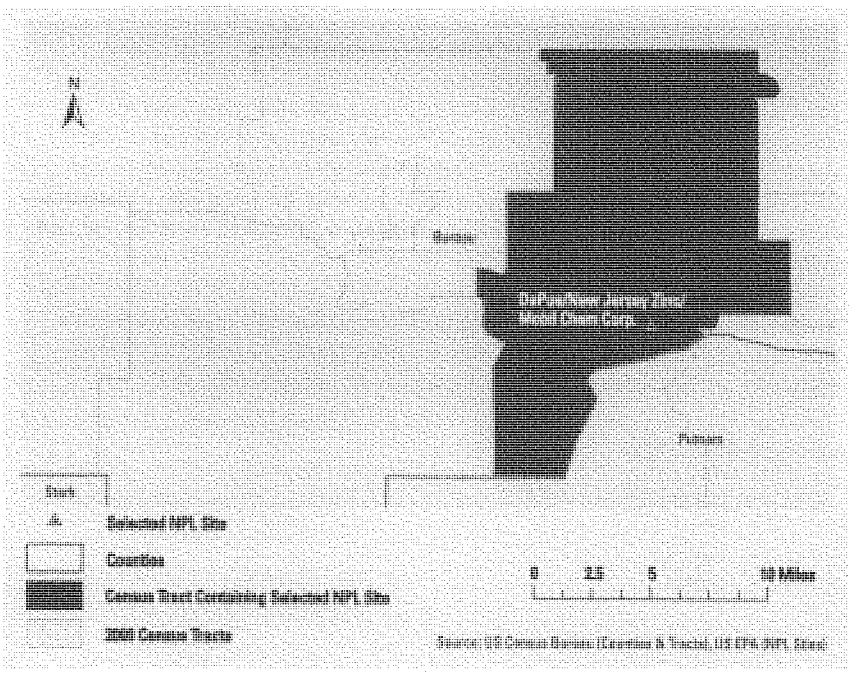
Contaminants Present

- zinc
- nickel
- lead
- cadmium
- copper

[109] Site description and contaminant information obtained from NPL Site Narrative, *available at* http://www.epa.gov/superfund/sites/npl/nar1475.htm.

DEPUE/NEW JERSEY ZINC/MOBIL CHEM CORP.

Bureau County, Illinois
HRS Score: 70.71



Demographic Profile

Census Tract No.: 9650
Total Population: 4,168
Median Age: 36.6
Children 9 and under: 598
Persons 75 and older: 347
Percent Minority: 10.27
Percent Hispanic: 24.33
Median Household Income in 1999: $37,181

Site Description[110]

Added to the NPL on May 10, 1999, the DePue site was a zinc smelting facility that began operations in 1903 and expanded into several facilities consisting of over 860 acres. The original plant produced slab zinc, zinc dust and sulfuric acid for the automobile and appliances industries. New Jersey Zinc constructed a di-ammonium phosphate (DAP) fertilizer plant on the site in 1966. Mobil Chemical Corp. purchased a portion of the property in 1975 and took over ownership of the plants in 1985. The site had several sources of contamination, including waste piles, lagoons and cooling ponds. The plants were demolished in 1992.

Soil, surface water and groundwater are contaminated with chemicals from the plants. Elevated levels of cadmium, lead and other metals were found in residential soil samples, posing long-term health effects. DePue Lake, with its fishery, state wildlife refuge and wetlands, is also contaminated by surface water and groundwater discharges from the plants.

Contaminants Present

Soil (including nearby residential areas):

- cadmium
- lead

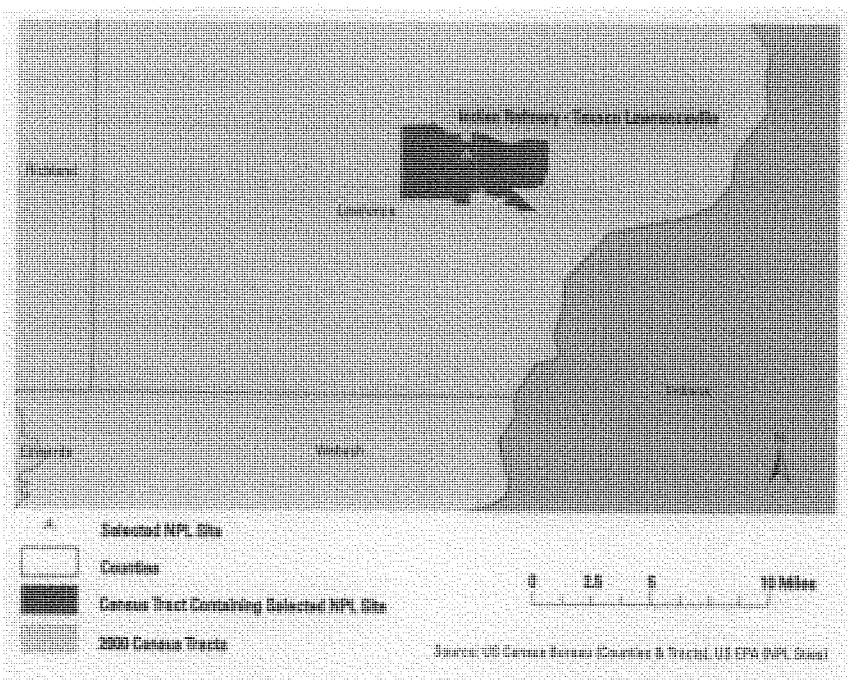
Site Source Areas:

- zinc
- lead
- arsenic
- cadmium
- chromium
- copper

[110] Site description and contaminant information obtained from NPL site fact sheet, *available at* http://www.epa.gov/R5Super/npl/illinois/ILD062340641.htm.

INDIAN REFINERY - TEXACO LAWRENCEVILLE

Lawrence County, Illinois
HRS Score: 56.67



Demographic Profile

Census Tract No.: 9811
Total Population: 3,459
Median Age: 45.3
Children 9 and under: 354
Persons 75 and older: 591
Percent Minority: 1.88
Percent Hispanic: 1.16
Median Household Income in 1999: $30,714

Site Description[111]

Added to the NPL on December 1, 2000, this 990-acre site was operated as a refinery from the early 1900s until 1995. An ongoing oil release and associated contaminated area on the southern part of the refinery property was discovered in 1997. Subsurface oil product, floating on groundwater, was escaping through several discharge points into wetlands that are hydraulically connected to the Embarras River. As a result, most of the vegetation in the wetlands area had been killed. Residential, commercial, agricultural and natural areas surround the site.

Approximately 4,900 people are supplied with drinking water from municipal wells serving the city of Lawrenceville. People living in the Kirkwood Subdivision and in scattered housing near the site use private wells for drinking water. Sampling in 1996 and 1999 revealed that hazardous substances that were disposed of at the Indian Acres area have migrated offsite into the adjacent residential area. The waste in the residential area contained elevated levels of PAHs and metals. During demolition of the site in early 1999, wastes containing phenol and cresols were hauled from the site to the city of Lawrenceville's wastewater treatment plant. The resulting fumes and odors caused respiratory problems in nearby residents and caused sewers to back up into the residents' homes.

Contaminants Present

Waste in residential area:

- low pH (characteristic of lube oil acid sludge and lube oil filter cake)
- PAHs
- metals

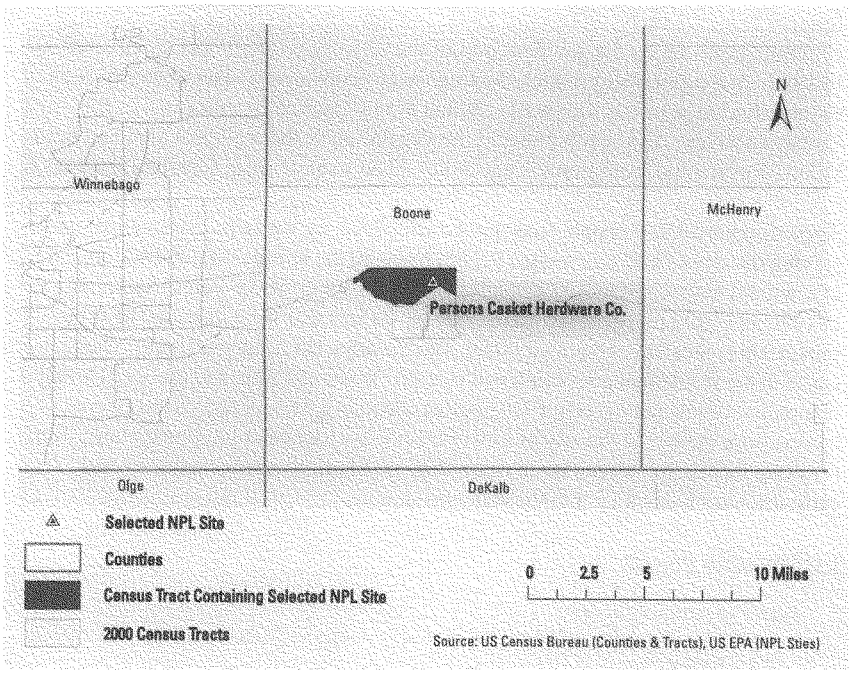
Oil releases into wetlands:

- benzene
- toluene
- xylene
- methyl napthalene
- napthalene
- trimethylbenene 1,3,5
- total petroleum hydrocarbons

[111] Site description and contaminant information obtained from NPL site fact sheet, *available at* http://www.epa.gov/R5Super/npl/illinois/ILD042671248.htm.

PARSONS CASKET HARDWARE CO.

Boone County, Illinois
HRS Score: 55.58



Demographic Profile

Census Tract No.: 0101
Total Population: 7,725
Median Age: 29.4
Children 9 and under: 1,453
Persons 75 and older: 358
Percent Minority: 20.47
Percent Hispanic: 26.64
Median Household Income in 1999: $39,041

Site Description[112]

Added to the NPL on July 22, 1987, this six-acre site was used as an electroplating facility from the 1920s until the owner filed for bankruptcy in 1982 and is now bordered by residential and industrial land uses. Wastes from the electroplating operations were stored in drums, aboveground and underground storage tanks and an unlined surface impoundment. Wastes included electroplating sludge, cyanide, bronze, nickel, brass sludge and associated solvents.

In 1982, the state of Illinois found that about 120 drums of various sizes were stored inside and outside the manufacturing building, many dented, corroded, leaking or uncovered. The storage tanks contained about 4,800 gallons of waste, while the unlined lagoon contained 166,500 gallons of liquid waste and 1,230 cubic yards of sludge. The state removed these wastes in 1985.

Despite this effort, sampling in 1987 indicated that groundwater was contaminated with VOCs. This groundwater is the sole source of drinking water for the 15,200 residents of the city of Belvidere, approximately 6,000 of which live within a one-mile radius of the site. The closest residence is less than one-tenth of a mile away, and a municipal water supply well is about 1,500 feet from the site.

Contaminants Present

Groundwater:

- VOCs.

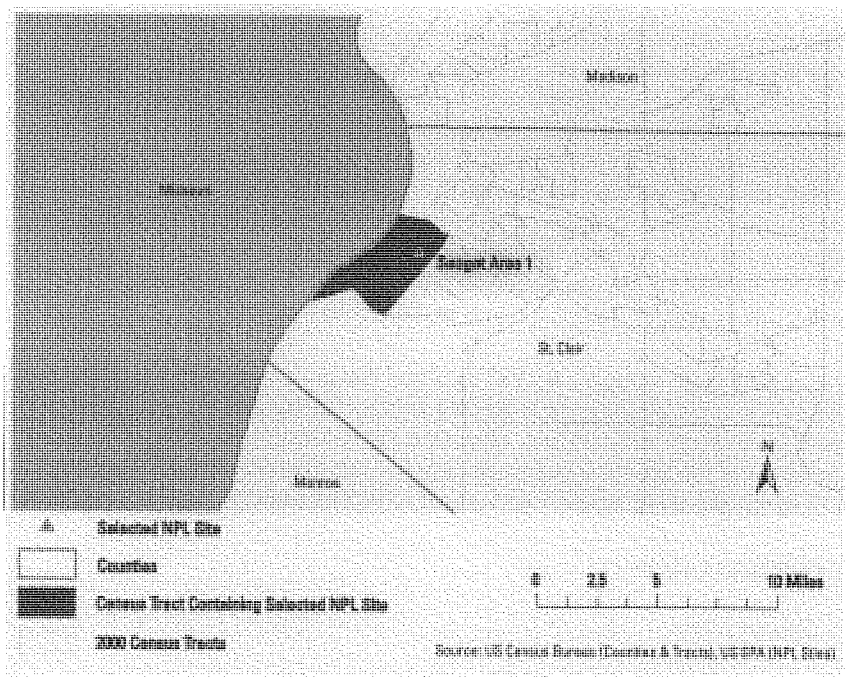
Soils:

- VOCs
- cyanide
- heavy metals including arsenic, copper and nickel

[112] Site description and contaminant information obtained from NPL site fact sheet, *available at* http://www.epa.gov/R5Super/npl/illinois/ILD005252432.htm.

SAUGET AREA 1

St. Clair County, Illinois
HRS Score: 61.85



Demographic Profile

Census Tract No.: 5023
Total Population: 7,152
Median Age: 29.9
Children 9 and under: 1,351
Persons 75 and older: 282
Percent Minority: 40.21
Percent Hispanic: 2.45
Median Household Income in 1999: $30,958

Site Description[113]

Sauget Area 1 site consists of 12 contaminated sources that include over 3.5 miles of Dead Creek (sites A through F) and adjacent sites (G, H, I, L, M and N). Dead Creek is an intermittent creek, sometimes impounded, that was used around the 1930s for waste disposal. Sites G, H and I are inactive landfills or former disposal areas adjacent to the creek. Site G operated between 1950 and 1973; H and I were active from 1931 to 1957. Site L is a former surface impoundment used by waste haulers to dispose of wash water from 1971 to 1979. Sites M and N are former sand pits that were excavated in the 1940s.

Protected endangered species, such as the black-crowned night heron, are located in Segment F of Dead Creek and downstream in Old Prairie Dupont Creek, the Cahokia Chute of the Mississippi River and the main channel of the Mississippi River. These water bodies, also used for recreation and commercial fishing, may be affected by the migration of hazardous substances from the Sauget site. About 6,000 feet of wetland frontage has been impacted by releases from these sources, and over 11 miles of wetland frontage is subject to potential contamination. Approximately 143,000 people live within a four-mile radius of the site.

Contaminants Present

Soil and sediment in landfills and creek:

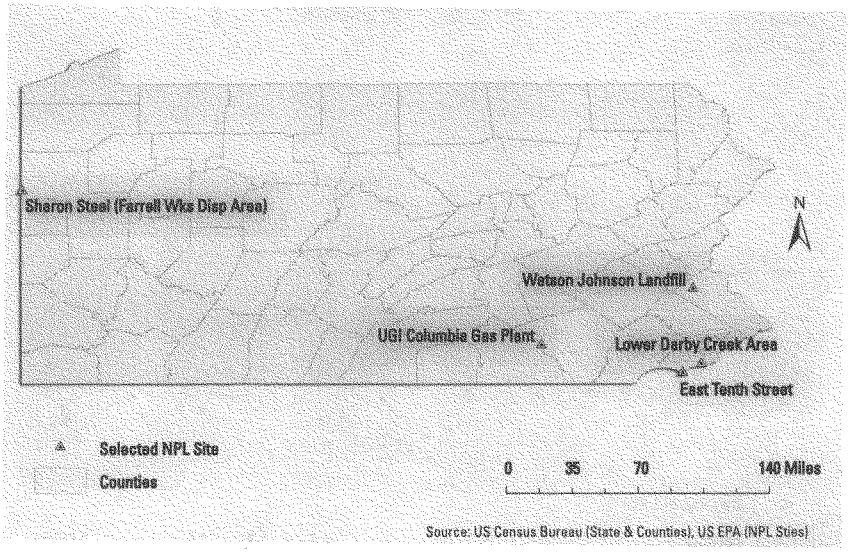
- chlorobenzenes
- chlorophenols
- chloroanilines
- nitroanilines
- dioxins
- PCBs

Surface waters:

- chlorinated solvents
- chlorobenzenes
- PCBs
- PAHs
- chlorophenols
- nitroaniline
- heavy metals (including cadmium, copper, cobalt, lead, mercury, nickel and zinc)

[113] Site description and contaminant information obtained from NPL site fact sheet, *available at* http://www.epa.gov/R5Super/npl/illinois/ILD980792006.htm.

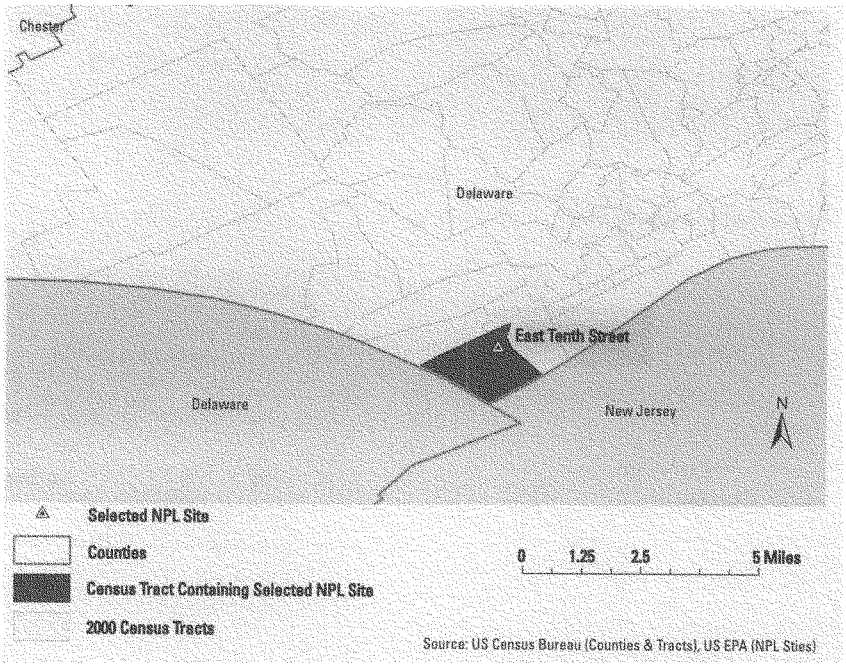
PENNSYLVANIA



As of the 2000 Census, 15,188 Pennsylvanians lived in the census tracts containing the five profiled NPL sites. Of those, 2,277 were children aged nine and younger and an additional 987 were aged 75 and older. In three of the five census tracts, the median household income for 1999 was below that for the nation.

