CONDENSED DRAFT

Please note: The following is not a complete transcript, but a summary of the discussion.

Stakeholder Meeting - Site Remediation Legislative Reform
Friday, June 1, 2007, 9 a.m.-noon

IRENE KROPP, Assistant Commissioner, DEP
KENNETH KLOO, DEP
THOMAS COZZI, DEP
WAYNE HOWITZ, DEP
JUDY SHAW, DEP
ED PUTNAM, DEP
BARRY FRASCO, DEP
JANICE BROGLE, DEP
BOB SOBOLESKI, DEP
GEORGE KLEIN, DEP
JOHN HAZEN, DEP
STEW ABRAMS, Shaw Environmental
JEFF TITTEL, Sierra Club
MARK SMITH, Smith Pizzutillo
STEVEN SENIOR, TRAC
MICHAEL EGENTON, NJ Chamber of Commerce
BUDDY BEALER, Shell Oil Products
OLGA POMAR, South Jersey Legal Services
TOM MCKEE, ICO
ERIC DEGESERO, Fuel Merchants Assoc. of NJ
ANDREW ROBINS, New Jersey Builders Assoc.
JORGE BERKOWITZ, Langan
FRANK SCANGARELLA, NJEIT
DAVID BROGAN, NJBIA
MICHAEL GORDON, Gordon & Gordon
JANE NOGAKI, NJ Environmental Federation
VALORIE CAFFEE, NJWEC
TONY RUSSO, CCNJ
ANA BAPTISTA, ICC

Topic: Remedy selection and IC/EC.

In her opening remarks, Irene suggested putting historic pesticides and schools on the agenda for a stakeholder meeting possibly the 29th, due to the recent discovery of contaminated soils at a middle school in Paramus. Topics on June 22nd will include public participation, specifically at critical points in the remediation process, and prescriptive versus performance-based cleanups. The issue of process in caseload management will be examined as well as the Massachusetts Contingency Plan. The 29th will also include a presentation on risk-based corrective action.

IRENE: The Commissioner's testimony to the Senate Environment Committee in October proposed that we selectively insert DEP into remedy selection in cases where there is a greater probability for future exposure of the public to contamination. I recommend that we have a greater ability to evaluate selective remedy when the end use is residential or educational facilities. She also expressed concern with the current handling of IC/EC and reforming that system; we want to evaluate the possibilities today.

BARRY: We adopted the tech regs in 1993 with a subchapter called the Remedial Action Analysis that dealt with remedy selection. It was based on the feasibility study process in CERCLA specified a preference for permanent remedies. The regs also required an analysis of various remedial options, with a couple of exceptions. If someone proposed an on-site permanent remedy or off-site disposal of less than 100 cubic yards of material, you were exempt from having to do the remedial action analysis. Otherwise, you had to look at a variety of remedial options and look at several factors including remedy effectiveness, implementability of the remedy, timeliness of the remedy, cost factors, and community concerns.

No sooner had we adopted the tech regs in 1993, than the law (S1070), modified the ECRA process and renamed it ISRA. It also created the "Hazardous Discharge Site Remediation Act." This revamped the remedy selection process. There was a stated preference for permanent remedies, however, the use of

nonpermanent remedies was allowed. This effectively reduced the Department's involvement in remedy selection. Basically, the Department could look at three items relative to remedy selection.

1) To determine whether or not the remedy was protective. If someone proposed a remedy and we felt that it was not protective, we could deny its implementation.
2) Could force a particular remedy if there was a two-fold cost factor relative to the cost of doing a permanent remedy versus the cost of a nonpermanent remedy. If based on the analysis, the cost differential was less than two-fold difference or two times difference, the Department could mandate the implementation of the permanent remedy and,
3) A cost analysis relative to implementing a remedy using residential exposure standards versus nonresidential exposure standards. If that cost differential was 10 percent or less, the Department could mandate the implementation of a remedy to the residential standards. That was in 1993.

Those changes were incorporated in the 1997 re-adoption of the tech regs. And no sooner that we had them up and running when, in 1998, another piece of legislation, S39, was enacted which revised S1070. It modified certain provisions of ISRA and renamed the Hazardous Substance Discharge Remediation Act to the Brownfields Act. S39 deleted the 10 percent cost differential and the two-fold cost differential. That left DEP the authority only to determine whether or not the remedy was protective. S39 retained the stated preference for permanent remedies, but allowed for nonpermanent remedies.

In S1070 as well as in S39, the implementation of a nonpermanent remedy would require the placement of a deed notice on the property. Since 1993, if a responsible party proposed as a nonpermanent remedy and a responsible party doesn't own the property, the property owner has to agree to the placement of the deed notice. If they don't, the responsible party has to implement a permanent remedy on that particular property. And that's basically where we stand today relative to remedy selection. Subchapter 5 is entitled "Remedy Selection," and basically it lists what the responsible party or the developer, whomever, chooses to implement regarding the remedy.

IRENE: We've talked internally about how to reinsert ourselves in the remedy selection process. We have concerns when there are high levels of contaminants left on site even though it might be a protective remedy. We were talking about acute and chronic risks and coming up with acute soil standards. We also have been talking internally about banning residential, educational, and child care development on top of landfills. And do we ban residential, educational and day care buildings on top of capped sites in general, which might be a little difficult in certain areas of the state. With that, I'm going to ask Ken to talk about potential impacts of these decisions on brownfields. Then we'll go back to acute soil standards and then open it up for discussion.

KEN: Most brownfield remediation is performed by developers. In cases where responsible parties do the work, it's a cooperative venture between a developer or municipality and a responsible party under a formal agreement, with the responsible party maintaining certain cleanup obligations and transferring the property once a “no further action” (NFA) letter is obtained. In cases where we've had a responsible party under administrative consent order or other regulatory authority and the municipality has attempted to usurp that responsibility in moving forward, we had some issues; however, with the adoption of S2851 back in January 2006, now municipalities that condemn property have the ability to petition the DEP for the authority to oversee properties.

The bar that municipalities have to clear to oversee properties is fairly low, and that's where a responsible party has not begun remediation for all of the areas of concern. They must actually begin the cleanup, remedial action, for all of the areas of concern of particular property within four years. That's most of our cases, unfortunately. Most of the remedies that we're seeing are nonpermanent. The biggest issues have to do with maintenance, monitoring, and reporting obligations associated with IC/EC specifically for single family residential development.

In cases with a condo or homeowner association, it hasn't been an issue necessarily because there's an entity who takes responsibility for that. In cases where we have single family residential development, it seems unreasonable to expect a homeowner to have to comply with those obligations. We don't see a lot of single family residential development cases because we discourage it. We don't know if there's an obligation that a developer may have to insure that a homeowners association is maintained throughout the life of that residential development. The other issue, is residential and other development on landfills. That's creating some issues for us as well; is that appropriate for municipal landfills? There may be cases where it is appropriate based on the age or history of the landfill and other cases where it may not be appropriate based on those same factors. We've been struggling with those issues.

JORGE: Ken, what percentage of your cases involve IC/EC?

KEN: Ninety percent; or more. Almost all the remediation work we see now results in some type IC/EC. The Cleanup Star Program has most of our permanent remedies as they are homeowners cases.

The group clarified that permanent means unrestricted use; nonpermanent basically means everything else.

JORGE: The feasibility study was in place because DEP's process mimicked the National Contingency Plan (NCP) and driven by public dollars. Much of the analysis in the feasibility study got the cost benefit. If somebody did not want to be cost effective with nonpublic dollars, why cause them to do a feasibility study? The feasibility study was costing approximately a quarter of a million dollars and took about a year.

TOM: Do all sites with IC/EC have a maintenance and monitoring requirement?

KEN: Yes. It's required under the tech rules.

TOM: Do you require the entity responsible with seeing it through over time?

KEN: If I'm not mistaken, the way the tech rules read now, it is the property owner who is responsible, who maintains that obligation.

TOM: And do you evaluate their ability to perform those duties; that they have financial ability to do it?

ED: No. In the case of single family homeowners we are concerned about their ability to meet those regulatory requirements.

KEN: If you're a single-family homeowner, that's necessarily on your radar screen. There are certain attributes of single-family homeownership, like the ability to do whatever you want in your yard like plant trees and putting in swimming pools and letting kids dig out in the yard that go along with homeownership. There are far more restrictions, and those are understood, when you reside in a condominium or other managed community.

TOM: Doesn't the ability to do that go into DEP decision-making as to whether or not to approve the institutional control as opposed to a permanent remedy?

MICHAEL: Since 1993, you can only stop a residential development if it's not protective of human health. What disclosure requirements are there for purchasers of these properties? Do you follow that through?

KEN: There are disclosure requirements now. We had lengthy discussions over the past year with Community of Affairs (DCA) and with the Builders Association for managed properties that require a significant amount of information to be disclosed through the public offering process.

MICHAEL: Does anybody know where there are disclosure requirements; is there a law that requires someone who has a property they own that they're developing into residential units to disclose the institutional environmental controls that are present somewhere on that property? I'm not aware of it, but I haven't really dealt with that particular issue.

ANA: I was going to ask about not just single family homes but in large part the urban communities where you have multifamily homes and tenants, renters in apartment buildings that are owned by someone who doesn't live on the property. How do you follow-up on protectiveness? What is the information given to tenants that move in and out of those apartment buildings and are using backyards or planting gardens? And what is the responsibility of the agency in terms of following that protectiveness over -- you know, what is the length of time that those deed restrictions stay in place? How do they get followed as the property turns over and tenants turn over?

