BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

VOLUME I

IN THE MATTER OF:	)
	)
TIERED APPROACH TO CORRECTIVE ACTION OBJECTIVES, 35 ILL. ADM. CODE 742 (Pursuant to P.A. 89-431)	) R97-012 (Rulemaking)

The following is a transcript of a rulemaking hearing held in the above-entitled matter, taken stenographically by LORI ANN ASAUSKAS, CSR, RPR, a notary public within and for the County of Cook and State of Illinois, before Kevin Desharnais, Hearing Officer, at 100 West Randolph Street, Room 9-040, Chicago, Illinois, on the 2nd day of December, 1996, A.D., commencing at the hour of 10:00 o'clock a.m.

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A P P E A R A N C E S :

HEARING TAKEN BEFORE:

ILLINOIS POLLUTION CONTROL BOARD,
100 West Randolph Street
Room 9-040
Chicago, Illinois 60601
(312) 814-4925
BY: MR. KEVIN DESHARNAIS
HEARING OFFICER.

ILLINOIS POLLUTION CONTROL BOARD MEMBERS PRESENT:
Mr. Kevin Desharnais
Mr. Chuck Feinen
Mr. Tanner Girard
Ms. Kathleen Hennessey
Ms. Marili McFawn
Ms. Jennifer Moore
Ms. Diane O'Neil
Ms. K.C. Poulos
Mr. Anad Rao
Mr. Hiten Soni
Ms. Marie Tipsord
Mr. Joseph Yi

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY MEMBERS PRESENT:
Ms. Shirley Baer
Mr. Lawrence Eastep
Mr. Gary P. King
Mr. Rick Lucas
Mr. Bob O'Hara
Mr. Todd Rettig
Ms. Vicky L. VonLanken
Mr. Mark Wight

OTHER AUDIENCE MEMBERS WERE PRESENT AT THE HEARING, BUT NOT LISTED ON THIS APPEARANCE PAGE.

I N D E X

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E X H I B I T S

(Documents marked as Hearing Exhibit Nos. 1 through 8 for identification, 12/2/96.)

THE HEARING OFFICER: My name is Kevin Desharnais. I'm hearing officer for these proceedings entitled, In The Matter of Tiered Approach to Corrective Action Objectives, 35 Illinois Administrative Code, Part 742, docketed before the Pollution Control Board as R97-12.

Present today on behalf of the Illinois Pollution Control Board is board member Marili McFawn, who is seated to my left.

MS. McFAWN: Good morning.

THE HEARING OFFICER: Board member Joseph Yi is seated to the right.

MR. YI: Good morning.

THE HEARING OFFICER: Also present is attorney assistant Chuck Feinen and the board's technical unit representative Anad Rao.

In the back of the room, we also have two other members of our technical unit. We have Hiten Soni and Elizabeth Ann.

To start out, what we are going

to do is just ask everyone to introduce themselves so that we have an idea who is present today and we will start with the agency.

MS. ROBINSON: Good morning. My name is Kimberly Robinson and I'm assistant counsel for the Bureau of Land and Division of Legal Counsel with the Illinois Environmental Protection Agency.

Should I let them introduce themselves?

THE HEARING OFFICER: Sure.

MS. VIRGIN: My name is Tracey Virgin. I'm an environmental toxicologist with the Office of Chemical Safety at the IEPA.

MS. ROBINSON: Let me just stop you here. This is a good time to practice projecting your voice. Okay?

MS. VIRGIN: Okay.

DR. HORNSHAW: I'm Tom Hornshaw, same office.

MR. SHERRILL: I'm John Sherrill. I'm a project manager with the Bureau of Land at the Illinois EPA.

MR. KING: I'm Gary King. I'm with the Bureau of Land at the Illinois EPA.

MR. O'BRIEN: Jim O'Brien, manager, Office of Chemical Safety at the Illinois EPA.

MR. WIGHT: Mark Wight. I'm with the Division of Legal Counsel at the Illinois EPA.

MR. CLAY: Doug Clay, manager of Leaking Underground Storage Tank Section at the Illinois EPA.

MR. LISS: I'm Ken Liss, groundwater unit manager, permit section.

THE HEARING OFFICER: We will continue with those in the audience.

MS. VON LANKEN: I'm Vicky VonLanken, Division of Legal Counsel with the Illinois EPA.

MR. WALTON: I'm Harry Walton with the Illinois Power Company, chairman of the site remediation advisory committee, chairman of Illinois Environmental Regulatory Group Corrective Action, and member of underground tank advisory committee.

MS. STEINHOUR: Beth Steinhour of the Illinois Environmental Regulatory Group.

MR. RIESER: I'm David Rieser. I'm with the law firm of Ross & Hardies. I'm here on behalf of the Illinois Petroleum Council and the Illinois Steel Group. I'm also a member of site

remediation advisory committee on behalf of the Chemistry Industrial Council of Illinois.

MS. ROSEN: Whitney Rosen with Illinois Environmental Regulatory Group.

MR. WATSON: John Watson from Gardner, Carton & Douglas.

MS. SHARKEY: Pat Sharkey from Mayer, Brown & Platt.

MS. JOSEPAIT: Linda Josepait, Northern Illinois Gas.

MS. HUFF: Linda Huff with Huff & Huff.

MR. SHEELY: Jerry Sheely, Marathon Oil Company.

MR. PRIMACK: Harold Primack, Amoco Corp.

MS. LYONS: Karen Lyons, Shell Oil Company.

MR. DeVAULL: George DeVaull, Shell Development Company.

MR. RETTIG: Todd Rettig, Illinois EPA.

MR. HOMER: Mark Homer with the Chemical Industry Council of Illinois.

MR. INGRAM: I'm Derek Ingram with

Black & Veatch, engineering consulting firm.

MS. TOMCZAK: Molly Tomczak with Northern Illinois Gas.

MR. PUTMAN: Lewis Putman with Gardner, Carton & Douglas.

MR. ORLINSKY: Peter Orlinsky, Division of Legal Counsel with the Illinois EPA.

MR. CHAMBERLAIN: Bill Chamberlain, City of Chicago Law Department.

MR. JAMES: Kenny James, Carlson Environmental.

MR. MUELLER: David Mueller, senior counsel for Case Corporation.

MS. WENTZ: Ann Wentz, U.S. Environmental Protection Agency.

MR. WENTZ: Jeffrey Wentz, Acme Steel.

MR. ARMSTRONG: Steve Armstrong, attorney for People's Gas.

MR. REOTT: Raymond Reott from Jenner & Block.

MS. BURKE: Jennifer Burke from Jenner & Block.

MR. PRAGER: Michael Proger, Illinois Environmental Protection Agency.

MS. POULOS: K.C. Poulos, Pollution Control Board.

MR. DAVIS: Eric Davis, A-Plus Environmental.

MR. SONI: Hiten Soni, Pollution Control Board.

MS. ANN: Elizabeth Ann, Pollution Control Board.

THE HEARING OFFICER: I would also note that another board member has joined us, Kathleen Hennessey.

MS. HENNESSEY: Good morning.

THE HEARING OFFICER: Okay. Today's hearing will be governed by the board's procedural rules for regulatory proceedings pursuant to 35 Illinois Administrative Code 102.282.

All information which is relevant and not repetitious or privileged will be admitted. Additionally, all witnesses will be sworn and subject to cross-questioning.

The rulemaking proposal which is the subject of today's proceeding was filed with the board on September 16, 1996, by the Illinois Environmental Protection Agency as required by

Public Act 89-431, which was signed and became effective December 15, 1995.

This act added a new Title 17 to the Environmental Protection Act entitled Site Remediation Program. The proposed regulations today are intended to achieve the following objectives set forth in Public Act 89-431.

First, the establishment of a risk-based system of remediation based on protection of human health and the environment relative to the future use of the land; and second, the assurance that the land use for a site at which remedial action was taken will not be modified without consideration of the adequacy of such remedial action for the new land use.

The subject matter of the current rulemaking is linked with two other rulemakings currently pending before the board.

The first separate rulemaking is also last, intended to meet the requirements of 89-431 entitled In The Matter of Site Remediation Program, 35 Illinois Administrative Code, Part 740; and second, a rulemaking entitled In The Matter of Regulation of Petroleum Underground Storage Tanks,

which is docketed as R97-10.

Section 58.11(c) of the Environmental Protection Act, as added by 89-431, requires the board to complete the rulemaking or before June 16, 1997.

Due to this stringent time frame for adoption, the board sent today's proposal first notice on November 7, 1996, without commenting on the merits of the proposal.

Today's hearing is reserved to the agency's presentation of its proposal and any questions for agency's witnesses.

Prefiled testimony will be entered into the record as if read and witnesses will be available for questioning. We will begin the questioning phase of today's proceeding with those questions that have been prefiled.

We have received four sets of prefiled questions from the site remediation advisory committee filed by Whitney Wagner Rosen and David Rieser; from Mayer, Brown & Platt filed by Patricia Sharkey; from Gardner, Carton & Douglas filed by John Watson and Lewis Putman; and from Jenner & Block filed by Ray Riat.

We are going to proceed through the prefiled questions that relate to specific sections in order of the proposal addressing all questions related to a particular section.

This would include all of the prefiled testimony with the exception of that of Ray Riat which is not proceeding section-by-section. We will address that separately at the end of the prefiled questions.

The agency has requested that it be allowed to respond in panel format so that agency witnesses will respond as they deem appropriate.

We would ask that when addressing prefiled questions that the proponent of the question first read the question. The agency will then have an opportunity to respond and then there can be any follow-up questions that you may have.

During the questioning period, if you have a question, please raise your hand and wait for me to acknowledge you. Then, stand and state in a loud and clear voice the name and the organization you represent, if any.

Please note that any questions asked by board members or board staff are not

intended to show any preconceived notions or bias, but merely to build a complete record for those board members who are not present today.

As set forth in my October 28, 1996, hearing officer order, the second hearing is scheduled to begin on this matter on January 15, 1997. That hearing will be held in Springfield, Illinois, at 201 Municipal Center West, at 7th and Monroe Street, Counsel Chambers, third floor.

That hearing will begin with any remaining questions for agency witnesses and will also allow for testimony from other interested parties and questions addressed to those witnesses.

MS. McFAWN: I just want to welcome you here on behalf of the board and staff. We have seen a lot of you at our recently held hearings in the underground storage tank docket as well as the site remediation program document.

As some of you may know, we have delayed this series of hearings at the T.A.C.O. rules at the request of a number of participants. Maybe it is for the best that we are coming now after having

our initial set of hearings in the U.S.T. and site remediation program dockets.

I certainly see how these dockets are now linked and I have reviewed the questions that you have prefiled as I am sure as the other board members and staff have done.

I find them most interesting. I believe they also will allow us today to develop a record useful to the board as well as the regulating public.

I hope we can get through these questions. We have quite a few and I look forward to having them succinctly read into the record and I'm sure the agency is looking forward to answering them.

So welcome all.

THE HEARING OFFICER: Mr. Yi, do you have any questions at this time or comments?

MR. YI: No, I really don't.

THE HEARING OFFICER: We will then turn to the agency for its presentation of the proposal.

Ms. Robinson?

MS. ROBINSON: Good morning. Thank you everybody for being here and thank you in advance for

all the hard work that everybody has put into this proposal.

The way I anticipate proceeding is by giving summaries of testimony and having all witnesses sworn to do so. In lieu of doing an opening statement, Mr. King will give an overview of its program and its intent.

We have provided, with the help of Mr. Rieser of Ross & Hardies, two flow charts which are also inside your proposals that you have received. If you have a board numbered version of the proposal, those two flow charts fall on Pages 77 and 78 for your reference in case you can't see the flow charts up there.

Would you like to swear in the witnesses. We also have an errata sheet that was mailed out November 27th. There are extra copies on the table back there as well as appendices with shaded areas that show any changes that have occurred. We will be going through this before the summaries and Mr. King will address them.

THE HEARING OFFICER: Would the court reporter please swear in all the witnesses?

(Witnesses sworn.)

WHEREUPON:

GARY KING, JOHN SHERRILL, THOMAS HORNSHAW, TRACEY VIRGIN, KEN LISS, DOUG CLAY, MARK WIGHT, JIM O'BRIEN,

the deponents herein, having been first duly sworn under oath, testifes as follows:

MS. ROBINSON: In advance, I have had the court reporter mark all the exhibits for identification. So we will just go ahead and proceed that way.

Mr. King, I will show you what has been marked for identification as Exhibit No. 1. If you could, identify that for the record, please?

(Document tendered to the witness.)

MR. KING: This is a copy of the testimony that I have prepaid for this proceeding. It discusses legislative background and some of the history of the regulatory development.

MS. ROBINSON: And is this a true and accurate copy of the testimony that we have filed?

MR. KING: Yes, it is.

MS. ROBINSON: I'm also going to

show you what has been mark as Exhibit 2 for identification. If you could, identify that, please.

(Document tendered to the witness.)

MR. KING: This is a copy of a document that I have prepared in support of this rulemaking, which discusses Subpart A and Subpart C of proposed Part 742.

MS. ROBINSON: Is that also a true and accurate copy of what we have filed?

MR. KING: Yes, it is.

MS. ROBINSON: This has been marked as Exhibit 3 for identification. Would you please identify that?

(Document tendered to the witness.)

MR. KING: This is a copy of a document that I prepared in support of the Part 742 regulatory proposal discussing Subparts J and K.

MS. ROBINSON: Is that a true and accurate copy?

MR. KING: Yes, it is.

MS. ROBINSON: The next has been marked

as Exhibit No. 4 for identification. I will show this to Mr. Sherrill.

Could you identify that for the record, please?

(Document tendered to the witness.)

MR. SHERRILL: This is a copy of my written testimony, which I prepared that supports Subparts B, E, F, G, H, and the related appendices.

MS. ROBINSON: Are there attachments to that exhibit?

MR. SHERRILL: Yes.

MS. ROBINSON: Are they all true and accurate copies of what we have prepared?

MR. SHERRILL: Yes.

MS. ROBINSON: The next one has been marked as Exhibit 5 for identification. I will show this to Dr. Hornshaw. Could you identify that for the record, please?

(Document tendered to the witness.)

DR. HORNSHAW: This is a copy of the testimony that I prepared in support of Subparts D,

E, F and H, plus some attachments to that testimony.

MS. ROBINSON: Is all of this a true and accurate copy of what you have prepared?

DR. HORNSHAW: Yes, it is.

MS. ROBINSON: The next one has been marked as Exhibit 6 for identification. I will hand this to Ms. Virgin to identify that for identification, please.

(Document tendered to the witness.)

MS. VIRGIN: This is a copy of the testimony -- written testimony that I have prepared on Subpart I for this rulemaking.

MS. ROBINSON: Is it a true and accurate copy of what you have prepared?

MS. VIRGIN: Yes, it is.

MS. ROBINSON: The next one is marked as Exhibit 7 for identification. Mr. King, would you please identify that for the record?

(Document tendered to the witness.)

MR. KING: This is a document entitled errata sheet number one which was filed -- has been filed transmitted to the board for filing. It was

transmitted on November 27, 1996.

MS. ROBINSON: Is that a true and accurate copy of what the agency put together?

MR. KING: Yes, it is a true and accurate copy.

MS. ROBINSON: The last one was marked as Exhibit 8 for identification. Mr. King, would you please identify that for the record?

(Document tendered to the witness.)

MR. KING: This is a document. It begins with Section 742, Appendix A, general, and it contains various revisions to the appendix that we put together. Those changes are basically described in errata sheet number one.

MS. ROBINSON: And is that a true and accurate copy?

MR. KING: Yes, it is.

MS. ROBINSON: At this time I would move to have these all admitted into the record.

THE HEARING OFFICER: Are there any objections.

The exhibits will be admitted as Exhibits 1 through 8.

(Whereupon, Hearing Exhibits 1 through 8 were admitted into evidence.)

MS. SHARKEY: Mr. Desharnais, I'm wondering if we could list the exhibits that are attached to the exhibits or the attachments attached to the exhibits just so we are all clear that we have all of the attachments.

MS. ROBINSON: They are marked with lettering. If you would like, we could read those in.

MS. SHARKEY: I'm just thinking if you could tell us for the record which exhibits have attachments and if it's, for example, A through D or whatever on each one.

THE HEARING OFFICER: Exhibits 4 and 5 have attachments. Do any others?

MS. ROBINSON: No. Those should be the only ones.

THE HEARING OFFICER: All right. Exhibit 4 has attachments Exhibit A through H. Exhibit 5 has attachments A through D.

Is that accurate?

MS. ROBINSON: Yes. Are there any

other questions at this time?

Shall I proceed?

THE HEARING OFFICER: Please.

MS. ROBINSON: Mr. King, at this time, if you would, please give an overview of the T.A.C.O. process and how it's intended to work.

MR. KING: Today's hearing really begins what I hope will be a culminating phase of a long process of rule development that really began back two and a half years ago when we began the hearing process as part of the proposed LUST rules that were a follow-up to House Bill 300.

We had a lot of discussions at that time about the whole notion of cleanup objectives. We deferred that to a separate docket, proceeded on that docket through the early part of '95, and then a new law came into effect.

So we have been really engaged in a process for a good two and a half years now of developing a set of rules to be dealing with what we are now calling remediation objectives.

I will tell you just a little story just -- I tell this story in terms of describing how hard both people on the public and

the private sector have worked together relative to developing this proposal.

A couple months ago back in September, Mr. Walton who has been described as the chairman of the advisory committee and I were attending a conference up here in Chicago. It was a conference sponsored by the USEPA discussing the issue of Brownsfields and utilities. We were both making presentations there.

During the afternoon of that conference, there was a presentation by a Chicago attorney, who will be nameless, and I checked the audience, he wasn't here either. But he went through a fairly cynical attack on what we had developed as part of the T.A.C.O. rulemaking.

That attack was kind of all over the place, but, in essence, it was saying on the one hand, this was too liberal and on the other hand, it was too conservative. It had a lot of misinformation in it. I kind of bided my time and bit my tongue a little bit.

At the conclusion of his statement, Mr. Walton reached over and said sit down and I'll deal with this. He got up and proceeded

to -- I'll use the term sternly refute the person who was making these comments. In fact, he used quite a bit stronger language than that.

For me, that was really a symbol. Actually, when he did that, I felt pretty proud of what we had accomplished in terms of public sector and private sector cooperation on a very significant issue because here was a person who was really representing the private sector through a key person representing them through the context of our negotiations who is defending what, in essence, had been put forth as an agency proposal.

I think it really showed how much this is. It's not just an agency proposal, but it's something that represents a lot of people who have spent a lot of time from both the public sector and private sector trying to develop a system of remediation objectives which is protective and yet makes the best sense that we can come up with.

It doesn't mean we aren't going to have arguments or disputes, but I think there is a core sense of cooperation on what we have put together.

We are going to be going through

this rulemaking. One of the other people on the advisory committee made the comment to me that he was comparing to what we have done in Illinois to what was going on in other states relative to remediation objectives. He described what we have done in Illinois as the Cadillac approach.

If you look at it in terms of the comprehensiveness, the flexibility that's engaged, how we have sought to adapt issues to our state programs, it's really something that no other state at this point really compares to. We have gone beyond virtually anything else going on in the country.

Now, one of the results of that, because of what we have done, is that we have a proposal, although it's very comprehensive and flexible, that's also made it -- admittedly made it quite complex. It takes a lot of work to understand all of the dimensions of what's going on.

Through that complexity, I think there are certainly underlying principals that need to be understood kind of from where we were coming from. I will give you four of the kind of guiding principals that at least for me that kind of molded

our path through this process.