EAST TENTH STREET

Delaware County, Pennsylvania
HRS Score: 67.68



Demographic Profile

Census Tract No.: 4066
Total Population: 2,314
Median Age: 34.5
Children 9 and under: 355
Persons 75 and older: 111
Percent Minority: 8.56
Percent Hispanic: 1.77
Median Household Income in 1999: $28,219

Site Description[114]

The East Tenth Street site was proposed to the NPL on January 18, 1994, but has never been finalized on the NPL. In 1910, American Viscose Co. purchased the 36-acre property to manufacture rayon and then, beginning in 1958, cellophane. In 1988, an environmental assessment by the Pennsylvania Department of Environmental Resources found that employees were excavating an underground solvent storage tank farm and dumping the contents of the tanks on the ground. Another assessment in 1990 revealed tanks, leaking transformers and asbestos within and outside of site buildings. Asbestos, PCBs and other hazardous substances had been mishandled during past demolition activities, and there was a sludge-filled tunnel located on one of the lots.

The sediments in Marcus Hook Creek, which runs next to the site and is classified as a state-designated area for the protection of aquatic life, are contaminated with PCBs. Removal actions — including the abatement of asbestos in several buildings, the removal of antiquated transformers, the construction of fences around contaminated lots and the removal of PCB-contaminated cements — have made the site safe. However, touching or ingesting contaminated groundwater, soils, surface water or sediments continues to pose a health risk.

Contaminants Present

Groundwater:
- VOCs

Soil:
- PCBs
- asbestos
- heavy metals
- organic compounds

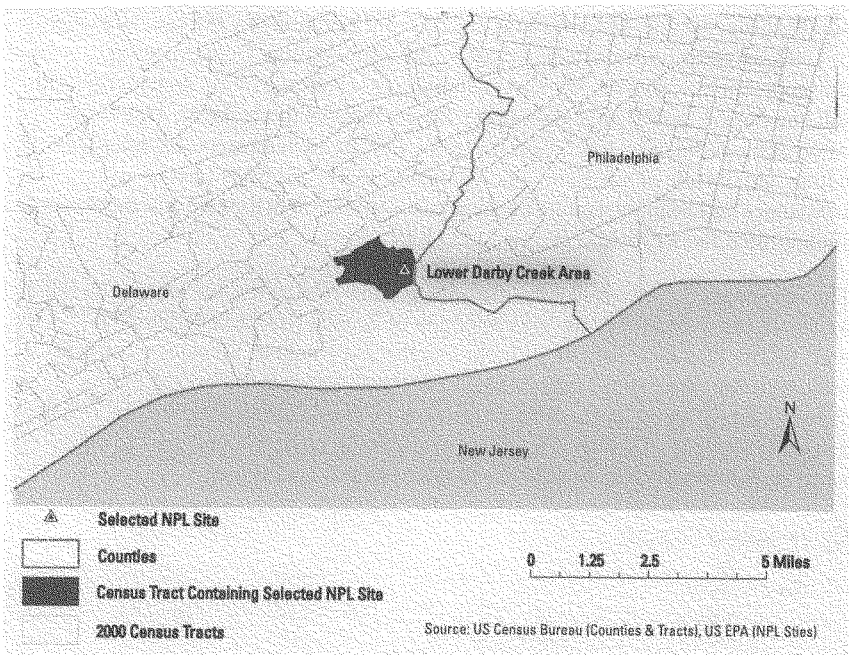
Sludge-filled tunnel:
- chloroform
- cadmium
- mercury

Sediments in Marcus Hook Creek:
- PCBs

[114] Site description and contaminant information obtained from NPL site fact sheet, *available at* http://epa.gov/reg3hwmd/npl/PAD987323458.htm.

LOWER DARBY CREEK AREA

Delaware County, Pennsylvania
HRS Score: 50



Demographic Profile

Census Tract No.: 4034.02
Total Population: 3,864
Median Age: 35.9
Children 9 and under: 566
Persons 75 and older: 178
Percent Minority: 2.07
Percent Hispanic: 0.78
Median Household Income in 1999: $45,353

Site Description[115]

This site, which was added to the NPL on June 14, 2001, consists of two landfills, the Clearview Landfill and the Folcroft Landfill and Annex. Clearview Landfill is on the east side of Darby Creek. About two miles downstream, the Folcroft Landfill/Annex is on the west side of Darby Creek. Folcroft is part of the John Heinz National Wildlife Refuge and is managed by the United States Fish and Wildlife Service.

The two landfills operated from the 1950s to the 1970s. They disposed of a variety of wastes, including municipal, demolition and hospital waste. Landfill waste was placed along the edges of the creek. After Clearview was covered and seeded in 1976, the Philadelphia Redevelopment Authority constructed hundreds of residences around its eastern and southern borders.

Years after the landfills closed in the mid-1970s, EPA discovered that the covers were eroding and contaminated runoff was seeping into Darby Creek. Samples and reports showed that Clearview soils and seeps contained metals, PCBs and petroleum byproducts. Groundwater at Folcroft wells contained metals and solvents.

Contaminants Present

Clearview Landfill soils and seeps:

- metals
- PCBs
- petroleum byproducts

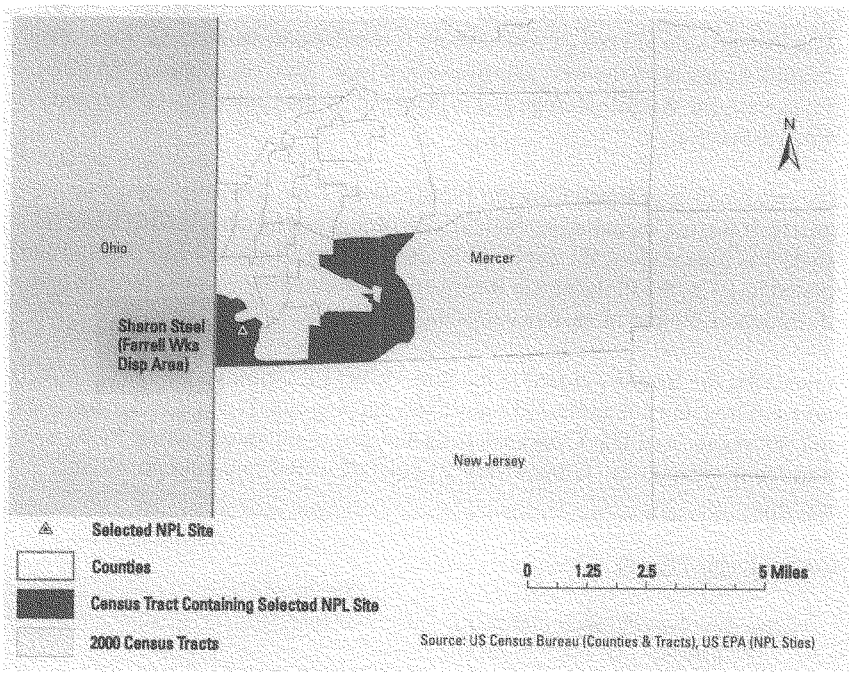
Folcroft Landfill/Annex groundwater wells:

- metals
- solvents

[115] Site description and contaminant information obtained from NPL site fact sheet, *available at* http://epa.gov/reg3hwmd/npl/PASFN0305521.htm.

SHARON STEEL (FARRELL WKS DISP AREA)

Mercer County, Pennsylvania
HRS Score: 50



Demographic Profile

Census Tract No.: 0311
Total Population: 1,871
Median Age: 41.4
Children 9 and under: 255
Persons 75 and older: 275
Percent Minority: 14.38
Percent Hispanic: 0.43
Median Household Income in 1999: $27,604

Site Description[116]

Added to the NPL on July 28, 1998, the Sharon Steel site encompasses a 400-acre area in western Pennsylvania, within a few hundred feet of the Ohio line. Beginning about 1900, the Sharon Steel Corporation used the area to dispose of blast furnace slag, electric arc furnace slag, basic oxygen furnace slag and sludge.

From 1949 to 1981, millions of gallons of spent pickle liquor acid were dumped over the slag, under the theory that the acid would be neutralized by carbonites in the slag. In actuality, groundwater and soils were contaminated with metals, PAHs, PCBs and pesticides.

The site is located in the flood plain of the Shenango River and there are several wetland areas on-site. Studies show that the groundwater flow is transporting the contamination away from residents so residential wells have not been affected. However, metals have been detected in all biota samples.

Contaminants Present

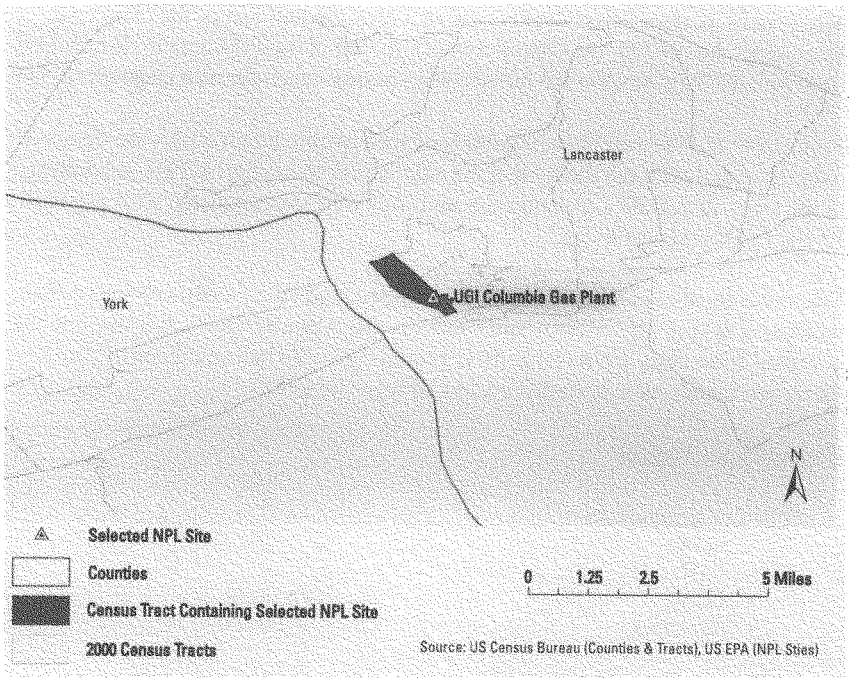
Soils and groundwater:

- metals
- PAHs
- PCBs
- pesticides

[116] Site description and contaminant information obtained from NPL site fact sheet, *available at* http://epa.gov/reg3hwmd/npl/PAD001933175.htm.

UGI COLUMBIA GAS PLANT

Lancaster County, Pennsylvania
HRS Score: 50.78



Demographic Profile

Census Tract No.: 0112
Total Population: 1,913
Median Age: 31.0
Children 9 and under: 341
Persons 75 and older: 68
Percent Minority: 13.17
Percent Hispanic: 8.21
Median Household Income in 1999: $30,789

Site Description[117]

Added to the NPL on May 31, 1994, this 1.5-acre site is located in a light industrial and residential area 400 feet from the Susquehanna River. From 1851 to 1949, Columbia Gas used the site for gas manufacturing. Eventually, the property was transferred to UGI Corp., which owned it until 1979. Thereafter, the property was used as a boat dealership until 1994.

During the years of active gas manufacturing operations, overflows from an on-site tar separator were directed to an open ditch that led to the Susquehanna River. Records reveal complaints by local fishermen that their boats were being covered in tar. Samples of soil, sediment, sludge and tar revealed VOCs, PAHs, heavy metals and cyanide contamination. Groundwater flowing through the contaminated subsurface soil and bedrock has become contaminated with VOCs. Additionally, in 1987, EPA determined that approximately 800 cubic yards of sediment in the Susquehanna River were contaminated with tar from the site.

Within 15 miles downstream of the site, about 90 people use the Susquehanna River as a source of drinking water, and 1,000 people use groundwater wells within four miles of the site for drinking water. People or animals that touch or swallow contaminated materials may be at risk.

Contaminants Present

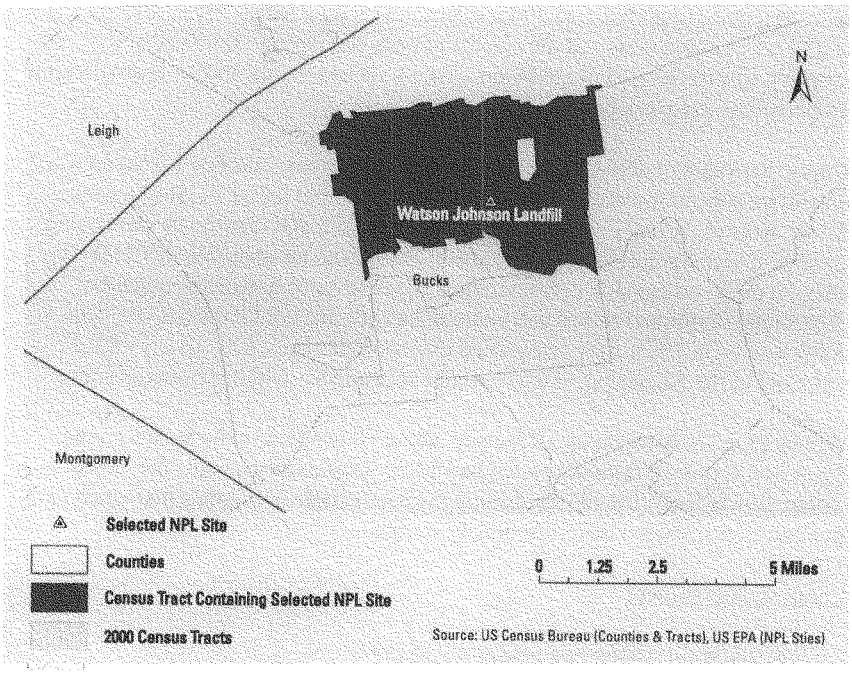
Soil, sediment, sludge, tar and groundwater:

- VOCs
- PAHs
- heavy metals
- cyanide

[117] Site description and contaminant information obtained from NPL site fact sheet, *available at* http://epa.gov/reg3hwmd/npl/PAD980539126.htm.

WATSON JOHNSON LANDFILL

Bucks County, Pennsylvania
HRS Score: 71



Demographic Profile

Census Tract No.: 1030.02
Total Population: 5,226
Median Age: 36.9
Children 9 and under: 760
Persons 75 and older: 355
Percent Minority: 2.99
Percent Hispanic: 1.21
Median Household Income in 1999: $47,269

Site Description[118]

The Watson Johnson Landfill was added to the NPL on September 13, 2001. About 32 acres of the 56-acre site was a former landfill that accepted both municipal and industrial waste. The landfill was active from the late 1950s until the early 1970s.

After concerned citizens contacted EPA in 1998, sampling revealed a variety of contaminants. Hazardous substances detected in the soils include VOCs, PCBs and metals. An on-site monitoring well and a Quakertown Borough municipal well were contaminated with PCE and TCE. Metals and PCBs were detected in sediment samples collected from an adjacent wetland and an elevated level of mercury was detected downstream of the site in Tohickon Creek. Residential well sampling indicated elevated levels of arsenic in some home wells.

In July 1999, a front-end loader unearthed and accidentally punctured a drum, spilling two gallons of material on the ground that was found to contain PCE and lead. EPA removed the drum and surrounding contaminated soil in March 2000. Drinking water from the municipal well is currently being treated to remove the TCE contamination, and public water main service is being extended to 35 residences currently using private wells.

Contaminants Present

Soil:
- VOCs
- SVOCs
- PCBs
- metals

Monitoring well and municipal well:
- PCE
- TCE

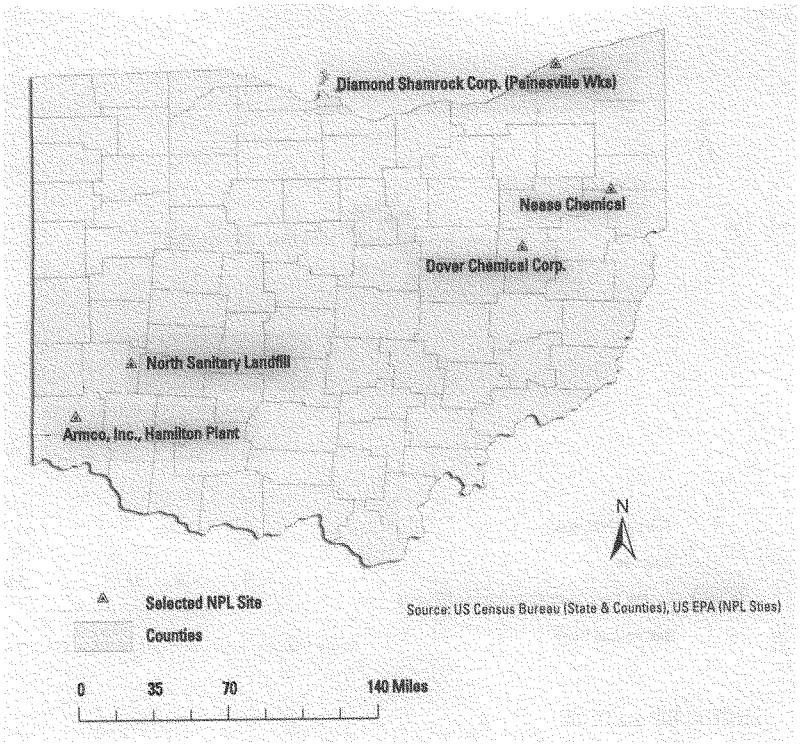
Sediments in adjacent wetlands:
- metals
- PCBs

Tohickon Creek:
- mercury

Residential wells:
- arsenic
- TCE

[118] Site description and contaminant information obtained from NPL site fact sheet, *available at* http://epa.gov/reg3hwmd/npl/PAD980706824.htm.