MICHAEL: I would say there is a general misconception of most people in New Jersey that if they're buying a residential property it's been cleaned up, not using INE. That is my sense of the perception. I don't think people, unless they're told, know they're coming onto a property where waste has been buried although it's been determined to be protective of the human health and the environment.

STEVE: I want to address the legal requirement to give notice. I think the deed notice itself, the institutional control does provide that legal requirement.

MICHAEL: Steve, in development when you have a big piece and you subdivide it, does the deed notice go to every subdivision piece of it?

STEVE: Well, I think by its terms, it must. If you look at the terms of the deed notice, it says there must be notice to prospective purchaser.

MICHAEL: If it gets passed down, then there are a lot of real estate lawyers who have an obligation. It may not be happening from the big piece of property to the subdivision.

FRANK: Legally it travels with the title. Through subdivisions is that title -- whoever the buyer is in their title search is buried in the search report and their attorney doesn't alert them to it. Are there subject to it? Yes. Is there an obligation? Yes. But do they actually hear it? Sometimes yes.

JANE: Is it really feasible and protective to institute these notices? Does the property owner really see them and understand them? And it goes back to the environmental community's preference for a permanent remedy where residential or school or day care sites are going to be -- or even recreation sites are going to be developed, because the institutional memory for these sites isn't going to be there from transfer of homeowner to homeowner. The Paramus School situation, you know, it probably was a termite application that was made and it was legitimate, and when you dug up that soil, it's contaminated. Left buried there, it was fine; but removed -- which had to be done for the installation of the HVAC system. You know, that's going to happen at schools, at homes. There's going to be remodeling. There's going to be digging up of that soil. I don't think that capping a site can be considered protective for a residential site or a school site. I don't even think it should be protective for an industrial site because renovations happen, construction happens. Soil is going to be dug up and removed. Today’s parking lot may be a ball field tomorrow at a school or in a park or in condo association. So the preference for a permanent remedy, removal and pump and treat if it's needed going toward a standard for residential, school, and day care, and recreational sites is that legal change that needs to get back into the law. DEP has to be able to drive that protective remedy because IC/EC don't work.

JUDY: When you do a real estate closing, you flip through the termites and everything else. And even if we put something that's required in there, it's just so easy not to see it. We talk about that disclosure issue when we were gathered last, and it's hard even if it's there. So I think we've got to remember that it's got to be something beyond that.

STEVE: You need a different formula. I see two or three issues going on here; the party responsible for getting those together and the form and frequency of notice. From my experience, you need something beyond the real estate transaction to provide periodic notice, whatever that period is. And once you nail that down, the next question is who. If you hire somebody to do it, guess what? You've got to manage the person you hired. So an eternity, unfortunately, is a long time.

JEFF: I have a concern about the notices actually getting filed. In the Land Use Program, notice of wetlands, and other things, deeds and restrictions, they're not there half the time, at least where we go looking. I have a concern that none of the notices actually being put in there. The next question is, how is that information being transferred to the potential buyer or to a homeowner? We've had people go look at some $3 million condominiums just to hear the spiel. The realtor never mentioned anything about the site. They all talk about the vistas and the swimming pool, none of them say that this is a contaminated site. And like I said, the concern is when a homeowner goes all the way down the road and is going to put down that deposit and sign the contract, do they actually know what they're buying? And something that's just buried underneath a document, they're not going to know it even if somebody mentioned it. I think there has to be a better education process upfront. And that's one of the failures.

Are the deed restrictions enforced? There are still deed restrictions out there that say no residential, yet on some of those sites we're hearing about residential going up. So how do we enforce the deed restrictions that are in place that we currently have?

WAYNE: One of the big issues of specifying permanent remedies for residential properties, as well as schools, is cost. It's easy to say we want a permanent remedy, but when you're a school board or you're a school administrator faced with mounting costs of do I buy books here or do I dig up or excavate all the way to the center of the earth so that we have an unrestricted remediation? Homeowners, the same way. When homeowners insurance is exhausted there's no other alternative for many of these homeowners other than to accept a nonpermanent remedy on their property. They're well aware of what they're getting into and as well as the buyers are usually getting into because we'll sit down with both parties and make sure they're aware of this

TOM: Where do you think DEP could inject authority? I think Jane touched on it nicely with schools and on residents. Where and how can we inject ourselves or inject the public into the process on how we deal with remedies? We don't have acute standards for a bunch of contaminants, we talked about the principal threat waste concept that EPA has which is an increased risk. In the guidance the document that poses that type of risk, you can take immediate action on it. Maybe we all can agree on the type of thing you don’t want to leave behind if you're going to cap it -- even if it's a nonresidential property, even if you're going to cap it and have IC/EC.

JORGE: The discussion to do away with engineering controls even in residential properties is frivolous because of many the constituents represented at this table are going to be irreparably harmed. The cost of living in the State of New Jersey -- housing is astronomical. Developers are leaving the state already. And it's not just because of the fact that we can't afford to do the Highlands areas in Hunterdon County, we're talking about developing urban areas. It's very important to understand that E/IC must be protective of human health. We have problems with notice and keeping track. The State is being cleaned up because more than 90 percent of the sites are using E/IC. And that means a lot of the residents you represent benefit from using engineering controls and mitigating exposure. If we throw that out, you are going to have an impact on

the economy in terms of being able to attract development in this state, and problems attracting affordable housing. We must be careful how we talk about these remedies. The issue really isn't engineering control or not engineering control. The issue is, is it protective of human health and the environment? We have an engineering control that assures that's human health and environment are protected. That's why we have these iterations of the laws, because the State wasn't getting cleaned up. Nobody was interested if they have to go for unreasonable levels -- now you have massive cleanups being done in New Jersey, and most of the people around this table are beneficiaries of those cleanups.

TOM: The law still has to protect the public health and the environment in improving remedies. So you're clearly injected into the process. You're not removed from the process at all. And preference for permanent remedies. We've just been told that over 90 percent of the remedies are not permanent remedies. So the big question is, how are we following the law? How are we exercising the preference for permanent remedies? And are these engineering controls, which we are also told have institutional controls more than deed restrictions also active requirements for reporting, monitoring, and maintenance, that we're unsure as to whether the people are doing these things, whether they're financially capable of doing it. You now have a 15-year record of how to improve these things, but we don't have the statistics on whether they're working. We don't have the ability to even gather those statistics right now. So until we do, the DEP has to make a case-by-case decision, looking at the ability of these people to maintain these controls and financially afford them over time. And so far, you haven't really demonstrated that you're doing that.

IRENE: I think that there's a serious weakness. There's no two ways about it.

JEFF: You need to look at institutional controls and a lot of the experts at Sierra Club all believe that engineering controls at some point will see some kind of failure. The question becomes the level of the failure. One of the problems we see is you have one cap monitor in the State, so you don't have anybody out there inspecting. The problem, too, is to make sure that people aren't running the new high speed cable line through the middle of a cap because they just got a new digital camera and they're digging it up and not really noticed that you're not supposed to dig there. I've seen people down in Ironbound breaking up asphalt in their backyard where there was a cap to plant tomatoes. So one is how do you enforce it? How do you monitor it?

Sometimes institutional controls can work, but it also depends on what's underneath. If you have something that's twice the standard and there's a failure or even three times the standard, and it fails, the impact may not be that much, especially if you put in things for vapor intrusion and other things which we're really not doing. But then what happens to those sites with hot spots where things are five or six or a hundred times the standard, and then if you have a failure, you've got a serious problem. If you've got, you know, lead at like 3,000 parts per million underneath a cap, well, you've got a serious problem if that cap were to fail and you've got serious health risks.

The concerns about leaving things to homeowners associations is like what happened back in the '70s with package plants all over the state. These small homeowners associations were set up for a hundred unit subdivision down in the middle of Highlands and places like that. When those plants in the '80s had to get upgraded, homeowners associations were looking at going broke coming up with a million dollars per hundred homes. And the next thing you know government is bailing them out. Who's going to bail out those homeowners associations? It will be us.

ANA: We've seen in the last 10 or so years that protectiveness doesn't just mean at the moment you put the cap on. We have to consider protectiveness and risk over the lifetime of that property. You're actually doing a disservice to urban communities when you place lots of housing, especially for low income people that are particularly vulnerable to a lot of different health problems, you're doing a disservice to them if you expose them in the long term to chemicals that they otherwise might not have been. We have to think more broadly

about what protective means. How do we protect particularly vulnerable communities? The reason we don't want these caps and nonpermanent remedies is because 90 percent of the remedies have been nonpermanent, and we've seen in the urban communities firsthand that system utterly fails. And so we need to rethink carefully. The last time we met we talked a little bit about cumulative impacts and vulnerable populations. I think we need to go back to that and think beyond just you have a cap, it's protective at this one moment in time, because we know that doesn't last.

OLGA: Will DEP and the public have some say on remedy selection or is it going to be left totally up to the developer. DEP does not have the authority that we think it needs to have influence over that remedy selection. I think the first step is to get that authority back to DEP and ensure a public process where the public has input, and then we can have the second round of discussion about exactly what those standards should be in terms of whether there is permanent capping or institutional controls. People in places like Camden and Newark and Trenton don't want to see institutional caps because of all the problems with failure of the caps. But also we have to tie that into cumulative risk issue that we talked about last time. It's one thing if you have one abandoned industrial site that everybody knows where it is and everybody knows what the remedy is there and what institutional cap is supposed to do. It's a totally other situation in a place like Camden where if remediation keeps happening the way it is, Camden is going to be one paved over institutional control. I mean, we have contaminated sites everywhere. The danger in using institutional controls in a place like the Ironbound or in Camden are very different than they are in a setting where there might be only one site or two sites to worry about. So I think that needs to factor into the remedy selection.