First, it was we weren't going to have soil remediation just for the sake of soil remediation. It's kind of a problem we saw occurring under past proposals. We felt a need to change that.

The second thing was that we really needed to look at contamination as an issue to be managed. So you end up protecting against pathways of harm to human health. The key there is we are looking at a management of contamination that results in protection of human health.

The third principal was that land use restrictions and how you handled the land use was going to be an important function with how a remediation objective system would work.

The final principal was that we wanted to have the same cleanup goals across all of our remediation programs.

In the last couple weeks, the board has seen us presenting testimony first for the LUST program, talking about the use of T.A.C.O. there and the site remediation program talking about the use of T.A.C.O. there.

We just think it is important

to have that kind of consistency as far as an overall goal. Each program will continue to have its own procedures as to how to function, but the goal -- the basic cleanup goal will be the same across all programs or at least that's our intent.

Now, we have taken those principals and we have used obviously the statute that was adopted last year, which had a lot of say about the direction we needed to take.

We have had ASTM procedures adopted through the RBKA process, which has been directed towards the petroleum program. We have used those procedures as a methodology. We have used USEPA guidance. We have used our own experience and guidance across multiple disciplines. We have had an extensive amount of peer review in this process.

What we have ended up with Part 742 is a set of procedures where there are five distinct methodologies for developing remediation objectives.

I know this may sound a little bit corny, but if you can, just think about it in the context of a symphony with five movements.

Each movements has its own theme and its own variations and each movement can be played separately, but they are all connected.

All five of those movements are connected into one symphony with some overarching themes to it. So it really is -- it's really important to look at this. There are five distinct things. It's important to understand how it all fits together.

The five methods that are -- I'll just go through those real quickly. There are five methodologies. There's the pathway exclusion. That's in Subpart C. There's an area background. That's in Subpart D. There's Tier 1. That's in Subpart E. Tier 2 is described in Subparts F through H. Tier 3 is described in Subpart I.

There is really -- I think there is -- in looking at these five methodologies, there are three real important things to consider as far as the fundamental starting points to using 742.

First, it simply doesn't work unless you have a sound characterization

and site contamination in accordance with accepted scientific and engineering principals. That means looking at the rate and extent of pathways.

Unless you have that, you really can't move forward in any kind of meaningful way relative to what these remediation objectives are all about.

The second important principal is that whatever method you are using, whatever these five methods you choose, whether you use one or whether you use more than one, you have to address three pathways.

Those three pathways are the soil inhalation, which is a direct pathway of human health impact. The second one is the soil ingestion, which is also a direct impact. Then, there is the groundwater ingestion.

Now, groundwater ingestion if you are ingesting groundwater, that's direct impact, but that has two components relative to it. The first component is really how does the contamination actually move in the groundwater towards a receptor or potential receptor.

The second component is how does

contamination move from a site -- from a point of being on land, inground, into the groundwater. That second part, that migration of groundwater, becomes critical because we are really not focused very much on people directly ingesting contamination of groundwater. Normally, it's a situation where it's been dumped on land or disposed on land or is just still there and has potential of movement.

The third thing that I think is a critical starting point is this notion of contaminants of concern. The contaminants of concern is determined based on two or three different major factors. First of all, it depends a lot on the regulatory program that you are in.

For instance, if you have a LUST site and it's a -- you're talking about a non-lighted gasoline tank, the contaminants of concern are real clear. It's the BTEX.

If you are like in the site remediation program, what the contaminants of concern are is something that can be optional on the nature of the investigation that's being performed. It also depends on what type of result is being sought from the agency.

Now, the heart of all of this, I think, is really the Tier 1 numbers as a baseline. Tier 1 kind of sits in the middle, the way we have it. It's real critical because Tier 1 can be used as a set of remediation objectives in which case you can meet those and be assured of adequate protection of public health or you can use those Tier 1 numbers as a screening tool to determine what additional information needs to be gathered, what other approach may be the best relative to the methodologies.

I'm going to take a few minutes and walk through the charts over here. First of all, as Kim was noting earlier, we would like to thank the advisory committee for doing a blowup of these charts. It saved us having to do it and saved us from having to carry if up from Springfield.

As Kim was saying, these are on Page 77 and Page 78 of the board's copy. It's going to be difficult for everybody to see this, but I'm just going to kind of quickly walk through. If you can't really see the chart, just follow along as part of your appendix documents.

Again, as I was saying before,

the whole process starts off with characterizing the site and determining what are the potential routes of exposure to human health. Once you pass through that, then, you're going to be going -- this is on the soil remediation objectives.

You determine what your contaminants of concern are. You go into the lookup tables and you see based on the contaminants of concern that you have and based on the use classification, what those Tier 1 objectives would be.

If those objectives have been met, then, you can -- then they would simply be completed without any further remediation. However, there might be a requirement of an institutional control if you have selected a remediation objective based on a non-residential use.

If you argue that you haven't met those levels, the choice could be to go ahead and remediate to those Tier 1 levels, in which case the project could be completed at the Tier 1 numbers.

The next option would be if you didn't meet Tier 1 numbers, then, you could

drop down into Tier 2 and develop objectives under Tier 2. Tier 2 is basically a set of equations. We have used both the model that comes out of the ASTM procedures and the models that come out of the USEPA soil screen and guidance document. Those can be used separately.

You go through and do a series of calculations based on on-site specific circumstances. You may find that the site meets those requirements relative to Tier 2 and can pass right through to the no further remediation stage and it could then do a cleanup of the site to meet those Tier 2 numbers.

If Tier 2 doesn't quite work out, then, the third option would be to go to Tier 3 and then objectives are developed in a similar sort of way. Tier 3 is much more wide open as far as what factors can be considered, whereas Tier 2 is looking at two models; one, the ASTM one and the other is the USEPA one as far as objectives. Tier 3 is wide open as far as different models that can be proposed. We listed a number of factors that can be considered.

The way we have tried to lay

this out is that whatever tier you are cleaning up to, it's an equivalent level of protection. So the no further remediation, from the legal standpoint, should have the same legal effect.

Moving on to the groundwater portion, when you are looking at the groundwater remediation objectives, you are still looking at site characterization, you are looking at exposure route evaluation, but then you are also looking at classification of the type of groundwater, basically, whether you have class one or class two.

Once you have determined to a great extent the groundwater classification, then, you can go in and go into the lookup tables with your contaminants of concern and as we went through with Tier 1 with the soil issue, and make some decisions as to whether you want to remediate to the Tier 1 levels or go on to one of the other tiers.

You could drop down to the Tier 2, then. Tier 2 provides the methodology for developing a Tier 2 groundwater remediation objective. That's spelled out directly in one

of the rules, what factors had to be addressed and you go through that approach.

Tier 3 for the groundwater is similar for Tier 3 to the soil in the sense that it's open and not confined to a single model. It's a little bit confusing in terms of these charts because there is an implication that you automatically go from site characterization to a Tier 1 process.

You can skip -- I don't know why you would want to, why you would want to skip past Tier 1 because you would always want to look at the charts to see whether you were meeting those numbers, but you could, in fact, jump from site characterization down to Tier 2 or down to Tier 3 as well and that's either groundwater or the soil side.

Thank you.

THE HEARING OFFICER: Thank you, Mr. King.

MS. ROBINSON: At this time I would like to have Mr. King go through the errata sheet to give an overview of the changes.

MR. KING: I think this overview is

going to be very brief.

In substance, what we have been doing since we proposed the rules back in September is we have been going through a process of making sure that a lot of things were just -- particularly with appendices, that we have numbers exactly right; that we didn't have any errors; that we didn't have any grounding problems.

So a lot of this is the result -- a lot of these changes are as a result of us going back and continuing to refine things and make sure they were accurate and getting all of the typographical errors out.

Now, there is one typographical error that I would like to note on errata sheet number one. If you look at Page 10 under Appendix C, Table D, the fourth one down, it says, for the symbol TR, the parameter values column, all references should be and then it says "ten to the minus six at the point of human exposure." After the word exposure, there should be a quotation mark.

We are going to be -- we have not been able to get -- as I was saying, we are continuing the process of making sure everything

is correct and that is an ongoing thing. We are anticipating that we will be filing a second errata sheet for the next set of hearings.

That concludes my statement on the errata sheet.

MS. ROBINSON: At this time we can proceed on through the summaries of people's testimonies and on to the questions.

Mr. King, would you like to summarize your testimony first?

MR. KING: The first part of my testimony is really just describing some of the issues that arose out of the legislation that was passed last year and just making some notes relative to that.

The second part was talking about the regulatory development. As identified here, we ended up meeting with the site advisory committee a full ten times between March and August. There was a lot of effort on everybody's part to accomplish that.

The second set of testimony discusses Subparts A and C. A lot of what is talked about in Subpart A I have already gone

through. So I won't belabor that any further.

Subpart C gives discussion as to some of the background as to how we really came to the notion of Subpart C. I think we will be talking about that in response to some of the direct questions.

The third set of the discussion that I had was talking about Subpart J dealing with institutional controls. We have designated five types of execution controls that we think are appropriate for use under these rules. Some of them are more obvious than others, but those are what we really concluded was appropriate.

Then, there is just a short discussion on engineered barriers and what that's intended to reply to.

MS. ROBINSON: Mr. Sherrill?

MR. SHERRILL: Thank you for the opportunity to address this hearing.

My written testimony provides details of these subparts, Subpart B, which is general, which has the incorporation by reference, the soil attenuation capacity, soil saturation limit, determination of compliance with

remediation objectives and agency review and approval.

Subpart E is the Tier 1 evaluation. Subpart F is the Tier 2 general evaluation. Subpart G is Tier 2 soil evaluation. Subpart H is the Tier 2 groundwater evaluation. Then, we have the related appendices A, B, C and D.

I would just like to start to briefly follow-up on what Gary King was talking about. If we could turn to Exhibit C, which follows my written testimony, that's Exhibit C.

Exhibit C is titled "Residential Exposure." Following up with what Gary King had said, these three pathways are very important and we will be discussing them throughout the day.

In looking at this exhibit, it demonstrates the fundamental exposure routes upon which these remediation objectives are developed.

On the left-hand side of this exhibit, we see a child who is potentially exposed to ingestion of contamination. We see a man walking in the middle of this diagram and he is exposed to

inhalation of contaminants. To the far right is someone potentially exposed to contaminants by drinking the groundwater.

The contaminants are shown to be what I have labeled waste pile and source. We can see that it's -- I'm demonstrating that it's leaving into the groundwater and the groundwater transports it over for possible ingestion.

So those are the three fundamental routes that will be discussed throughout these hearings; soil ingestion, inhalation, and ingestion of groundwater.

If we could turn to -- I think it would be helpful just to briefly turn to the actual proposed rule itself, Part 742, Appendix B, Table A, Appendix B, Table A.

THE HEARING OFFICER: For those following along, that's on Page 79.

MR. SHERRILL: This is titled "Table A, Tier 1 Soil Remediation Objectives for Residential Property." To the far left of this is a column chemical abstract number. The next column is the chemical name. Then, we have a column labeled ingestion. There is a column labeled inhalation.

Then, we have two columns for the migration of groundwater -- portion of the groundwater ingestion exposure route with respect to class one and class two.

What I'm trying to tie together is those three exposure routes that we went over. What Tier 1 provides, and as Gary King has called screening or looked up values, Tier 1 provides pre-calculated numbers.

For example, looking at benzene, we see that we have soil ingestion value of 22 milligrams per kilogram. We have an inhalation value of 0.8 milligrams per kilogram.

So Tier 1 provides pre-calculated lookup values. We have provided these lookup values for 117 different chemicals. Throughout my testimony, I use the word chemicals and contaminants somewhat interchangeably.

Generally, the Tier 1 soil -- unless we have other information demonstrating otherwise, a Tier 1 soil objective is generally the most restrictive soil objective problems from the respective routes that we review.

Subparts F, G and H in my written

testimony provides the framework and equations of the Tier 2 evaluation by which site-specific remediation objectives are calculated. These are analytical methods that you incorporate site data to calculate the Tier 2 remediation objectives.

Subpart B of my testimony provides what we are calling ceiling amounts by use of a soil attenuation capacity and a soil saturation limit. This prevents free product and potentially unacceptable risk from either single or multiple contaminants remaining in the soil as well as violating the model assumptions themselves under Tier 2.

Subpart B of my testimony also has the criteria for determining if a site meets the remediation objectives. Basically, the chief compliance of the analytical results are less than the applicable remediation objectives.

We have also provided some flexibility in meeting these objectives by provided what we call averaging and compositing techniques to achieve these objectives.

That is the end of my summary.

MS. ROBINSON: Thank you, John.

Dr. Hornshaw?

DR. HORNSHAW: Good morning. My testimony concerns information presented in Subpart D, determining area of background, and portions of the information presented in Subparts E, which is the Tier 1 evaluation; F, which is the Tier 2 general evaluation; and H, which is the Tier 2 groundwater evaluation.

In my testimony, I describe the development of the proposed methodologies for determining and using area background concentrations for chemicals in the soil and groundwater. I present an overview for the derivation of the Tier 1 cleanup objectives listed in Appendix B for groundwater and soil.

I explain why and how cumulative effects of non-carcinogens must be addressed. I have discussed the recommended values for physical chemical parameters presented in Appendix C and I have described the rationale and requirements for allowing chemical concentrations in groundwater in excess of the Tier 1 values.

For Subpart D, area of background, my testimony goes into a discussion of why the

general assembly included a place for area background as one of the alternatives in House Bill 901. That was at Section 58.5(b).

This is because it's possible that native concentrations of chemicals may exceed the calculated cleanup goal for a chemical. It's also possible that an upgradient source of a chemical has resulted in concentrations of that chemical at a downgradient site, which exceeds its risk-based cleanup goal even though that was never handled at a downgradient site.

It's also possible that area-wide or even global human activities have resulted in man-made chemicals being deposited in appreciable concentrations around and sometimes even distant from such activities.

Therefore, recognition of background levels of chemicals is necessary in a risk-based remediation program in order to address the situations that I have just discussed.

For the soil background determination, we decided that specific procedures for determining background concentrations were needed and what we tried to do was identify at

least one procedure for soil and one for groundwater, which if performed correctly by the person doing remediation, it would routinely generate results which could be accepted by the agency without question.

Thus, we originally selected two no questions approaches for determining soil background in the draft Part 742, which was sent to the advisory committee in April.

Our first approach at that time, which we called the prescriptive approach, was adapted from a pretty much routine approach the USEPA uses for determining groundwater background concentrations at RCRA sites.

In this adaptation, we specified a minimum of ten samples, which would also have to be demonstrated to be normally distributed as shown by a coefficient of variation tests. If the background data set met these requirements, then, the 95 percent upper tolerance limit of that data set would be the upper limit for the area of background concentration for that site.

We also developed a second approach, which we called the statewide background

approach, and that relied on our publication entitled "A Summary of Selected Background Conditions for Inorganics in Soil." We use that -- our publication to determine if an inorganic chemical could be considered to be present at a site at background levels.

My office, the Office of Chemical Safety, had previously compiled into a data base all samples which had been reported to the agency as "Background Data for a Site," and we decided to take advantage of this relatively large data base to help in determining area background at sites.

If the concentration a chemical at a site fell within the range reported for that chemical in our survey, then, the chemical was likely present at background levels and need not be included among the chemicals of concern at a site.

In addition to these "no questions" approaches, we also included pretty much standard language allowing another approach acceptable to the agency as a third option, which was intended to address situations in which the minimum requirements of the prescriptive approach

were not met.

However, there are some complications that developed during the course of our discussions with the advisory committee as a deadline for submitting our proposal approach where certain problems with the prescriptive approach for soil surfaced.

An update to the RCRA guidance, which I discussed earlier, was obtained by the agency and we reviewed it for some additional guidance in establishing soil cleanup or soil backgrounds.

In contrast to the earlier guidance, the update said that most naturally occurring chemicals will have a long normal distribution rather than a normal distribution and this distribution should be shown to be the case rather than assuming normality.

The update also specified a number of tests for normality and distribution and actually quite a few of them were preferred to the coefficient of variation tests, which was specified in the original draft.

Beyond these apparent problems

from USEPA's update, we became aware that due to the inherent variability in the naturally occurring levels of chemicals and soils, statistical methods, which are appropriate for background groundwater data, may not necessarily be appropriate for background soil data.

USEPA personnel were contacted for advice and they relayed to us that since there are multiple distributions possible in naturally occurring chemicals and specific methodologies and tests are available for these various distributions, the statistical methodology should be appropriate for both the nature and distribution of the data set.

As a result of all of this, we removed the prescriptive approach from the original proposal and now the statewide background approach is the only no questions approach for soil.

For determination of the groundwater background, much of what I described for soil also applies to groundwater since the soil approach was originally adapted from groundwater methodologies.

Thus, the prescriptive approach, which I described above, and which we subsequently

dropped from the final proposal to the board, for soils is still proposed for groundwater.

Since the agency has not developed a data base for groundwater background samples similar to what we did for soil, there is no statewide background approach for groundwater.

If the minimum conditions of ten samples having a normal distribution are met, the agency will accept the ninety-five percent upper tolerance limit of the data set as the upper limit of background concentrations for groundwater without question.

As with the soil background determination, the standard language of another statistical method appropriate for the data set may be approved by the agency to address those sites which don't meet the minimum requirements or for which the prescriptive approach isn't really appropriate.

As far as use of background, any of the procedures prescribed may be used to demonstrate that a chemical is present at a site as a result of background conditions and should therefore be eliminated as a chemical

of concern for that site.

With the exception of the statewide background approach for soil, any of the procedures may also be used to determine a remediation objective for that chemical in lieu of the other procedures of Part 742.

Since the statewide background approach has certain shortfalls, the agency believes that this approach is inappropriate for establishing remedial objectives for soil at a site.

Finally, we included two specific restrictions on the use of background concentrations which come from the language of House Bill 901. Section 58.5(b)(2) of the act specified that background concentrations of chemical of concern at a site exceed residential use remediation objectives. A site may not be converted to residential use unless the residential use or remediation objective for that chemical is first achieved.

Therefore, we are requiring the use of institutional controls at sites where background concentrations exceed the residential

use remediation objectives prohibiting future residential development unless the residential use remediation objectives are first achieved.

Second, Section 58.5(b)(3) of the act prohibits its use of area background concentrations if the agency determines in writing that the background level poses an acute threat to human health or the environment when considered post-remedial action use at the site.

The language for both of these sections have been incorporated directly into Part 742.

Subpart E, I need to talk a little bit about how we came to the Tier 1 tables. In 1994, ASTM and USEPA separately published procedures to develop cleanup objectives for protection of human health and the environment which take into account site-specific conditions and risks.

All of these approaches are slightly different. They have a lot in common and tend to compliment each other. Both approaches accelerate and increase the consistency of regulatory decisions concerning soil and groundwater cleanup

objectives.

At this point, I'm going to present a brief overview of how USEPA soil screening guidance came into being before I go into the development of the Tier 1 tables.

USEPA began their process of developing soil screening guidance levels in 1991 as part of an accelerated review of the Super Fund process, with the aim of identifying trigger concentrations for commonly detected chemicals at Super Fund sites.

As a result of that activity, an initial list of thirty trigger levels, which USEPA called the dirty thirty, were developed and has since been expanded to the current list of 110 soil screening levels and fourteen alternative calculations, which are contained in the final guidance from USEPA.