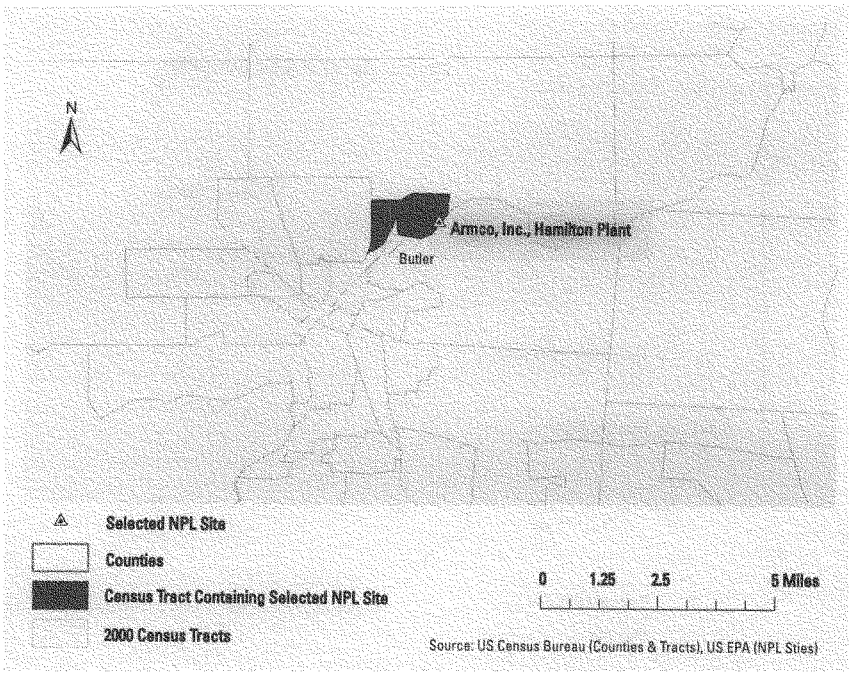
OHIO



As of the 2000 Census, 23,068 Ohioans lived in the census tracts containing the five profiled NPL sites. Of those, 3,270 were children aged nine and younger. An additional 1,581 were persons aged 75 and older. In three of the five census tracts, the median household income for 1999 was below that for the nation.

ARMCO, INC., HAMILTON PLANT

Butler County, Ohio
HRS Score: 69.34



Demographic Profile

Census Tract No.: 0105
Total Population: 2,543
Median Age: 33.8
Children 9 and under: 369
Persons 75 and older: 102
Percent Minority: 6.80
Percent Hispanic: 0.63
Median Household Income in 1999: $34,630

Site Description[119]

Proposed to the NPL on April 30, 2003, the Armco Inc., Hamilton Plant site is a 120-acre inactive industrial facility bordered by the Great Miami River and the B&O Railroad. Augspurger Road divides the site into two portions. The 27-acre northern parcel was formerly used as a rail yard, a temporary storage area for scrubber sludge waste and a 4.5-acre landfill. The southern parcel consists of 92 fenced areas and was used for manufacturing operations, including a coke production facility and blast furnaces.

The facility operated as a steel mill, producing both coke and molten iron under various owners since the 1900s. Coke production stopped in 1982 and iron production ended in 1991. The facility was then used intermittently until it was completely closed in 1994. Coal tar sludge was periodically drained and disposed of in the landfill portion of the property from the early 1960s through the landfill's closure in 1980. The blast furnace operation generated wastewater that was discharged into two settling ponds. Excess water from the ponds was originally discharged to the Great Miami River under a permit. Settled pollutants in the water such as ammonia, cyanide, phenol, lead and zinc were periodically dredged from the ponds and stored in piles in the northern parcel.

Past disposal practices resulted in the contamination of site soil and Great Miami River sediments. The river is a recreational fishery for species such as bluegill and small mouth bass, and nearby land serves as habitat for a federally designated endangered species, the Indiana Bat. Moreover, the site is less than one-half mile from the City of Hamilton's North Plant wellfield, which serves approximately 35,763 people. The Village of New Miami Wellfield is located within one mile of the site and serves about 3,045 people. A total population of 60,605 is served by wells within four miles of the site. Although groundwater contamination had not yet been detected, the aquifer is only 40 feet below ground surface in the vicinity of the site.

Contaminants Present

Settling pond sediments:

- SVOCs
- PCBs

[119] Site description and contaminant information obtained from NPL Site Narrative, *available at* http://www.epa.gov/superfund/sites/npl/nar1670.htm.

Soil:

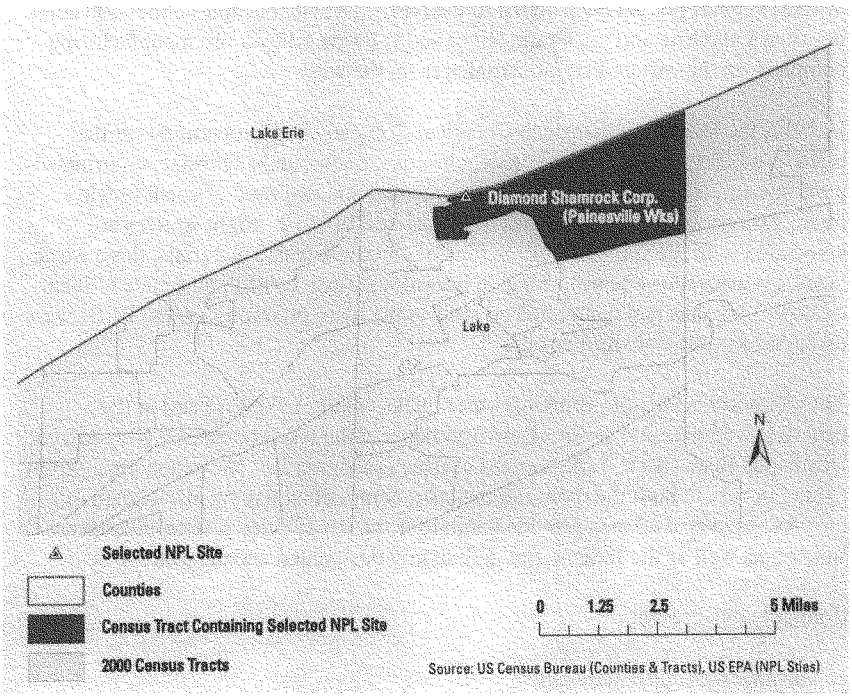
- SVOCs
- PCBs
- metals

Great Miami River sediments:

- SVOCs, including 4-methylphenol (o-cresol), fluoroanthene, benzo(k)flouranthene, and benzo(f,h,i)perylene
- metals, including chromium and zinc

Diamond Shamrock Corp (Painesville Works)

Lake County, Ohio
HRS Score: 50



Demographic Profile

Census Tract No.: 2048
Total Population: 3,337
Median Age: 38.7
Children 9 and under: 400
Persons 75 and older: 182
Percent Minority: 1.80
Percent Hispanic: 0.72
Median Household Income in 1999: $48,125

Site Description[120]

Proposed to the NPL on May 10, 1993, the Diamond Shamrock Corp. (Painesville Works) site has not yet been added to the NPL. The site occupies about 500 acres between Lake Erie and the Grand River and is bordered by a tire manufacturing company on the east and an industrial area on the west.

In 1912, the Diamond Shamrock Chemical Company began operations at the plant, producing mainly caustic soda, chromate compounds, chlorine, chlorinated paraffins and coke. The company also accepted and disposed of spent pickle liquor from nearby steel industries until it closed in 1972. Eight sources are associated with the site: .75 million tons of chromate waste materials, three waste lakes, a wastewater retention basin, a hazardous waste landfill, chromate effluent treatment lagoons and contaminated soils in the main production area. PCBs were discovered in the transformer oils.

The site poses a threat to drinking water intakes along Lake Erie and to the fisheries, wetlands and sensitive environments in the lake and nearby Grand River. Headlands Beach State Park, located nearby, is a significant recreation area. Sport fishing occurs in both the river and the lake; commercial fishing also occurs in the lake. Nearby wetlands provide habitat for the River Otter, a state endangered species, as well as the Indiana Bat, a federally designated endangered species.

Contaminants Present

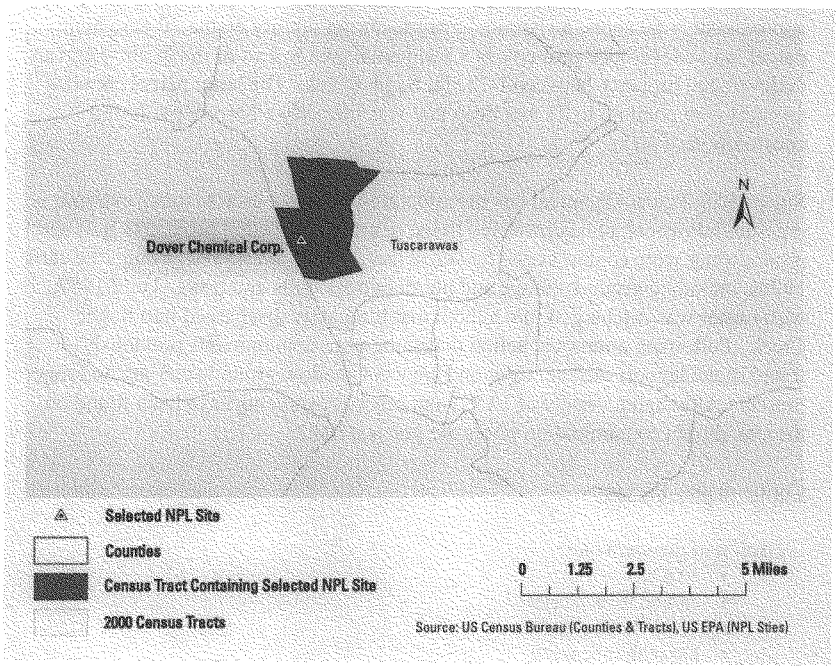
Surface water and sediments:

- hexavalent chromium
- mercury
- cyanide
- ethylbenzene
- xylene
- napthalene

[120] Site description and contaminant information obtained from NPL Site Narrative, *available at* http://www.epa.gov/superfund/sites/npl/nar1376.htm.

Dover Chemical Corp.

Tuscawaras County, Ohio
HRS Score: 50



Demographic Profile

Census Tract No.: 0206
Total Population: 5,206
Median Age: 42.6
Children 9 and under: 572
Persons 75 and older: 586
Percent Minority: 1.63
Percent Hispanic: 0.61
Median Household Income in 1999: $43,830

Site Description[121]

The Dover Chemical Corp. site was proposed to the NPL on May 10, 1993, but has not been added to the final NPL. This site consists of three parcels that total approximately 60 acres: a chemical manufacturing facility on the 20-acre main parcel; an undeveloped property in a residential area to east of the facility; and an undeveloped property between I-77 and Sugar Creek. The latter parcel contains an eight-acre pond up to 28 feet deep that was formerly a borrow pit during construction of I-77.

Since 1950, Dover Chemical has manufactured products used to make extreme pressure lubricants, plasticizers and flame retardants for vinyl products. Soil and groundwater were contaminated by site activities from the 1950s through the early 1970s, including ground storage and unintentional spills and leaks. Until 1987, wastewater was discharged into a ditch that ultimately discharged into Sugar Creek. Following a removal action that same year, contaminants previously found in the lagoon surface water and adjacent shallow groundwater are no longer present. Although a variety of VOCs and other constituents have been found on the site, dioxin contamination poses the greatest risk.

Contaminants Present

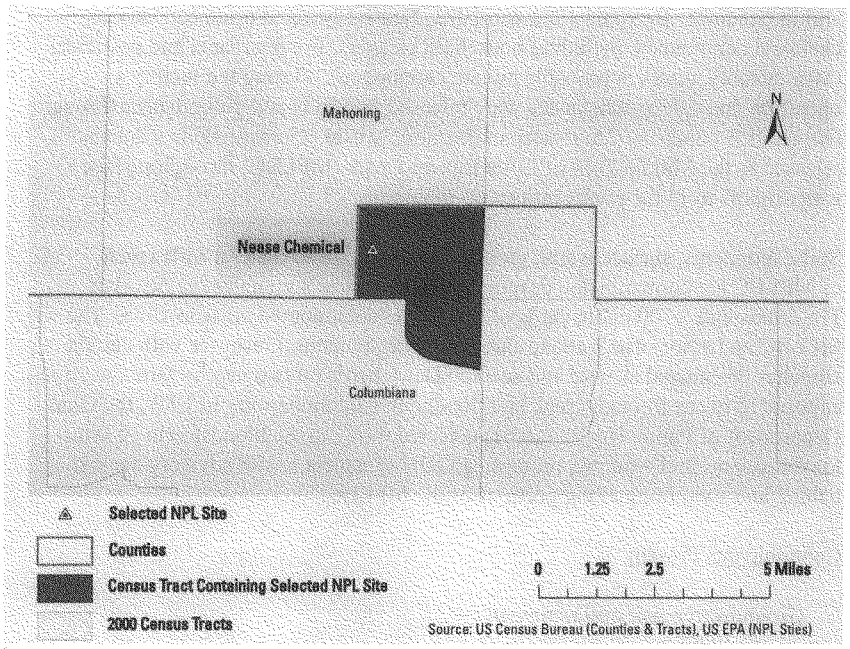
Soil and groundwater:

- VOCs
- carbon tetrachloride
- 1,4-dicholorobenzene
- hexachlorobenzene
- tetrachloroethene
- dibenzofurans (furans)
- polychlorinated dibenzodioxins (dioxin)

[121] Site description and contaminant information obtained from NPL site fact sheet, *available at* http://www.epa.gov/R5Super/npl/ohio/OHD004210563.htm.

NEASE CHEMICAL

Columbiana County, Ohio
HRS Score: 47.19



Demographic Profile

Census Tract No.: 2048
Total Population: 5,491
Median Age: 37.0
Children 9 and under: 728
Persons 75 and older: 338
Percent Minority: 1.91
Percent Hispanic: 0.53
Median Household Income in 1999: $35,038

Site Description[122]

Added to the NPL on September 8, 1983, this 44-acre site is surrounded by lightly developed land on three sides, an industrial plant to the northeast and 124 homes within one mile. Between 1961 and 1973, Nease Chemical produced various chemical compounds, including household cleaners, fire retardants and pesticides (most notably, mirex, a probable human carcinogen). During the facility's operation, hazardous substances were released into soils and groundwater through five unlined ponds used to treat manufacturing waste. Contaminants were also released to the Middle Fork of Little Beaver Creek (MFLBC) through surface water runoff from the ponds into creek tributaries.

Soils, sediments, surface water, groundwater and fish along a 30-mile reach of MFLBC are contaminated despite Nease Chemical's voluntary removal of 115 drums and 5,700 cubic yards of soil from contaminated areas in 1975. The MFLBC and associated wetlands are an important natural resource with certain stretches designated as wild and scenic. Dairy herds on two nearby farms were exposed to mirex through creek and floodplain contamination. In 1989, the Ohio Department of Public Health (ODH) detected mirex in the bloodstream of some local residents and workers, prompting ODH to issue a health advisory against fishing and swimming along portions of the MFLBC.

Contaminants Present

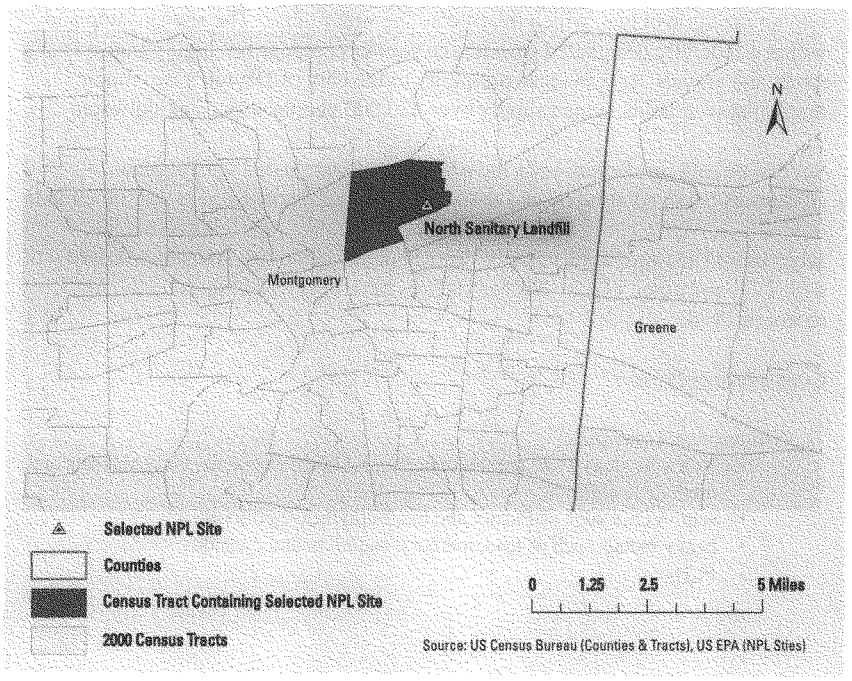
Groundwater, soil and sediments:

- VOCs
- SVOCs

[122] Site description and contaminant information obtained from NPL site fact sheet, *available at* http://www.epa.gov/R5Super/npl/ohio/OHD980610018.htm.