MICHAEL: You touched on an interesting point; change in the legal approach did jump-start a lot of cleanups. There was a point in time when we were stuck with a lot abandoned properties and not many cleanups. We are realizing now is that the cost of taking that turn was not properly analyzed because whether it's -- the developer saves money up front, that cost goes somewhere. If people are buying, as I suspect, by the hundreds, if not thousands, on properties that they don't know accurately the condition of the property, that's not a good thing for New Jersey. And also, if the Department doesn't have the finances and resources to ensure that what they signed off on can be properly maintained and not disturbed, to be comfortable that it remains protective of human health, we didn't accurately judge the cost savings. So to do the cost savings, which in the short term did stimulate a lot of development, now we have some experience, we have to find a way to kind of evaluate the long-term cost. You know, when you close a landfill, you don't just say, "Okay, what's it cost to cover it?" You've got the cost, which is substantial, to maintain it, to respond to breaches, those kinds of things. And if that's not being considered, we don't really have a true comparison of the permanent versus the nonpermanent remedy.

KEN: One of the concerns with precluding capping as a remedy or requiring permanent remedies or unconditional no further actions for all residential, educational, and day care facilities, is that communities that have ubiquitous contamination and that if we adopted a position like that, we may never be able to build another home or educational facility or day care because it's just technically or financially impractical to remediate those to unrestricted use. We need to consider that in developing some of our strategies here, that there may be some more moderate position. Maybe something Jeff suggested; acute hazards and the actual threat resulting from a breach of or failure to maintain a particular institutional or engineering control. To adopt that position where just across the board, we would put municipalities like Jersey City, Newark, and Camden in a very difficult position. If we were to do some kind of a general area-wide evaluation of the soil conditions in those neighborhoods, we would find contamination to considerable depths and it may be low level, but because of the industrial history, a lot of the historic filling has gone on in those areas. We would encounter a significant problem with any type of redevelopment moving forward.

ANDY: When it comes to remedy selection, there are a lot of good reasons why it was set up the way it's been set up. It happens that sometimes regardless whether it's three times more expensive, four times more expensive, someone will make the decision that they'd rather remediate entirely than deal with the IC/EC.

There is an incentive in the program now not to have to go through the process of worrying about how it's going to be handled and whether it's going to come back to you. But when it comes to remedy selection, I think it's a slippery slope in a lot of ways. And when it comes to being able to be successful in developing these sites, whether it's complete remediation -- I'm not going to use the word "permanent." I'll come back later to why that's a fallacy, too. When it comes down to a complete remediation at least for today or not a complete remediation at least for today, the important thing for development is predictability. So if the Department's going to go down the route of asking for authority on remedy selection, don't stop at, "Gee, we'll wait for you to submit something and then we'll tell you whether or not we like it." Pass the regulations that say, "Hey, if you're building this, this is what we want." Go through that. Don't expect the private community to go through due diligence and see whether or not they're going to go through and tackle the approval process and then later find out that that's not what was wanted. Tell everyone up front. "We're not going to let you build a school here unless it's X. We're not going to let build a townhouse complex unless it's Y."

TOM: Isn't that what the standards tell you?

ANDY: I can rely on an engineer to work with my client to meet standards. Letting the Department then choose a remedy, takes predictability out. If that's the way the legislation wants to go and that's the way the Department wants to recommend that the legislation goes, then you'll say that and you'll come out with what it's supposed to be and then the private sector will make its decision whether to be in New Jersey or not. But at least they'll know up front.

IRENE: That's a very good point.

JEFF: My biggest concern is …if a housing development starts sinking into the landfill or some goo comes up into somebody's living room and they're on "60 Minutes", it's going to kill development on brownfields and urban redevelopment. We don't want to see some scare story on Channel 4; '"cancer cluster", 40 kids in a housing development with cancer.' If we come up with a way of dealing with contaminated sites where we clean them up with protective standards and we do institutional controls, there's a fail safe system in place, then you're not going to see that happen. The second point is if we do our job right, it's actually going to help bring in more development and redevelopment in these areas, not less.

JORGE: I agree with a lot of what Jeff has just said. I think we all need to have the assurances that if an engineering control were to fail, there is a process and dollars to take care of it. If we have engineering controls that are protective and then we have a situation where the engineering control were to fail, it is up to government as and us as stakeholders to identify a process that would serve as a safety net

We just designed an engineering control in Camden accepted by the community. It's a cap. But a cap is not a cap. In some cases the soil is between two and four feet deep. At that point, there is a physical indication that this is where the cap stops. There is hot spot removal, because of just some of the issues that were raised, not because we had to but because we wanted to. That school would have never been built if we couldn't rely upon engineering controls. There's arsenic approximately 16 feet below the surface. It's not showing up in the groundwater. It's not going anywhere. There's no exposure. That's an engineering control that works and we need to make sure that it works in the long term.

STEW: If it became prescriptive, how are you going to do that? We've spent hours and hours talking about backlog. You'll just scare people away. Even if Andy gets his way and the regs are clear, if we have to wait 18 months for a yes/no because it's become prescriptive, you're going to scare away developers because time is money. I agree with Andy; we've got to make the requirements really clear, because I want it all to go through an LSP. Get the backlog off and then you have the resource to do the cap inspections. Instead of one cap inspector, you've got 20, because now you're not writing 20-page letters. Write clear regulations, move

the resources into things that are important to us; monitoring engineering controls, setting standards for engineering controls, making it transparent so businessmen and school boards can make decisions, and stop spending your time on things don't really clean up anything.

VALORIE: The issue was raised earlier -- Jorge, you raised the issue about the SCC and school construction in Camden. Who's paying for that cleanup?

JORGE: SCC.

VALORIE: That's public money that's being used for cleanup of that site.

JORGE: Yes.

VALORIE: This is problematic. You're talking about developers losing money, but the public is losing a lot of money also, particularly with school construction in the Abbott districts. In fact, a number of people that I work with who are involved in local school construction issues in urban communities are extraordinarily upset about the hemorrhage of money that's going for cleanup from the public trough to build some of these schools. And in Trenton we have some really bad examples right here of cases where a couple schools are being built on contaminated sites and then one where contaminated fill was brought in the Martin Luther King Jefferson School situation, $24 million squandered and 20-some million more to rebuild the school.

JORGE: If the SCC didn't pay for it, the Camden Board of Education would have.

VALORIE: Well, it's still public money.

OLGA: All the more need for more protective standards. There is going to be focus on urban areas due to natural development pressures because of the lack of open developable land. We won't scare people away from Camden if we make the area truly more protective of health of residents rather short changing Camden with half cleanups.

As for the SCC site; from the public perspective, that is a very scary site. That school is called the Early Childhood Development Center where it's preschool kids with developmental disabilities who may have already been damaged by environmental exposures coming to school, and it sits across the street from a known contaminated site, the Monsanto site is right there. It's right next door to an abandoned chemical plant that for years was spewing ammonia and God knows what else, and cited by DEP for air emissions violations. And kids are playing in the playground right next to those smokestacks. Now we have arsenic in the soil. And we're told that an institutional cap is good enough. I think that's a good example of how schools should not be built in those kinds of sites with that kind of partial remediation. Camden is desperate for new schools. And the SCC money was basically ripped off and misspent and now Camden is only getting three or four schools built when it probably needs about 25 schools built. But that's not a reason to build a school on a site that's not safe.

BARRY: I put the engineering control issue into two categories: 1) a reliability component-- is the proposed remedy protective? 2) a notification component. Anytime DEP would approve an engineering control, it's on the basis that DEP believes the remedy is protective. Then there's a question of, is it protective over time? The regulations have provisions relative to safeguards for engineering controls; the main one is that every two years a document indicating that engineering control remains protective. There has to be a strong enforcement program within DEP to monitor this requirement; and if it isn't, that's where we have to do some corrective action. If we are going to allow for engineering controls, we do need to have a strong enforcement component. One fix is a requirement pursuant to approving an engineering control that the RP or the developer establish some sort of funding source to back up O & M costs projected out over number of

years. If they default, there's a pot of money to use to do that. That's not something we have now, but it is something we're thinking about. With regard to the notification issue, again, at the set up of the deed notice pursuant to the tech regs, the Department has to be notified as to which party is responsible for maintaining the engineering control and performing the O & M and submitting the biennial certs so we have that on record, so that in two years if we don't see something or if we're a little more proactive we send out a notice saying, "Your biennial cert is due," that we have that mechanism on at least a two year cycle. The regs currently specify that if the individual changes, Mr. X is supposed to do it and that changes due to a sale and now Mr. Y, the regs specify that the Department has to be notified who that new individual is. Again, for this to work properly you have to have a strong enforcement program so that if we send out a notice and we find out that that person's no longer doing it, then we've got to have that enforcement hammer.

With regard to the Department's evaluation of a remedy, I can't speak for what happened 10 years ago, what happened 15 years ago. But I do know that today that we do take a look at potential future use of the property relative to a remedy selection. And in particular, we consider vapor intrusion. And that also should be keyed into this biennial cert. In our regs we specify as part of the biennial certification process, has there been any change in use of the property over that two-year period; and if there has been, what's been done? Now, again, I'm not saying that it's perfect, but, again, it is something that the Department has taken into consideration as a safeguard to engineering controls.