This evolution came from a series of four meetings with fifteen states, which were invited to participate with USEPA, and also the Association of State and Territorial of Solid Waste Management Officials in the development process plus continuing research

by USEPA into how chemicals behave in the environment, et cetera, outreach efforts with the various state holders and several rounds formal of and informal public comment and peer review.

Soil screening guidance is intended to be used by USEPA as a mechanism to screen out areas or sites within a Super Fund site that don't require further action or study provided that the area does not differ significantly from the assumptions which underlie the soil screening levels.

In other words, the screening level is a soil concentration below which there is no concern that the Super Fund Program and above which some type of further action is required. The soil screening levels are neither cleanup goals for a Super Fund unit nor an automatic trigger for remedial action.

The area or site under consideration shouldn't differ significantly from the underlying assumptions which went into the development of the soil screening levels. These underlying assumptions in the final guidance

was on a one-half acre site with contamination extending to the water table upon which a future residence with a private well would be built.

In both conceptual models, USEPA used a series of standard exposure assumptions and equations which were derived for and used in baseline risk assessments for Super Fund sites, which were readily available health-based standards and toxicity data from their data bases and sources, conservative transport and fate models, and an extensive data base of computer runs of the transport and fate models using input parameters from sites around the nation to develop a matrix of soil screening levels which appear in the soil screening guidance.

These matrices contain soil concentrations for protection against direct ingestion, inhalation of soil contamination, and indirect exposure due to movement of chemicals from soil into the water supply well.

If the soil -- if the screening levels are not exceeded, as I said, before then the site should be acceptable for even residential

future use in the future, which is usually the most risky anticipating future use because we are assuming a child is eating soil at this site, and that should be eliminated from further action at the site.

Only when slight conditions deviate from this conceptual exposure scenario would further consideration of the area or site be indicated regardless of comparison of concentrations at the site with the soil screening levels.

Some examples of sites, which would require further evaluation automatically, are where surface water is adjacent to the site, when there are environmental concerns at the site, where there is the potential for significant human exposure other than ingestion and inhalation of soil, and drinking contaminated water such as extensive skin exposure or eating locally grown food crops or animals or where other future uses of the property is very likely to be other than residential.

Finally, USEPA invisions using the soil screening guidance in a tiered manner. It is anticipated that relatively few large areas

within most of our fund sites will initially be below all of the soil screening levels. However, by using a series of equations which allow Super Fund personnel to calculate site-specific soil screen levels, which will still be protective of a residential future use, the USEPA anticipates that a number of smaller parcels may be eliminated from further review at these sites.

As a result, USEPA prefers the calculation-based levels for use by their project managers since with the relatively small increase in effort and analytical costs, it may be possible to calculate an alternative set of screening levels, which would allow the site to be eliminated from further consideration without jeapordizing public health.

The baseline of generic soil screening levels were derived using conservative dafault assumptions for each of the three pathways as I described previously. Therefore, there are screening level concentrations for protection of residents living on a site for thirty years. One value is for ingestion of contaminated soil; one is for inhalation of vapors and particulates

coming from the contaminated soil, and one is for ingestion of water from a drinking well on the site.

If all three pathways are or could be relevant at a site, then, the lowest of the three values is the screening level. If a pathway can reasonably be excluded, then, the lowest value is used.

I would like to list a few of the other key features -- cut it short?

MS. ROBINSON: Yes.

DR. HORNSHAW: Okay.

We adopted quite a bit of USEPA's key features and I guess what I will go through next are parts that we have added or changed from USEPA's approach in order to make this an Illinois-specific procedure.

The first thing we did was concern Class C carcinogens or Category C carcinogens, which are defined by USEPA as possible carcinogens.

There are several chemicals in the generic soil screening levels classified as Category C, and whose soil screening levels

have been calculated with a cancer risk no greater than one in one million.

House Bill 901 limits the definition of carcinogen to Categories A or B(1) or B(2). Therefore, in order to be consistent with the legislation's intended and definition of carcinogen, we had to recalculate the Tier 1 tables for Category C carcinogens.

Now, the way we did this was -- okay. All right. We recalculated Chlorodibromomethan, 1,1-Dichlorethylene, Isophorone, 1,1,2-Trichloroethane, and deleted Hexachloro-1,3-Butadiene, Hexachloroethane and 1,1,2,2-Tetrachloroethane because there wasn't a non-carcinogen toxicology criteria to recalculate the Class C's.

I probably should mention that 1,4-Dichlorobenzene was listed as a B2 carcinogen. If the board would remember back to the air toxic rulemaking where we had quite a discussion about the cancer classification of this chemical, we had contacted USEPA who had identified this as a B2 carcinogen in the rule and asked them if it wasn't actually a Category C carcinogen. They said it was

so we recalculated that chemical also.

We had to tinker with the way the migration to groundwater pathway or the inorganic chemicals was derived. USEPA put together an alternative table for pH of 4.9 and pH of an eighth of the soil. We realized that this was insufficient for remediation objectives for Illinois so we expanded that table greatly giving cleanup objectives for chemicals that can ionize in half of pH increments for all the chemicals that are in the proposal.

We have added twenty-two chemicals that have current groundwater standards in Subpart 620 and had to go through the same process as USEPA used in calculating the chemicals that were in the soil screening guidance. So what we have in the rule is entirely consistent with the procedures the USEPA used to calculate the chemicals that were in their rule or their procedure.

We have added these twenty-two chemicals using that exact same procedure. We had to add a whole new section on migration to class two groundwater because the soil screening guidance contains tables -- their tables are based on

protection of drinking water and class two is not a drinking water aquifer.

Finally, the big one, we had to include tables for industrial remediation objectives because the soil screening guidance anticipates residential as the only future use at a site. The things that we had to add into the USEPA's equations to develop the industrial cleanup numbers are detailed in my testimony.

In support of Subpart F, my testimony discusses why cumulative effects of non-carcinogens need to be evaluated in Tier 2. We don't do this in Tier 1 because we feel that the conservative nature of the calculations for Tier 1 should be acceptable to protect against cumulative effects of carcinogens where this may not necessarily be the case in Tier 2 and Tier 3. Those have to be specifically included in a Tier 2 approach.

We note that the USEPA did a large research project in QA/QC on physical chemical parameters which are necessary to use the Tier 2 equations. We have adopted those into the proposal.

The primary reason we needed

kind of a standardization of the physical chemical parameters is because in some cases they may vary by two or three orders of magnitude. When you look at all the values that are available from the literature, which could lead to two or three orders of magnitude difference in cleanup objectives calculated using the Tier 2 equations, so we wanted to standardize this.

Finally, we put in Tier 2 for the groundwater remediation objectives a site-specific procedure to deviate from the 620 standards on health advisories if the person doing the cleanup meets the listed requirements.

Finally, I need to mention a couple of errata items that we have added since the filing of the board. We had to add a table of organic carbon partition coefficients for various pH's for use in Tier 2 because when we reread that, we found that there was nothing in the proposal that was sent to the board directing a person how to calculate a site-specific value.

We had to add a table listing all the different groundwater values that were used to calculate the Tier 1 migration to groundwater

numbers. There was a lot of confusion.

I'm sorry for taking long.

MS. ROBINSON: Thank you, Dr. Hornshaw.

The last one on the summaries will be Ms. Virgin.

MS. VIRGIN: Thank you, Ms. Robinson.

My testimony is on Subpart I and Supart I provides guidance for requesting a Tier 3 evaluation and the criteria that the agency will use in reviewing these Tier 3 submittals.

The first section is Section 742.900, which states that Tier 3 has been developed to be flexible and to address sites that are not suitable for Tier 1 or Tier 2 analysis.

Tier 3 analysis may be performed without first doing a Tier 1 or Tier 2 analysis, as Mr. King mentioned earlier.

The remaining sections of Subpart I discuss what scenarios can be considered for a Tier 3 evaluation and the criteria the agency will use in evaluating Tier 3 requests.

In general, the agency will be evaluating the appropriateness of sampling the analysis at the site, whether the relevant

chemicals of concern were analyzed, whether the detection limits were appropriately low, whether the sampling was performed correctly, if any modeling was performed, whether the model has been peer reviewed, that the parameter values are within the model ranges, and whether the calculations were done correctly.

The agency considered making the requirements of Tier 3 more specific, but we decided that this would have precluded many sites from a Tier 3 evaluation and would have made the size of 742 unwieldily.

Briefly, Section 742.905 provides guidance for modification of parameters that are not allowed under Tier 2. Section 742.910 discusses how the agency will evaluate requests to substitute analytical models different from those in Tier 2.

Section 742.915 provides guidance for submittal and review of formal risk assessments. At some sites, it may be prudent to perform a full scale risk assessment to demonstrate that the contaminants of concern do not pose a significant risk to any human receptor.

Section 742.920 contains

guidance for submitting requests to the agency for site-specific remediation objectives due to impractical situations such as when the remaining contamination is located under a building.

Section 742.925 provides guidance for submittals made to the agency demonstrating that a particular exposure route is not viable at a site because of natural or man-made barriers.

Section 742.930 allows for derivation of toxicological bench marks in those instances where a contaminant of concern does not have toxicological information available from the sources which are incorporated by reference for the relevant exposure groups.

Finally, Section 742.935 has been reserved to address sites which will be used for agricultural or wildlife habitat.

Nationally peer reviewed and accepted ecological based risk assessment guidance is not available at this time. Therefore, this section has been reserved until such guidance becomes available.

That concludes my summary.

MS. ROBINSON: Thank you.

That would include all of the agency's summaries of summary at this time.

THE HEARING OFFICER: At this time, we will take a ten-minute break. Then, come back to continue with the prefiled questions.

(Whereupon, after a short break was had, the following proceedings were held accordingly.)

THE HEARING OFFICER: We can go back on the record.

Does the agency have anything further at this time?

MS. ROBINSON: No, we do not.

THE HEARING OFFICER: Okay. We will then proceed to the questioning phase of today's proceeding.

As I mentioned, we are going to begin with the questions that have been prefiled and particularly those that have been prefiled referencing particular sections.

That's the testimony filed

by the site remediation advisory committee; Mayer, Brown & Platt; and Gardner, Carton & Douglas.

After that, we will have the prefiled questions from Ray Reott which will address general questions and any general questions after that if we get that far.

The first prefiled question that we have is from the site remediation advisory committee on Section 742.100.

MS. ROSEN: Good morning. I'm Whitney Rosen. I'm legal counsel for the Illinois Environmental Regulatory Group. We participated with numerous other individuals and organizations in filing these questions on behalf of the site remediation advisory committee.

Question number one, is it correct that Part 742 regulatory proposal replaces the agency's tiered approach to cleanup objectives guidance document?

MR. KING: Yes. That is correct.

MS. ROSEN: Does the agency intend to perform any formal outreach or make some sort of a statement to the regulating community to publicize

this act?

MR. KING: I think we have already -- when we have gone out and done or -- opportunities to speak at conferences and that sort of thing, we have already been telling people that they should have been using the proposal as opposed to the guidance document.

MS. ROSEN: Okay. So you are encouraging the use of the proposal and at such time it's finalized, you will encourage that use, but you are no longer encouraging the use of the guidance document?

MR. KING: That's correct.

MS. ROSEN: Okay. Question number two, if remedial action plans are being or have been developed in accordance with tiered approach to cleanup objectives guidance document, yet final remedial action has not been completed, will the agency allow additional plans to be resubmitted based on proposed Part 742?

MR. KING: That's correct. I should note that still would have the follow of the procedures of the specific program under which that is being resubmitted.

MS. ROSEN: Thank you.

THE HEARING OFFICER: Okay. The next question concerns Section 742.105. There are several questions.

We will begin with the questions again from the site remediation advisory committee.

MS. ROSEN: Question number one, is it correct that Title 17 of the Illinois Environmental Protection Act and Part 742 regulatory proposal authorizes the use of groundwater remediation objectives for contaminants of concern that are greater than the groundwater quality standards established pursuant to the Illinois Groundwater Protection Act and rules promulgated thereunder at 35 Part 620 Part 620?

MR. KING: Yes, that is correct.

MS. ROSEN: Moving on to question two, is it also correct that the site-specific groundwater remediation objectives approved under Part 742 are equally protective of and may exceed the 35 Illinois Administrative Code, Part 620 groundwater quality standards?

MR. KING: Generally, that's correct. It assumes, of course, that the decision that's

being made is consistent with Part 742, but with that assumption in mind, I would say that's a correct statement.

MS. McFAWN: Could you define what you mean by "may exceed," Mr. King, when you answer that question?

MR. KING: What the words "may exceed" mean.

Is that what you are looking for?

MS. McFAWN: Yes.

MR. KING: May exceed, in that context, is looking at, really, the numbers that are in Part 620. For instance, for a class one, there is a -- for class one groundwater, they are already given contaminant that's elicit in 620. There is a numeric number. I mean, there is a number associated with what that class of groundwater is supposed to achieve. We would be talking about the number that's greater.

MS. McFAWN: Thank you.

THE HEARING OFFICER: Okay.

MS. ROSEN: Could I ask that the beginning of Mr. King's answer be read back, the answer to question number two?

(Whereupon, the requested portion of the record was read accordingly.)

MS. ROSEN: Thank you.

All right. Number three, based on Section 742.105(g), it is correct that the agency's issuance of a no further remediation determination provides prima facie evidence that the contaminants of concern addressed under the remedial action plan do not, relative to groundwater, cause water pollution under Section 12(a) or create a water pollution hazard under Section 12(d) of the act?

MR. KING: I would agree that that's a good characterization of what 742.105(g) says except with one small caveat and that is the rule discusses the fact that the -- that this principal is in effect while the no further remediation determination is in effect.

For instance, if the NFR determination was voided at some point in the future and it was no longer in effect, then, this principal would not apply at that point.

MS. ROSEN: Question number four,

please clarify what will constitute no further remediation determination for each of the various remedial programs which may utilize Part 742.

MR. KING: Okay. Let me provide four and perhaps five examples. The first example is the site remediation program. The NFR determination there is going to appear as part of the remedial action completion report and no further remediation letter.

Under the RCRA program, that occurred in two different ways. First of all, if there is a Part B permit, the permit itself would represent the determination, which would be included within that determination, or if you had an interim status situation, then, it would be an acceptance of the certificate of closure.

For the LUST program, there is a corrective action completion report and that's followed by a no further remediation letter.

Finally, for the Super Fund Program, the NFR determination there would be incorporated within the record of decision.

MR. RIESER: If I could just follow-up on the part -- the RCRA context, is it your testimony

that a Part B permit itself would be an NFR determination?

MR. KING: Well, the Part B permit would -- could be including that determination as part of it.

MR. RIESER: What if the Part B permit set out corrective action requirements for units identified at the site?

MR. KING: In that situation, then, you would have a follow-up document that demonstrated that those items had been completed.

MR. RIESER: Is there a common term or a term under the RCRA regulations for that follow-up document?

MR. KING: I don't think there is really a specified defined regulatory term. We just call it a closure letter.

MR. RIESER: Okay. Thank you.

MS. SHARKEY: If I could follow-up --

THE HEARING OFFICER: Could you, please, stand up and identify yourself for the record.

MS. SHARKEY: I am Pat Sharkey with Mayer, Brown & Platt.

Mr. King, are you saying, then, that a RCRA Part B closure letter would have the effect of a no further remediation letter under Subsection G here?

MR. KING: No, I'm not saying that.

MS. SHARKEY: If, in fact, the procedures here were followed in the Part B consistent with the Part B program culminating in a closure letter, would the issuance of that closure letter provide that prima facie evidence that contaminants of concern do not tend to cause water pollution under 12(a) or create a water pollution hazard under 12(d)?

MR. KING: I'll try to explain that as best as I can respond to it.

With the RCRA program, it's a little bit different than the site remediation program or the LUST program in terms of there is not a specific thing called a no further remediation letter.

So in essence, to effectuate any kind of determination that was relative to the RCRA program if you are using something beyond Tier 1 residential, you would have to use a different

institutional control to effectuate that.

MS. SHARKEY: Could you give me an example of what you mean by a different institutional control?

MR. KING: We provided for, for instance, deed restrictions. That would be an example.

MS. SHARKEY: I'm sorry. Are you saying in the context of something other than a no further remediation, for example, the Part B closure letter that we just talked about, that you would need some sort of institutional control, that you would not need in, for example, the site remediation program?

MR. KING: In either program, if you are talking about remediation objectives which are, for instance, based objectively on industrial/commercial use, you would need to have some type of institutional control relative to that piece of property.

For instance, the no further remediation letter is a concept that's been put -- it appears in the proposed rules for the site remediation program and for the LUST program, but

it does not appear in any of the RCRA rules.

So there would not be that direct equivalent document in the RCRA program. So if we saw a need to -- you know, in order to make that option available for cleanups under the RCRA program, that would be an institutional control document, which would be -- we would call a deed restriction.

MS. SHARKEY: Would it be possible to get a no further remediation letter as well as a RCRA closure letter at a RCRA site?

MR. KING: Could you say that again?

MS. SHARKEY: I'm wondering if a remediation applicant or a Part B owner/operator who is cleaning up or performing corrective action goes through and uses standards, uses the procedures under Part B program under Part B permit, at the end of that period of time, if they get a closure letter that has one set of requirements and does some things, can they also get a no further remediation that gives them the protection that is described here in Subsection G?

MR. KING: Well, I think that closure letter -- if the closure letter is incorporating

that through further remediation determination, which is what we anticipate to be the way to proceed, then, 105(g) would apply.

MS. SHARKEY: Thank you.

THE HEARING OFFICER: Are there any additional follow-up questions?

MS. SHARKEY: If I could just ask you this, in other words, then, you would not necessarily need another letter? It could be incorporated into that closure letter?

MR. KING: That's correct. Again, just so it's clear, of course, you have to comply with all of the RCRA requirements relative to securing that letter.

MS. SHARKEY: Right. Thank you.

THE HEARING OFFICER: Ms. Rosen?

MS. ROSEN: Okay. Question number five, will these rules apply to remediations required as a result of enforcement actions under the Illinois Environmental Act?

MR. KING: They certainly -- they could apply. I think that's going to be dependent on what the result of the enforcement action is. There certainly is the option the way the statue

rules are set up that that could be a result.

MS. ROSEN: How will the rules be implemented in the context of enforcement actions?

MR. KING: As I have envisioned it, typically, what will happen is, for instance, if the agency was pursuing an enforcement case, typically, those end up with some kind of settlement document. I would anticipate that the settlement document would end up referencing the use of 742 as a methodology for developing remediation objectives.

MS. ROSEN: How do you envision that the rules will apply in a pre-enforcement scenario where the agency may have become aware of an alleged violation, yet it has not been referred to the attorney general's office?

MR. KING: That's going -- to some extent, that's going to depend on how that would fit together from a programatic standpoint.

For instance, that's if you are talking about a site under the LUST program and we are provided as a methodology that 742 could be used. So I think it would just kind of flow as kind of a natural result of that

situation.

MS. ROSEN: It would remain an option, though, for an alleged violator to utilize these provisions?

MR. KING: Yes.

MS. ROSEN: Do you envision that the agency might demand that these provisions be used to address potential groundwater or soil contamination?

MR. KING: Well, again, if we go back to the LUST program example, that is the option. The LUST rules reference the remediation objectives process of Part 742 and we expect that process to be used.

MS. ROSEN: It would also be an option in situations where petroleum isn't an issue, but there is some other contaminants of concern?

MR. KING: Yes, that's correct.

THE HEARING OFFICER: Mr. Rieser?

MR. RIESER: You have indicated it would be dependent on some things. Under what circumstances would a person either in enforcement or some pre-enforcement mode not be able to utilize

742 for developing remediation objectives?