North Sanitary Landfill

Montgomery County, Ohio
HRS Score: 50



Demographic Profile

Census Tract No.: 0018
Total Population: 6,491
Median Age: 32.0
Children 9 and under: 1,201
Persons 75 and older: 373
Percent Minority: 14.90
Percent Hispanic: 1.96
Median Household Income in 1999: $24,875

Site Description[123]

The North Sanitary Landfill was added to the NPL on May 31, 1994. More than half of the 102-acre site was used for landfilling industrial and municipal wastes into unlined gravel pits, which intersected the water table. The site sits atop and within a federally designated sole-source aquifer composed of highly transmissive sands and gravels. It is in close proximity to the City of Dayton's two major municipal well fields, which supply over 430,000 people with drinking water.

Several private residential wells have become contaminated with organic substances believed to be related to the site. Wastes disposed of at the site include used oils, solvents, paint, electrical transformers, brake grindings containing asbestos and sewage. Thousands of drums buried on the site are contaminated with TCE and other VOCs. Numerous fires have occurred at the site, the most recent in 1996.

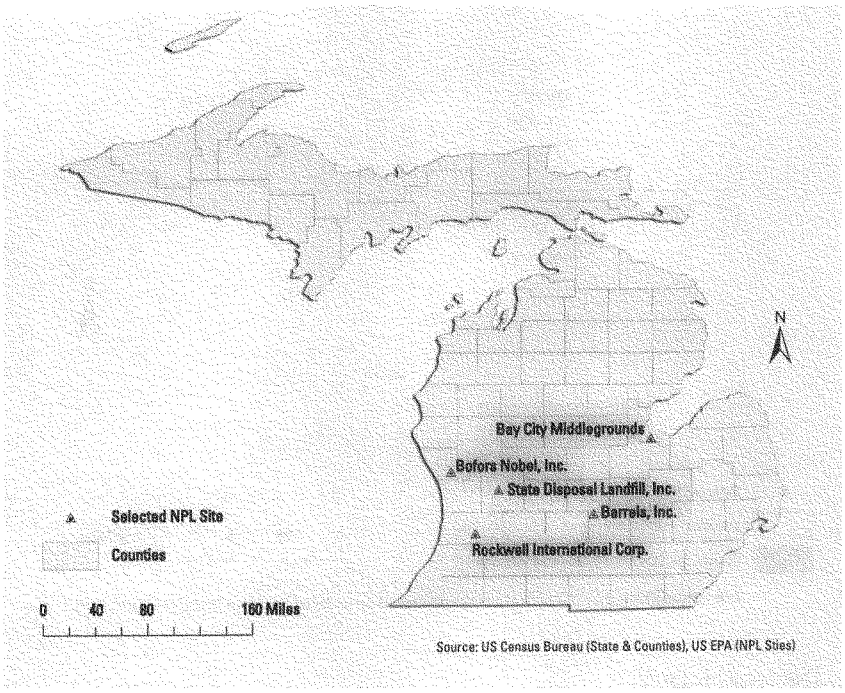
Contaminants Present

Groundwater and soils:

- VOCs, such as TCE, tetrachlorethene, 1,1-dichloroethene, vinyl chloride and methylene chloride
- semi-VOCs such as Phenol and bis(2-ethylhexyl)phthalate
- heavy metals such as lead, mercury, cadmium and cyanide
- PCBs

[123] Site description and contaminant information obtained from NPL site fact sheet, *available at* http://www.epa.gov/R5Super/npl/ohio/OHD980611875.htm.

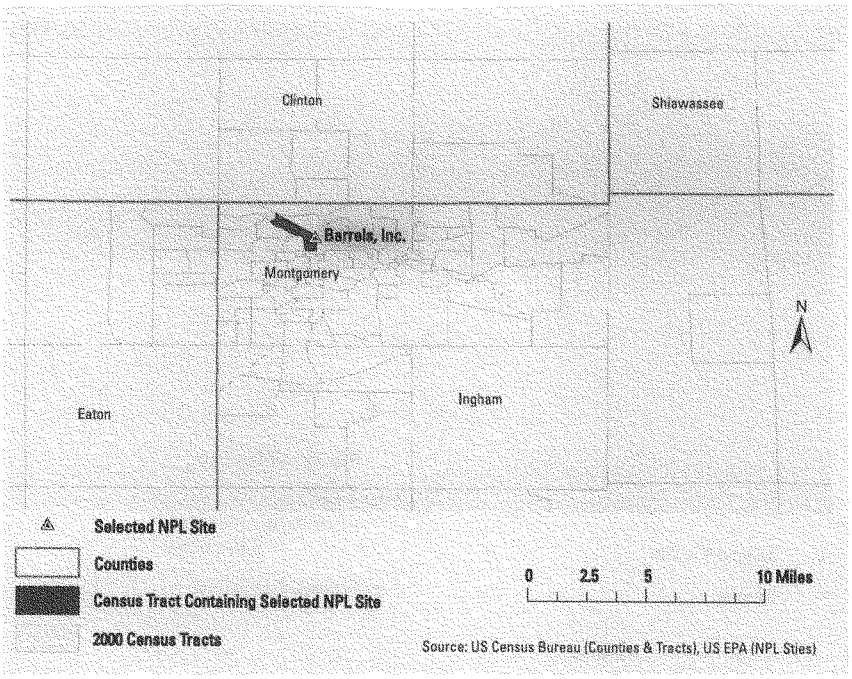
MICHIGAN



As of the 2000 Census, 20,915 Michiganders lived in the census tracts containing the five profiled NPL sites. Of those, 3,189 were children aged nine and younger. An additional 1,161 were persons aged 75 and older. In four of the five census tracts, the median household income for 1999 was below that for the nation.

BARRELS, INC.

Ingham County, Michigan
HRS Score: 42.24



Demographic Profile

Census Tract No.: 0002
Total Population: 1,467
Median Age: 28.7
Children 9 and under: 319
Persons 75 and older: 40
Percent Minority: 41.58
Percent Hispanic: 24.81
Median Household Income in 1999: $28,681

Site Description[124]

Added to the NPL on October 4, 1989, Barrels, Inc. is a two-acre site in an industrialized portion of Lansing, Michigan. From 1964 to 1981, Barrels, Inc., received metal barrels from industrial facilities for cleaning and repainting. Waste residues were allegedly dumped directly onto the ground as the first step in recycling the drums. Paint sludges were also deposited at the site.

In 1983, the state detected lead and zinc in the shallow groundwater. Soils on-site were heavily contaminated with heavy metals, volatile hydrocarbons, PCBs, oil, grease and many inorganic substances. Air quality reports indicated elevated levels for benzene and methylene chloride at the site boundary when barrels were on the site.

Approximately 9,000 people live within one mile of the site, and three schools are within one-half mile. A Lansing municipal well is located in close proximity to the site, and the Grand River flows within one-half mile of the site. In 1986, the state removed 1,000 drums, 1,000 cubic yards of contaminated soil and nine underground storage tanks. The area is fenced, which EPA says has resolved the risk of direct contact.

Contaminants Present

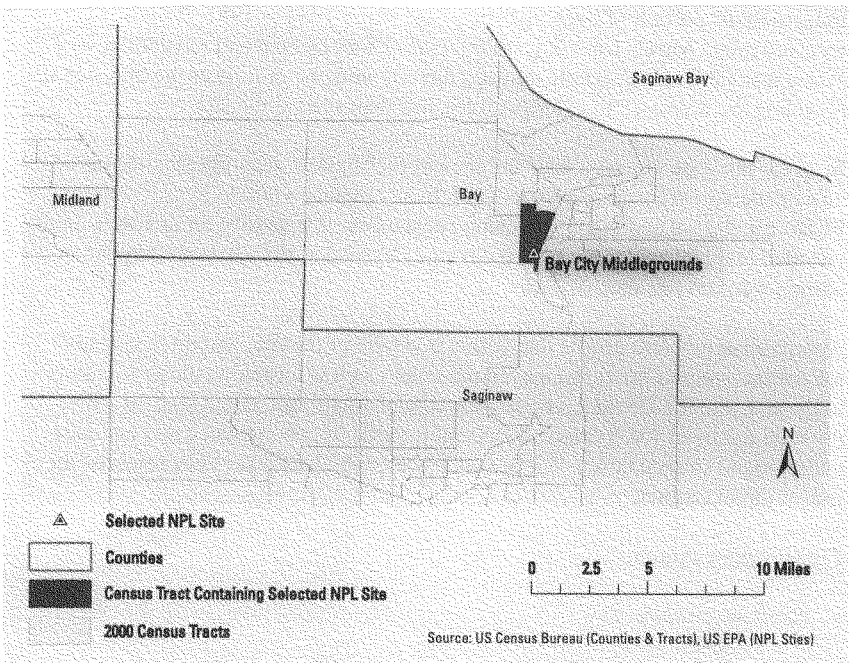
Shallow groundwater:
- lead
- zinc

Soils:
- heavy metals
- volatile hydrocarbons
- PCBs
- oil
- grease
- inorganic substances

[124] Site description and contaminant information obtained from NPL site fact sheet, *available at* http://www.epa.gov/R5Super/npl/michigan/MID017188673.htm.

BAY CITY MIDDLEGROUNDS

Bay County, Michigan
HRS Score: 50



Demographic Profile

Census Tract No.: 2810
Total Population: 4,363
Median Age: 35.2
Children 9 and under: 632
Persons 75 and older: 384
Percent Minority: 3.71
Percent Hispanic: 4.54
Median Household Income in 1999: $30,264

Site Description[125]

Proposed to the NPL on February 13, 1995, the Bay City Middlegrounds site has not been added to the final NPL. The site occupies 40 acres on Middlegrounds Island in the Saginaw River. It is an inactive landfill and dredged sediment disposal area owned by Bay City, Michigan. The landfill accepted construction and demolition debris, municipal and household wastes, and solid and liquid industrial waste. The sediment disposal area consists of piles of sediments dredged from the Saginaw River and Bay by the U.S. Army Corps of Engineers.

Approximately 58,900 people live within a four-mile radius of the site. The sediments in some areas of the river and bay have been contaminated with many hazardous substances, including pesticides and PCBs. Soils and groundwater associated with the landfill also contain a variety of contaminates. The highest threat is to surface water. Contaminated groundwater and surface runoff discharge to the Saginaw River and have contaminated fishing areas as well as a small river wetland. A drinking water intake for the Bay municipal system, which serves approximately 94,426 people in Bay City and the surrounding area, could potentially be affected by site contamination. Also potentially affected are fisheries in the river and bay, wetlands, threatened and endangered species, and a state-designated wildlife area.

Contaminants Present

Soils and groundwater associated with landfill:

- PCBs
- solvents
- benzene
- toluene
- ethylbenzene
- xylenes
- polynucleic aromatics
- phthalates
- pesticides
- a variety of other contaminants

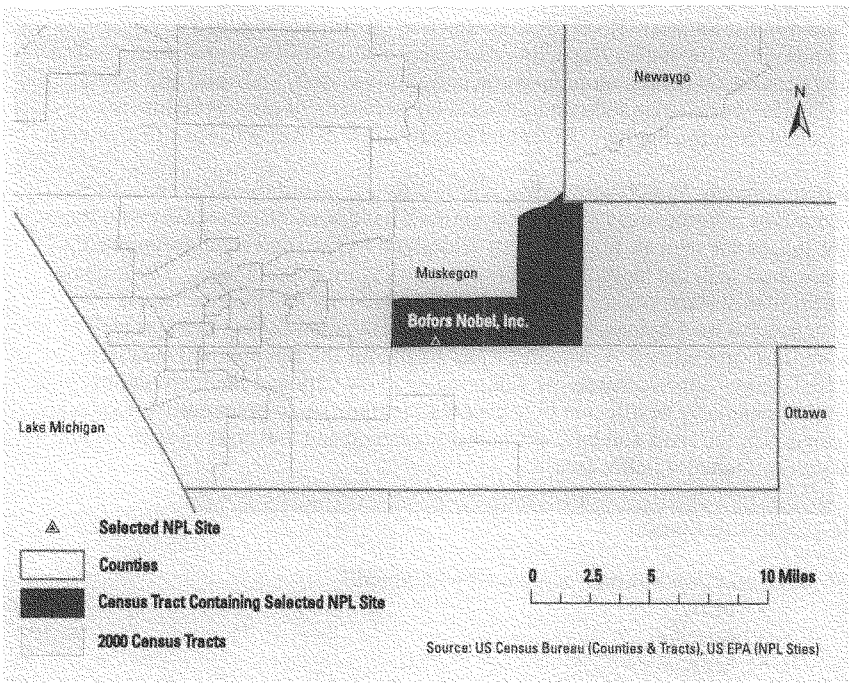
Sediment piles:

- polynucleic aromatics
- phthalates
- PCBs
- pesticides
- heavy metals

[125] Site description and contaminant information obtained from NPL Site Narrative, *available at* http://www.epa.gov/superfund/sites/npl/nar1450.htm.

BOFORS NOBEL, INC.

Muskegon County, Michigan
HRS Score: 53.42



Demographic Profile

Census Tract No.: 0031
Total Population: 4,191
Median Age: 33.3
Children 9 and under: 673
Persons 75 and older: 160
Percent Minority: 5.61
Percent Hispanic: 3.82
Median Household Income in 1999: $37,663

Site Description[126]

Added to the NPL on March 31, 1989, Bofors Nobel is an 85-acre site six miles east of Muskegon with an operating chemical production facility and 10 abandoned sludge lagoons. Big Black Creek, which bounds the site on the south, receives groundwater discharge from the site.

Starting around 1960, operations at the site produced alcohol-based detergents, saccharin, pesticides, herbicides and dye intermediates. Unlined lagoons were used for wastewater and sludge disposal until 1976. In the 1970s, the state of Michigan discovered contaminants in site groundwater that had severely affected the creek ecosystem. Twelve extraction wells were installed to capture contaminated groundwater before it reaches the creek.

About 1,800 people live within a 1.25-mile radius of the site. Groundwater treatment plant and barrier walls have been installed to treat the contamination.

Contaminants Present

Lagoon sludge:
- 27 different organic compounds

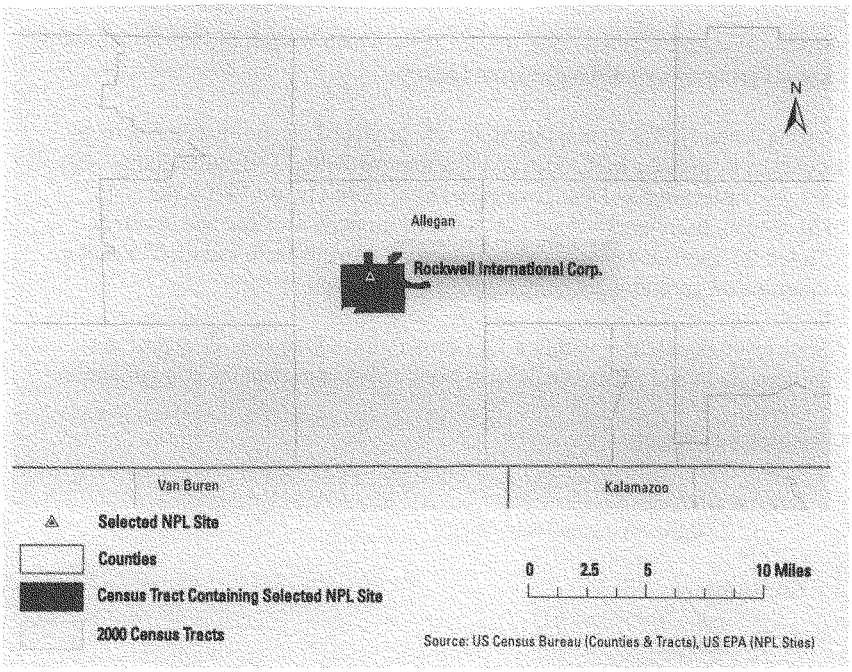
Groundwater:
- methylene chloride
- benzene
- 3,3-dichlorobenzidine
- aniline
- azobenzene
- benzidine
- toluene

Soils and lagoon sludge:
- methylene chloride
- benzene
- 3,3-dichlorobenzidine
- aniline
- azobenzene
- benzidine

[126] Site description and contaminant information obtained from NPL site fact sheet, *available at* http://www.epa.gov/R5Super/npl/michigan/MID006030373.htm.

ROCKWELL INTERNATIONAL CORP. (ALLEGAN)

Allegan County, Michigan
HRS Score: 52.15



Demographic Profile

Census Tract No.: 0312
Total Population: 4,838
Median Age: 35.2
Children 9 and under: 697
Persons 75 and older: 402
Percent Minority: 8.56
Percent Hispanic: 2.85
Median Household Income in 1999: $39,539

Site Description[127]

The Rockwell International Corp. (Allegan) site was added to the NPL on July 22, 1987. From the 1920s until 1991, Rockwell manufactured parts for trucks and construction equipment on this 30-acre site. During this period, wastewater and oils were discharged into a wetland area behind the plant, a series of lagoons and the Kalamazoo River. Prior to 1970, the wetland and lagoons were filled in and built over.