One of the concerns my staff has is leaving contamination underneath an engineering control. One way to address this concern is to define a hot spot where beyond a certain level you can't leave it behind under an engineering control. One of the difficulties is defining hot spot. One way is EPA's principal threat, which is a multiplier of a standard. And I don't know if it's 2 times, 5 times, 10 times, but some sort of multiplier of a standard and you just basically say, "Beyond which you can't leave behind."

Another way of looking at it is relative to whether you want to call it an acute standard or a short-term exposure standard, what level based on a short-term exposure, which can be defined, one month, one week, whatever, that would not be determined to be protective, setting it up such that you would not allow for levels of that concentration to remain behind under an engineering control. One of the difficulties in establishing an acute exposure standard is there isn't a lot of literature dealing with this type of exposure. Virtually all the data to develop current standards, whether they're groundwater standards, soil standards, are based a long-term exposure, a chronic exposure, you know, 25-year exposure over 61 a 70-year lifetime; 30-year exposure over a 70-year lifetime. There is some information, what's called subchronic. Between short-term and long-term, maybe five-year, say, exposure. Right now, we probably could establish numbers for a half a dozen chemicals. That's all that's out there.

For a short-term exposure, we focus on non-cancer health end points. Most cancer data is based on long-term exposure. SRP in conjunction with the Division of Science and Research is doing exploratory initial meetings to examine short-term acute exposure sites.

JANE: That concept is reducing risk when contaminants are left on site. Hot spots should be addressed. Are you going to do this one chemical at a time? At cleanups there's a driver, like arsenic for a site, when in reality it's never just one chemical at a site. I hope DEP is looking at multiples of standards, driving cleanup of a hot spot, cumulative risk with the aggregation of the chemicals at the site, not just one. In other words, you know, an arsenic hot spot, an organic hot spot, look at more than one contaminant that's affecting the site, not just letting one be the driver.

One variable in the reliability is future uses of the site. It implies there will never be a change at the site, no new construction, no reconstruction, no new foundations being built. And is that really realistic when in New Jersey, every 20 or 30 years sites are developed or redeveloped. An institutional control pretty much dooms that site forever to stay the way it is, that there will never be an excavation on that site.

BARRY: I agree with you in the sense of, yes, a change in use could change a remedy that's protective now to being not protective in the future. And, again, this goes back to the notification issue and the ability for everyone to know what's going on. If you had a situation where everyone knows that there's an engineering control on the property and a change in use triggers a new evaluation of the property and it may have to trigger some additional work at the site before construction begins.

ANDY: I've been involved in sites with IC/EC and we changed the use. You adjust or make the case that the adjustment isn't needed. It doesn't deal with one specific thing. It's a requirement that you address a change in use to see if it remains protective. The point was that you can't dig, which is also a fallacy. You can. In fact, under the deed notice until we have acute standards, someone needs to repair a sewer line, someone needs to repair a water line, again, this is a chronic risk. It's not, "Gee, if I'm exposed to this for the next two days, I have that risk." It's, "if I'm chronically exposed to this for many years." Deed notices have built in now that if you need to disturb it, you notice the Department, just like you do with the "One Call." And maybe it needs to be a legislative tie-in between the deed notice and the One Call; you tell the Department when you're done and you restore the cap to where it was. That is in the deed notice now. You can dig; it does allow for that. The broader issue is: if there's a change in use it gets addressed; that's an important discussion.

JEFF: Look at natural conditions; In Gloucester City, school, there was contamination on alluvial lands. It was a former wetland and floodplain filled in with chemicals, and the problem is that even if you put in your institutional controls, seasonally the groundwater comes to the surface. Anything under that cap is going to come to the surface because you've got a high groundwater problem. And I think that's one of the things that's missing.

When changing sites, the concern is when someone's under a voluntary cleanup for industrial and down the road it gets switched to another use like residential, was the original cleanup thorough enough to meet the new need? And I'm not so sure. And then who pays for that difference? The industrial discharger has his NFA; they did their due diligence; now they are off the hook. The developer comes in, in a way they're an innocent purchaser. Will it end up falling on the taxpayers if they have to go to a much stricter cleanup? If the Department moves to a system with better enforcement and monitoring, putting up more money in reserve, insurance bonding for institutional controls, the cost starts rising. Between the time that it takes for approvals and engineering, it might end up becoming cheaper and clearer if the Department says, "If you're willing to clean it up to an unrestricted use and you're willing to meet these certain standards of removing 20 feet of soil and putting in this, this, and this, and you go through the system at the head of the line so you have your clear standards in front of you, you also save time," and then all of a sudden the money differential starts getting a lot closer.

TOM: On the acute standards, have you considered using characteristic as an acute standard? If it needs to be in a reputable landfill because of toxicity, flammability, whatever, it probably shouldn't be in somebody's backyard.

MICHAEL: If you have a cleaned up property [without a cap], it can be sold to residential buyers at a higher price than a [property with an] institutional control; with full disclosure, you get an accurate cost picture. Right now, we're getting inaccurate information because people don't know what they're buying.

TOM: If we're going to implement an institutional control could we rely on a permit?

MICHAEL: I guarantee that DEP will track it more aggressively if there's a permit fee due than an annual or two-year certificate. If somebody's paying for it, there's a greater likelihood there's full disclosure, although not automatically. If there's an annual permit, if someone wakes up four years after purchasing a

condominium and finds out somebody's been paying the permit and hadn't disclosed that there is institutional controls, they know who to go after because they're paying the permit.

TOM: If you don't want a permit that's going to last over time, it pushes you to a permanent remedy than dealing with the permit.

STEW: I've signed and sealed an institutional control as a practicing professional engineer. What I like to know is, one, issues of failure, issues of is this going to come back to haunt me and my company five years from now, ten years from now, who is my client? I liken it a little bit to some of the LSP issues I've been talking about, too, because there's a tremendous personal responsibility when the rubber hits the road and somebody hands you a set of drawings and you have to seal them. You're betting your career. You're betting your personal reputation. You're betting your company's reputation. There's also all that professional insurance that comes along with it, because if my company is still working, is still in business, and there's a failed institutional control and there's a sinking, where are they going to go? They're going to go to that professional liability insurance. My career is ruined. So I want you to get an appreciation of what that looks like. The second piece of it is when that comes to me, I want to know what are the regs. Are we doing everything that's required? If there's any mushiness, it is a very difficult thing to deal with when you're signing and sealing drawings. New Jersey has an interesting professional engineering requirement.

The other thing I want to address is, when I sit with a client, we're talking about interest rates, we're talking about the quality of the data we know about the site. There are a lot of guesstimates that go into the decision-making. Clear regs makes it easier to do cost analysis. I ask for predictability. So when the client and I sit down, I go back to the office, a week later he's got his cost analysis and the rates are clear and we can proceed without knowing that the Department isn't going to veto what we're doing.

KEN: To marketability of these redeveloped properties, I don't think we have those comparison figures. Most of the redevelopment on brownfield sites is high-end market rate redevelopment. And quite frankly, I'm shocked by the prices of the homes.

MICHAEL: I got a call last night from a doctor who didn't know he was sitting on a problem. So I wasn't implying that it was for poor people. I was just saying there's a general -- unless there's a specific requirement, it may be buried in the stack of papers and not flagged to people who are purchasing. And I don't know if that would affect the purchase. My gut is there is a differential in the price value.

KEN: I don't know to what extent that disclosure takes place. We've worked out a process for condominiums, -- public offering statements-- the ones that have to go through PREPTA process, I think we are weak where we have single family residential development taking place. My point is if that's disclosed, it doesn't appear to have a significant effect on the purchase price for a lot of these homes. And many of the purchasers seem to be very comfortable with the engineering and institutional controls that are in place. And I'm only making that determination based on the marketability of those properties and the corresponding purchase price.

Jorge agreed the permit is a good idea and asked Barry for clarification on acute level of risk.

BARRY: We could establish some sort of short-term exposure number; we may have data for about six chemicals.

TOM: The other idea would be EPA's principal threat waste is based on chronic data for 10^{-6}. Just making it 10^{-3}, I think, if it poses a 10^{-3} risk then you have to take an action.

FRANK: The One Call program will help with the problems being discussed. I encourage the Department to look at that seriously. Once it's reported, someone's got to get back to the homeowner, most likely to tell them what the problem is. You can easily have a separate form required at closing --a deficient title exchange. Someone would have receive it and enforce that. But there's really no question, at closing you could guarantee that property owners would be informed of this problem. I think a lot of the problems I see

with the current deed notices is exactly the point you made, which while they're entitled, they're just really not being disclosed.

KEN: We know that the deed notices are being filed because it's a requirement to get book and page and no further action letter. To what extent that information is getting to the perspective purchaser [is the question].

IRENE: I think that's a good one point because with the environmental section, Dave said they can put this on the transactional portion, so as the real estate transaction's going through, there is disclosure at that particular point in time.

TONY: Just a thought about the permanent/nonpermanent remedies. If you require more permanent remedies, that implies a treatment system or excavation. The proposed soil standards are so stringent that you have to set the PQL to whatever the lab can meet -- even on groundwater the standard can be 1 part per billion, and they keep getting hits of 2 parts per billion, 3 parts per billion. The DEP can't sign off on that. If you go towards the more permanent remedy, are you ever going to achieve that standard? And you could have cleanups that could just go on and on where it gets back to that risk issue. If there's no risk there, should you clean up to that standard? For instance, a refinery -- there's always going to be a refinery. The chances of a refinery actually being converted into townhouses is very slim.