MR. KING: For example, there could be a court order already in effect which mandates certain activities as applying.

Absent a modification of that court order, those would be the procedures the court order would be following.

MR. RIESER: Are there other circumstances?

MR. KING: One of the things we identified in the rules, we have had several exception areas. One of them, for instance, is emergency response type things. If you have an emergency type situation, certainly, following the procedures of a tiered approach is not the thing to be doing. You need to address the emergency right away.

MR. RIESER: Anything else?

MR. KING: Again, this is also in is Section 105. We discussed issues where you have releases to surface waters. You really have to look at what other programs are requiring. Ecological concerns would be another issue where 742 doesn't really directly address that.

MS. ROSEN: Do you envision requiring the use of these procedures in all instances aside from emergency responses where there might be a release or where the agency has become aware of a release of a contaminant of groundwater or to the soil?

MR. KING: Well, I hesitate to speculate as to all other circumstances. We have outlined in the rules a series of things where they really shouldn't be used of various circumstances. There may be others.

Certainly, our intent is that 742 have as wide an application as possible. I think it's a good way of doing things. We want to see it widely used. There may, of course, be specific situations where it certainly doesn't make sense to use it.

THE HEARING OFFICER: We have a follow-up question from Chuck Feinen.

MR. FEINEN: Do you envision a problem with parties of an enforcement action coming to the agency and trying to use this program as a way of cleaning up the site versus the already established process and how would the agency work with those

parties?

MR. KING: The way this is set up is really the interaction with the agency. The direct interaction with the agency is, vis-a-vis, whoever is owning or controlling the use of a piece of property.

If there were a third party enforcement case, again, one of the results there could be that the site owner/operator was directed to enter the state site remediation program and then we would use the Part 742 procedures in that context.

Our involvement with a citizen group is it's probably going to be more of an indirect option as opposed to the direct kind of interaction that I was analogizing to earlier.

MR. FEINEN: Thank you.

THE HEARING OFFICER: Ms. Sharkey?

MS. SHARKEY: Following up on the idea of pre-enforcement use or enforcement use of the rules, does the agency intend to utilize the tables and the other Tier 2, Tier 3, even, objectives as a basis for determining when to pursue enforcement?

MR. KING: That's an option.

MS. SHARKEY: I noted that said you thought it was the agency's intent and hope that these would be used broadly and there would be sort of a uniform set of standards in all programs.

So is the intent that over time, at least, these same rules will be looked to in making enforcement decisions at the agency?

MR. KING: I think that's generally correct. I guess I would view, for instance, if we were dealing with a site which was in our state Super Fund cleanup program where we had the lead relative to those activities as far as expenditure of state funds, we would initially -- our initial screening would be done as would a private owner relative to this property.

We would look to whether the Tier 1 numbers are being exceeded and then once we have screened through that process, we would have to look at what other ultimately remediation objectives could be applied relative to that property considering long-term use, long-term control, and those kinds of things.

MS. SHARKEY: Thank you.

THE HEARING OFFICER: Are there any additional follow-up questions?

MR. RIESER: I think we are on to 742.115.

THE HEARING OFFICER: Was question six asked?

MR. RIESER: I believe it was.

MS. ROSEN: Yes, it was.

THE HEARING OFFICER: Actually, then, we will be moving on to the prefiled questions of Mayer, Brown & Platt concerning 742.105.

MS. SHARKEY: Thank you. May a person use this part if he or she can demonstrate that this part is not in conflict with a program requirement?

MR. KING: I think that's correct. We had initially used the term in conflict. As we discussed it with the advisory committee, we ended up using a positive statement of that same principal. You will see that in 742.105(a) in the second sentence.

MS. SHARKEY: What I'm trying to figure out is if consistent with is actually the same as not in conflict with.

Is it your understanding that

the intent is really the same?

MR. KING: Yes.

MS. SHARKEY: May Part 742 be used in a Section 4(q) site?

MR. KING: That's correct.

MS. SHARKEY: Would it make any difference if the Section 4(q) site were also a landfill?

MR. KING: Yes, it could, yes.

MS. SHARKEY: Is it possible for these procedures to be used in the context of landfill closure?

MR. KING: I think I discussed that in my testimony. Let me get a copy of that out.

MS. SHARKEY: I apologize. This question is a little bit off of my prefiled questions, but I'm concerned about the extension of the 4(q) at a landfill site specifically.

MR. KING: In the testimony, we submitted, if you look at this, it's in my discussion relative to Subpart A, there is a paragraph that talks about how we see Part 742 interrelating with sites that are managed under Part 807 and Parts 710 to 817.

MS. SHARKEY: I appreciate it that it's in there, but could you help me by explaining it, though, on the record?

MR. KING: Let me ask you this. It's a little difficult for me to do that. I'm not sure what point you are finding confusing looking at this.

MS. SHARKEY: What I'm trying to determine is I have a client who has a landfill that is a 4(q) site and we are in the process of doing some remedial work at that 4(q) site and would like to potentially use this approach.

If this is of any help, we are looking at a plume that goes beyond the actual landfill, but that is associated with it. So there is not only, for example, class four groundwater, but there is a broader plume.

The concrete question is, as I understand it, we can use these procedures at a 4(q) site, but does the fact that this is also a landfill which is also in a landfill program, create a different scenario and somehow make these procedures and these objectives unusable for purposes of both closing the 4(q) and

achieving closure at the landfill?

MR. KING: I really hesitate to make a commitment on that because it really is dependent on where that landfill would sit in the regulatory process. It might be a situation or could apply or it might be a situation where it simply is not going to apply.

I guess really without evaluating a substantially more complete set of facts, I don't think we really could make a site-specific determination.

MS. SHARKEY: I understand that. I'm really not trying to get you to say anything site-specific as much as whether or not within -- these rules could be used or there is nothing in here prohibiting use of these rules in a landfill closure. I understand there may be site-specific considerations in each one.

MR. KING: As was discussed in the testimony, there are certain situations where it could. There are certain situations where it can't because of the regulatory structure.

MS. SHARKEY: Because it would be in conflict with the regulatory structure?

MR. KING: Right.

MS. SHARKEY: So if it's not in conflict with the regulatory structure, there is nothing -- in other words, if it isn't in conflict with that structure, there is nothing in these rules that would prohibit the use of these objectives and these procedures in a landfill closure, nothing in these rules?

MR. KING: You have to bear in mind that in a landfill situation, even if you could apply the rules, they might not make any sense. So if they don't make any sense, whether it's legally applicable, but it makes no sense at all, and it may not because of the various criteria that we have relative to sites.

For instance, we have these various criteria relative to attenuation capacity and saturation limits, which landfill may simply not be able to meet these criteria.

MS. SHARKEY: I understand. I think what you're saying -- I think what I'm looking at is that closure often requires one to do clean up in order to achieve the closure and make demonstrations off the site -- off the waste site

itself in order to obtain final closure. It's in that context that I'm wondering if these rules may be useful or may be used.

MR. KING: Like I said before, that's kind of a hypothetical question. There might be some situations where we could and there might be some situations where we can't. I don't think we could make a universal rule.

MS. SHARKEY: Okay. That's good enough.

MS. McFAWN: Gary, could I just interject a question here?

In your testimony, you said that you concluded that the restrictions of 742, Parts 810 and 817, may be feasible in context of the rule that is to apply 742 to some landfills.

Can you just maybe tell us what some of those concerns were that made you reach that conclusion?

MR. KING: I don't think I'm going to be able to cite you to a specific rule within the landfill rules, but as I recall, as an example, there is a specific provision which describes how groundwater is to be handled within the

context of a landfill.

We would anticipate that that's the rule as followed because it's a specific management requirement relative to landfills. That would apply as opposed to 742.

MS. McFAWN: Okay. Thank you. So it's things like that?

MR. KING: Right, right.

MS. McFAWN: Thank you.

MS. SHARKEY: I just want to, if I can, clarify something in here. Section 742.105(a) allows a party to elect to proceed under this part, but then 742.105(b) states this part is intended to be used in the following procedures and requirements applicable to the following programs and they are under -- the UFT program is mentioned, the site remediation program, and the RCRA permits and closure plans.

It's my understanding or it had been my understanding that A, the election would allow use of this part where not inconsistent with or not in conflict with a program in a broader set of programs than those that are listed under B

potentially.

Am I correct in that assumption that one may elect in a broader question a number of situations to use these procedures?

MR. KING: That's correct.

THE HEARING OFFICER: Are there any additional follow-up questions?

MR. WATSON: For the record, my name is John Watson from Gardner, Carton & Douglas. I have one follow-up with respect to 742.105(b) and that is why isn't the Illinois Super Fund Program expressly set forth as one of the programs under which the 742 rules are intended to be used?

MR. KING: Well, in a sense -- in one sense, the site remediation program envelops that as well. We just didn't think it would be a very good way to just add on the state Super Fund Program because then we would try to identify what set of rules would be governing that and there aren't any set of rules other than this new 740.

MR. WATSON: But you did say earlier with respect to enforcement actions involving Illinois Super Fund sites that the agency does intend on using 742 to develop its cleanup standards,

is that correct?

MR. KING: Yes. I think that's generally correct.

MR. WATSON: Thank you.

THE HEARING OFFICER: Ms. Sharkey, your next question?

MS. SHARKEY: My next question was asking if you could give an example of how this part might be used in a RCRA Part B context.

We have just previously talked a little bit about the RCRA context, but I'm wondering if you could give some examples. I am really thinking of two things; one of them is corrective action that at a RCRA unit or at a SWMU, and the other would be beyond corrective action just getting to closure of the overall -- and getting to that closure letter.

MR. KING: In the Part B context, Part B permits specific procedures for corrective action. If corrective action is triggered -- if there is some circumstance which triggers the need for corrective action under that Part B permit, then, 742 would be the vehicle that could be used to develop the remediation objectives.

Under the interim status context, if the person subject to the RCRA requirements was developing a closure plan, then, they would develop the closure plan using the 742 procedures as far as determining the remediation objectives and then present that approach and analysis as part of that closure.

MS. SHARKEY: Okay. Is there anything in these rules that would prohibit a party who is performing a closure under interim status from also using these rules to establish objectives for and remediate other sites on that facility, on that property?

I'm talking about non-interim status -- sites that were not identified as interim status sites. What I'm trying to figure out is if this program can coexist at an interim status facility apart from being under the interim status or apart from being under a Part B permit, for example, can one do cleanups using this program.

I am assuming it might be within the site remediation program. Is there anything inconsistent with doing both at the same time?

MR. KING: I guess under the situation

you're talking about, you're talking about a site where part of it is subject to the RCRA program and another part of the site is not subject to the RCRA program.

The part that's not subject to the RCRA program, I would say the vehicle for interaction probably should be the site remediation program, and then through the site remediation program, we would use 742.

MS. SHARKEY: So they could coexist?

MR. KING: Yes.

MS. SHARKEY: My next question is --

THE HEARING OFFICER: Excuse me. Before we proceed with the next question, I would just like to ask, if possible, that you could read the prefiled so that the board members who were not present follow along by following the transcript.

MS. SHARKEY: Thank you.

My fourth question on this point was regarding the interim status question. So we have answered that. We can skip that.

My fifth one is, is a focused as opposed to comprehensive no further remediation

letter issued under Part 740 prima facie evidence with regard to Sections 12(a) and 12(d)?

MR. KING: We have kind of a shift of terminology here. I assume by the term focused, you are talking about a focused investigation under Part 740?

MS. SHARKEY: Yes.

MR. KING: The issue with a focused investigation relates to eliminating the contaminants of concern. It would be possible for a focused NFR letter for this prima facie evidence issue to apply to it relative to those contaminants of concern. That's what we -- we say that in 105(g), that it's the contaminants of concern of the site. It doesn't necessarily mean all of the contaminants of concern or all of the contaminants at a site.

MS. SHARKEY: Thank you. My next question is would that be true even if groundwater was not sampled in the focused investigation?

MR. KING: No.

MS. SHARKEY: Okay. In other words, the context I'm thinking of is one where there is a spill, for example, in a soil remediation that it satisfies the agency that groundwater need not

be addressed, need not be sampled and need not be addressed, in that context, would it be possible to get a no further remediation letter that had the effect under Subsection G of prima facie evidence of no groundwater contamination?

MR. KING: Well, our presumption here with this section is that you are dealing with a context which you already had contaminants in the groundwater. I'm not sure if that's what you are envisioning here.

MS. SHARKEY: Okay. No, I was not. I was assuming a scenario where a remediation applicant under Part 740 has done a cleanup and has not sampled groundwater, has satisfied the agency based on depth of clay and other factors that there was no risk in the groundwater and eliminated basically the groundwater pathway, and I'm wondering if in that instance, one could still get a no further remediation letter, which will constitute this evidence?

MR. KING: I would like to defer answering that question. We were understanding this question as being directed at a different issue. I think before I answer that, I think

I would like to come back to that question maybe some time later today when I get a chance to discuss it a little further.

MS. SHARKEY: Okay. Thank you very much.

THE HEARING OFFICER: Okay. We will proceed on to the next section, which has questions at Section 742.115. We will begin questions with the site remediation advisory committee.

MR. RIESER: Thank you very much. I believe the agency said this in its testimony, but just to underline it, will the agency clarify that with regard to the groundwater, the exposure route of concern is the actual ingestion of groundwater and not just impact on groundwater?

MR. KING: We will agree it's not just impact on groundwater. I will insert that it could be an actual or potential investigation. With the notion it could be actual or potential ingestion of groundwater, then, I would say that's correct.

MR. RIESER: By potential ingestion,

what do you mean?

MR. KING: There could be a future scenario where there is a potential for groundwater to be used which is not otherwise controlled by an institution control.

MR. RIESER: Thank you.

THE HEARING OFFICER: Okay. The next question on 742.115 was filed by Mayer, Brown & Platt.

You may proceed, Ms. Sharkey.

MS. SHARKEY: Must zoning classifications be considered under Subsection C? For example, if a property is zoned for residential use, but is currently vacant, and used primarily for wildlife, is it currently residential or conservation property?

If the property is anticipated to remain in conservation use, must the zoning be considered for post-remediation use classification?

MR. KING: Under the proposal we have put together, zoning would not be a basis for making a determination relative to the use classification.

MS. SHARKEY: It is correct, then,

that what one would look to is the current use of the property, the actual use and, then, the anticipated post-remediation use?

MR. KING: That's correct.

MS. SHARKEY: Thank you.

THE HEARING OFFICER: The next question is --

MR. WATSON: Excuse me. If I could, I would like to ask a follow-up.

THE HEARING OFFICER: Okay.

MR. WATSON: Why has the agency made that determination that zoning is not an appropriate consideration in determining use?

MR. KING: Zoning restrictions are -- have been adopted by local governments for all sorts of reasons, many which have nothing to do with the issues relative to public health protection.

To rely on those as far as making these determinations, we just don't think would be appropriate. For instance, a zoning ordinance could designate a piece of property as a commercial use, but allow within that commercial use designation residential uses as well.

So if you are simply to rely

on the zoning designation, we would not be achieving the kind of public health protection that we intended.

MR. WATSON: So you are saying it's not relevant at all to the determination of post-remediation uses?

MR. KING: It may be a relevant fact, but the zoning classification in and of itself, we don't see it as being a sufficient control relative to the use of the property to make it a basis for our determination.

MR. WATSON: Okay. But it would be somewhat relevant in determining the appropriateness of an industrial/commercial classification to understand the existing zoning of a parcel of property, correct?

MR. KING: As I said, I think it could be important in terms of understanding the factual context in which a site is being presented relative to remediation objectives.

For instance, if it's in Chicago, and it's part of their industrial corridor program, that's something we would be -- a fact that we would be interested in knowing about because

that's indicative of what long-term may be happening relative to that piece of property. We would still require that there be the appropriate institutional controls put into place.

As I was saying, it's an element of fact in understanding the nature of the site.

THE HEARING OFFICER: Are there any additional follow-up questions?

Okay. The next prefiled question is on Section 742.120. Again, this has been filed by Mayer, Brown & Platt.

You may proceed, Ms. Sharkey.

MS. SHARKEY: This section states that site characterization is to be performed pursuant to other programs.

How is site characterization different from site investigation required to confirm compliance with the Part 742 regulations? Aren't the concrete steps and methods one must use to characterize a site actually contained in this part, for example, number of samples and methods of sampling can't the characterization and investigation be combined?

MR. SHERRILL: Let me answer the first part of that, how a site characterization is different from the site investigation required to perform in compliance with Part 742 regulations.

For example, LUST has statutory requirements for site classification and the BOL programs do not? Generally, when you term -- when the agency uses the term investigation or remedial investigation and characterization, we are referring to a generic use of determining types concentrations and the extent of contamination.

Regarding are the concrete steps and methods one must use to characterize a site actually contained in this part, the answer is no, they are not. The concrete steps to characterize a site is not contained in this part. Part 742 is to develop remediation objectives.

MS. SHARKEY: I guess I am having some trouble distinguishing the two and I am still having it if you will bear with me.

If I have a spill site, let's say, and I am wanting to move forward and remediate it and move forward toward a no further remediation letter, and I enroll the site in a site remediation

program, don't I look to 742 to determine how many samples I'm going to take in order to actually figure out what objectives might apply?

MR. SHERRILL: No. A site investigation would be based on historical use of the site, what was spilled, many factors go into that. We tried to make it clear that 742 was to be used only after a site investigation has been performed.

MS. SHARKEY: All right. Now, only after a site investigation has been performed or only after a site characterization has been performed or are you using those terms synonymously?

MR. SHERRILL: How are you using those terms?

MS. SHARKEY: My assumption is that one might want to collapse this process and characterize the site and establish objectives in one swoop and not have to go out and do some level of characterization by a sampling under one program and then come in and use the procedures under 742 and have to go through another round of sampling to establish objectives and be able to confirm compliance with those objectives.

MR. SHERRILL: Well, 742 only

shows how to do the compliance with remediation objectives. It doesn't prescribe or show how to do an investigation.

I keep coming back to LUST. LUST has a prescribed method for doing that. RCRA has their own guidance. The site remediation program says there is a wide variety of sites that we see in that program to investigate. Different program requirements would need to be followed.

MS. SHARKEY: I understand, I think, what you are saying in terms of the RCRA and LUST programs. With regard to the site remediation program, are you saying that Section 740 actually tells me how many samples to go out and take in order to characterize that site?

MR. SHERRILL: No.

MS. SHARKEY: Would it be possible for me to characterize that site under 740 and also use the procedures under 742 for the number of samples and the methodology and the depth of sampling, for example, do that in one set of sampling and bring that into the agency and be able to demonstrate compliance with Tier 1, for

example?

MR. SHERRILL: It may be possible to combine those two steps. There is such a wide variety of sites out there. A prescriptive approach would not be practical to sit and define how many samples need to be taken, the depth and location of samples, and what to be sampled for.

MS. SHARKEY: If I want, though, ultimately to get this spill site to the point of a no further remediation letter, and I'm in the site remediation program and I'm going to need to use these ultimately to comply with the procedures for sampling, et cetera, in 742, am I not?

MR. SHERRILL: Correct. 742 has a section on how to comply with remediation objectives.

MS. SHARKEY: So ultimately, I'm going to have to come back to specific procedures in 742, those concrete steps for demonstrating compliance objectives?

MR. SHERRILL: Yes.

MS. SHARKEY: Okay.

THE HEARING OFFICER: Are there any additional follow-up questions?