Surface and subsurface soils, groundwater and sediments in the lagoons and the Kalamazoo River are contaminated with VOCs, semi-VOCs, pesticides, PCBs and metals. The areas of waste disposal may also overlap with portions of a landfill adjacent to the site. Oils containing semi-VOCs and PCBs are present in the waste disposal areas. During the 1970s, Rockwell built a wastewater treatment plant at the site and discharged treated wastes under a National Pollutant Elimination Discharge System permit.

Approximately 8,150 people live within three miles of the site. The area is served by a public water supply system. Three municipal wells are located one-half mile up gradient of the site, and at least 15 private wells are known to be within a mile of the site. The groundwater discharges into the Kalamazoo River.

Contaminants Present

Soil, groundwater, lagoon sediment, Kalamazoo River:

- VOCs
- SVOCs
- pesticides
- PCBs
- metals

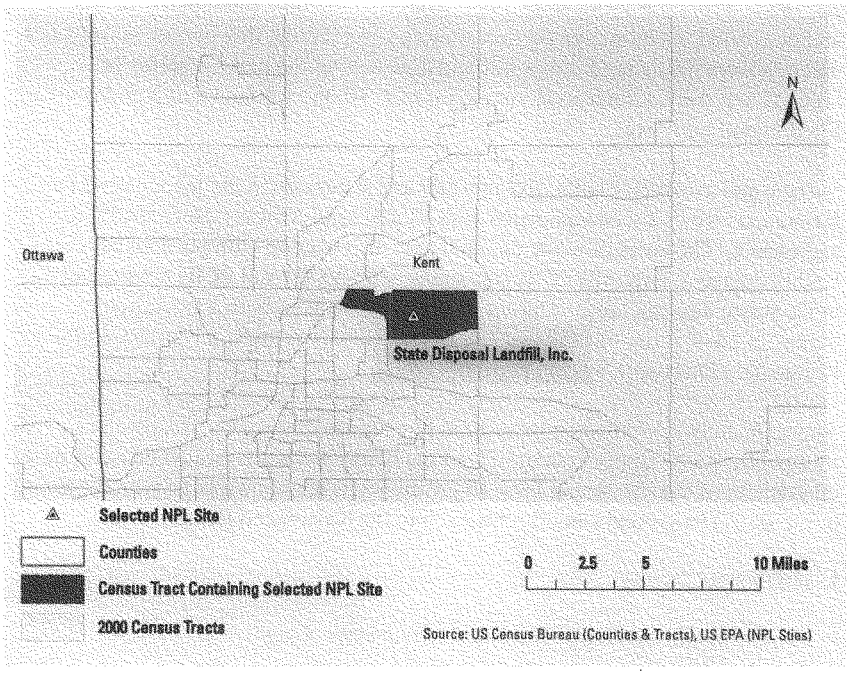
Landfill area:

- VOCs
- SVOCs
- pesticides
- PCBs
- metals
- oil containing SVOCs and PCBs

[127] Site description and contaminant information obtained from NPL site fact sheet, *available at* http://www.epa.gov/R5Super/npl/michigan/MID006028062.htm.

STATE DISPOSAL LANDFILL, INC.

Kent County, Michigan
HRS Score: 42.24



Demographic Profile

Census Tract No.: 0118.01
Total Population: 6,056
Median Age: 36.5
Children 9 and under: 868
Persons 75 and older: 175
Percent Minority: 3.98
Percent Hispanic: 1.04
Median Household Income in 1999: $66,458

Site Description[128]

Added to the NPL on February 21, 1990, this 37.6-acre former landfill is located in Plainfield Township in Kent County. It was a licensed waste disposal facility from 1966 to 1976. The landfill accepted residential, commercial and other wastes, and unconfirmed reports indicate that it may have also accepted liquid hazardous wastes.

The area under study encompasses 800 acres of wooded, agricultural and residential properties. Affected residential wells were provided with alternative water supplies from 1985 to 1991 and some were connected to the municipal water supply. The landfill has been capped and fenced.

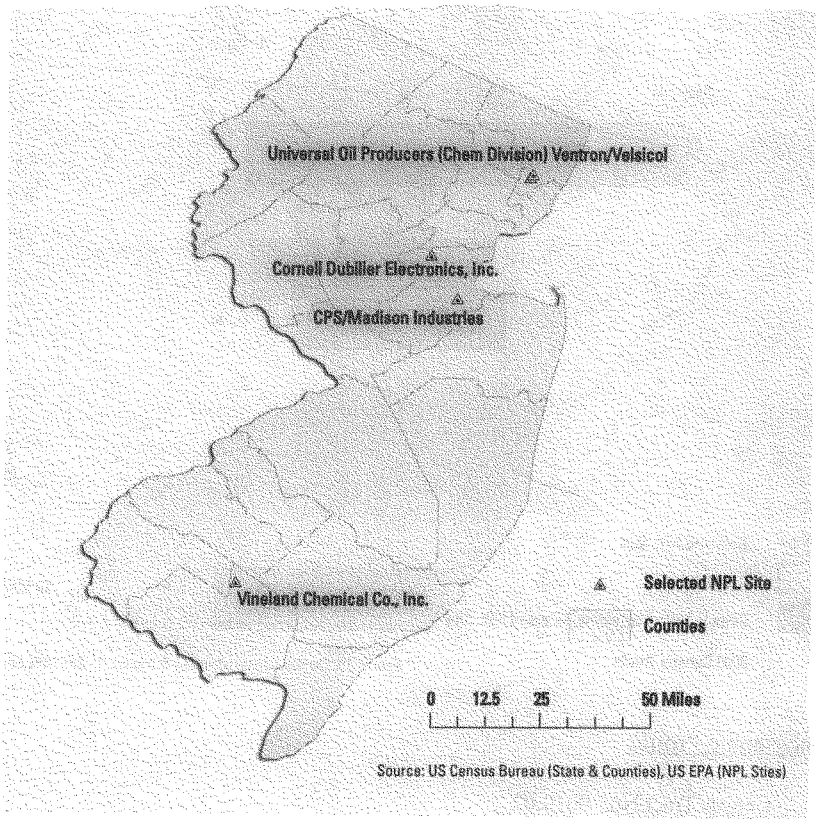
Contaminants Present

Groundwater and landfill area:

- lead
- copper
- cyanide
- chromium
- VOCs (including tetrachloroethane, trichloroethane, 1,2-dichloroethane, dichloroethane, 1,1-dichloroethane, chloroethane, vinyl chloride, 1,1,1-trichloroethane, chloroflourocarbons as well as benzene, toluene and xylene compounds)

[128] Site description and contaminant information obtained from NPL site fact sheet, *available at* http://www.epa.gov/R5Super/npl/michigan/MID980609341.htm.

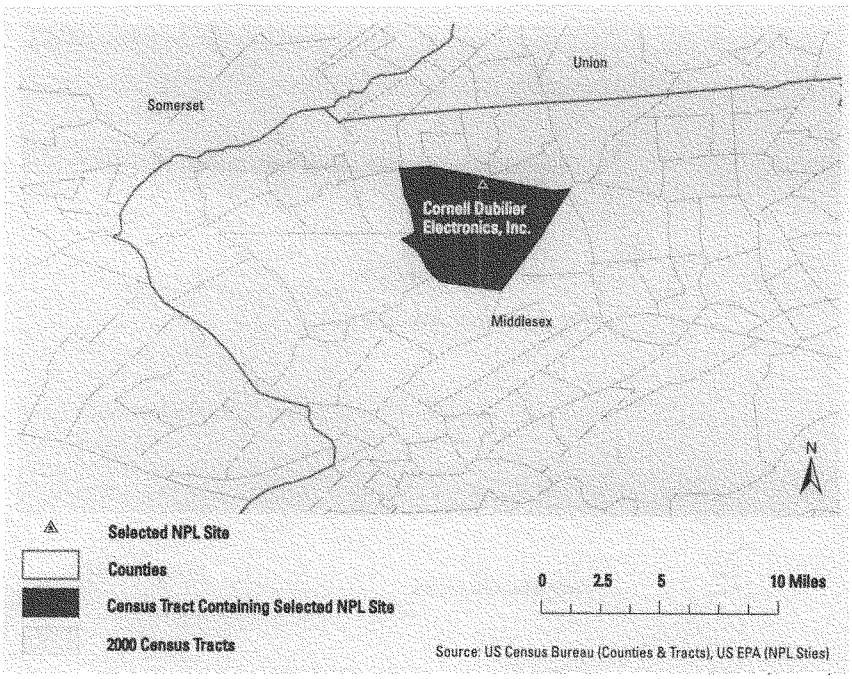
NEW JERSEY



As of the 2000 Census, 28,155 New Jerseyans lived in the census tracts containing the five profiled NPL sites. Of those, 3,392 were children aged nine and younger. An additional 1,977 were persons aged 75 and older. The median household income for 1999 in all five tracts was above that for the nation.

CORNELL DUBILIER ELECTRONICS, INC.

Middlesex County, New Jersey
HRS Score: 50.27



Demographic Profile

Census Tract No.: 0010.02
Total Population: 5,950
Median Age: 36.2
Children 9 and under: 818
Persons 75 and older: 395
Percent Minority: 35.61
Percent Hispanic: 9.78
Median Household Income in 1999: $65,942

Site Description[129]

The Cornell Dubilier Electronics, Inc., site was added to the NPL on July 28, 1998. From 1936-1962, the company manufactured electronic parts and components at the site, during which time it allegedly dumped PCB-contaminated materials and other hazardous substances directly onto the soil. Now known as the Hamilton Industrial Park, the site is occupied by an estimated 15 commercial businesses.

Approximately 540 people live within a quarter-mile of the site, and the nearest residential homes are less than 200 feet away. A total of about 8,700 people live within one mile of the site. An unnamed tributary to Bound Brook traverses the southeast corner of the property. Water bodies that join this tributary allow for the maintenance, migration and propagation of various plants and organisms. Fish collected from Bound Brook were found to contain PCBs at levels higher than the amount allowed by the FDA, so a fish-consumption advisory is in effect.

A study conducted between 1988 and 1991 found significant groundwater contamination, consisting mainly of trichloroethene and tetrachloroethene. Due to widespread contamination, all residential wells in the area were reportedly closed and residences were hooked up to another water main.

Contaminants Present

Soil:
- VOCs
- SVOCs
- PCBs
- inorganic constituents

Groundwater:
- trichloroethene
- tetrachloroethene

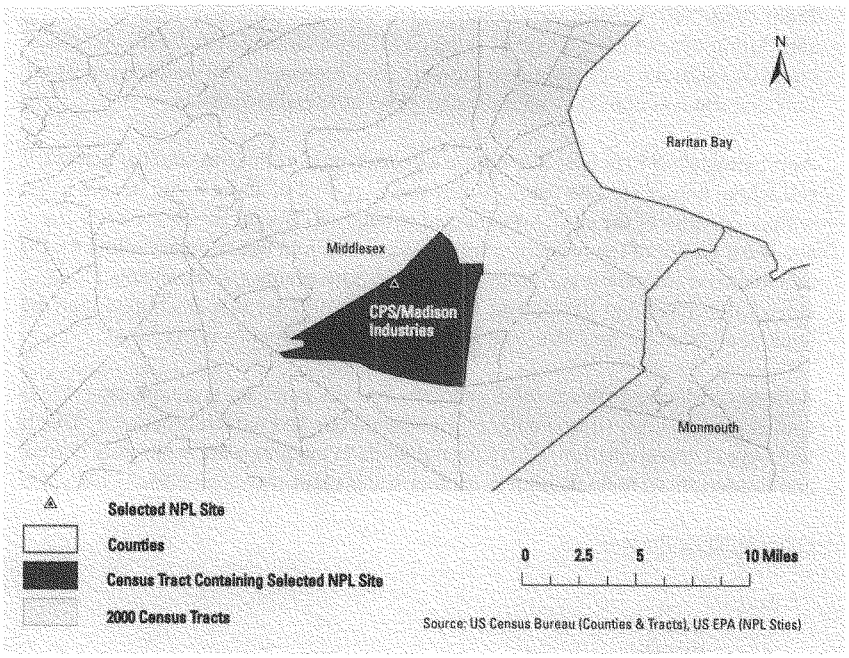
Surface water:
- PCBs

Building interiors:
- elevated levels of PCBs and metals

[129] Site description and contaminant information obtained from NPL site fact sheet, *available at* http://www.epa.gov/region02/superfund/npl/0201112c.pdf.

CPS/MADISON INDUSTRIES

Middlesex County, New Jersey
HRS Score: 69.73



Demographic Profile

Census Tract No.: 0078.01
Total Population: 3,032
Median Age: 38.6
Children 9 and under: 334
Persons 75 and older: 176
Percent Minority: 24.11
Percent Hispanic: 7.12
Median Household Income in 1999: $52,284

Site Description[130]

Added to the NPL on September 8, 1983, this site contains two adjacent manufacturing facilities on a 35-acre tract of land. CPS, which is no longer in operation, processed, treated and stored organic chemicals used in the production of water treatment agents, lubricants, oil field chemicals and anti-corrosive agents. The company generated spent halogenated solvents that were shipped off-site for disposal. Hazardous wastes were stored in tanks or containers. Madison Industries is still in operation and continues to handle hazardous materials at the site. Madison produces zinc compounds for fertilizers, pharmaceuticals and food additives.

Since 1967, the two companies have repeatedly dumped and discharged chemicals into the public sewer system as well as onto their respective properties. To date, 32 municipal wells have closed due to contamination. Approximately 1,000 people live within a half mile of the site. Prickett's Brook and Pond have also been contaminated. These waters are not used for recreation or as water supplies, but children who play nearby may suffer adverse health effects if they come in contact with or ingest the water or sediments. The Perth Amboy well field is down gradient of the site and may be impacted further if the recovery well system is not properly monitored and maintained.

Contaminants Present

Groundwater:

- VOCs
- heavy metals including zinc, cadmium, copper, lead

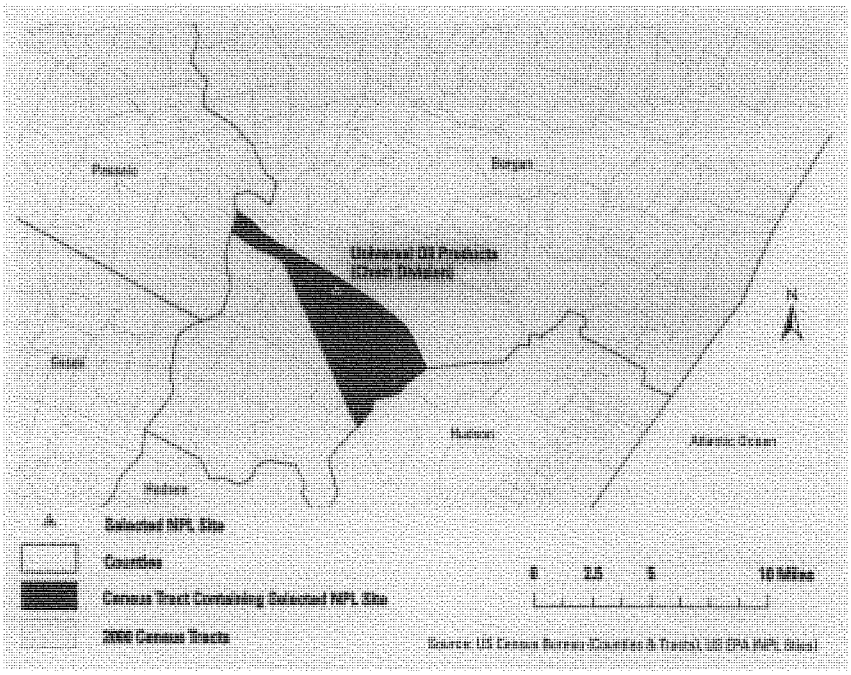
Sediments and surface water of Prickett's Pond:

- zinc
- VOCs

[130] Site description and contaminant information obtained from NPL site fact sheet, *available at* http://www.epa.gov/region02/superfund/npl/0200109c.pdf.

UNIVERSAL OIL PRODUCTS (CHEMICAL DIVISION)

Bergen County, New Jersey
HRS Score: 54.63



Demographic Profile

Census Tract No.: 0120
Total Population: 8,716
Median Age: 37.9
Children 9 and under: 938
Persons 75 and older: 616
Percent Minority: 20.32
Percent Hispanic: 10.65
Median Household Income in 1999: $50,163

Site Description[131]

The Universal Oil Products (Chemical Division) site was added to the NPL on September 8, 1983. Various chemicals were manufactured on this 75-acre site from 1932 to 1979, when Universal Oil Products ceased operations and dismantled the plant. From 1960 to 1979, the company also recovered solvents and waste chemicals.

Approximately 4.5 million gallons of these wastes were dumped into unlined lagoons. This resulted in contamination of the soil, surface water and groundwater. Approximately 36,500 people within three miles of the site depend on groundwater as their drinking water source. The site is in a coastal wetland management area of the Hackensack River Basin. Ackerman's Creek, a tributary to Berry's Creek, flows through the site. These and other area surface waters are used by local residents for recreation.