TOM: There are institutional treatments on a lot of sites, too, that either brings it to standard or -- solidification and other things, depending on what's there. Whether it's permanent or not is a different question, but it's certainly better than just capping it over. So it's not just excavation, it's also treatment.

IRENE: Institutional and engineering controls definitely need to be modified, beefed up, changes made. People are very interested in making sure there's financial assurance to ensure the long-term monitoring and maintenance of institutional controls; stronger enforcement. We need more resources for long-term monitoring. People seem to be in quasi-agreement about some of hot spot, acute soil standards-- that needs to be addressed and taken care of. Better tracking is needed. Disclosure is a weakness. We need to make sure that people are truly being told of the situation at the site over property changes. Change of use is a problem needs to be addressed. And site alteration, if somebody's going to go in and dig up the parking and put in trenches for utilities and stuff; that's a problem. And the concept of having a mechanism like a permit that that goes with the institutional control over the long-term to ensure that there is -- assurance is in place that we know what's going on with the institutional controls. So just some things that seem to -- people kind of were in agreement on. Still need to get to some recommendations, solutions for remedy selection in terms of the Department playing a role. I think the Commissioner wants to play a stronger role. We don't want to delay any processes or make it burdensome.

How we can get interjected into remedy selection? I understand the clearer we can be upfront in these scenarios what's going to be needed, the better it is for everybody to be able to make informed business decisions.

TOM: The big problem we have is the biennial certifications themselves. So that's certainly a manpower issue. It's a matter of enforcing the fact that we get these, making sure that somebody is submitting them. Who submits them sometimes is an issue. So those are a lot of the things that we're dealing with internally, and they're very critical right now to us. That's the only mechanism to assure that we maintain the protectiveness on the sites. The other thing we talked about internally, at least with Irene and some other folks, we never really touched on it much here about CEAs. When we do monitoring and natural attenuation remedies, the tech regs require you pass the Mann-Whitney U test; show a decreasing trend and then estimate that this is going to clean up to standards in 10, 15 years, and there's no requirement for that period of time once you show that decreasing trend for any monitoring. We require you at the end of the CEA to lift it or when the estimate of that expires to go out and take samples. We're talking about tightening that up and having more of a monitoring or some review process like EPA five-year review or something on groundwater to make sure that maintains protectiveness.

Could DEP put more robust data on their website as far as the institutional and engineering controls are out there, the deed notices that are out there? I know we have some information, but I think he was looking more for when they're established, when maybe the biennial certification is due, when the inspections maybe are due on the site, that kind of stuff.

ERIC: I'd like to talk about where an engineering or more appropriately an institutional control is used at piece of property that is, say, 75 by 100 foot, it has a CEA employed and is never going to be developed -- well never is a strong word. It's very unlikely that it's going to be developed to the same extent that a landfill or a large industrial piece of property may or may not be. So with that, I guess I have two questions or two statements. One is the process. We talked in February about biennial certification – it may or may not be the right way to go, so we can look at having a permit system so we have better means of getting data and things are more neat and clean.

We're going to talk about insurance. That's another process issue that I see as it relates to engineering and institutional control. For locations where the RP has instituted the engineering institutional control, maybe we look at the need, especially if we're cleaning up or better defining the process, the follow-through process; would that RP need to go and get financial assurance if there's still the RP? If the RP is continuing to own the property, do they necessarily need to go and procure that because they're still responsible? Is there a preference for nonresidential, non day care, non-school? Is the Department going to say, "No, we want that to go permanent anyhow," or is the Department going to continue to allow engineering and institutional controls in those types of settings where it's commercial or industrial and there's no change in use, it's continuing to be that?

IRENE: The Department has not said that we want to completely to do away with institutional controls or engineering controls. An industrial setting that's going to remain industrial setting, that's not my first priority to say it needs to have a permanent remedy. Let me just add also, when you say that something is going to remain. I know you qualified your "never," but I had a phone call the other day where a gas station, an old gas station was being converted into a restaurant. And the question was, was there any DEP regulations overseeing or requirements to make sure that, for all intents and purposes, not necessarily. Whether there should be health regulations that deal with it -- I mean, I referred the people to the local Health Department.

ERIC: Nor should there been. If you are sure there's no vapor intrusion into the building, which would be certainly a concern.

IRENE: But it's who is making sure that there's no vapor intrusion?

ERIC: Well, in that case, if the RP has sold the property, then that's an issue where the title has changed hands. But if you have an abandoned service station on Route 18 that's in -- you know, you've got four lanes of highway and divided barrier and it's on public water and there's no vapor intrusion, what difference does it make if it's -- the exposure scenario is certainly different than if you have a residential or some other, quote, sensitive population.

TOM: Just to add, though. The building itself -- and we don't regulate building interiors, the building interior itself could be a hazard.

ERIC: Yeah. But that building isn't going to -- again, you have to look at the vapor issue, but this isn't taking a former factory and converting it into condos. You're going to be knocking down the existing structure. You're not converting a bay garage into a restaurant.

IRENE: They were.

TOM: We certainly have seen buildings themselves that were used for industrial purposes -- and Ana can speak to this -- converted themselves to residential use.

ERIC: I certainly think that there is a difference if a structure is continuing to remain there. I don't know the functional use of what two bays and a small office are going to do, but if the developer feel -- but that's sort of what the RP -- I mean, the RP is still the RP and that if it's changing hands, that's going to have to be

addressed and before that property transfers there will either have to be an insurance policy procured or it will have to be cleaned up to a permanent standard or a residential unrestricted use.

JEFF: I want to touch on CEAs because I think that there's a lot of conflicts when you look at the whole concept of CEA. When you look at New Jersey's Clean Water Act, very specifically it says that all water in the state shall be considered potable. And if you look at the water supply master plan, it says because New Jersey is running out of potable water in so many different parts of the state, you have to look at urban areas and other future sources of water because we don't have any place to grow. And yet we then treat many contaminated sites, we give them CEAs. And I'll use the example of Camden. Camden's well field is in a CEA and yet it's an existing well field. And so I think you need to take a broader look at this whole issue because of, one, water supply; two, where we have existing water -- Atlantic City is another one where you've got a very big contaminated site moving right towards our well fields. And if we're not cleaning up these sites, we're going to allow natural attenuation, what's going to be the consequences for water supply in urban redevelopment. The other concern that I have is that in certain parts of the state where you have CEAs, you also have very high groundwater. You have springs and other things. And one of my favorite ones, even though it's not a CEA yet, but take the Ford site up in Ringwood. You go up there in the springtime and you watch that stuff bubbling out of the springs heading down to the reservoir. So I think you need to take a better look at what happens, especially in some of the urban areas. The Army Corps did a study of the Saddle river where they wanted to put in slurry wall, not because of flood control, but they want to keep the contaminated groundwater out of the river. There are many sites that are intermixing. And so the concern in older urban areas with multiple sites and multiple CEAs is that you're going to have a witch's brew in groundwater and it's going to get into people's basements. And I'm not talking about new development because maybe you can handle it, maybe you can't.

TOM: CEA is a notification mechanism, it's not a remedy. If we were implementing a pump and treat remedy as aggressively as you can pump and treat an aquifer, we would still meet the CEA until that met standards. What you're touching on more is the remedies that we're implementing that make the CEA last longer.

JEFF: Natural attenuation.

IRENE: Natural attenuation and CEAs are two different discussions, because the CEAs originally were to keep people from drilling in an area of known contamination. So I think your concern is more about natural attenuation used as a remedy.

JORGE: [Public input into]Remedy selection is going to mean a lot of carve-outs and a lot of inelegant exceptions to a program that really needs simplicity and predictability. I suggest instead that you go back to your tenants, that any remedy -- you already have bearing on the remedy selection must be protective of public health and environment. And if we can impose the fact that we're going to make sure that it's continued to be protective of public health and the environment, to me, the remedy selection process can become moot. I think the remedy selection process needs to meet those two standards. Now, having said that, engineering controls can be different based on land use. Perhaps your engineering controls need to be perhaps a little bit more rigorous in certain land use situations. And I think that's where your solution may lie, not necessarily saying that you need just in schools or residential homes that must meet X standard. For example, instead having two feet of cap, maybe you have four feet of cap, hypothetically. Somebody wants to put in a garden, they're not going to dig four feet. Somebody wants to put in a flower garden, you can do that.

TOM: You're saying residential end point maybe increase the depth of –

JORGE: I'm using that as a hypothetical. I'm just saying that rather than throw out engineering controls because based on site use you may want to modify the engineering control based on site use.

MICHAEL: Last meeting when we started to try and define the universe of the problem that's facing the Department, I think we were using 18,000 sites are the institutional engineering control sites, in that number, or is that –

IRENE: Yes. Everything is in that number.

MICHAEL: Tom just mentioned thousands of biennial certifications. Is there any compilation of the data of the 18,000 that can give us an idea of what's facing you? Because I know we heard 11,000 residential-type sites, around, general numbers.

IRENE: No. Of the 18,000, about 4,000 is homeowner. And those cases for the most part are not being permanent remedies. Right, Wayne?

WAYNE: Correct.

IRENE: They're homeowners, and it's not a lot of cleanup. So I would say of the 18,000, then take away the 4,000, so you get about 14,000 cases that are all the other -- the regulated and the developer MOA cases.