Okay. The next section --
MS. ROBINSON: Can we hold on for one second? May I have a clarification here?
THE HEARING OFFICER: Sure.
MR. SHERRILL: We were just discussing that it may be possible and we have had many instances where this is true that it may be possible to combine the site investigation and your compliance under 742 through one sampling event if you want to call it that.
MS. SHARKEY: Okay. Thank you.
THE HEARING OFFICER: Are there any further follow-up questions or clarification?
DR. HORNSHAW: I'll just add if you are lucky.
THE HEARING OFFICER: All right. Then, the next section to which there are prefiled questions is Section 742.200. We will begin with questions filed by the site remediation advisory committee.
MS. ROSEN: Question number one under Section 742.200 is with regard to the definition of conservation property, what is the purpose of including the definition in

the proposal?

Is it the agency's intent to have this decision made by the property owner when identifying the post-remediation land use of the site?

MR. KING: As to the first question, we had two real purposes including conservation property. First, it was to establish a place holder for future rules once it's more solidified from a scientific standpoint as to what factors should be considered with regards to ecological risks.

The second reason was to establish a context for sites where the non-human impacts are the primary focus.

As to the second question about the agency's intent relative to decisions by the property owner when identifying post-remediation land use of the site, it's our intent that that would be the decision of the property owner.

We would expect perhaps some consultation with the agency or some other governmental entity like the Department of Natural Resources where that's appropriate.

MS. ROSEN: Okay. Also, on that point, question number two, is it correct to conclude that conservation property was not defined so as to require post-remedial sites to enter into further remediation should they plant prairie grass on the site after remedial action is completed or an NFR determination is issued?

MR. KING: Yes, that's correct.

MS. ROSEN: I believe Ms. Sharkey has questions on the conservation property issue. So if we want to jump to those and then revisit question three, that would be fine.

THE HEARING OFFICER: That's fine.

MS. SHARKEY: Okay. Would a former landfill at which only post-closure activity such as gas extraction and groundwater monitoring are taking place and which at the surface at least is used primarily for wildlife be considered conservation property?

MR. KING: We were reviewing this question. It looked fairly similar to an existing site we are dealing with. I guess we really don't want to get into trying to figure out what the answer should be in the context of this proceeding

without looking at all of the factors relative to that site or the other site.

MS. SHARKEY: I guess I would like, then, to ask, if I can, what is intended by the notion of primarily for wildlife habitat in the definition?

MR. KING: We talked about some of the reasons why we included that or at least we talked about the two reasons why we included that in response to an earlier question. We really don't have any additional factors in mind at this point.

MS. SHARKEY: Well, I guess I'm wondering if a property is, for example, also used by human beings if it's -- for example, I used the example in my third question here is a Cook County forest preserve conservation property.

MR. KING: Yes. We saw that. Again, I think that just kind of typifies the issue. I mean, a Cook County forest preserve, they operate a lot of -- they manage a lot of property up in Cook County. There are all sorts of different uses depending on where you are at on the forest preserve property.

So to say yes or no, it is a conservation property, it just wouldn't be appropriate. You would have to look at the specific piece of property you are looking at and what are the current uses, what are the planned uses and so forth.

MS. SHARKEY: Would wildlife include plants in your definition here? For example, a prairie or conservation area?

MR. O'BRIEN: That's correct.

MS. SHARKEY: It would?

MR. O'BRIEN: Yes.

MS. SHARKEY: In other words, I guess the thing I was trying to get at with the forest preserve concept, and particularly Cook County, is this is an area where we know people are also using the area for recreation in addition to it being a conservation area for plants and animals. Does the fact that people are using it change its nature so it's no longer primarily for wildlife or would it depend on the individual case?

MR. KING: I think it really depends on the facts. Again, if you are in a situation where that property has been used for baseball

diamonds, that would be primarily a recreational use. If it's trails going through a forest used by humans, that might be a different context there. I think it really is a site-specific decision.

MS. SHARKEY: All right, the latter being more likely to be conservation property than the former recreational use like a baseball diamond being something else.

What else would that baseball diamond be? That goes to my second question, which is if, for example, a former landfill was going to become a golf course, how would that be classified as a golf course or a baseball diamond.

What would that fall under the class as defined in this section?

MR. KING: I don't think we made any kind of site-specific determination about golf courses at this point.

Now, we do have a definition that talks about, for instance, what constitutes residential property and we really haven't made a decision in the context of a site-specific instance.

MS. SHARKEY: Is there a different

remediation objective established for conservation property than for residential or for industrial?

MR. KING: That's potentially the case, yes.

MS. SHARKEY: Do these rules define -- prescribe doing something different, coming to different conclusions for conservation property?

I'm trying to figure out how this concept of conservation property actually works in these rules.

MR. KING: Well, as I was saying early on, the use of this was intended to be to deal with sites where the primary focus was a wildlife issue and to be a place holder. So it's clear that this is something where there might be situations where you really have to think about this as the primary issue. That's why we put it there.

MS. SHARKEY: Okay. Meaning that there might be other pathways that are involved because it's conservation property?

MR. KING: I think this is a question that's talked a little bit further on in the rules

as far as what are some of the factors that are considered.

MS. SHARKEY: Okay. We can save it until then if that's more appropriate.

MR. KING: I think that it would be more appropriate.

MS. SHARKEY: That takes care of my questions.

THE HEARING OFFICER: We will return to the questions filed by the site remediation advisory committee.

MR. RIESER: Before we begin on our next question, I would just like to follow-up on Ms. Sharkey's questions.

Would there be a situation where a landowner would identify a site as not being a conservation property and the agency would in the context of viewing remedial objectives, for example, overrule that decision or deny that decision?

MR. KING: I would suppose that could be the situation. I wouldn't -- normally, we would anticipate that remedial objectives are going to be more conservative in most cases for a residential

use than they would be for conservation property.

So perhaps it would tend to go the other way where it was designated conservation property and we would say no, really, it should be considered residential because the cleanup objectives would be more stringent.

MR. RIESER: What about for industrial/commercial?

DR. HORNSHAW: I can think of one area where we might make that kind of determination and that is if a threatened or endangered species is known to be on the property, we may overrule.

The reason is especially if pesticides are involved. In a lot of cases, pesticides are designed specifically to kill certain target organs. In some of these cases, in fact, probabaly a lot of them, humans aren't the target species. So they are hopefully less affected by the pesticides. So we may have occasion to overrule in these cases where the primary threat would be an endangered species.

MR. RIESER: Would these issues entirely come up during the ecological risk discussion and is reserved as a place holder?

DR. HORNSHAW: Yes.
MR. RIESER: The answer is yes?
DR. HORNSHAW: Yes.
MR. RIESER: Okay. We've got some questions there that might address this further.
DR. HORNSHAW: Okay.
MR. RIESER: The conservation issue, to the extent that it involves different remedial objectives, is going to be an issue only with respect to ecological risk factors, is that correct?
DR. HORNSHAW: Correct.
MR. RIESER: Thank you.
THE HEARING OFFICER: Are there any additional follow-up questions?
Okay. We will move on to the question, then. It's from the site remediation advisory committee.
MR. RIESER: This is our number three under Section 742.200. What factors will be used to evaluate how a source is identified in defining a point of human exposure?
MR. SHERRILL: Factors used to evaluate a source in the context of point of human exposure

include the concentration of whether any free phased contaminant is present; whether the soil attenuation capacity is exceeded; whether a sheen is visible either in the soil, groundwater, or surface water; whether remaining contamination will be disturbed by construction workers or other human activities; whether remaining contamination will be disturbed by natural or animal forces such as burrowing animals, high infiltration rates, highly permeable units such as karst geology, sand seams; whether the release point of the contamination can be located such as in the LUST program, we know we have identified tanks with known release points versus the site remediation program where we have contamination and we do not know the origin of the contamination and it becomes problematic identifying the horizontal and vertical extent of contamination; and intended post-remedial use of the property; residential, industrial, commercial, and so forth.

MR. RIESER: So it's correct that sources something other than a unit -- a physical containing unit from which contaminants are released?

MR. SHERRILL: Correct.

MR. RIESER: And it's also more than

the presence of free product as determined by the soil attenuation capacity and the existence of a sheen on groundwater or something of that nature?

MR. SHERRILL: Correct.

MR. RIESER: Thank you.

THE HEARING OFFICER: Are there any additional follow-up questions?

Okay. The next question will go to the question filed by Gardner, Carton & Douglas.

Mr. Watson, you may proceed.

MR. WATSON: My question goes to the inclusion in the definition of regulated substances of natural gas, which historically has been excluded from the regulation under the hazardous waste rules.

The specific question is what characteristics or constituents of natural gas need to be considered when evaluating whether it is a regulated substance?

MR. KING: Why don't we answer both parts of that question together.

MR. WATSON: Okay. For the record, Question B is does the agency propose that natural

gas be addressed during a site investigation?

MR. KING: The issue relative to natural gas is it doesn't need to be addressed during a site investigation unless it's considered to be a contaminant of concern.

MR. WATSON: Can you give me an example of an instance where natural gas would be identified as a contaminant of concern at a site?

MR. KING: In a situation where, for instance, the property owner identifies it as such as being one of the contaminants of concern to be addressed.

MR. WATSON: How would you go about assessing a risk for natural gas? I'm not sure that's -- I think we are kind of jumping far afield relative to that.

As I sit here, I don't know. I suppose that I didn't really see that as being part of this question here.

MR. O'BRIEN: Natural gas will primarily consist of methane, but it also has other components. That varies somewhat depending on the source of the natural gas. So it would

depend what those specific components were and if they were identified as contaminants of concern.

MR. WATSON: There is nothing in the Tier 1 risk criteria, however, that addresses natural gas issues, is that correct?

MR. O'BRIEN: Not natural gas as listed as natural gas, per se.

MR. WATSON: Are there any other constituents of natural gas that are reflected in the risk guidance or materials?

MR. O'BRIEN: I don't recall. Typically, there are other alkanes involved in natural gas, which would include propane, butane and smaller amounts of propylene and butalene.

Then, they are also either added to natural gas mercaptans and then sometimes naturally mercaptans. I don't believe that any of those are listed in the tables that we have provided for Tier 1.

MR. WATSON: In dealing with natural gas under this program, then, it would be an issue of looking at a Tier 3 risk assessment, is that

correct?

MR. O'BRIEN: If any of the constituents were constituents of concern, then, you would probably deal with the Tier 3 process.

THE HEARING OFFICER: Are there any additional follow-up questions?

MS. ROBINSON: I have one. Is that okay?

THE HEARING OFFICER: Sure.

MS. ROBINSON: Mr. O'Brien, is it going to be rare that we see natural gas as a contaminant of concern at various sites?

MR. O'BRIEN: I would think so. I have never seen it at any sites. The hazard of natural gas is more of an emergency hazard, which is pointed out as a proposed rule which is not appropriate for T.A.C.O. evaluation primarily because I gather this is an explosion hazard.

MR. WATSON: So you would be surprised to see natural gas identified as a contaminant of concern at a site?

MR. O'BRIEN: Yes, I would.

MR. WATSON: Thank you.

THE HEARING OFFICER: Are there any

additional follow-up questions?

MR. JAMES: I have a question.

THE HEARING OFFICER: Yes, sir, in the back?

MR. JAMES: I am Ken James from Carlson Environmental. I was just wondering if we ever addressed Mayer, Brown & Platt's question on Section 742.200 regarding the definition for area of background?

THE HEARING OFFICER: We are just getting to that.

MR. JAMES: Thank you.

THE HEARING OFFICER: Are there any additional follow-up questions?

Okay. It is getting close to the lunch hour, but we will attempt to finish up these definitions before we break for lunch.

The next prefiled question is from Mayer, Brown & Platt.

MS. SHARKEY: This is a question regarding the definition of area background. Does the agency interpret this language as meaning historical site contamination such as the PNA's found to be ubiquitous in the soil at old coal gasification

sites around the state, can this be considered area background?

DR. HORNSHAW: We don't interpret it that way. If it is something as related to activities at the site, then, that should be considered area background.

MS. SHARKEY: I think what this is going to impart is a problem in the definition. The definition of area background as is noted in the rule comes out of Section 58.2 of the act.

I would like to read it into the record if you don't mind this definition: Concentrations of regulated substances that are consistently present in the environment in the vicinity of a site that either results in natural conditions or human activities and not the result solely of releases at the site.

If I understand you correctly, you are saying that activities at the site cannot be considered area background?

DR. HORNSHAW: That's correct.

MS. SHARKEY: What, then, is meant by the language of human activities?

DR. HORNSHAW: We interpreted that

to mean activities of a general nature such as in operation of motor vehicles, which could result in the deposition of highly clear aromatic hydrocarbons widely in an environment.

MS. SHARKEY: So the agency has interpreted it as a subset of human activities, then?

DR. HORNSHAW: Yes.

MS. SHARKEY: Okay. Is the term releases as used in this definition intended to mean known and quantifiable releases?

Is it based on the definition of release in CERCLA?

DR. HORNSHAW: It's based on the definition of release in the act.

MS. SHARKEY: Is it intended to be known and quantifiable releases?

DR. HORNSHAW: No.

MS. SHARKEY: Okay. To sort of tie this up, then, you are saying that the concept of area background would not include historic contamination on a site where the contamination is clearly related to some industrial activity, for example, but nobody

has any knowledge of a specific release?

DR. HORNSHAW: Correct.

MS. SHARKEY: And that determination that the contamination is, in fact, related to the activities on that site, that industrial site, would be based upon what?

How would one determine that this is not area background, but is indeed related to those industrial activities?

DR. HORNSHAW: Well, one example I could probably give is activities that would come about as a result of a Phase 1 or a Phase 2 investigation.

MS. SHARKEY: Okay. For example, if one has knowledge that certain types of raw materials are used on a site by a certain type of industry, is that in and of itself enough to be an indication that the contaminants of the ground are associated with that activity and therefore, not an area of background?

DR. HORNSHAW: It could be.

MS. SHARKEY: In other words, area of background -- I guess I'm trying to figure out -- in other words, the concept of human activity here

is completely separate from the concept of a release.

In other words, we need not have a release on the site and we need not have -- as long as we have an activity on the site other than what the agency has defined as human activities on the site, that could be related to the contaminants found in the soil in the agency's view, the concept of area background is not available of using area background?

DR. HORNSHAW: Yes.

MS. SHARKEY: The answer is yes?

DR. HORNSHAW: Yes.

MS. SHARKEY: All right. Thank you.

MS. ROBINSON: I have one follow-up question.

Ms. Sharkey, I think, referred to the definition of release under CERCLA and then Dr. Hornshaw answered as the release definition in the act. Did you mean the Environmental Protection Act?

DR. HORNSHAW: Yes, I did.

THE HEARING OFFICER: Is there any additional follow-up, Mr. Rieser?

MR. RIESER: To follow-up on this concept and use the example of the PNA's which Ms. Sharkey started with, that there were PNA's on a site as a result of this typical -- in Chicago as a result of deposition of Chicago fire materials that weren't the result -- and not the result of any industrial activities on the site and they were widespread, not just on that site, but other sites in the area, would that not be considered an area of background?

DR. HORNSHAW: Yes.

MR. RIESER: It would be considered an area of background, correct?

DR. HORNSHAW: Yes. If the fill -- if it was documented this was, indeed, areas where Chicago fire material was filled, yes.

MR. RIESER: Similarly, if there are contaminants that are the result of sort of a widespread industrial activity that are common to all the properties around the subject property such as lead in some communities, that, too, would be considered area of background with respect to the subject property?

DR. HORNSHAW: That's kind of a

difficult question to answer because at least in some of the sites where we know that lead is a problem, it's complicated by the fact that lead is in the surrounding area and not part of an actual identified site, sometimes that lead got there because slag was used as fill material as an example. So it's hard to separate out what is there because of widespread activity and what was there intentionally as waste.

MR. RIESER: Wouldn't the use of slag fill over a broad area also be considered an area of background?

DR. HORNSHAW: It could be.

MR. RIESER: Why would it not be?

DR. HORNSHAW: If it was used, I guess, to fill in a known geographical area like a swamp or a wet land. I'm not sure we would consider that as background.

MR. RIESER: Well, wouldn't that be common to most industrial areas where slag was fill -- was used exactly for that purpose?

DR. HORNSHAW: I guess it would

depend on the site on what was the known history of the site.

MR. RIESER: If slag was used as an area-wide fill substance, would not that be considered area background with respect to the materials in the slag?

DR. HORNSHAW: Again, that's a difficult question to answer. One of the sites I personally am working with is out of an existing steel mill in which the slag from that operation was used to fill on the site. So how would you say that would be area background?

MR. RIESER: What I'm asking is if the historical -- if slag is a historical use from, say, the beginning of the century and what was the component of all of fill in a given area, then, that would be -- that ought to be considered area of background since it was not the release -- not the result of the release solely, which is what the statue says, from the subject site.

MR. KING: I think you are jumping around as far as the context in which this would

come up. If, for instance, you had a site that had -- there was slag material on it, okay, and that slag material had come from off-site and was placed on the property you are concerned with and that was coming from somewhere else, that might be a situation where that could be considered an area of background.

If you are dealing with -- if you are talking about the site where that material came from, okay, if you are talking about the site where that contamination came from, now that was moved off-site, I mean, he can't -- that guy can't go and say, well, that stuff is off-site and now that's area of background because it was brought off-site.

To give you an example -- another example would be, for instance, if you had a smelter, which we have some that have contaminated fairly major portions of a community, for that smelter to then claim that the contamination that they have spread around the community is area of background, that would be not be appropriate.

MR. RIESER: Okay. With respect

to that individual site, because it would be viewed that those releases are as a result of activities solely from that site --

MR. KING: Right.

MR. RIESER: As a result of releases solely from that site?

MR. KING: Right.

MR. RIESER: I understand.

MS. SHARKEY: Now, I have a problem about why my example on the coal gasification site doesn't work. Maybe I wasn't clear enough with the example, but I don't see the distinction anymore.

Coal gasification sites, as I know the agency is well aware of, sometimes encompasses very large areas and those areas have since been developed into other properties and where you have a property that's no longer a coal gas site, has not been a coal gas site since the turn of the century, and it and all of its neighbors are now sitting on an old coal gas site, aren't the PNA's from the soil from that oil coal gas site, in fact, area background under the same principals just expressed in

response to Mr. Rieser's questions?

MR. KING: I think the issue that we were faced with when we were developing this statutory language in '95 was that we did not want to see somebody bootstrapping the fact that they had released contamination beyond their own property as a basis for claiming that the contamination on their own property was representative of a background.

That was the issue that -- that was one of the reasons why we phrased the language the way we did. So to the extent -- I guess I was interpreting your example as really that kind of situation.

MS. SHARKEY: If one could demonstrate that surrounding properties had the same level of contamination, which is what I think you are required to do as a whole formula and approach for demonstrating area of background, isn't it, under these rules?

DR. HORNSHAW: Correct.

MS. SHARKEY: Now, if one can demonstrate that, the fact that you have an industrial contaminant that may have been released

by somebody at some point, that does not take it out of the definition of area of background, does it?

DR. HORNSHAW: I guess in the case of coal gas sites, it's similar to the analogy Gary used about the lead smelter. That coal tar is there solely as a result of activities even way back in time, but it's still there at that site. It shouldn't be considered background.

MS. SHARKEY: Well, at a very broad site -- I think that maybe part of the problem with the coal gas definition is that you have what was at the turn of the century a huge coal gasification property that has now been subdivided and has all kinds of other usually industrial uses on it. Those other activities have nothing to do with coal gasification.