Contaminants Present

Groundwater:
- VOCs, including benzenes and TCE
- vinyl chloride
- toluene
- PCBs
- lead

Sediments:
- PCBs

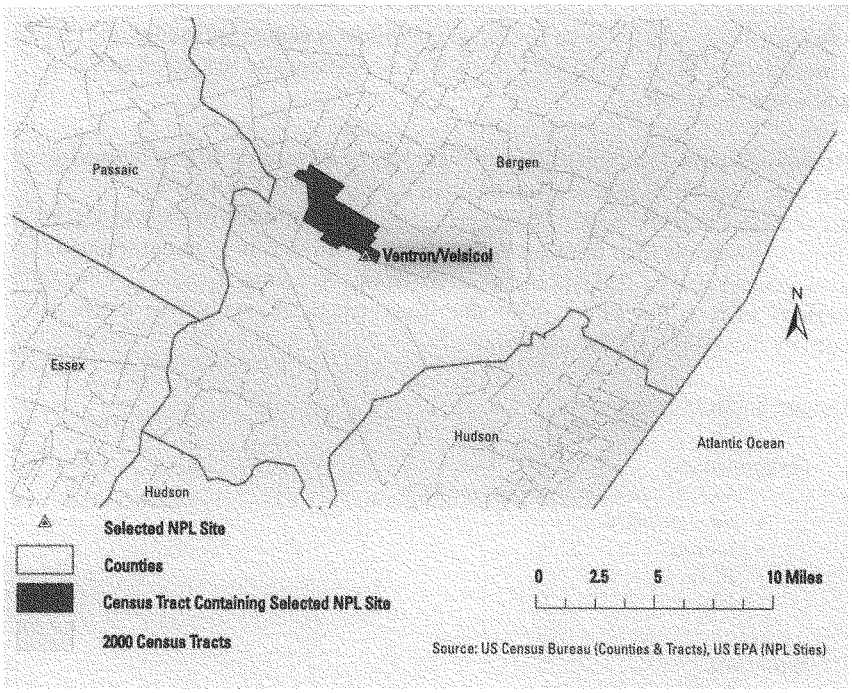
Soils:
- VOCs
- PCBs
- PAHs
- lead

Surface water:
- VOCs

[131] Site description and contaminant information obtained from NPL site fact sheet, *available at* http://www.epa.gov/region02/superfund/npl/0200101c.pdf.

VENTRON/VELSICOL

Bergen County, New Jersey
HRS Score: 51.38



Demographic Profile

Census Tract No.: 0600
Total Population: 7,708
Median Age: 40.3
Children 9 and under: 948
Persons 75 and older: 616
Percent Minority: 9.08
Percent Hispanic: 7.30
Median Household Income in 1999: $60,859

Site Description[132]

Added to the NPL on September 21, 1984, this 40-acre site is a former chemical processing plant that operated from 1929 to 1974. Approximately 160 tons of process waste is believed to have been buried on-site. Ventron buildings were abandoned and demolished in 1974, and two new buildings now stand on the site where the old mercury processing plant stood. One is a food distribution center and the other is used for warehousing activities.

The site is located in a densely populated industrialized area, but access is restricted. Contaminants still remain on the site and could potentially migrate by groundwater and air. Discharges from the facility have contaminated Berry's Creek and neighboring wetlands with mercury and other chemicals. Mercury levels in the sediment adjacent to the property are among the highest known in freshwater ecosystems nationwide.

Exposure to site-related contaminants could occur by drinking or direct contact with the water or sediments in the creek. On-site workers may be exposed to contaminants located in the soils and sediments. Humans and wildlife could also be exposed to mercury via consumption of organisms in Berry's Creek.

Contaminants Present

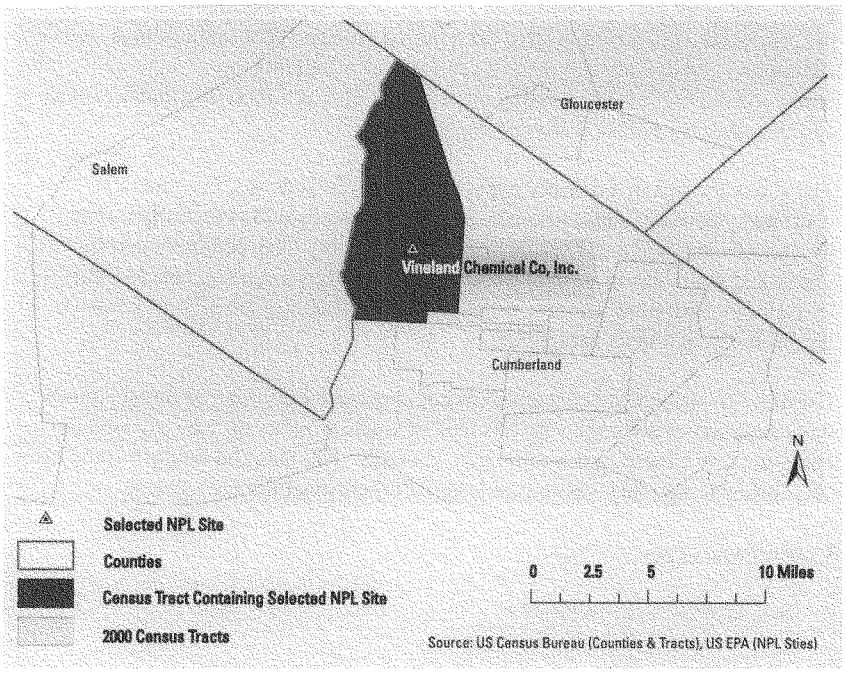
Soil, sediments, groundwater:

- mercury and other contaminants

[132] Site description and contaminant information obtained from NPL site fact sheet, *available at* http://www.epa.gov/region02/superfund/npl/0200674c.pdf.

VINELAND CHEMICAL CO., INC.

Cumberland County, New Jersey
HRS Score: 59.16



Demographic Profile

Census Tract No.: 0409.01
Total Population: 2,749
Median Age: 37.1
Children 9 and under: 354
Persons 75 and older: 174
Percent Minority: 33.14
Percent Hispanic: 24.01
Median Household Income in 1999: $44,962

Site Description[133]

Added to the NPL on September 21, 1984, this 54-acre site served as a location for Vineland Chemical's production of arsenic-based herbicides from 1950-1994. The site is mostly covered with vegetation and included manufacturing and storage buildings, a laboratory, lagoons and former chicken coops. Prior to 1977, the company stored byproduct arsenic salts in open piles and in the chicken coops.

As the result of water contacting the exposed piles, arsenic has contaminated the subsurface soils, groundwater and the nearby Maurice River and Union Lake. The lower Maurice River system extends 26 miles from the lake to the Delaware Bay. Approximately 57,000 people depend on the groundwater system in the area, either through private or municipal wells, for drinking water. Residential areas surround the site and numerous towns and villages are close to the Maurice River.

A health screening study showed that some company employees had elevated concentrations of arsenic in their blood and urine. Accidental ingestion, direct contact or inhalation of the contaminants may subject workers or trespassers to carcinogenic and non-carcinogenic risks. Downstream residents who use well water also may be subject to health risks. In 1982, the company began operating a wastewater treatment system to remove arsenic, but the system cannot accommodate all the contaminated water leaving the site each day.

Contaminants Present

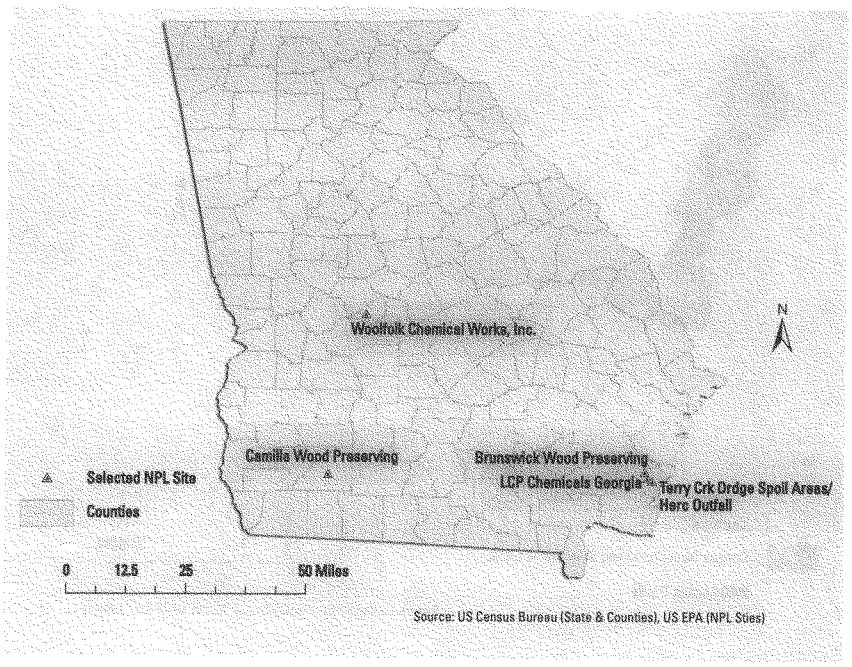
Groundwater:
- inorganic and organic arsenic
- metals

Surface soil:
- arsenic
- small amounts of other metals

Subsurface soil, Sediments and Surface Waters of Union Lake and Maurice River:
- arsenic

[133] Site description and contaminant information obtained from NPL site fact sheet, *available at* http://www.epa.gov/region02/superfund/npl/0200209c.pdf.

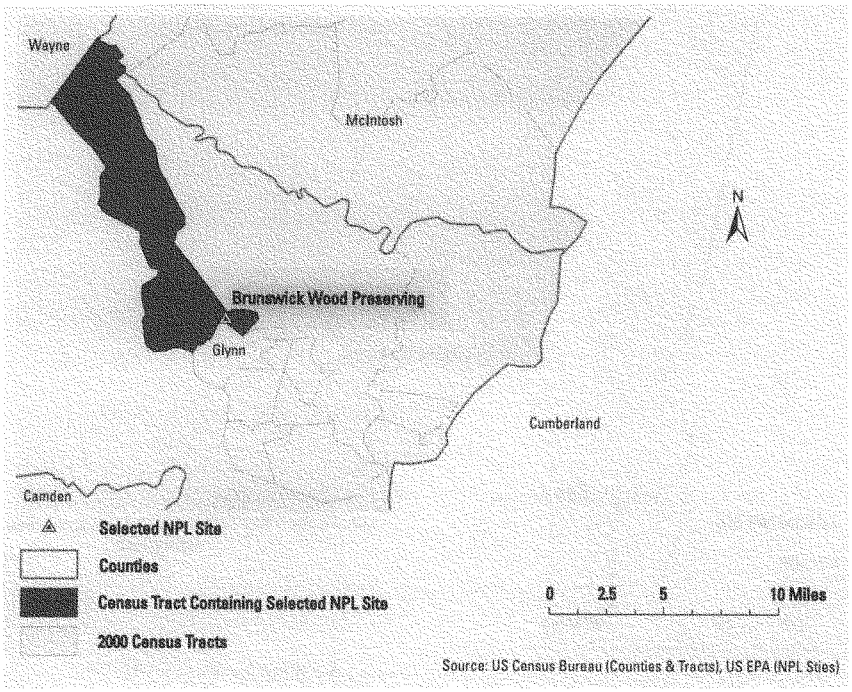
GEORGIA



As of the 2000 Census, 30,498 Georgians lived in the census tracts containing the five profiled NPL sites. Of those, 4,229 were children aged nine and younger. An additional 1,864 were persons aged 75 and older. In all five census tracts, the median household income for 1999 was below that for the nation.

BRUNSWICK WOOD PRESERVING

Glynn County, Georgia
HRS Score: 54.49



Demographic Profile

Census Tract No.: 0004.01
Total Population: 6,115
Median Age: 35.7
Children 9 and under: 921
Persons 75 and older: 198
Percent Minority: 12.02
Percent Hispanic: 1.42
Median Household Income in 1999: $39,612

Site Description[134]

This 84-acre site in Brunswick, Georgia, was used to treat wood from 1958 to 1991. The wood was treated using pentachlorophenol, creosote and CCA (chromium, copper, arsenic). These chemicals were stored in drums and eventually contaminated the soil. In February 1991, the company declared bankruptcy and the following month EPA responded to a fire at the facility.

There are six municipal wells within a four-mile radius of the site, which serve over 6,000 people. All the municipal wells and most, if not all, of the private wells draw water from a deeper aquifer. Private wells in the area have been sampled extensively since 1991 but have not been impacted by the site. In addition, the site is adjacent to the tidally influenced Burnett Creek.

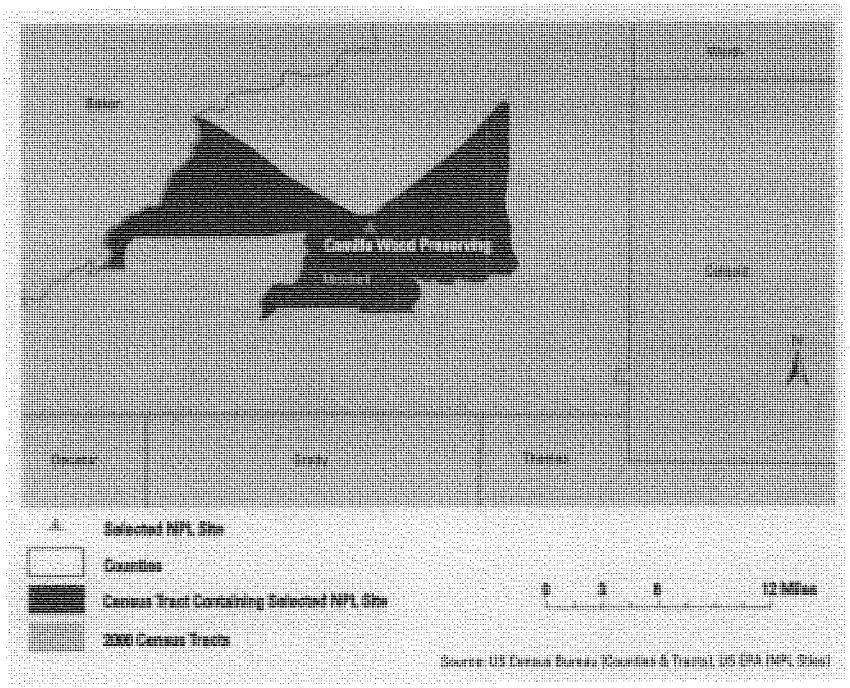
Contaminants Present

- PCP
- creosote
- CCA (chromium, copper, arsenic)

[134] Site description and contaminant information obtained from NPL site fact sheet, *available at* http://www.epa.gov/region4/waste/npl/nplga/brunwpga.htm.

CAMILLA WOOD PRESERVING COMPANY

Mitchell County, Georgia
HRS Score: 50



Demographic Profile

Census Tract No.: 9804
Total Population: 7,431
Median Age: 34.2
Children 9 and under: 910
Persons 75 and older: 403
Percent Minority: 53.29
Percent Hispanic: 2.64
Median Household Income in 1999: $30,625

Site Description[135]

Added to the NPL on July 28, 1998, this former wood preserving facility used creosote to treat railroad ties and poles from 1947 through the 1980s. In the 1970s, pentachlorophenol (PCP) was introduced as a preservative for pole treatment and was the exclusive preservative for poles by the 1980s. The plant ceased manufacture of railroad ties in the late 1980s and stopped wood treating operations in 1991.

That year, EPA conducted an emergency response action because soil and ground water were contaminated with wood preserving materials. EPA's actions included placement of a fence along the perimeter of the facility. Sampling indicated that 35,000 cubic yards of soils were contaminated. There were also vast quantities of wastewater containing PCP and creosote, which were shipped off-site to a Chemwaste facility in Texas.

Contaminants Present

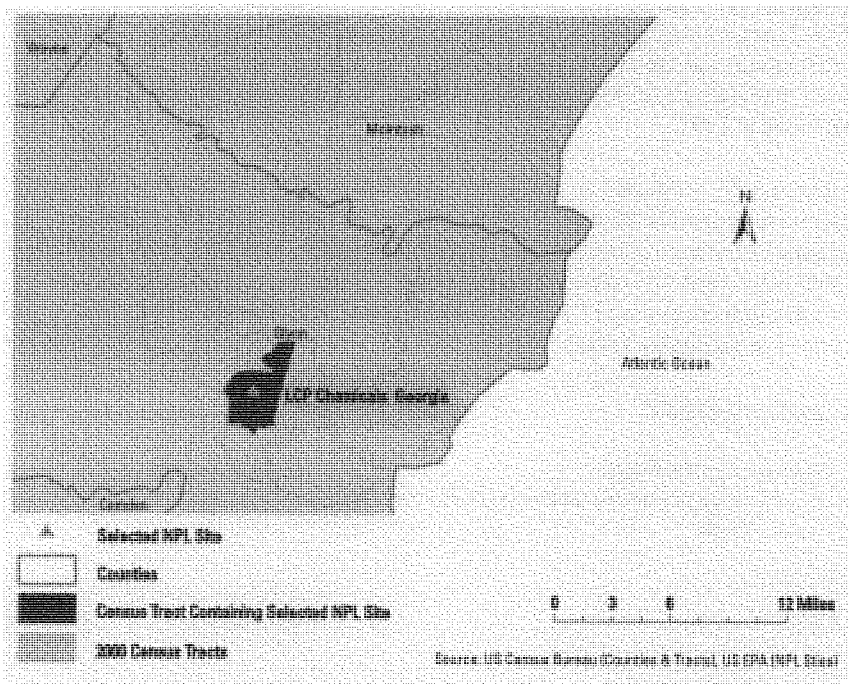
Soils and groundwater:

- wood preserving materials (PCP, creosote)
- PAHs

[135] Site description and contaminant information obtained from NPL site fact sheet, *available at* http://www.epa.gov/region4/waste/npl/nplga/camilaga.htm.