MICHAEL: And I had mentioned, having looked at that voluntary -- the oil company program, that there were a few thousands in that. Do you know about how many are in the gas station type of –

WAYNE: In the Underground Storage Tank Program there's approximately 4,000 cases.

IRENE: In the underground -- regulated underground storage tank arena, 5,700. That includes gas stations and non-gas stations.

UNIDENTIFIED SPEAKER: How many are gas stations?

IRENE: Gas stations I wouldn't know off the top of my head. Eric, a clue?

ERIC: I'd say a lot.

MICHAEL: But that's different than the 4,000 homeowners because those are smaller tanks?

IRENE: Those are unregulated.

MICHAEL: And then on top of that we have the ones that the remedies have been selected and you're in the I and E phase. You have an approximate number that are in that?

IRENE: Eight hundred cases in BOMM; BOMM (Borough of Operations, Maintenance and Monitoring). And there may be other cases in ISRA and places like that where there are controls.

KEN: We have a remedy where there's other AOCs undergoing investigations, but we have areas that have an institutional or an engineering control in place.

BUDDY: Just because they're in BOMM does not mean that they necessarily have engineering controls on them. It means that it's an approved BOMM.

MICHAEL: And so then the remaining are in investigation, likely commercial, industrial sites.

TOM: ISRA sites, initial notice which is a section that deals with the less contaminated, typically before they move them on Brownfields. It's a little category developer cases.

MICHAEL: ISRA, that's probably a pretty good size chunk list.

TOM: We have about 1300 on the list generated a couple months ago, March.

ED: (Assistant Director of the Site Remediation Program) I have Bob Soboleski (Chief of the Bureau of Operations Maintenance and Monitoring, called BOMM). A couple real quick notes anecdotally on the One Call System. Historically, Honeywell voluntarily joined the One Call System in Hudson County. And then when BPU found out who they were and what they were there for, they kicked them out. They said, you're not a utility, get out of here. But I think it is something that we are still looking at. It's being looked at

around the country. EPA, I think, is in one or two spots in the country. We certainly know people in BPU that we can talk to about it. It is something that we can still look at. And there's something similar that I'll cover in my talk on the Sentinel Trust. And then additionally, we pulled out the residential seller disclosure form that's currently out there. I don't have enough copies for everyone, so the attorneys can simply write down the citation and get their own West Law copy. If you don't have it handy, you can grab one and pass the rest on. There's a section called "Environmental Hazards" and "Deed Restrictions." There is information that is required in the disclosure that somewhat fits what we're talking about. That said, when we look at the long-term effectiveness of the institutional and engineering controls, a couple of business plans, business models are currently out there that we wanted to mention in this discussion. Historically, our regs required individual property owners to maintain them as part of the deed notice requirement. But these two different types of models, companies have come and talked to us about.

Sentinel Trust
The two of them are Sentinel Trust and Guardian Trust. They both use trust funds as their fiduciary source of funds. They have insurance that backs up that trust fund. They pool all the sites together in case of a catastrophic failure at one site. By pooling sites, they spread the risk out among everybody and they basically assume the role of the responsible entity. That's a term that comes out of a grace period rule to perform that maintenance and monitoring that's necessary. The big difference is that the Sentinel Trust model pretty much requires everyone to participate into their program. When we initially looked at this, we felt that that would require a legislative mandate to make everyone cash out to the Sentinel Trust. They would then take on that responsibility of doing all the maintenance, all the monitoring, all the repairing, all the reporting. They have partnered with a company called Tera Text who has a web-based information system that allows people to access it. It's mainly set up for local land use authorities and officials to be able to access the information. They have a much better web-based system to store the information, report on it, and create maps. We're looking to pilot that in New Jersey. We haven't quite figured out, but we're still working on that, not just that particular aspect of the Sentinel.

Guardian Trust
The Guardian Trust is basically a company that runs on a site-to-site basis. They'll go to the responsible party, they'll go to the developer, and they'll basically negotiate a site-specific contract that says, "I will do this for you related to the operation of maintenance. And for this you will pay me this amount of money." The Guardian Trust model is certainly out there. I'm not sure if anyone in the room has ever heard of them or used them, but they are certainly available now. And although the responsible entity is still beholden to the Department to get it done, they in turn have this contractual relationship with the companies that does it for them and provides that service for them. I didn't want to go into any pros and cons in writing. I just wanted to kind of throw out the two ideas and start the discussion going. Certainly, the one, the Guardian Trust is available now and can be used. It adds a greater degree of reliability that the maintenance is going to occur. You have a company that has a fund that is backed up by insurance, so it relies on the financial ability of security to get the institutional controls done. The Sentinel Trust, obviously, would be something that the Legislature would, in essence, have to mandate. That seems like it might be an overall fix for what we've been talking about here as another way to go. What it doesn't do necessarily is go back in time, though, and catch up on the approximately 2,000 biennial certifications that might be floating around.

JEFF: On the Sentinel Trust, if someone's come through and doing an institutional control, couldn't you use that as a way --

ED: We could. I think the issue there would be -- when it's Sentinel Trust, when it's established, the money is then transferred into the trust from that person to that. So currently, you'll have that money that's been already been taken up in the last real estate transaction. So that current owner doesn't necessarily have the money to then throw into that. They may have, in essence, gotten a break on the purchase price, but they really don't have that. It's kind sucked up in the transaction. But that's just an issue to look at how to do seed

money for the already existing. Or you might be able to use a real estate transaction fee increase -- I didn't say that. That might be used to do seed money to catch up and maybe do it for a limited type period or something.

TOM: The Sentinel model, is that a quasi-state organization?

ED: They would be a non-profit corporation that would be established as a quasi-government agency. Legislation sets the model and everyone's required to put it in.

ED: It's funded by the participants. It has insurance product behind it, total catastrophic-type failure. Ultimately, though, if you're going to set that up, it may well be that the State is ultimately behind both the trusts.

Ed clarified that the trust would be responsible for current and future liabilities, which address the problem of liabilities falling to LLCs that may dissolve over time.

MICHAEL: Is there any state using it?

BOB: Largely TeraText is part of New Jersey Sentinel Trust. California has just bid out 300 of their highest priority sites to TeraText. I think it cost close to $175 per site to set up the database.

TONY: Is the California model looking for the response for the work as well or just the data? Because Sentinel takes responsibility to respond to the maintenance. Is that what California is looking to do for those 300 sites?

BOB: Yes.

ED: Guardian is a private company who operates on a contract basis by site, but the money still goes in with their overall pie where they maintain all of their individual contracts.

JANE: The state would require the responsible party to provide this insurance?

ED: I think we can look at this as an alternate -- financial assurance is apparently acquired on administrative incentive, not on voluntary cleanups. This might be a way of setting up a requirement so that if you have a voluntary cleanup and you're going into an operation maintenance situation, you would -- this would be the financial assurance mechanism would be used. If we were looking -- one of the things we're looking at is whether to have those LLCs cash out, provide the funds to take care of -- the remainder. So this would be a mechanism to handle that. Whether it be required or not, I don't know.

JORGE: The insurance agreement would only cover what was in remedial action plan and what was specified in engineering control?

ED: The insurance aspect of these trusts is only for the trust failure.

JORGE: It's only on those operations that are specified in the engineering control at that point?

ED: For Guardian, yes. They have an extremely detailed contract of what's covered and what's not.

ED: Sentinel takes on the whole liability.

JORGE: Changing cleanup standard, things like that?

BOB: I don't how they hand that. I don't know how we handle it either.

ED: We could build that in. We could build in the order of magnitude issue. It obviously puts that secondary unknown on it. I guess as far as the liability issue goes, that would be a legislative change. The responsible party would remain liable in our current laws.

JORGE: How do they calculate the term of the engineering control? How do they deal with how long they put the engineering control, into perpetuity?

ED: To some extent I think they realize that some of them are going to go to perpetuity. And I think to some extent then they'd have continual fee.

JORGE: So it's an annual fee that is being charged?

ED: I think it was one time cash out deal.

TOM: Probably get a lot more permanent remedies if you set that up.

ED: It might, depending on how they calculated the fees. But keep in mind, as the money -- it's a one-shot deal cashing in so then they have this huge bottom line that they invest, which is, by the way, how they make their money. It's a non-profit corporation, but the company that invests the money –

JORGE: Are they both NPO?

ED: No. Guardian, I think, for profit. The Sentinel Trust itself would be a non-profit, but the people who manage their money wouldn't be.

TOM: So you would definitely have to change the strict liability?

ED: You could still have the original discharger responsible. The maintenance pretty much runs with the current property owner, with exceptions along the way. But currently the original discharger is always liable, but it usually ends up that the institutional controls maintenance runs with the property. You could just set it up so that they only take that second part.

ANDY: Guardian is site specific. I've seen people look at Guardian and for a lot of reasons it doesn't work out because they're charging much more than the cost to do it yourself. But the Sentinel Program, how do they distinguish between carefree sites versus sites with significant issues? For example, if you have a site where institutional control is empty your soil versus a site where you have operational testing of wells, vapor systems and the like. How does Sentinel distinguish that process? Because obviously there's not a cookie cutter to that.

ED: The contribution would be set up to address that. I haven't gotten in a discussion with them exactly how they calculate that. But, I mean, that would be a sliding scale. Everyone wouldn't contribute the same amount.

TOM: It would seem to me the more risk, the higher the fee.

ANDY: In the models that have been out there like that, and I don't want to talk about the New Jersey model, but joint underwriting ultimately ended up with much less of a sliding scale because they focused on is getting the capital and generate money rather than how much your site is costing. They're looking at how much overall of a pool of capital they can get so they can invest, and the investment money is what they use to pay their cost. It's not so much what your site is generating, it's how much cash can they get in overall.