The party who has a strip of property in the middle of that old coal gas site, if they attempt to clean up the PNA's in the soil, will be the only clean postage stamp on that dirty envelope.

The analogy I have heard the agency use before that strikes me as being counter

to the whole Brownsfields concept is to say one must clean up those PNA's although that entire old coal gas site is not being cleaned up.

MR. KING: Well, there is the other countervailing policy argument which is what the statute really addresses and that is the fact that you shouldn't be able to bootstrap reduced levels of cleanup based on the fact that you sent them off-site.

That's a different policy issue and I think that's the policy statement that this provision provides. It doesn't mean -- because something doesn't qualify as an area background, that doesn't mean that the other methodologies are unavailable. They are still available and can be used as a way of proceeding.

MS. SHARKEY: Well, the fact that the -- Mr. King, your remark was limited to stuff that has been transported off-site rather than a site that was broader and historically used as a single facility by another party, a larger facility.

In other words, it was never transported off-site. It was on-site at the time

that the coal gas plant operated. It's simply that the property has been now sold and subdivided.

Its historical context probably are not unique to coal gas. It would seem to me anyone who has a large old industrial facility, there are many of them certainly in the Chicago area that have since been redeveloped into other types of property where the activity going on there today has nothing to do with the activity that went on historically.

MR. KING: That's true, but one of the goals of this is not to just say that because it's there, it's okay that it continue to be there. If that contamination was there and public health continuing to be protected even if that contamination is there, that's a different issue.

If it's an issue of long-term public health is not being protected, then, the fact that somebody put it out there and now it's underneath some other piece of property, if there is a potential that it's going to cause a hazard to people, it should be addressed.

THE HEARING OFFICER: Since it's

now about a quarter after 1:00 and lunch hour is almost over, we'll take a break and we will continue after lunch. We will take a one hour break. Please be back here at a quarter after 2:00.

(Whereupon, after a short lunch break was had, the following proceedings were held accordingly.)

THE HEARING OFFICER: Okay. We were proceeding through the prefiled questions. Again, we were doing this, in case there is anyone new here, we were going through the questions that were prefiled regarding all questions relating to a particular section.

Then, after the prefiled questions have been addressed by the agency, if you have a follow-up question, please raise your hand and wait for me to acknowledge you, and we will take a follow-up question.

We had been addressing Section 742.200, the definition of area background. Is there any further discussion on that matter from the agency?

MS. ROBINSON: No.

MS. SHARKEY: I was wondering if we could have the last response read back to us before we broke.

(Whereupon, the requested portion of the record was read accordingly.)

MS. SHARKEY: Okay. Am I the one who is asking questions at this point? I can't remember.

THE HEARING OFFICER: Yes, if you have any remaining follow-up.

MS. SHARKEY: Yes. I would like to get a little more closure on this question. It's linked to my next question on contaminants of concern as well. I don't know if I'm the next one to go to on this.

My next question was whether or not contaminants of concern as defined herein are intended to include contaminants associated with historical contamination, for example, where contaminants are discovered in the soil, but cannot be linked to a specific release.

In this context, I think it would be useful to read the definition of

contaminants of concern, which is any contaminant that is expected to be present at the site based on past and current land uses and associated releases that are known to the person conducting a remediation based upon reasonable inquiry.

I guess I go back to my question is this intended to include historical contamination?

MR. KING: Contaminants of concern can include historical contamination.

MS. SHARKEY: Would that be the case if there are no releases known to the person conducting the remediation?

MR. KING: We are just looking here at Section 742.115(b). There are three factors to be considered when talking about remediation of contaminants of concern.

MS. SHARKEY: And how do you link those?

MR. KING: Maybe you could go back to your question.

MS. SHARKEY: The question is, is the definition of contaminants of concern, which would appear to have both a release component

as well as what's expected based on past and current land use, whether or not that's intended to include historical contamination in the context where you don't know of a release.

MR. KING: We are struggling with this because it appears that you are linking two concepts here. I guess I'm not understanding why you are linking them that way.

MS. SHARKEY: Well, the two concepts being the release and the past and current land uses?

MR. KING: Here, the definition says it's a contaminant that is expected to be present at the site based on past and current land uses.

MS. SHARKEY: And associated releases.

MR. KING: Right, and associated releases that are known. So you have two different things there.

MS. SHARKEY: So you're reading of that is that those are independent requirements that the term used here doesn't mean that one has to find an associated release, not simply past land use?

MR. KING: Right, because otherwise,

you would be presuming -- for historical contamination, you would be presuming a level of knowledge that just may not be there.

MS. SHARKEY: That's precisely my point. We talked about this last week in the hearings on --

MR. KING: Let me just interrupt you. Otherwise, you would be in a position if a person came in and said, well, I have this contaminant of concern that I want to remediate and I want to work with the agency to remediate.

I think under the interpretation you are raising, we have to say, oh, you have to tell us what specific release that's identified with. Well, we don't want to get to that level of detail.

If there is a contaminant present there, you know, let's address that contaminant regardless fo whether you found exactly the form of release that it originally had.

MS. SHARKEY: I hear what you are saying, and I guess what I'm trying to do is understand this language that came out of the

statute, which used an and. I had taken a different reading of that and that is it meant that one needed to be able to say that it was associated with a known release and not simply -- this goes back to what I was saying before.

It goes back to the concept and the conversation that we had on the record for the R97-11 rulemaking that we had last week where we talked about whether or not it was enough to simply know that a party had used a raw material on the property to then be able to say, well, now you must treat that as a contaminant of concern, any constituent potentially in that material and go out and sample for it and that in defining contaminants of concern I thought the conclusion was no -- the mere presence of this material on the site, the fact that the material was used on the site was not enough to mean that one had to look for it as a contaminant of concern under Section 740 -- under Part 740.

We are using the same term here and the same definition and I'm trying to figure out here if in defining the contaminants of concern

for this remediation, is it enough simply to say we have a past or current land use and I guess that again in itself is a little vague, but if the land use, for example, were simply the use of a certain material on the property, is that enough to make that material become the precondition of a contaminant of concern?

I didn't say that very well. When I say this, I'm meaning the existence of that material means that one must look for contaminants of concern associated with that material, that past land use.

MR. SHERRILL: Generally, under 742.120, we talk about site characterization and we note in here the actual steps and methods taken to characterize a site are determined by the requirements applicable to this program under which site remediation is being addressed.

Speaking for the site remediation program, usually if a raw material has been handled on a site, many sites that come onto the site remediation program, they want to address those. They want to include them as a contaminant of concern. I mean, that's the specific way they

are in the program.

MS. SHARKEY: Is it the answer, then, that the contaminants of concern is going to be defined in the program and not separately under Section 742?

MR. SHERRILL: Generally, that's true. What comes to mind is, like, the LUST program where you have BTEX indicator contaminants.

MR. CLAY: If there is a record that shows that you had an unleaded gasoline tank, for example, all we are going to ask you to do is look for BTEX, but that's all your NFR letter is going to say, too, that this site or this release has been addressed for BTEX. It's not going to address any other constituents and those are going to be your contaminants of concern and those were identified by the party seeking no further remediation.

MS. SHARKEY: That's assuming that I'm going for a no further remediation letter solely on the basis of a tank. What if, in fact, I was going for a broader no further remediation letter? Maybe there is a tank on the property, but in addition, I want to get a clean letter,

basically, for my whole property.

MR. CLAY: The comprehensive --

MS. SHARKEY: The comprehensive --

MR. CLAY: -- under the site remediation program.

MS. SHARKEY: What I'm trying to get at is how far does one have to go? I'm understanding that answer to be that it would be defined by the site remediation program if it had a tank, the LUST program might define that piece of it, is that correct?

MR. CLAY: Right, but I think if there was a container storage area where you stored solvents, then, it would mostly be asked to sample for those solvents that you showed records of having on your site even though there may not be a confirmed release of those solvents in that container storage area.

I think we would ask for some sampling for that type of solvent or whatever that was stored and managed at that site.

MS. SHARKEY: Okay. So you're saying that under Part 740 that one would be

required to sample for every material that was maintained on the site, contaminants associated with those materials, even though there is no record of any release from some or all of these?

MR. SHERRILL: I don't know if I want to use the word required.

MS. SHARKEY: In order to get a comprehensive letter.

MR. SHERRILL: Generally, that's the case.

MS. SHARKEY: So in other words, somebody would have to have a record of every material that was ever used on a piece of property in order to obtain a comprehensive letter?

MR. SHERRILL: No.

MS. SHARKEY: But it would be anything that was turned up in a Phase 1 that showed the material was used?

MR. KING: I thought we talked about this in the context of the 740 rules. Didn't we answer those questions already?

MS. SHARKEY: I guess that I'm thrown back to it because we have the definition

in here again. I'm wondering is one going to encounter the question of second time in this program and get a different answer?

MR. KING: If I recall right, it's the same definition. It's based on the same statutory language.

MS. SHARKEY: It is, right. So it will be interpreted the same way, is that what you are telling me?

MR. KING: If you are under 740, yes, it would be interpreted the same way. Again, each program has a little bit different way that identifies a contaminant of concern. Obviously, under LUST, there is a specific set of indicator contaminants that you use. The other programs aren't as specific.

MS. SHARKEY: In the site remediation program under 740, it's going to be defined there and it's not going to be defined differently under 742?

MR. KING: That's correct.

MS. SHARKEY: Okay. Both to this definition, which I believe has some ambiguities in it in terms of the use and in the discussion

of known releases and the prior definition that we were looking at for area background, would the agency agree that there is ambiguity in the statutory definitions? For example, what is a human activity under the definition of area background?

MR. KING: Well, I suppose one could read ambiguity into any set of words, but to us, it's fairly clear.

MS. SHARKEY: Would the agency consider a definition of the term human activities to attempt to avoid future litigation over what this term means?

MR. KING: I guess I don't know what you are suggesting. Are you suggesting that we have a litany of every potential human activity that was a human activity?

MS. SHARKEY: Well, we could go through, I suppose, trying to get on the record examples of human activity that the agency interprets this as meaning.

MR. KING: If somebody wants to propose a definition of human activity, I suppose that's something we could consider. We didn't feel it

was either necessary or appropriate in the context of this proceeding?

MS. SHARKEY: But you have made it clear today by your answers that there was some human activities that you don't consider to be -- to fall within that statutory term as it's used in that definition and others that you do feel fall within there.

MR. KING: Well, if that's the conclusion you've reached, I think you have misinterpreted our answers.

THE HEARING OFFICER: I think we have thoroughly covered this ground. If it needs to be addressed further in comment, we can do that at the next hearing. I think we should move on in the interest of making some progress today.

MS. SHARKEY: Fine. Thank you.

THE HEARING OFFICER: The next definition, I believe, is the definition of site, Ms. Sharkey.

MS. SHARKEY: Can non-contiguous property be a single site?

MR. KING: No.

MS. SHARKEY: Is common ownership required of a single site?

MR. KING: No.

MS. SHARKEY: Thank you.

THE HEARING OFFICER: Are there any follow-up questions at this time?

MR. WATSON: Yes. Before we leave the definition section, I would like to ask a couple of follow-up questions on the definition of residential property just because it's an issue that I think we talked about in the 740 hearings and I think there is some potential ambiguities associated with it.

Given that it's such a fundamental part of determining how 742 works, I was wondering if whether I could ask just a couple of follow-up questions in an attempt to clarify that definition.

THE HEARING OFFICER: Well, we are generally sticking to the prefiled questions. We haven't made much progress today. I really think that we should move along. We will have some time at the end of all of the prefiled questions to address the other questions that people have that were not prefiled. I think we need to move on.

MR. WATSON: Okay. If you like, that's fine, I will hold that question until the end.

THE HEARING OFFICER: Thank you.

The next prefiled question concerns 742.210 that was filed by the site remediation advisory committee.

MR. RIESER: Are all of these references the most current?

MR. KING: Yes.

MR. RIESER: Thank you.

THE HEARING OFFICER: The next question concerning Section 742.210 was filed by Mayer, Brown & Platt.

Ms. Sharkey?

MS. SHARKEY: What is the function of these incorporations by reference?

MR. KING: This was also an issue that we talked about under R97-11. The incorporation by reference procedure, as I understand it, allows a reference to documents without placing the entire document in the record.

Considering the number of ancillary procedures that are involved here, it

would obviously make the rulemaking record much more voluminous than what it is.

MS. SHARKEY: Can updated versions or alternative methods be used under this part?

MR. KING: By rule, that's not allowed. However, we have tried to interject some flexibility with regards to that issue. There are specific points where in the proposal where it talks about alternatives being proposed.

I guess we would see one potential is that if there is a new version of one of these methodologies that that could be proposed as an equivalency determination. I think that would be a window to use different options.

MS. SHARKEY: That would be without a rulemaking?

MR. KING: Well, the rulemaking provides for that option. It wouldn't be a separate rulemaking itself.

MS. SHARKEY: Do these documents contain solely methods and procedures?

MR. KING: No.

MS. SHARKEY: What else do they

contain?

MR. KING: Well, your next question intimates -- for instance, some of them, from our perspective, do contain standards. ASTM has a broad range of standard test methods for various types of activities. I guess we would consider those standards.

MS. SHARKEY: Has the agency reviewed these documents and the procedures, standards, everything else in them for consistency with each other and with the procedures, methods, and standards in these proposed rules?

MR. KING: As a whole, yes, we have done that. We haven't gone through, as part of this proceeding, every single line of every single document and cross-referenced the entire proposal, but we do think that it all fits together.

We have had experience with working with all of these documents in the context of other programs. As a whole, yes, we think it all fits together.

MS. SHARKEY: If there is a conflict, do the procedures specified in Part 742 control?

MR. KING: Yes, that's correct.
MS. SHARKEY: If there is a conflict between two documents in here, how would one resolve that?
MR. KING: I think we would have to look at the context in which it is coming up. We would have to look at which is the more applicable procedure or methodology given the issue at hand. I don't think there is really a uniform procedure to follow with regards to that issue.
MS. SHARKEY: Okay. Thank you.
THE HEARING OFFICER: Are there any follow-up questions?
Okay. The next prefiled question concerns 742.215 filed by the site remediation advisory committee.
MR. RIESER: Is the purpose of the soil attenuation capacity to represent an objective analogue to a free product determination?
MR. SHERRILL: The purpose of the soil attenuation capacity is to provide mechanisms to -- there are parts here. One is to make sure there is no migration of mobile free products; two, ensure that no potentially unacceptable health

risk remains where there is a violation to an engineered barrier or institutional control by unintentional or accidental exposure to the contamination left in place; and three, provide a ceiling control to limit the level of exposure from high contaminant concentrations from multiple organics.

MR. RIESER: Does this apply only to organics?

MR. SHERRILL: Yes.

MR. RIESER: On page four of your testimony, this is directed to Mr. Sherrill, you indicate that the soil attenuation section applies only to native soils and not to fill. How does one address these issues to sites which are mostly fill and non-native soils?

MR. SHERRILL: The attenuation capacity of the soil is not to be measured out or from fill soil. Fill soil may not retard or attenuate contaminant flow. It's a site-specific call.

Fill could have -- when we think of fill, it could have wood chips, metal, brick, demolition, construction debris, organic branches, leaves. When we talk about taking an

organic content of native soils, these other organics, such as leaves, branches and this disturbed material and fill would not be indicative of that.

MR. RIESER: For those sections of the rule, for example, 742.305 as part of the pathway exclusion where you are required to verify whether you have compliance with this specific section or not, how would that be handled with that context?

MR. SHERRILL: In many instances, regarding fill, you may have fill that is a native fill soil and we would just want to know what the organic content of that is.

If it's fill in the context of containing this miscellaneous debris that I mentioned earlier, it would become a Tier 3 issue and it would need to be reviewed whether you were in compliance with this soil attenuation or not.

MR. RIESER: So if you had, say, a site which had -- let's go back to slag as an example. You had a slag site. You couldn't use pathway exclusion, the Subpart C pathway exclusion,

because the soil attenuation issue is going to apply to that material.

MR. SHERRILL: You may or may not depending on your contaminant. You may not -- the soil attenuation may not even be a ceiling factor for a particular site. It may or may not.

As we mentioned before, it applies for organics. So if you are looking at inorganics, it would be inapplicable such as slag if that was your contaminant.

MR. RIESER: Well, the organic or inorganic refers to the contaminant and not to the material?

MR. SHERRILL: Correct.

MR. RIESER: I guess I was thinking of an organic contaminant would be of the slag type.

MR. SHERRILL: If you have an organic contaminant in a slag fill, you could not measure what we term as the soil attenuation capacity.

MR. RIESER: So in that circumstance, that would automatically be something where you could not use the Subpart C pathway exclusion and you would have to go to some Tier 3 evaluation?

MR. SHERRILL: You may be able to go below the slag and measure the native soil below the slag.

MR. RIESER: If the contamination reached that far? I mean, what if the contamination was just limited to the slag, the fill area?

MR. O'BRIEN: It really wouldn't matter. We are looking at the capacity of the soil to attenuate. It's a capacity of the soil, not the contaminant in it.

We would have to look and see what the contamination was, but the underlying soil could still have that capacity to attenuate. As long as that capacity wasn't exceeded, then, that pathway wouldn't be --

MR. RIESER: So if there was underlying soil between the contamination of a water table, that is what you would look at to fulfill this requirement?

MR. O'BRIEN: That could be one option.

MR. RIESER: Excuse me. If you measure your FOC, can you use that instead of this value?

MR. O'BRIEN: Correct.
MR. RIESER: This is just a default value that selected as being useful for the purposes that you have here?
MR. SHERRILL: Yes.
MR. WATSON: Excuse me. What does FOC mean?
MR. SHERRILL: The traction of organic carbon in the soil.
MR. RIESER: Okay. Thank you.
I'll proceed with the next group of questions.
Is it correct that this rule requires a person to sum only those organic constituents which are required to be analyzed by the particular program under which remediation is being conducted?
MR. SHERRILL: The sum of all organic chemicals are to be totalled. At a LUST site, for example, if it is thought that only BTEX constituents are at a site, then, only BTEX need be summed.
Additional analytical sampling, for example, from a target list of compounds would not be required and then the agency also approves

of the use of a total petroleum hydrocarbon test to derive the sum of all organic chemicals.

MR. RIESER: So it's also correct that it would not require any additional sampling of constituents on a targeted list of compounds other than those that you have identified either at a LUST site or in a focused investigation?

MR. SHERRILL: Not necessarily. If you have a focused investigation only for benzene and there were other organic contaminants at the site to fulfill this requirement, you would need to measure those other organics.

MR. RIESER: So even in the focused site investigation where you evaluate one targeted compound of concern, you have to evaluate other constituents even though they weren't identified as compounds of concern?

MR. SHERRILL: Yes, if it's thought that those are present.

MR. RIESER: Even if you don't have that information at hand performing the investigation, you would be required to go out and obtain it?

MR. SHERRILL: There again, that's

site-specific or program-specific. I'll go back to LUST. We generally know at a LUST site what the release is. You would not need to analyze for all of those other organic contaminants. We usually know at a LUST site it's BTEX, for example.

MR. RIESER: Okay.

MR. SHERRILL: So you would only be sampling for BTEX.

MR. RIESER: So by the same token, if you were evaluating one group of compounds at a focused site investigation, that's all you would have to evaluate for under this?

MR. SHERRILL: Let me give you an example from the site remediation program. A site comes in and they want to focus their investigation for benzene, but it is also known that trichlorethylene is also present. Both benzene and trichlorethylene concentrations would need to be summed.