LCP CHEMICALS GEORGIA

Glynn County, Georgia
HRS Score: 60.14



Demographic Profile

Census Tract No.: 0007
Total Population: 7,224
Median Age: 33.8
Children 9 and under: 1,198
Persons 75 and older: 467
Percent Minority: 63.10
Percent Hispanic: 2.03
Median Household Income in 1999: $23,801

Site Description[136]

Added to the NPL on June 17, 1996, this 550-acre site is the top priority site in Georgia. Over the last 70 years, an oil refinery, paint manufacturing company, power plant and chlor-alkali plant have all operated at the site, the majority of which is a tidal marsh. Since 1919, the site has been occupied by at least five major companies: ARCO, Georgia Power Company, Dixie Paints and Varnish Company (currently O'Brien Company), Allied Chemicals, Inc., (currently Allied Signal) and the Hanlin Group subsidiary, LCP Chemicals-Georgia, Inc.

Plant soil, groundwater and marsh biota are substantially contaminated with mercury, polychlorinated biphenyls (PCBs), metals and semi-volatile compounds. EPA estimates that more than 380,000 pounds of mercury was "lost" in the area between 1955 and 1979. Mercury and PCBs have been detected in aquatic life at levels sufficient to produce a ban on commercial fishing in the area. There is also a seafood consumption advisory for part of nearby Turtle River and all of Purvis Creek. Upon the plant closing in 1994, Georgia asked EPA to take immediate action at the site to address chlorine gas releases and the flow of contamination into an adjacent saltwater tidal marsh, which provides habitat for endangered species. To date, EPA has recovered over 400,000 pounds of mercury. Approximately 13 acres of marsh and marsh channels adjacent to the site have been excavated.

Contaminants Present

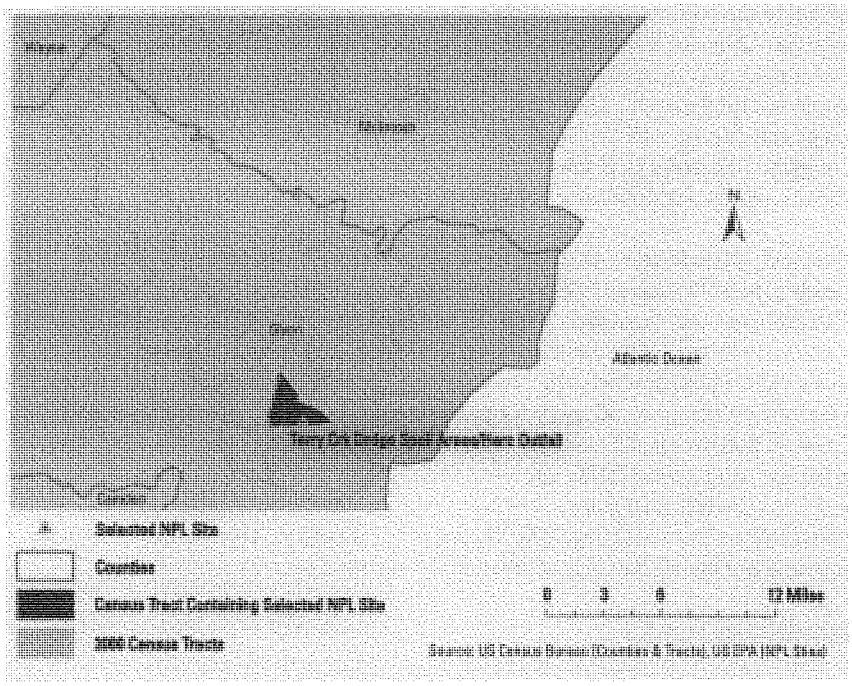
Plant site soils, groundwater, and marsh biota:

- mercury
- PCBs
- semi-volatile contamination

[136] Site description and contaminant information obtained from NPL site fact sheet, *available at* http://www.epa.gov/region4/waste/npl/nplga/lcpincga.htm.

TERRY CREEK DREDGE SPOIL AREAS/HERCULES OUTFALL

Glynn County, Georgia
HRS Score: 50.18



Demographic Profile

Census Tract No.: 0005.01
Total Population: 3,928
Median Age: 42.9
Children 9 and under: 479
Persons 75 and older: 573
Percent Minority: 50.53
Percent Hispanic: 1.25
Median Household Income in 1999: $27,768

Site Description[137]

Proposed to the NPL on April 1, 1997, the Terry Creek Dredge Spoil Areas/ Hercules Outfall site has not been finalized on the NPL. This site was an outfall area for a former pesticide manufacturer in Brunswick, Georgia. Toxaphene, a chlorinated pesticide, was produced at the Hercules plant between 1948 and 1980. During that period, toxaphene was discharged through an outfall ditch into Dupree Creek, which flows into Terry Creek.

The U.S. Army Corps of Engineers periodically dredged portions of Dupree Creek and Terry Creek. Dredge material was placed in several areas near the confluence of the two creeks, as well as other nearby locations. The dredged material contained highly contaminated sediments. Seafood monitoring has demonstrated a significant reduction in total toxaphene concentrations since a 2001 cleanup action. However, fish consumption advisories still exist in parts of both creeks.

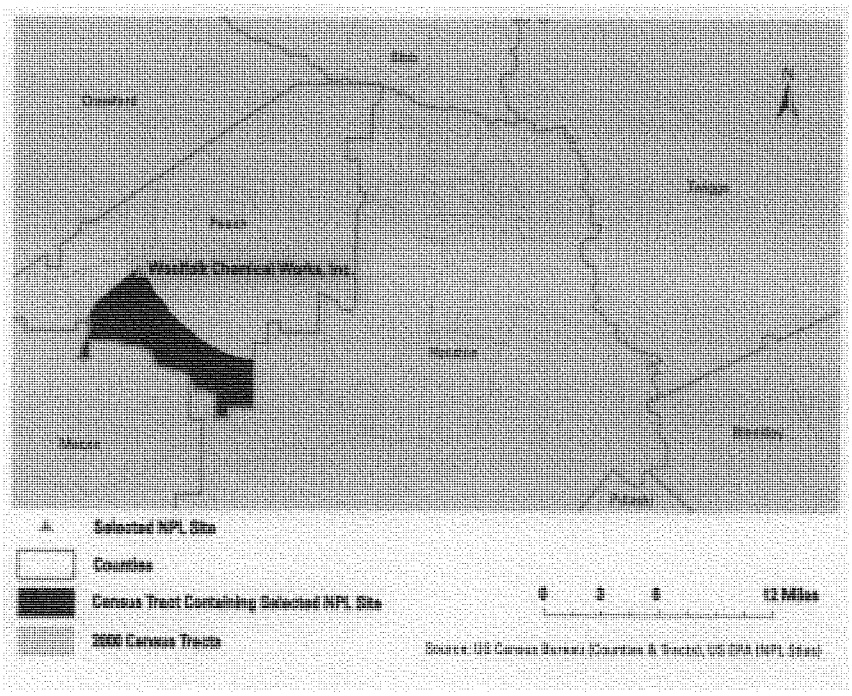
Contaminants Present

Outfall ditch sediments, creek sediments and dredge disposal areas:
- toxaphene

[137] Site description and contaminant information obtained from NPL site fact sheet, *available at* http://www.epa.gov/region4/waste/npl/nplga/tercrkpr.htm.

WOOLFOLK CHEMICAL WORKS, INC.

Peach County, Georgia
HRS Score: 42.24



Demographic Profile

Census Tract No.: 0404
Total Population: 5,800
Median Age: 23.9
Children 9 and under: 721
Persons 75 and older: 223
Percent Minority: 95.29
Percent Hispanic: 0.71
Median Household Income in 1999: $21,094

Site Description[138]

Woolfolk Chemical Works, Inc. was added to the NPL on August 30, 1990. Contamination on this 31-acre site resulted from the production, formulation and packaging of pesticides, herbicides and insecticides, which took place on the site since 1910. In the early 1980s, the Georgia Environmental Protection Division investigated the site based on citizen complaints and found that the company was discharging waste products to a drainage corridor heading away from the site. The property was later transferred to another company, and a cleanup action, which had been agreed to as part of the transfer, revealed more extensive contamination.

There are 48 contaminants of potential concern at the site and the majority of the risk stems from arsenic contamination. In 1990, contamination was found to have spread to surrounding residential properties. Contamination was eventually removed from 26 residential properties, including 22,900 tons of soil and debris. A PRP associated with the site also purchased about 17 properties and converted them to commercial use. However, EPA reports continuing problems with PRP compliance with orders pertaining to cleanup of one of the site's operable units.

Contaminants Present

- 48 contaminants, primarily arsenic

[138] Site description and contaminant information obtained from NPL site fact sheet, *available at* http://www.epa.gov/region4/waste/npl/nplga/wolfokga.htm.

State	Site Name (County)	Date Added to NPL	HRS Score	Description of Site	Population Within 1 Mile	Population in Census Tract Containing Site	Children Aged 9 and Younger in Tract	Persons Aged 75 and Older in Tract	Median Income (1999) in Tract	% Minority in Tract	% Hispanic in Tract*
California	Aerojet General Corp. (Sacramento County)	Sept. 8, 1983	54.63	5,900-acre site used for manufacturing rocket propellants.	5,001-10,000	4,751	582	339	$84,740	22.6	4.4
	Iron Mountain Mine (Shasta County)	Sept. 8, 1983	56.16	4,400-acre site mined for iron, silver, gold, copper, zinc and pyrite from the 1860s until 1963.	0-100	3,663	387	204	$41,607	8.4	3.6
	McCormick & Baxter Creosoting (San Joaquin County)	Oct. 14, 1992	74.86	29-acre former wood-preserving facility where utility poles and railroad ties were treated with chemicals including creosote and pentachlorophenol (PCP).	10,001-50,000	1,525	306	58	$22,348	71.7	68.3
	Operating Industries Landfill (Los Angeles County)	June 10, 1986	57.22	190-acre residential, commercial, liquid, and hazardous waste landfill.	10,001-50,000	4,309	462	364	$46,708	61.1	46.4
	Stringfellow (Riverside County)	Sept. 8, 1983	61.4	17-acre site located in a canyon and served as a hazardous waste disposal facility from 1956-1972.	1,001-5,000	8,005	1,491	262	$43,132	52.5	58.4
Texas	ALCOA/Point Comfort/ Lavaca Bay (Calhoun County)	Feb. 23, 1994	50	Site consists of the 3,500-acre ALCOA plant, an associated 420-acre dredge spoil island, and portions of Lavaca Bay and western Matagorda Bay. The plant used mercury cathodes to produce chlorine gas and sodium hydroxide.	5,001-10,000	1,515	220	86	$40,300	7.39	14.59
	Gulfco Marine Maintenance (Brazoria County)	Apr. 30, 2003	50	40-acre site served as a barge cleaning, sand blasting, and repair facility.	101-1,000	2,307	286	65	$38,542	10.62	10.92
	Jasper Creosoting Company Inc. (Jasper County)	July 28, 1998	50	21-acre former wood treatment facility that utilized coal-tar creosote and pentachlorophenol.	1,001-5,000	3,685	543	261	$27,926	44.48	7.06
	R&H Oil/Tropicana (Bexar County)	Proposed on June 14, 2001	50	7-acre site that contains an inactive petroleum refinery and a gasoline blending facility.	10,001-50,000	8,292	1,602	362	$24,200	39.58	93.96
	Star Lake Canal (Jefferson County)	July 27, 2000	50	Site includes the lengths of two industrial canals (Star Lake Canal and Jefferson Canal), which were constructed in the late 1940s as industrial wastewater and storm water outfalls.	101-1,000	5,210	769	318	$41,890	4.32	5.68

State	Site Name (County)	Date Added to NPL	HRS Score	Description of Site	Population Within 1 Mile	Population in Census Tract Containing Site	Children Aged 9 and Younger in Tract	Persons Aged 75 and Older in Tract	Median Income (1999) in Tract	% Minority in Tract	% Hispanic in Tract*
Illinois	Circle Smelting Corp. (Clinton County)	Proposed on June 17, 1996	70.71	Facility was constructed in 1904 as a zinc smelter, and began recovering zinc from scrap metals.	1,001-5,000	6,427	973	453	$46,859	1.24	1.1
	DePue/New Jersey Zinc/Mobil Chem Corp. (Bureau County)	May 10, 1999	70.71	Zinc smelting facility began operations in 1903, expanded into several facilities consisting of over 860 acres. The original plant produced slab zinc, zinc dust, and sulfuric acid for the automobile and appliances industries.	1,001-5,000	4,168	598	347	$37,181	10.27	24.33
	Indian Refinery -- Texaco Lawrenceville (Lawrence County)	Dec. 1, 2000	56.67	990-acre site operated as a refinery from the early 1900s until 1995.	1,001-5,000	3,459	354	591	$30,714	1.88	1.16
	Parsons Casket Hardware Co. (Boone County)	July 22, 1987	55.58	6-acre site used as an electroplating facility from the 1920s-1982.	5,001-10,000	7,725	1,453	358	$29,041	20.47	26.64
	Sauget Area 1 (St. Clair County)	Proposed on Sept. 13, 2001	61.85	Site consists of twelve (12) contaminated sources that include over 3.5 miles of Dead Creek and adjacent sites. Dead Creek was used around the 1930s for waste disposal. Remaining sources include inactive landfills, former disposal areas, and former sand pits.	5,001-10,000	7,152	1,351	282	$30,958	40.21	2.45
Pennsylvania	East Tenth Street (Delaware County)	Proposed on Jan. 18, 1994	67.68	38-acre property used starting in 1910 to manufacture rayon and then, beginning in 1956, cellophane.	5,001-10,000	2,314	355	111	$28,219	8.56	1.77
	Lower Darby Creek Area (Delaware County)	June 14, 2001	50	Site consists of two landfills (Clearview and Folcroft), which operated from the 1950s to the 1970s, accepting municipal, demolition and hospital waste.	5,001-10,000	3,864	566	178	$45,353	2.07	0.78
	Sharon Steel (Farrell Works Disposal Area) (Mercer County)	Jul. 28, 1998	50	400-acre area used to dispose of wastes generated in steel production, including spent pickle liquor acid, slag, and sludge.	1,001-5,000	1,871	255	275	$27,604	14.38	0.43
	UGI Columbia Gas Plant (Lancaster County)	May 31, 1994	50.78	1.5-acre site used for gas manufacturing; during the years of active operations, overflows from an on-site tar separator were directed to an open ditch that led to the Susquehanna River.	5,001-10,000	1,913	341	68	$30,789	13.17	8.21
	Watson Johnson Landfill (Bucks County)	Sept. 13, 2001	71	About 32 acres of the 56-acre site was a former landfill that accepted both municipal and industrial waste.	1,001-5,000	5,226	760	355	$47,269	2.99	1.21

State	Site Name (County)	Date Added to NPL	HRS Score	Description of Site	Population Within 1 Mile	Population in Census Tract Containing Site	Children Aged 9 and Younger in Tract	Persons Aged 75 and Older in Tract	Median Income (1999) in Tract	% Minority in Tract	% Hispanic in Tract*
Ohio	Armco, Inc., Hamilton Plant (Butler County)	Proposed on Apr. 30, 2003	69.34	120-acre site; southern parcel operated as a steel mill, producing both coke and molten iron.	1,001-5,000	2,543	369	102	$34,630	6.8	0.63
	Diamond Shamrock Corp. (Painesville Works) (Lake County)	Proposed on May 10, 1993	50	500-acre site; from 1912-1972, produced caustic soda, chromate compounds, chlorine, chlorinated paraffins, and coke; also disposed of spent pickle liquor from nearby steel industries.	1,001-5,000	3,337	400	182	$48,125	1.8	0.72
	Dover Chemical Corp. (Tuscawaras County)	Proposed on May 10, 1993	47.19	60-acre site made up of 3 parcels, including a chemical manufacturing facility that produced products used to make extreme pressure lubricants, plasticizers and flame retardants for vinyl products.	1,001-5,000	5,206	572	586	$43,830	1.63	0.61
	Nease Chemical (Columbiana County)	Sept. 8, 1983	50	44-acre site; from 1961-1973, used to produce various chemical compounds including the pesticide mirex, a probable human carcinogen.	101-1,000	5,491	728	338	$35,038	1.91	0.53
	North Sanitary Landfill (Montgomery County)	May 31, 1994	50	102-acre site; used for landfilling industrial and municipal wastes into unlined gravel pits.	5,001-10,000	6,491	1,201	373	$24,875	14.9	1.96
Michigan	Barrels, Inc. (Ingham County)	Oct. 4, 1989	42.24	2-acre site, which from 1964-1981, accepted metal barrels from industrial facilities for cleaning and repainting; waste residues were allegedly dumped directly onto the ground as the first step in recycling the drums.	10,001-50,000	1,467	319	40	$28,681	41.58	24.81
	Bay City Middlegrounds (Bay County)	Proposed on Feb. 13, 1995	50	40-acre inactive landfill and dredged sediment disposal area on Middlegrounds Island in the Saginaw River.	5,001-10,000	4,363	632	384	$30,264	3.71	4.54
	Bofors Nobel, Inc. (Muskegon County)	Mar. 31, 1989	53.42	85-acre site; consists of an operating chemical production facility and ten abandoned sludge lagoons.	1,001-5,000	4,191	673	160	$37,663	5.61	3.82

State	Site Name (County)	Date Added to NPL	HRS Score	Description of Site	Population Within 1 Mile	Population in Census Tract Containing Site	Children Aged 9 and Younger in Tract	Persons Aged 75 and Older in Tract	Median Income (1999) in Tract	% Minority in Tract	% Hispanic in Tract*
Georgia	Brunswick Wood Preserving (Glynn County)	Apr. 1, 1997	54.49	84-acre site used to treat wood with pentachlorophenol, creosote and CCA (chromium, copper, arsenic) from 1958-1991.	1,001-5,000	6,115	921	198	$39,612	12.02	1.42
	Camilla Wood Preserving Company (Mitchell County)	Jul. 28, 1998	50	Former wood preserving facility; used creosote to treat railroad ties and poles from 1947 through the 1980s; in later years used pentachlorophenol (PCP) for pole treatment.	1,001-5,000	7,431	910	403	$30,625	53.29	2.64
	LCP Chemicals Georgia (Glynn County)	Jun. 17, 1996	60.14	550-acre site; over the last 70 years has served as an oil refinery, paint manufacturing company, power plant and chlor-alkali plant.	1,001-5,000	7,224	1,198	467	$23,801	63.1	2.03
	Terry Creek Dredge Spoil Areas/Hercules Outfall (Glynn County)	Proposed on Apr. 1, 1997	50.18	Site was an outfall area for a former pesticide manufacturer. Toxaphene, a chlorinated pesticide, was produced at the Hercules plant from 1948-1990.	1,001-5,000	3,928	479	573	$27,768	50.53	1.25
	Woolfolk Chemical Works, Inc. (Peach County)	Aug. 30, 1990	42.24	31-acre site contaminated as the result of on-site production, formulation and packaging of pesticides, herbicides and insecticides.	5,001-10,000	5,800	721	223	$21,094	95.29	0.71

* This refers to all those who classified themselves as "Spanish/Hispanic/Latino" for Census 2000. These people may or may not have been also classified as minorities. See the methodology discussion in Appendix B for more.