ED: I suspect they have something similar in mind because they did make it clear that they intend to make -- the people who come up with this idea are looking to make money on how to handle the money, not necessarily the actual work.

ANDY: The insurers have a fiduciary responsibility to their shareholders not to take claims. Who controls when they make payments who doesn't control when they make payments?

ED: And Guardian actually gets a little more detail with their insurance. They actually have a five-year term that they continually renew.

TOM: Do they actually get involved with remedy selection?

ED: No. Neither one of the models has an opinion on how to remedy it. They'll just take what they need to do, operation and maintenance and then cost it out.

JEFF: I have seen insurance companies where they'll send letters where to a point of the people are carrying, point them in a direction or say we're not going insure you or we're going to raise your premiums if you do this.

ERIC: Just a point of clarification, what Adam talked about the last time with Wells Fargo and NAIG, that was private party insurance, and this is Option B, another way of achieving that same goal.

ED: We're simply relaying information to us on how to solve the long-term stewardship issue.

JUDY: That this is specifically for assuring that it gets the biennial cert kind of approach but not for payout if it fails?

ED: No. The Sentinel Trust would collect the bills.

JUDY: And Guardian as well?

ED: If it's in the contract.

ED: The State could do something similar.

ANDY: Did you look at the Wisconsin's CEA program as a model?

BOB: Not yet.

TOM: You said Wisconsin. What was the program?

ANDY: CEA. I want to focus on economic realities as they're conceived, the cookie cutter broad reach kind of discussion we've had, and the concept of permanency. Economic reality is perceived -- this is a state where there's substantial needs for housing. The cost of the median house, the average priced house in the State of New Jersey last year was such that you had to earn more than 75 percent of the rest of the people in the state to afford it. Someone in the median income level in this state cannot afford the median house and that gets more extreme further down the income levels. We live in a state where the Supreme Court or our courts have reinforced that this state is not meeting its Constitutional obligation to provide low and moderate affordable housing. We have dramatic needs for workforce housing because the housing isn't where the jobs are. And in that context, consider residential and redevelopment as something that can be segregated out from the brownfield process. It creates an economic reality that precludes brownfield development. You cannot do brownfield development without residential. To say that we haven't chased people away is also a fallacy. I can go to my client list 10 years ago, I can go through my client list today, and not only is it thinner, but the people who were players in the market, not just residential but also commercial, aren't here anymore. In the Builders Association alone, we have many members who are trying to build low and moderate housing, and they can't do it. The economic reality is not there. Tell me the presumptively clean piece of property in the State of New Jersey, basically you can say it is presumptively clean, let alone in areas where development is supposed to be constrained now, Tier 1, Tier 2, brownfields; it's an economic reality that you need to be able to develop there.

When you're talking about residential, you have a broad reach; from the townhouse complex that goes up in an urban area to someone's home where they don't want to rip their foundation out because the person who owned the house's tank 30 years ago left contamination behind and they don't want to take their 92-year-old house and jack it up because they're worried about that historic house being damaged. And they'd rather take the deed notice. And if you're saying they can't, then you're restricting that site as much as you're restricting the site in Camden or in Hoboken or in Asbury Park. And a lot of what we're talking about is we keep talking about using broad cookie cutter approaches. You can't necessarily take that approach. Third is permanency. The Department now has on the street the soil standard proposal. A lot of the standards change and a site that had been approved as a cleanup under standard today may not use those standards adopted as their proposal be clean tomorrow. It's not permanent; it is under today's standard, but not tomorrow's standard. I'll tell you a site that is more protective; a site that's capped. And if we're talking a direct contact exposure standard, it's still capped. The fact that the standard became lower doesn't stop that site from still

being protected. For those sites, the institutional and engineering controls more protective than the, quote/unquote, permanent remedy. So when we're talking about permanency, we're using a fallacious term and we always -- human nature, we have to pick a word, we have to deal a semantics. But it's not permanent. It's permanent in the sense of what today's standard is, not what tomorrow's standard is. And there are a lot of important issues that we need to get to on institutional and engineering controls, notice, how do we go through the enforcement process, how do we make it transparent. But a lot of the discussion I've heard today, in my mind, are based on basic factual fallacies. And I don't know how we advance the discussion well as long as we keep trying to work under those assumptions.

TOM: I think you're ignoring the fact that the law shows a preference for permanent remedies. So are you saying we should get rid of that part of the law?

ANDY: No. I think that's what we have now and I think that aspect of it works. There is a preference today.

TOM: How is that expressed if we have nonpermanent?

ANDY: It's apples and oranges. The preference is that if I do a "permanent" remedy I don't have to deal with filing deed notices. I don't have to deal what level of disclosure is involved in that. I don't have to deal with long-term liability except that there's an order of magnitude change. That is the preference. It's much simpler to move on from a site if you remediate it to the current standard. It is. The system has that preference in there. What you're seeing, however, is the economic reality that preference can't drive the decision as to how the sites are cleaned up.

TOM: That's exactly what the law says it should do.

ANDY: No, it doesn't.

TOM: Should we quote it?

ANDY: Yeah. Absolutely.

TOM: "Permanent and nonpermanent remedies shall be allowed except that permanent remedies shall be preferred over nonpermanent remedies for all remedial action." And this is a mandate to the DEP in approving remedies.

JORGE: And there are other portions of that law that say it is refutable presumption that a nonpermanent remedy is acceptable. It's in the law. So you just can't take that out of context. DEP is working within the context of the law.

TOM: We're talking about a preference that's not being observed.

MICHAEL: One is acceptable, one preference. I think what Tom is saying is that the Legislature has established that we know the problems we're dealing with now: permitting and allowing nonpermanent. That's why they say there should be a preference, but the economic realities and the approvals have come in 90/10 for nonpermanent, meeting the standard.

ANDY: Maybe we're disagreeing on how to interpret the word "preference." What I'm hearing is preference means a presumption that it has to be that way. My reading is preference being all things equal, it should be a permanent remedy. All things aren't equal. The economic reality is that I can't get a client to come in and risk their capital to develop a piece of property and in the process remediate it so it's not an immediate concern to people if it's going to cost them a hundred times more.

ANA: In regards to affordable housing and tying that into this process, in the last 10 years where the process has been open and the developers have had their say and DEP has very little say in the type of remediation that's occurred, I haven't seen one iota of affordable housing go up in my community and lots of market rate housing built poorly and not well maintained.

My point is to get back to what is the role of the DEP? That's why we're all sitting here. Obviously, something's not working. It's important for the DEP to reassert themselves and to take a stand on what should be the protectiveness of a remediation. Going back to the original standards weren't just for protectiveness and the cost, but also the community concerns, the timeliness, different remedial alternatives to be considered, permanent versus nonpermanent; or just different types of institutional controls, different options to look at and compare. DEP and the community should have the ability to weigh in, not just the economic concerns because I think a lot of times, like Mike was talking about, the economic concerns are not fully captured. They're certainly not going to be fully captured by the developers. The developers have one set of economic concerns they're thinking about. The State and the people who are going to be the eventual bearers of the burden bear different economic cost and public health cost. I want to go back to what that original technical standards were and maybe look at those again and have different options at least to weigh.

OLGA: We often hear this false dichotomy, that the interest of low-income people and poor people are in contradiction to environmental protection. Now we're hearing that we shouldn't have full remediation because that interferes with affordable housing. First of all, I just think it's unacceptable that low-income communities should have to choose between environmental degradation and having a house. There are lots of reason why we have an affordable housing crisis in New Jersey. I don't think they're tied to remedy selection. We have discrimination. We have resistance of communities to income mix, to racial mix. We have areas like Camden that don't have investments coming in. We have a lack of investment of public monies into creating affordable housing. We are never going to achieve a healthier urban environment and remediation in urban areas isn't really safe and really protective. And I don't think that it's going to happen unless DEP is able to control what kind of remedies are included. And going back to what Jane said when I was first walking into the room, I think it's really important that the residential and schools and recreation areas, and places where there are vulnerable populations like that, that we have a permanent remedies and stricter standards. It shouldn’t be sold as being in the interest of low income people.

MARK: The reason the State followed a brownfield approach was because, at the time, it was something like 11,000 sites and the bureaucracy wasn't up to the task in terms of the number of cases. The idea was to create a process where the business community would invest in properties they ordinarily wouldn't have invested in because those properties were not getting cleaned. You're right, we should have cleaner properties in urban areas. The question is who is going to do the cleaning up? You can say the responsible party will do the cleanup. On an awful lot of sites in urban areas there is no responsible party. No one responsible for it. There's nothing that you can go after. That would require the State to use this Spill Fund and/or other public funds to start doing cleanups in certain circumstances. We already know there isn't enough public revenue to move it. And that's sort of the genesis of doing so that you can go for permanent remedies, but you have to understand that if that is the preference on any given site, Andy's point is correct. The guy will turn around and walk away because he can't capitalize a cleanup, especially if it's an expensive cleanup. And more of the brownfield sites now are more complicated and, therefore, more expensive. And if that becomes the issue, the developer's going to go in, look at it, and say, "All right. Well, what's going to happen?" And if there's predictability in the regulation that say, "Well, you're going to need a permanent remedy," the guy is going to turn around and say, "I can't. It's not a way I can afford that. So let's find other property." Meanwhile, that site, if there's exposure now, the exposure will continue. The economic opportunity of somebody going in and cleaning so that there isn't, cleaning it up to the point where isn't exposure, will disappear because there's no incentive to do that. You're right, preference for the State is to have all these sites cleaned up, but the State doesn't have the revenue to do that all at once. It's hard -- in the circumstances that we're in now, it's very difficult for -- the Governor is even saying, "Look, we can't be spending any more money on buying open space right now." And maybe it will be two years or whatever it is that he works out with the Legislature. But the open space program is in some jeopardy, one of the most popular programs publicly ever. Now, you may be talking about in the long-term having to raise more money for the cleanup of properties. Is it our responsibility to do that? Absolutely. Can we? That's a whole different question. So I'm not denigrating the notion there ought to be a preference for permanent remedy.