MR. RIESER: In looking at 215(b)(1), it says the sum of the organic contaminate residual concentrations analyzed for the purposes of the remediation program for which the analysis is performed, that's what the focus is. Then, it

follows in the next sentence by saying if the information relative to the concentration of other organic contaminants is available, such information shall be included in the sum.

I was wondering by the inclusion of that language, wasn't it the agency's intent when there was a focused site investigation as opposed to a tank site, to rely only on the -- to evaluate only those organic constituents which are the subject of the focus and to only require the inclusion of those other organics if that information was already available, that information being the sampling information?

MR. SHERRILL: I think that's correct.

MR. RAO: Can I ask a follow-up question?

If you don't have all the information that is available like they are doing a focused investigation and they have certain information based on their investigation that they have access to and they are going to use only the sum of those constituents for which they have information for, if there are other organic contaminations in the area, and if they

don't use it, how protective will this exclusion be?

MR. SHERRILL: Well, if there were other contaminants and you are saying that information is available and then going back to the rule if the information relative to the concentration of other organic contaminants is available, such information shall be included in the sum.

MR. RAO: By available, are you saying it should be included in the sum? If it's not, are you asked to go and investigate to make sure there are no other organics in the site other than what they are focusing on?

MR. KING: What we were trying to do is a balancing here because one way to approach this is to say even though you are coming in on a focused investigation, go out and look for everything. Well, that seems to be too far to one side.

On the other hand, if we just said let's just look at the single contaminant or contaminants that you brought into the focused investigation, but ignore all of the other information that might be out there, well, that

seems to be too far on the other side.

We tried to strike a balance where if the information was available as part of whatever characterization you had done or some kind of historical information as far as sampling data, that that would be included as part of the calculation that would be made.

We didn't necessarily want somebody, if they were doing a focused investigation, to necessarily go out and look for everything.

The situation, then, obviously is different if you have a comprehensive investigation where you are looking at all of the contaminants of the site.

We tried to do a balancing and one could say, well, it's not protective enough, but on the other hand, we didn't want to go too far and open up the entire range of chemicals when we have this focused investigation.

MR. RAO: So would there be any judgment calls on the part of the agency when they come up with a focused investigation where they are pretty close to the limit and you want

to investigate further to make sure that there was --

MR. SHERRILL: I would think in that situation, we would go under 742.215 to one of the methods is this total petroleum hydrocarbon where instead of going and running what we call the total compound list and priority pollutant list, that they would run this one test in lieu of sampling for all of these other constituents.

MR. RAO: To get an idea what the level would be?

MR. SHERRILL: Exactly. That test actually may be probably a better test than analyzing for all of the target compound lists.

MR. RAO: Okay.

THE HEARING OFFICER: Are there any additional follow-up questions?

Mr. Rieser?

MR. RIESER: Go ahead.

MS. SHARKEY: No. I'll defer to Mr. Rieser.

MR. RIESER: I was going to go on to my next question.

MS. SHARKEY: Well, I'm not sure what

I -- did I -- I just want to make sure what I heard Mr. Sherrill say in response to Mr. Rao's question.

Are you saying that the agency could require a party to go and use (b)(2), the total petroleum hydrocarbon concentration rather than (b)(1), the sum of the organic residuals?

MR. SHERRILL: You can use either method. The demonstration would be left up to the responsible party on how to make that demonstration -- even if you were pressing the limit, as Mr. Rao said, I'm sure we would ask for that to demonstrate that you are not exceeding the soil attenuation.

MS. SHARKEY: Is the impact of that that the agency could basically ask a remediation applicant in a focused assessment context to include concentrations of materials that were not the subject of the focused investigation?

MR. SHERRILL: That would be -- we would not require it. What I'm saying is that is an option that the applicant could do. The other option would be this total petroleum hydrocarbon procedural test.

MS. SHARKEY: Doesn't that have the

effect, though, of including materials beyond --

MR. SHERRILL: It gives you a sum total. It doesn't tell you what those contaminants are.

MS. SHARKEY: But that's an option, it's not a requirement? You're not saying the agency would require that in some situations, are you?

MR. SHERRILL: We would not require -- I mean, this (b)(2), 742.215(b)(2), is an option.

MS. SHARKEY: Okay. Thank you.

MR. SHERRILL: Yes.

THE HEARING OFFICER: Is there any additional follow-up?

MR. RAO: Would it be more appropriate to use the total petroleum hydrocarbon option instead of going through your individual contaminants analysis just to get an idea in terms of what the total organic contamination is?

MR. SHERRILL: Regarding the TPH test, we did not prescribe -- this will partially address your question -- we did not prescribe what type of TPH test there is because there is more than one method.

Depending on the type of contaminants that you have, whether you had higher end carbons or lower end carbons, that may influence what TPH test you have.

Since many sites come into the program -- into the site remediation program and they have already analyzed for what we call the target compound list up front, then, that data is already available and there would be no purpose to duplicate it and have them go out and run TPH tests.

THE HEARING OFFICER: Mr. Sherrill, maybe you could clarify for the record that TPH means total petroleum hydrocarbon?

MR. SHERRILL: That's correct.

THE HEARING OFFICER: Any additional follow-up?

MR. WATSON: I have a couple of questions.

THE HEARING OFFICER: Mr. Watson?

MR. WATSON: Just so that I'm clear, with respect to (b)(1), if you are doing a focused site investigation, the only time that you would be obligated to include organic concentration of

other organic contaminants in your calculation would be where you have existing sampling data with respect to those other contaminants, is that correct?

MR. SHERRILL: It may not be actual data. I mean, when I say data, it may not -- we use the term information. If you go out there with a PID meter and you are getting indications that there are high organic contaminants in the soil and you go out and just run a benzene sample and there is no benzene, well, there is information provided there that indicates that there are organic contaminants in the soil.

That's just one method to know if you are smelling high volatile organics in the soil, that's an indication there are contaminants there. I use the term information.

MR. WATSON: So some level of observed site conditions with respect to the presence of organics, is that correct?

MR. SHERRILL: Using the word observe -- there again, if we have historical information that there were many spills at the site and it's documented in previous Phase 1 reports, that would

lead me to believe there are other organic contaminants there whether I observed it or not.

MR. WATSON: So then you would have to go out and do the sampling? If you have information regarding spills, you would have to go out and do the sampling to determine the presence of those compounds, is that right?

MR. SHERRILL: Yes, or the TPH method that we discussed.

MR. WATSON: The TPH, does that applies to sites other than purely petroleum sites?

MR. SHERRILL: It would apply to sites that have organic contaminants.

MR. WATSON: So it would extend beyond petroleum constituents.

What's the basis for that TPH test?

MR. O'BRIEN: There are several different methodologies. Some of the most common ones depend upon infrared spectroscopy and it looks for particular absorption band of carbonhydrogen. So it would be indicative of organics.

The test also does a certain

extraction procedure that's intended to separate organics which normally would be present in natural soils from petroleum type synthetic organics.

MR. WATSON: Is there a risk justification behind the test?

MR. O'BRIEN: Again, the reason that we are using it here is to look at what is the attenuation capacity of the soil. The soil has -- soils have varying amounts of natural organic matter. That attenuates when it's present in sufficient quantity. It attenuates organic materials that travel through it.

When all of those attenuation sites, when they are filled up by something, whether that something is toxic or non-toxic, then, those sites are no longer available to attenuate the things and the models don't accurately predict any additional material that comes through because it's not attenuated.

It just passes through the soil. Therefore, the models we've relied on in Tier 1 or Tier 2 are no longer accurately predictive. So we put this in the rule to make sure that when the models are applied, they are applied within the

boundaries upon which they were developed.

MR. WATSON: So really the issue here is it's a safety factor to make sure your model works correctly as opposed to you do this because the results of this indicate that there is a risk to human health and the environment, is that right?

MR. O'BRIEN: That's correct.

MR. SHERRILL: And that was answered before. Like I said, there are three reasons why they want this soil attenuation checked.

THE HEARING OFFICER: Are there additional follow-up questions?

Mr. Rieser, are you ready to move on to the next question?

MR. RIESER: Sure. I think with respect to two and three under (b)(1), those have been answered already.

Under Subsection (b)(2), I think we have answered it already. It is correct that Subsection (b)(2) is an alternative to (b)(1) and the person does not have to meet both conditions, is that correct?

MR. SHERRILL: That's correct.

MR. RIESER: Of the numerous types of total petroleum hydrocarbon, which should be sampled and analyzed, how do you make that decision?

MR. SHERRILL: Feel free to answer that.

MR. RIESER: Let the record show that was directed to Mr. O'Brien and not himself.

MR. SHERRILL: It's generally a site-specific TPH test depending on the type of organic contaminants at the site.

MR. O'BRIEN: The difference there is there are maybe forty different methodologies for running total petroleum hydrocarbon and the agency would consider a proposal, but some of them are more suited towards hydrocarbon with lower molecular weight and some of them are more suited towards hydrocarbons with higher molecular weight.

Some of the tests are less expensive, but don't work well with clay soils. So we haven't specified specifically one method because there is no absolutely perfect method suitable for every site.

MR. RIESER: Are references regarding TPH included in the documents appropriated by

reference or is there a document one can refer to or a central place one can refer to to identify types of TPH methodologies?

MR. SHERRILL: I don't believe we did.

MS. ROBINSON: Could we check on that at a break just to be certain, though?

MS. McFAWN: That's a good idea.

THE HEARING OFFICER: Sure.

MR. RIESER: Thank you. I'll move on to (b)(3) unless there is follow-up to that.

THE HEARING OFFICER: Are there any additional follow-up questions?

MR. RIESER: I'm going to withdraw my first question under (b)(3) and go to number two.

What are examples of other methods for demonstrating that the soil attenuation capacity is not exceeded?

MR. SHERRILL: I do not know of any other methods to demonstrate the soil attention capacity is not exceeded.

MR. RIESER: Are there factors that the agency would consider in evaluating other methods which are proposed?

MS. ROBINSON: Court reporter, could

you read back?

(Whereupon, the requested portion of the record was read accordingly.)

MR. O'BRIEN: Well, I think we would look to see if it fulfilled the purpose of measuring what the capacity of the soil was. I guess potentially we would look for some type of leachate test that would load up that particular soil with organics so we could see at what leading rate it actually came out the bottom. We look for essentially a scientifically credible approach.

MR. RIESER: Okay. Thank you.

Even if the levels of contaminants at a site exceeds the default values of Subsection (b)(1)(A), would the agency still allow Tier 3 demonstration that the site does not present a risk to human health through the use of other models or technical impracticality demonstrations?

MR. SHERRILL: Yes.

MR. RIESER: Are there fate and transport models which can take free product into account and will the agency accept these in a Tier 3 demonstration?

MR. SHERRILL: The agency is not aware of any models to model the fate transport of free product, but we are willing to revise peer reviewed in scientific literature or USEPA reviewed.

MR. RIESER: Thank you.

THE HEARING OFFICER: If there are no additional follow-up questions, the next prefiled question concerns Section 742.220 filed by the site remediation advisory committee.

MR. RIESER: It is not clear from Mr. Sherrill's testimony whether soil saturation is the same as solubility. How are these different?

MR. SHERRILL: The soil saturation limit is provided by the methods listed in 742.220(c) and refers to the contaminant primarily in unsaturated soil. Solubility refers to a contaminant primarily in a saturated zone, that is, groundwater, and we have a chemical-specific solubility table in Appendix C, Table E.

MR. RIESER: Looking at number two, can Section 742.220 be summarized by stating that the agency will not accept the calculated remediation objective which exceeds the Csat either for inhalation pathway for organic contaminants where

melting point is 30 degrees C or for migration to groundwater portion of the groundwater ingestion pathway for all organic contaminants?

MR. SHERRILL: Yes. Yes, the agency will not accept calculated remediation objectives which exceeds Csat either for the inhalation pathway for organic contaminants or for the migration of groundwater portion of the groundwater ingestion pathway.

MR. RIESER: Is it accurate that this is not an issue for the ingestion pathway?

MR. SHERRILL: That's correct. Csat is not an issue for the ingestion route.

MR. RIESER: Why is that?

DR. HORNSHAW: A child could eat soil that is super saturated with chemical and the physical amount of the chemical is not important. It's not a migration issue. It's a direct ingestion issue.

MR. RIESER: Are the organics with melting point less than 30 degrees C only those listed in Appendix A, Table A?

MR. SHERRILL: Of those organics listed in the Tier 1 remediation objective tables, those

with a melting point less than 30 degrees C are listed in Appendix A, table A. For those contaminants not listed in the Tier 1 remediation objective tables, a chemical-specific determination will need to be made of its melting point, which could be referenced in a common chemical handbook.

MR. RIESER: Can the agency clarify that this only applies through remedial objectives for soils?

MR. SHERRILL: Yes. Csat only applies to soil remediation objectives.

MR. RIESER: Even if the contaminants at the site exceeds these values, can a person use Tier 3 to arrive at risk-based objectives for the site?

MR. SHERRILL: Well, even if the contaminants at a site exceed their respective Csat values, one can propose a Tier 3 demonstration to show that a site does not pose a risk to human health and the environment.

MR. RIESER: Can the agency clarify that the options for determining soil saturation limit as set out in Subsection C are alternate options?

MR. SHERRILL: Either 742.220(c)(1) or 742.220(c)(2) may be used. They are alternatives.

MR. RIESER: Okay. Subsection (c)(3) allows the derivation of the value to another method approved by the agency. What other methods are available?

MR. SHERRILL: Under 742.220(c), two methods are provided to develop a soil saturation limit; one, which is the lookup of the tables in the Appendix A, Table A. Then, we have a -- you can use what is called Equation S29 in Appendix C, Table A, to derive soil saturation limit and I do not know of any other methods to make this demonstration.

MR. RIESER: Would a proposal of such method -- would the standards for approving the proposal of such a method be the same standards as you answered with regard to the last section?

MR. SHERRILL: Yes.

MR. RIESER: Can the agency clarify that the soil saturation values were taken into account in setting values in the Tier 1 tables?

DR. HORNSHAW: Yes.

MR. RIESER: Those were the soil

saturation values included in Appendix A, Table A?

DR. HORNSHAW: Yes. Those were the values in the lookup tables marked with Footnote D.

MR. RIESER: Thank you.

THE HEARING OFFICER: Are there any follow-up questions concerning 742.220?

MR. WATSON: I have one.

THE HEARING OFFICER: Mr. Watson?

MR. WATSON: How would you determine the melting point of a compound such as naphtha that has a bunch of constituent contaminants of concern?

MR. O'BRIEN: We would look at the constituents and not the mix.

MR. WATSON: So when we are looking at compounds in determining free productive definitions, for instance, that have a melting point criteria, then, you would look at the constituents of that compound and determine the application of the definition?

MR. O'BRIEN: That's correct.

MR. WATSON: Okay.

THE HEARING OFFICER: Are there any

additional follow-up questions?

Okay. The next questions concern 742.225. We will begin with questions filed by the site remediation advisory committee.

MS. ROSEN: Number one, is it correct that determination of remediation objectives in the form of a numeric concentration of contaminants is not required by Part 742 nor warranted in all cases?

MR. KING: That's correct. Recognizing that there are certain provisos relative to soil attenuation capacity and the soil saturation limit, et cetera, that we were just talking about.

MS. ROSEN: Okay. Number two --

MR. WATSON: I have a follow-up question on that.

Do you think the language in the regulations needs to be amended? It really isn't clear anywhere here that there can be non-numerical remediation objectives.

If you read the language, for instance, in 225(b), where it says compliance is achieved if each sample result does not exceed that respective remediation objective.

The conclusion that you could

draw from that is it necessarily numerical and I guess the question is whether or not there needs to be some clarification in the regulations themselves to reflect that that, in fact, could occur.

MR. KING: You need to recognize that when you are using 742, it's in the context of one of the other programs. For instance, when we were going through Part 740 last week, to just kind of flip through there, where it talks about the remedial objectives process, this is in 740.440, it clearly references that you are not always in a numeric situation.

The same is true under the tank program where you can achieve under certain circumstances getting a no further remediation letter without going through the numeric process here.

MR. WATSON: Thank you.

THE HEARING OFFICER: Are there any additional follow-up questions?

Ms. Rosen?

MS. ROSEN: Just one minute.

Continuing on with that Section

742.225, our question number two, says if a sample point is different than the compliance point, is it accurate to say that the compliance point values which are applied at the sample point are back calculated from the remedial objectives derived for the compliance point?

MR. KING: I was wondering, could we kind of talk about two, three, four and five together? They are really talking about the same kind of issue. Perhaps if we discussed that all together, I could try and point out the differences between the three.

You can have a point of human exposure that's different than the compliance point. One of the ways that the point of human exposure gets moved out is based on where the applicable institutional control is.

For instance, if your point of human exposure was moved to the edge of an institutional control, you could then, in essence, back calculate to determine what your compliance level needed to be at a specific point.

The sampling point that we were talking about that earlier today, the sampling

point could be at various places on the site in terms of determining what the levels of contamination are in various areas, but those -- each of those sampling points does not have to be a compliance point.

MS. ROSEN: To interject, the sampling points would be determined by the program under which you are operating?

MR. KING: That's correct.

MS. ROSEN: Okay. Please explain the compliance point more specifically.

MR. KING: Okay. The compliance point is a program-specific determination. It's really -- that varies from program-to-program.

The LUST program is the most rigid relative to that where it's restricted. It says it's either 200 feet or the property line and each program has a different point where the compliance levels must be achieved.

MS. ROSEN: Question number five, if you could provide some examples of where the compliance point and the point of human exposure would be different.

THE HEARING OFFICER: Excuse me.

Before you respond, could you just read it into the transcript for the board members who are not present?

MS. ROSEN: Yes, I could.

Is it correct that the compliance point is at the point of human exposure? If not, can you provide some examples of when the compliance point and point of human exposure would be different?

MR. KING: The compliance point can be at a different place other than the point of human exposure. An example of that would be if you had an institutional control applied off-site. That, in essence, would move the point of human exposure to the edge of that institutional control.

In that case, you might still very well end up placing your point of compliance at the edge of the on-site property.

MS. ROSEN: Okay. Thank you.

MS. SHARKEY: Could I follow-up on that?

THE HEARING OFFICER: Sure.

MS. SHARKEY: I just want to make sure I've heard this correctly.

In that case, the point of human exposure and the compliance point are one in the same, is that correct, Mr. King, from the example you just gave?

MR. KING: No. I think I said the opposite. In the example that I gave, the compliance point was closer to the source than what the point of human exposure was.

MS. SHARKEY: Okay. Because the institutional control has controlled human exposure within a designated site so if human exposure will be at the edge of the site or immediately outside the site, in other words, outside the boundary where the institutional control is in effect, but the compliance point is not the site boundary, then, the compliance point may be some other site within -- some other sampling point within the site?

MR. KING: That's correct.

MS. SHARKEY: Thank you.

THE HEARING OFFICER: Are there any additional follow-up questions?

Ms. Rosen?

MS. ROSEN: Okay.

MR. RIESER: All right. On page

eight of Mr. Sherrill's testimony, he appears to reference differences in the application of these rules to inhalation routes within enclosed structure. Is the agency proposing different approaches or objectives based on inhalation pathways within an enclosed structure?

MR. SHERRILL: 742 does not model the fate and transport of contaminants that make their way into an enclosed structure. The agency is not proposing any approach or objective for the inhalation pathway within an enclosed structure other than whether that exposure route can be excluded from further consideration.

MR. RIESER: Is that a separate consideration than that which is provided for inhalation pathway under Subpart C?