APPENDIX B – METHODOLOGY

Site Selection

The top 10 most populous states are host to a total of 796 National Priorities List (NPL) sites:[139]

1. 631 are "final" NPL sites but are still awaiting cleanup. Many were first placed on the NPL as long as two decades ago.
2. 28 are "proposed" NPL sites, meaning that EPA is still considering public comment on whether they should be placed on the NPL in final status.
3. 137 have been deleted from the NPL.

Because sites have typically been listed for long periods of time, and are often very large complicated properties with multiple sources that contributed hundreds of contaminants, it is impossible to detail their tortured histories in anything less than thousands of pages. For readers interested in investigating their status in more depth, we recommend the following Internet accessible resources:

1. the NPL site fact sheets maintained by the EPA regional offices, available online by selecting the state and then site of interest at www.epa.gov/superfund/sites/npl/npl.htm; and
2. EPA's Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) at http://cfpub.epa.gov/supercpad/cursites/srchsites.cfm.

More detailed information, including site-specific information about responsible parties, cleanup actions and funding, is available by ordering the desired information in CD format (without cost) from EPA. Visit www.epa.gov/superfund/sites/phonefax/products.htm to learn more and place orders.

The criteria we used were designed to capture the risks posed by NPL sites to people who live nearby or to the environment. The steps described below were repeated for each of the 10 states in order to select the five profiled NPL sites in each state.

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[139] *See* U.S. ENVTL. PROT. AGENCY, *National Priorities List Sites in the United States*, http://www.epa.gov/superfund/sites/npl/npl.htm (last visited Feb. 14, 2006). By clicking on individual states, visitors to the site may obtain basic information on each NPL site in the state, as well as links to NPL Site Narratives and current Site Descriptions.

Site Status

From each state's complete list of NPL sites, we eliminated from consideration those sites that have already been deleted or partially deleted from the NPL, along with sites designated "construction complete." Therefore, all of the 50 profiled sites are in the status where construction, for one reason or another, is not complete.[140]

In accordance with the report's focus on appropriations to EPA, we eliminated federal facilities from consideration, since, as explained above, they are funded through mechanisms specific to the agencies responsible for those sites. Because the report focuses on the implications of Superfund's deterioration since 1995, when taxes expired, we imposed one further screen: eliminating sites that were added to the NPL only recently, with one important caveat. Where sites that had been added to the NPL presented a significantly higher risk than older sites, as measured by the Hazard Ranking System scores for that site, we included them in our study.[141] Additionally, some of the sites with high HRS scores that had been proposed to — but not yet finalized on — the NPL were selected due to the relatively higher risks posed by such sites to the surrounding communities.[142] We ask readers to keep in mind that the threats posed by sites that we excluded are not necessarily resolved, and it may take many years of follow-up monitoring and remedial repair until these threats are eliminated.

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[140] Construction complete status last verified April 13, 2006.

[141] The HRS is a complex, multi-factor formula that EPA uses to decide which sites are placed on the NPL. *See Board of Regents of the Univ. of Washington v. EPA*, 86 F.3d 1214, 1217 (D.C. Cir. 1996). The HRS methodology is set forth as Appendix A to the National Contingency Plan, 40 C.F.R. Pt. 300, App. A, and was revised in 1990. *See Hazard Ranking System, Final Rule,* 55 Fed. Reg. 51532 (Dec. 14, 1990). The mathematical model serves as a screening device for evaluating relative risks to health or the environment posed by releases of hazardous substances. *See supra* note 15, and accompanying text; *see also, e.g., RSR Corp. v. EPA*, 102 F.3d 1266, 1268 (D.C. Cir. 1997). HRS site scores range from 0 to 100. 40 C.F.R. Pt. 300, App. A, § 2.1.1. EPA proposes sites receiving a score of 28.5 or higher to the NPL. *See Tex Tin Corp. v. EPA*, 935 F.2d 1321, 1322 (D.C. Cir. 1991). The majority of HRS scores for the sites profiled in this report were obtained from Scorecard.org, *available at* http://www.scorecard.org/env-releases/land/rank-sites.tcl. For sites recently proposed to the NPL, HRS scores were obtained from the HRS Documentation Records themselves, available through EPA's electronic docket system, now incorporated into the government-wide Regulations.gov.

[142] "Because cleanup activity is often at an early stage at proposed sites, there generally is considerable work still to be done." Probst, *et al.*, SUPERFUND'S FUTURE, *supra* note 9, at 37.

Ordering Individual Sites by HRS Score

Once we had identified sites where construction was not complete, we ranked them in descending order according to their HRS scores, which provide a measure of the site's pre-cleanup risk to human health and the environment.

Identifying the Greatest Risks

These steps yielded non-federal proposed or final NPL sites that had not yet been designated construction complete, have relatively high HRS scores and have, in most cases, been on the NPL for a number of years. From this pool, the challenge was to identify the sites that pose the greatest risk. Two factors entered into this decision: the number of people living near the site and progress on cleanup. The former was an objective piece of readily available information — EPA's CERCLIS database provides ranges for the population living within one mile of any NPL site.[143] The latter — progress on cleanup — was a different matter entirely. In a recent report commissioned by EPA to analyze ways of improving performance measures for the Superfund program ("Success for Superfund: A New Approach for Keeping Score"),[144] Resources for the Future concluded that although EPA provides a great amount of information concerning specific NPL sites in its various databases, "The lack of overall standardization in format, of consistency in the information available, and of regular updates makes it very difficult to get a complete picture of individual sites on the NPL or to compare progress or attributes among sites."[145]

Initially, we used performance measures provided as part of Superfund's Government Performance and Results Act (GPRA) reporting, principally for EPA's assessment of "current human exposure under control" and "contaminated water migration under control."[146] The final selection of sites was based on a qualitative balancing of the status of the sites as measured by these indicators, the population density surrounding the site and the descriptions of site conditions provided in the NPL site fact sheets, which are prepared and maintained by the relevant EPA regional offices. As Resources for the Future noted in its "Success for Superfund" report, however, although the NPL site fact sheets seem to be the

[143] Information for specific sites can be accessed through CERCLIS online, *available at* http://cfpub.epa.gov/supercpad/cursites/srchsites.cfm.

[144] Probst & Sherman, *supra* note 17, at 4.

[145] *Id.* at 7-8.

[146] *Id.* at 3, note 10 (noting that the current human exposure under control and contaminated groundwater migration under control had originally been developed for the RCRA program, which regulates the treatment, storage and disposal of hazardous wastes). Information on the status of specific sites as measured by these two indicators can be accessed through CERCLIS online, *available at* http://cfpub.epa.gov/supercpad/cursites/srchsites.cfm.

most complete source of information for NPL sites, "there is little standardization among the formats used or the information provided."[147] Information provided in this report concerning the profiled NPL sites is drawn from each site's fact sheet. Taken together, these selection criteria resulted in an informed selection of five of the non-federal proposed or final NPL sites in each state that pose the greatest continuing risk to surrounding populations. Detailed descriptions of the sites appear in the state-specific sections of this report, many of which reveal past waste disposal practices and pre-cleanup conditions not dissimilar from that most infamous of Superfund sites, Love Canal.

Demographic Analysis

Locating NPL Sites

Next, to obtain a picture of those populations that the 50 profiled sites potentially affect, coordinates for each site were obtained from EPA's CERCLIS database.[148] Using geographic information systems (GIS) software and boundary files from the 2000 Census, the census tract containing each site was identified.[149]

Census tracts are subdivisions of counties that generally have between 1,500 and 8,000 people, with an optimum size of 4,000 people each.[150] Population density affects the geographic area of census tracts[151] — that is, there will be more (geographically smaller) census tracts in densely populated areas and less (geographically larger) census tracts in sparsely populated areas. Because we chose our 50 sites in part on the basis of the number of people they affect, more are located in relatively small, densely populated census tracts than might otherwise be true of Superfund as a whole. These people also live in closer geographic proximity to the sites than people living in larger, more sparsely populated tracts.

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[147] *See* Probst & Sherman, *supra* note 17, at 7. As RFF further noted, site fact sheets vary in how recently they have been updated, as does the schedule for updating the information among EPA regional offices. *Id.* NPL site fact sheets for specific sites can be obtained by accessing http://www.epa.gov/superfund/sites/npl/npl.htm, then navigating to the state and site of interest and clicking on the site name hyperlink.

[148] Precise latitude and longitude coordinates for NPL sites were obtained from the December 2005 version of EPA's *List 9 – Active CERCLIS Sites*, which contains information concerning active CERCLIS sites, including, for NPL sites, latitude and longitude data. List 9 and other Superfund products may be obtained in CD format without cost by submitting orders online, *at* http://www.epa.gov/superfund/sites/phonefax/products.htm. The ability to provide an accurate demographic analysis was limited by the fact that the coordinates given by EPA yield a single point for a site location. In reality, sites consist of polygons containing, in some cases, hundreds of acres of land.

[149] Cartographic boundary files *available at* http://www.census.gov/geo/www/cob/bdy_files.html.

[150] UNITED STATES CENSUS BUREAU, *Census Tracts: Cartographic Boundary Files and Metadata, available at* http://www.census.gov/geo/www/cob/tr_metadata.html (last visited May 3, 2006).

[151] *Id.* (explaining that "[t]he spatial size of census tracts varies widely depending on the density of settlement.").

Census Tract Maps

This phenomenon can be seen by comparing census tract maps within each state. Within each state, all five maps are drawn at the same scale. Accordingly, where one map shows the outlines of many census tracts, while another (drawn at the same scale) shows the outlines of fewer tracts, the former (with many census tracts) is the more heavily populated area.

2000 Census Data

Finally, demographic data from the 2000 Census were obtained for each census tract from the U.S. Census Bureau's American FactFinder, a user-friendly Internet accessible database.[152] Current demographic conditions in the census tracts may differ from the data collected for Census 2000. To address the fact that demographic shifts do occur between decennial censuses, the United States Census Bureau collects and produces demographic data on a yearly basis in its American Community Survey, based on an annual survey of three million households.[153] Although the Census Bureau plans to increase the local coverage of its American Community Survey data over the next several years, currently the only tabulation of data on the tract level are those collected during the last decennial census (Census 2000). Detailed information on the people that live in the census tracts containing the 50 profiled NPL sites is presented in the state-specific sections of this report. Two final pieces of demographic information are included for each of our 50 sites: the percentage of "minority" and "Hispanic" populations. For Census 2000, the Census Bureau asked every individual living in the United States both: 1) whether they classify themselves as "Spanish/ Hispanic/Latino"; and 2) what race they considered themselves to be, because "the federal government considers race and Hispanic origin to be two separate and

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[152] UNITED STATES CENSUS BUREAU, AMERICAN FACTFINDER, *available at* http://factfinder.census.gov/home/saff/main.html?_lang=en. Data for specific census tracts may be obtained by accessing http://factfinder.census.gov/servlet/AdvGeoSearchByListServlet?_lang=en&_command=getPlacenames and choosing the appropriate year, and geography, then selecting the state, county and tract of interest. The following categories of information are provided for each census tract: Total Population, Median Age, Children 9 and under, Persons 75 and older, Percent Minority, Percent Hispanic, and Median Household Income in 1999. For each tract, Median Household Income was obtained from Table DP-3, *Profile of Selected Economic Characteristics: 2000* (from Summary File 3 (SF-3) Sample Data), while all the other figures were obtained from (and, for percentages or aggregations of age groups, calculated from data provided in) Table DP-1, *Profile of General Demographic Characteristics: 2000* (from Summary File 1 (SF-1) 100-Percent Data).

[153] UNITED STATES CENSUS BUREAU, *American Community Survey*, *available at* http://factfinder.census.gov/jsp/saff/SAFFInfo.jsp?_pageId=sp1_acs&_submenuId= (last visited May 2, 2006).

distinct concepts."[154] The "minority" classification in this report includes all those residents who classified their race as anything other than "one race, white." The "Hispanic" classification in this report includes all those residents who classified themselves as "Spanish/Hispanic/Latino." Because the classifications measure two different attributes, there may be overlap between the two categories. For example, an individual could have classified herself as "American Indian" and "Spanish/Hispanic/Latino." Thus, the classifications are not mutually exclusive but measure two separate and distinct concepts, as defined by Census 2000.[155]

Readers will note that several sites are located in areas that are heavily populated by Americans that identified themselves as a race other than white and/or as Spanish/Hispanic/Latino. Scholars and other commentators have long debated whether Superfund and other hazardous waste programs address problems that disproportionately affect people of color, and those concerns are validated by aspects of this report *on an individual site basis*. However, our sample size and the focus of our analysis are *not* sufficiently refined to support any further speculation as to whether Superfund sites as a whole affect such populations in a discriminatory manner.

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[154] UNITED STATES CENSUS BUREAU, *Census 2000 Brief: Overview of Race and Hispanic Origin* 1 (March 2001), *available at* http://www.census.gov/prod/2001pubs/c2kbr01-1.pdf (last visited May 2, 2006).

[155] Census 2000, in turn, adhered to "the federal standards for collecting and presenting data on race and Hispanic origin as established by the Office of Management and Budget (OMB) in October 1997." *Id.* at 2.

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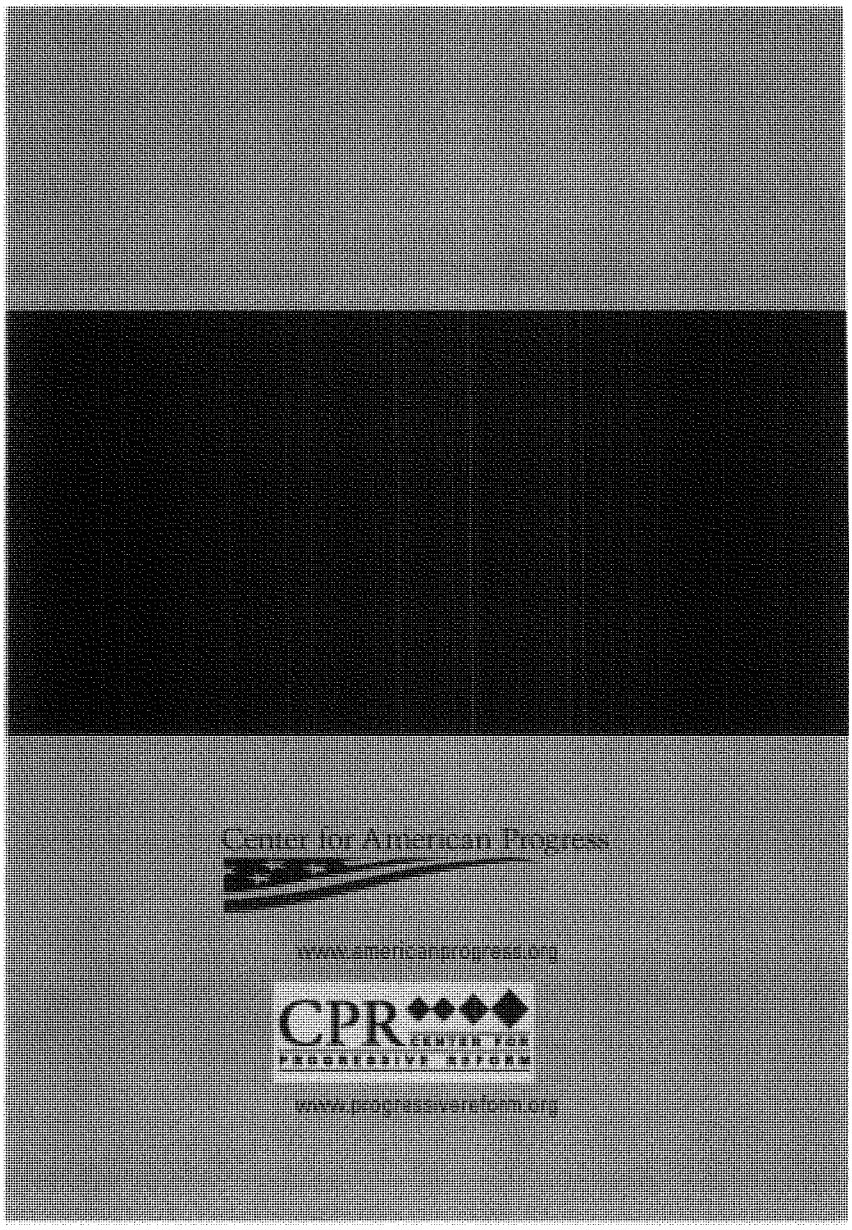
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