It's just the closer you get to a complicated site and the more you require of that particular cleanup, the less it's going to be private capital investment.

JANE: It does seem to me that in a majority of these sites, the engineering/investigations/preliminary work often exceeds the cost of the actual physical removal of soil; at least that was a case on a Superfund site in my town. The investigation far exceeded the cost of the actual excavation of the soil. Secondly, is that the reason caps aren't really acceptable and as protective as a permanent remedy is that they don't address the issue of groundwater contamination? There's still that issue of groundwater contamination that goes on. That contamination lingers there and can affect groundwater. We have to put extensive filtration systems on drinking water wells, and it still doesn't capture all the pollutants. So there's an environmental piece to this as well as a public health piece that caps don't address. That's why permanent removal, permanent remedy, and the pump and treat system or some kind of institute treatment of groundwater to get it to standard is our best attempt at a cleanup. I think we need to give DEP back the power to insist on that kind of remedy. As far as the money goes, the Spill Fund isn't providing the money that we need and to provide incentives the way it is for brownfields redevelopment, and we need to beef up the Spill Fund. Maybe that's an additional piece of legislation that we need to tax the chemicals that are causing the problems.

IRENE: Even with a cap, any soils that are impacting groundwater need to be treated or removed. So when we do an evaluation, any source material to groundwater need to be removed. So we're not ignoring impact to groundwater when a cap is part of the remedy.

BUDDY: We have two choices, clean up to standards that are very low and assume worst case scenarios in very long exposure rates, or use an institutional control to get out of that. So if it's a permanent remedy, cleanup to a very ultra low concentrations or use an institutional control. It really is a risk question when we decide which way to go, we've got to look at the consequences on the effort for permanent remedy. A lot of times consequences of the effort on a permanent remedy are worse than the consequences of the institutional controls. And the effort to pump and treat typically doesn't work. Usually it has to be soil removal, but soil removal doesn't always work either. There are times when you cannot access the soil that needs to be removed. So it's not only an economic question -- which does come into play which isn't my expertise either, that's a development issue -- but as a technician looking at a site, there's physical limitations where a permanent remedy cannot be used. And what are we left with then? Then we're left with an institutional control or an engineering control that are really risk management tools. And what they set to do is prevent the exposure of any constituents to the public, which is as safe, not more safe than trying to get rid of them. There probably are places where they're not appropriate. We need to figure out where those places are. One of the problems we have on some of the smaller sites is we have to apply the rules that were meant for really large sites to very small sites, and it becomes very difficult to implement and unreasonable. If we have some flexibility in how they're used on different kinds of sites, will move sites quicker and better.

JEFF: Some places, a permanent remedy may work very fine economically. For example, the site in Hoboken where the Governor was building a giant multi-million-dollar condo complex on very small site, a permanent remedy works. You have to look at the balance of where it is and what those sites are. Right now in the State there is more than $10 billion worth of economic investment in brownfields. So it's not like it's some small number and everything is just merely break-even point. There's also quite a bit of public money going on. And I can tell you a site where $300 million of public money is going into a golf course. So we are investing and we are putting in a lot of resources. One of the problems that I see, though, is sort of the disparity with ISRA where sites came under voluntary cleanup with a cap. It may not be strong enough of a cleanup for a development community to build a condominium, or at least to the point where I see where we can be assured, not beyond a reasonable doubt, but be assured that if there's a problem with the institutional controls or something else on that site that the public health and safety of the people be protected. I think what we're really looking at is this gap between what is the proper level of control or cleanup for residential development and where the voluntary cleanup gap, who's going to pay that differential. Will it be the developers, the taxpayers, or is there a way to require the RPs to clean up to higher standard because they can also sell the property for more money? And I think that's part of the balance you have to look when

you're looking at economics. In the West Ward in Newark, you may not see the same economic forces on a brownfield development that you're going see on, you know, the waterfront in Union City. So you have to look at the economic mix to some extent.

The State doesn't go after RPs and sue owners of the recalcitrant sites and recover damages. You can't expect the market in the development community to do all the brownfield's work. We have sites that have institutional controls but have we actually gone back and looked at some of those sites and done air monitoring the sites to see what's going on with vapor intrusion, what the condition of the caps are, is there migration of groundwater off site? Are we actually looking to see if these controls that everybody saying are wonderful, are they actually working? And to what level are they working? I know some of the thing's I've seen on other states, I've seen real problems in California, Florida, and Texas. I've seen some real problems when they go back do studies.

ED: Our "cap cop" did about 120 inspections last year and he found 2 problems. The cap was disturbed, but there was no exposure from that. It was disturbed during construction and, in essence, reestablished. As far as grace period on the biennial certifications, under the grace period rules not submitting a biennial certification is a non-minor $8,000 a day fine. We set it up as a significant requirement. We are getting a lot of what we refer to as CEA lift requests. People got a letter and they established a CEA 10 years ago, did a Mann-Whitney U test and it was supposed to go away at eight years. Looking at it, they go, " I need to pay consultant $2,000 to do this biennial cert or I can go through the process of finding out whether or not the contamination is still there or not." A lot of the response we're getting from our letters that we sent out requesting people to get the biennial certificates in was requests to, in essence, eliminate it, take the data to eliminate the CEA. We hope that as we get through this process, we're going to get set where we now have biennial certs in. We now have very accurate picture of what CEAs are still left out there and what needs to be monitored. So we're getting to the point, I think, we're going to be able to get that data on how good are these existing system.

JEFF: There was one person in a hundred sites per year which is a lot of work. I'm talking about really going into a site and doing real evaluation with air monitoring –

ED: Well, that's one of the things we have to table here. We're statutorily excluded from building interiors.

JEFF: Doesn't mean you can't test it.

ED: What are we going to do with the data? From a vapor intrusion standpoint, when we're reviewing the CEA's biennial certs, we are reviewing the context of we believe there's a vapor intrusion problem. But from a deed notice standpoint, you know, deed notices were established and the ECRA building material was not part of the remedy.

GEORGE: I, for one, do not accept the premise that we have a broken program in New Jersey. I think we have an outstanding program that's resulted in more net good than anyone around the table can imagine. I think that the program has been very effective in implementing cleanups and mandating cleanups and overseeing cleanups for almost every one of the NJ municipalities. I can only think of two examples in the last 30 years when we've had major missteps where people had demonstrably had negative health impacts. So I think we need to be very careful how we throw the terminology around. We don't have a lot of people being acutely exposed to material that's going to cause problems and maybe not even chronically exposed to materials that will cause problems. I also think it's important to realize that because we leave contamination behind doesn't mean that people are impacted. You go to the zoo and you look at a lion; the lion is not killing people. We have an engineering control and it's being put in place. And as long as we ensure that it's in place, people are safe and the exercise is safe. The other thing I think we need to be very careful about is that there's no pluralism in cleanups here. In terms of who's buying property or living in property where contamination is left behind, it is every strata of the economic sector of the state. It's the million dollar homes that are built in the landfills in Wildwood; it's $300,000 homes that are being built elsewhere; and it's $100,000 to $150,000 homes that are being built in Newark. Why? Because we have no options. This is

New Jersey. We can't economically dig up this state and move it to Ohio. It ain't going to happen. Nobody can afford it. Nobody's interested in doing it. And the people who are going to suffer are all of our constituents across this table.

IRENE: I think that we're close on that note. I do have one quick question for everybody, though, before you leave, which is would anybody be interested in having folks from DEP do a presentation on the programs that other states use to establish a fund to clean up dry cleaner sites? There's legislation in other states -- I can't remember, Wisconsin and places like, Kansas, where they tax the individuals that produce the PCE and the solvents.

STEW: Illinois, again, has a private program where the dry cleaner associations self tax themselves, and so it's a different type of thing.

IRENE: Because one of the problems that we see are that there are serious contamination with dry cleaner spills because of vapor intrusion. And they do not have the money necessarily to do the cleanups because they're small businesses. So I was just wondering if anybody was interested in seeing a demo, their staff and the DEP that are very familiar what other states are doing, so...

MICHAEL: There's a dry cleaner association, too, isn't there?

IRENE: Yes, there is. And we would not exclude them from their say.

MICHAEL: I remember being involving with them. We needed an interpreter there.

IRENE: If we're going to be making legislative recommendations, and this is something that we have been thinking about internally. I just wanted to know if people would be interested in seeing that.

TONY: Are you saying you're going to tax the people that make PCE?

IRENE: That was what some states do. Some states tax the solvent folks. And that created the pool of money for –

TOM: There are dry cleaners that are getting away from PCE also.

MICHAEL: Isn't that trend?

IRENE: It's going to be banned, I think, in 2020.

TOM: Because I've seen it in our area. And they post it environmental -- the one by me says environmentally safe dry cleaning.