MR. SHERRILL: Could you clarify that?

MR. RIESER: In the last part of your testimony, you talked about excluding a certain pathway.

MR. SHERRILL: Uh-huh.

MR. RIESER: I just want to clarify that's a separate demonstration than the methodology for excluding inhalation pathway under Subpart C.

MR. SHERRILL: I guess under Subpart C, we do have that method for excluding a pathway.

MR. RIESER: That's correct.

MR. SHERRILL: And you are asking whether there is another method to exclude?

MR. RIESER: My question is that the regulations at no point appear to reference a specific inhalation pathway within an enclosed structure as being separate from any other inhalation pathway.

I want to confirm that there is no demonstration that has to be made with respect to that specific pathway.

MR. SHERRILL: That's generally true. You do not need to make some demonstration.

MR. RIESER: Okay. Thank you.

Can the point of human exposure for construction workers be moved away from the source by using an institutional control which identifies the area of contamination and requires compliance with OSHA standards?

MR. SHERRILL: Yes.

MR. RIESER: Going on, what is an aliquot? What does the word mean in the context

of this regulation?

MR. SHERRILL: An aliquot is only one part of a composited sample submitted for laboratory analysis. For example, if there are six aliquots taken from six different locations at a site, these six aliquots may be physically mixed together and submitted as only one sample for laboratory analysis.

MR. RIESER: Why is there a limit of six aliquots per sample for the inhalation or ingestion route, but not for the migration to groundwater route?

MR. SHERRILL: There is a limit of six aliquots per sample because USEPA believes that the physical mixing of soil samples beyond six aliquots is not valid. You would not get a representation of those six aliquots.

MR. RIESER: So why wouldn't that apply to the migration of groundwater route?

DR. HORNSHAW: Actually, the number of aliquots in a sample is a variable number. It depends on the zone of contamination. We are specifying samples being collected every two feet within the zone of contamination. So it depends

on how much contamination is there and how many sub-samples go into the sample.

MR. RIESER: You can have more than six in that circumstance?

DR. HORNSHAW: Or less. It depends on how much contamination is there.

MR. RIESER: All right. Thank you.

MS. ROSEN: Is it correct that Part 742 does not allow a target cancer risk to exceed one in one million at the point of human exposure?

MR. KING: That's correct.

MS. ROSEN: Is it correct that the point of human exposure at which the target cancer risk of one in one million must be achieved can be moved from the source without the inhalation of an engineered barrier so long as applicable exposure routes have been managed through the use of an institutional control?

MR. KING: Yes, that's correct.

MS. ROSEN: Question eleven, the Part 742 proposal sets out numerous mechanisms for developing remedial objectives -- exposure route exclusion, use of area background concentrations, development of Tiers 1, 2 and 3

remedial objectives. Assuming the same land use scenarios, is it correct that development of a remedial objective under any of the above-listed mechanisms offer equivalent protection of human health in the environment?

MR. KING: Yes. That is our intent as to the way it's supposed to operate.

MS. ROSEN: Thank you.

THE HEARING OFFICER: The next prefiled questions on 742.225 were filed by Mayer, Brown & Platt.

Ms. Sharkey?

MS. SHARKEY: My first question is whether groundwater sampling is always required.

MR. SHERRILL: Groundwater sampling is not always required. To kind of tie that into 742, it is not a program, but works in conjunction with the other Bureau of Land programs. For example, I know under LUST you can have -- under your site classification, you may not be sampling groundwater. The same thing with the site remediation program.

MS. SHARKEY: Are there instances in which compliance with a ground water remediation objective can be demonstrated without groundwater

sampling?

MR. SHERRILL: I cannot think of how one can determine compliance with the groundwater remediation objective without sampling.

MS. SHARKEY: We talked last week in the hearings on Part 740 about factors which might give the agency confidence that a spill was not impacting groundwater.

I guess I was wondering whether there is, in fact, in the notion of migration to groundwater pathway, if, in fact, by excluding that pathway with a demonstration, in effect, one demonstrates one is achieving, for example, a Tier 1 type of groundwater objective?

MR. KING: I think this is kind of the situation we were talking about this morning when I deferred answering the question. I think we would still like to defer this a little further and make sure we are on the same wavelength.

MS. SHARKEY: Okay.

MR. RAO: I have a follow-up question.

MS. McFAWN: I know you are deferring it.

MR. RAO: As Ms. Sharkey is saying,

if a groundwater pathway is excluded, then, in terms of remediation, do they have to do anything more with relation to groundwater or at that point, they don't have to concern themselves anymore with groundwater issues?

MR. SHERRILL: Let me answer that in two ways. Under Subpart C, if you go under Subpart C of Part 742 to exclude the groundwater, our guidelines and requirements that need to be met, one of those -- you would need to be sampling the groundwater to know what you concentration is, you need to be modeling it to know what those estimated concentrations are downgradient. You can't have free product there. You would be needing an institutional control to limit people from potentially putting in a well.

Then, the other issue that Pat Sharkey brought up, we get many sites where the instance -- where it can be demonstrated through the sampling -- the soil sampling that the groundwater has not been impacted.

In other words, they sample how deep a surface spill has occurred. Let's say, the depth of the contamination has only

migrated down to three feet or four feet and there was no saturated water conditions -- groundwater conditions. So the agency could concur that the groundwater was not impacted without even investigating groundwater.

MR. RAO: So some of these things that you mentioned now are the procedures by which you exclude the pathway. Once you do that, when it comes to compliance with the remediation objectives, then, is groundwater still an issue?

MR. SHERRILL: No. Under the site remediation program, really, under any program, the groundwater may not even be an issue. In other words, we may not even be issuing or developing groundwater remediation objectives because it wasn't an area of concern.

MR. RAO: So what you are saying is in order to exclude the pathway, you may have to do some sampling? You cannot exclude a pathway without doing any sampling, is that what you are saying?

MR. SHERRILL: If you use the strict definition of excluding a pathway under Subpart C, what I'm saying also is since

a site investigation is a prerequisite before you even started using 742, during that site investigation, the agency may concur that groundwater is not even an issue.

MS. McFAWN: So you wouldn't even have to develop a remediation objective?

MR. SHERRILL: Correct.

MS. McFAWN: So you would never get that question?

MR. SHERRILL: Correct.

MR. RAO: And that's based on whatever program you are in before you get into these T.A.C.O. rules?

MR. SHERRILL: Okay.

MS. SHARKEY: I would just like to still come back to it in the context of what that means in terms of your no further remediation letter and the ability to get that protection. If you wanted to defer that answer until later, that's fine.

My question number three was if consistent with applicable program requirements, can a remediation applicant use the provisions of this part to develop soil objectives only?

MR. SHERRILL: Yes.

MS. SHARKEY: Under 742.225(a) and (b)(4), if a remediation applicant is electing to sample groundwater apart from any program requirements, how would the sample points be determined?

MR. KING: We struggled with this one because we just don't know. I mean, if you weren't doing it in one of the context of the programs you were involved in, I just don't know how you would do that.

MS. SHARKEY: I guess I'm assuming that it's either a part of the site remediation program or potentially in the context of getting a 4(y) letter, which is another alternative we had talked about last week that is outside the site remediation program.

For the site remediation program itself, is there something in Section 740 that would tell the applicant how many samples they should take for groundwater and where to sample?

MR. KING: There is not an express number. I mean, we didn't want to be prescriptive as to that issue because of the wide variety of

sites that are encountered.

It's not like the LUST program where you can say you have a tank, take two on the bottom and one on each wall. You can't do that in context with the site remediation program. We didn't want to try and prescribe that kind of regimen.

MS. SHARKEY: Is there some sort of standard one could -- that could be developed to incorporate the kinds that the agency might have -- the factors the agency might want to look at to establish the sampling points and number of samples for that kind of situation?

MR. SHERRILL: Again, that's program-specific. I know under 740, we referenced ASTM documentation for site investigation. We see such a wide variety of sites. I addressed in my testimony -- I provided two or three pages of testimony on the very issue of trying to come up with sampling points to investigate a site. It's such a broad subject that wasn't applicable for the 742 development of remediation objectives.

MS. SHARKEY: Okay. So it's under 740 if I'm dealing with a site remediation program.

Under 742.225(c), if no contaminants of concern are detected six inches below ground surface, is it necessary to go further?

The question goes on to say if no contaminants of concern are detected two feet below the six-inch level, is it necessary to go further.

Does it make a difference in where or how far one must sample if an immediate soil removal action was performed at a site?

MR. SHERRILL: To answer the first part, if no contaminants of concern are detected at six inches below ground surface, is it necessary to go further, I mean, our LUST sites -- in our LUST tanks, their release occurs at ten feet below the surface. So to say six inches below the ground surface wouldn't really have any relevance at a LUST site. We have many site remediation program sites where the release points are several feet below the surface.

MS. SHARKEY: I was taking that from (c)(1), discussing a minimum of two sampling locations for every half acre of contaminated areas required with a screen sample at each sample location

obtained at every two feet of depth beginning at six inches below the ground surface and continuing through the zone of contamination.

MR. SHERRILL: The key word there is on 742.225(c)(1) is that it is necessary to continue through -- meaning sampling -- through the zone of contamination.

MS. SHARKEY: That's really my question. If you sampled six inches down and you have gotten to it being clean, are you through the zone of contamination?

MR. SHERRILL: Well, no. Like I said, in a LUST site, the zone doesn't start until ten or twelve feet below the surface.

MS. SHARKEY: How is the zone of contamination defined?

MR. SHERRILL: The zone of contamination would be defined through the site of investigation prior to getting to the 742.

MS. SHARKEY: Okay. So if I have a spill site and I know -- I visually know the area of impact horizontally. I don't know the vertical area of impact in my sampling. I assume this was designed to tell me the zone of contamination

vertically.

What I'm trying to figure out is when can one stop sampling? How far does one have to go down before one can determine they are no longer within the zone of contamination?

MR. SHERRILL: In the context of 742, we do not address -- that would be considered a site investigation question. We are really not trying to be prescriptive here on how deep one needs to sample.

MS. SHARKEY: Do you know if there is anything in Section 740 that would give a remediation applicant direction on this point of how far they needed to go?

MR. KING: Again, there is nothing that's prescriptive that gives an express number, no.

MS. SHARKEY: So is it your intention in using these two programs together, 740 and 742, that in each instance, it's going to be on a case-by-case basis, the determination of how far an applicant must sample, how far vertically one must go down?

MR. KING: Well, now, don't confuse

this. This section is the section that is dealing with determination of compliance. This is not a section that's dealing with determining the extent of contamination as far as gradient extent and characterizing the site.

You could be going out and sampling to determine how far out your contamination has gone and then going back and using this methodology to determine whether you have compliance at those specific points.

MS. SHARKEY: Okay.

DR. HORNSHAW: Can I add a note of clarification?

The whole intent of this section is for determination of compliance for the migration of groundwater route. The intent is to determine the total mass of contaminant within a soil column that's available to move to groundwater.

What you need to do is sample through that area of contamination to get an idea of what that mass is and then you can average that out on all of the samples collected within that bore hole to determine that the total mass there is okay or if it's going to leave you

problems in the groundwater. That's the basic intent of the whole section.

MS. SHARKEY: The intent is to allow you to composite with aliquots from different levels vertically?

DR. HORNSHAW: Right, to represent the total amount of contamination in that soil column, which is available to move down to groundwater.

MS. SHARKEY: All right.

MR. SHERRILL: Historically, we would collect a sample and the most contaminated sample from the soil column, we would say this is representative of the whole column. Well, that's not realistic. Now, we're saying you can, within the guidelines, average a composite within this column and that gives a more accurate representation of that contaminant loading into the groundwater.

DR. HORNSHAW: And to go even further, its sort of at the discretion of the owner/operator as far as how far they want to sample. They can sample all the way down to the water table if they want in order to get a better estimate of the total mass contamination within the bore hole or they can

just sample down to the first non-detect. I mean, that's up to the person doing the work.

MS. SHARKEY: That goes, I think, directly to my question. One can sample to the first non-detect area?

MR. KING: No, the first non-detect beyond the zone of contamination.

MR. SHERRILL: And provided you have gone through the zone of contamination.

MS. SHARKEY: Okay. For your compliance demonstration, then, one must have previously defined the zone of contamination and then go either to -- go through that zone of contamination or to the first non-detect or through the zone of contamination and to the first non-detect thereafter?

MR. KING: It's the latter.

DR. HORNSHAW: The latter.

MS. SHARKEY: So one could simply go through the zone of contamination composite and not have to ever get to a non-detect situation or below the objective situation because the objective is going to be based on the composite rather than any individual sample point?

DR. HORNSHAW: As long as you characterize the depth of the contamination, you could go to the last sample point that is still within the zone of contamination.

When you get right down to it, it's to the owner/operator's benefit to include non-detects in the calculation of the average.

MR. SHERRILL: I want to clarify this. It's got to be done within the guidelines provided because compositing and averaging are two different techniques that you just -- that there are restrictions on those particular uses.

MS. SHARKEY: Earlier, I had some questions about using the characterization sampling as the compliance sampling also in that a party may want to telescope the process and if they are lucky, they may be able to demonstrate right off the bat that they have met objectives, Tier 1 objectives, for example.

DR. HORNSHAW: Or that they have characterized the site completely.

MS. SHARKEY: Right, but that is another component of it. In that instance, some of the problem that I'm picking up on now the

question is zone of attenuation -- excuse me -- the zone of contamination.

Has it been fully defined as part of that problem, then? In other words, if I really have no -- I haven't gone down ten feet or I haven't gone down to groundwater in an area of the spill. I have simply gone down until I come up clean, maybe two feet below clean.

At that point, I want to say I'm done. Is there a problem with using that, too, as a demonstration of compliance under this part?

MR. SHERRILL: The way you phrase that question, we would need to know the site. I mean, are we looking at the site that had a surface spill or --

MS. SHARKEY: Yes, a surface spill. I'm talking about a surface spill.

MR. SHERRILL: Well, there again, I know of sites that have had surface spills in sandy environments and you can go there a week later and it's migrated down several feet below the surface very quickly. You may not be done.

We have railroad cars that

turn over and they have heavy contaminants and they just migrate right down through the soils at a very quick pace.

MS. SHARKEY: So you're saying that that needs to be developed on a site-specific basis, then, how --

MR. SHERRILL: Yes.

MS. SHARKEY: -- far down one would have to go?

MR. SHERRILL: Yes.

THE HEARING OFFICER: Okay. Before we continue with the next questions and any follow-up, we will take a 15-minute break.

(Whereupon, after a short break was had, the following proceedings were held accordingly.)

THE HEARING OFFICER: Okay. We have had some questions concerning how long we are going to continue tonight. It seems to be a topic of grave concern.

We are looking to see if we can make it up to the Subpart E, Tier 1 evaluations section. That gives us about twenty-one more

questions.

MS. McFAWN: That covers about eight sections. I don't know if we can make it or not. That can be our goal. That would leave us about half of our prefiled questions not including Mr. Reott's questions that we need to do tomorrow.

THE HEARING OFFICER: That's our goal. We'll have to see how it goes.

MS. McFAWN: If not, we should also give you a time. We are looking to conclude about 5:00 o'clock. It is a rather ambitious goal.

THE HEARING OFFICER: We were addressing the questions of Ms. Sharkey of Mayer, Brown & Platt on Section 742.225. I think we are up to the fourth question.

MS. SHARKEY: Does Mr. Watson have any follow-up on that?

MR. WATSON: No, I'm satisfied.

MS. ROBINSON: Could I just jump in?

THE HEARING OFFICER: Yes.

MS. ROBINSON: We committed over the break to look at the TPH -- I think it was you who asked -- if there were any incorporations by reference that addressed TPH. There are not any

that we can see that are incorporated by reference. I just wanted to follow-up with that.

MR. RIESER: Thank you.

MS. SHARKEY: I'm actually on -- I believe it's my sixth question under item six. It's my sixth bullet under item six.

Please provide an example of an appropriately designed site-specific evaluation under 742.225(c)(1). What are the key factors the agency would look to to determine the appropriateness of an alternative sampling method, for example, representativeness?

MR. SHERRILL: An example of an appropriately designed site-specific evaluation under 742.225(c)(1), we could collect a soil sample at every three feet instead of every two feet within a bore hole to determine compliance relative to the migration of groundwater route.

MS. SHARKEY: Okay. In other words, there just might be some variation in the distances. Are there any other kind of factors one might be able to specify as to the kind of things you would be looking at for as an alternative?

MR. SHERRILL: What we are looking at

is equivalency of protection.

MS. SHARKEY: Is representativeness a fair term to use as a factor when you are looking for sampling that can be determined to be representative?

MR. SHERRILL: Yes. That's partially included.

MS. SHARKEY: How many samples are required for volatile organic contaminants which cannot be composited for the migration to groundwater route, for the inhalation exposure route or soil ingestion route?

MR. SHERRILL: There is no specified number of volatile organic samples required to be collected. What we have done here is provide a methodology to average their analytical results.

MS. SHARKEY: So is it fair to say what 742 does is it provides what you have to do if you are going to composite or if you are going to average?

It specifically says you can't composite volatile organics, but it does not in any way lay out the number of samples that one must take under any given program because you look to the

individual program for a number and --

MR. SHERRILL: That would be correct.

MS. SHARKEY: And would that be true for depth of sampling, if you are not compositing depth of program that, again, that is defined by the program?

MR. SHERRILL: That would be correct.

MS. SHARKEY: Okay. Now, turning to 742.225(f), could you provide some examples that that again is a provision that allows alternative methods, provide an example of alternative methods for determining compliance of remediation objectives, what might be an alternative -- what might an alternative -- sorry for this question -- what might an appropriate be, what key factors would the agency look to to determine approveability?

MR. SHERRILL: For example, if a minimal impact occurred from a small UST and the source area was thought to be only a few square feet and twenty-four aliquots composited into four samples may not be appropriate. That may be too many samples to characterize that. Subsequently, a fewer number of aliquots and samples may be appropriate.

MS. SHARKEY: Okay.

MR. SHERRILL: What we are looking for is equivalency of protection.

MS. SHARKEY: And representativeness?

MR. SHERRILL: Yes.

MS. SHARKEY: I'm using that term, I think, because -- what I understand we are trying to do is get comfortable that the area has been adequately sampled so that you are getting a clear reflection of the contamination in that area?

MR. SHERRILL: That's true.

MS. SHARKEY: Okay. Thank you. I have no more on that section.

THE HEARING OFFICER: Okay. The next prefiled question concerns 742.225 filed by Gardner, Carton & Douglas, Mr. Watson?

MR. WATSON: This is question two. I will read A. How does the agency explain the inconsistency between the availability of discrete sample averaging and compositing in the top foot in Section 742.225(d) with the requirements for demonstrating Tier 1 compliance in Section 742.310 for the inhalation exposure route in the upper ten feet and for ingestion exposure route in the top three feet?

MR. SHERRILL: We do not believe they are inconsistent?

MR. WATSON: Why not?

MR. SHERRILL: The purpose of the 742.225(d) is compliance with remediation objectives for that contaminated soil located within the top foot of the surface. For contamination below one foot of the surface, ingestion inhalation compliance still needs to be achieved.

Averaging and compositing is an alternative method to discrete sample collection, which is what we have historically done, in analysis to obtain compliance. The 742.225 rules provide just one approach to averaging and compositing.

The purpose of 742.310 is a separate issue, which is the issue of determining that the inhalation route is to be excluded from further consideration.

MR. WATSON: You're going to have to explain that to me. As I read Section 742.225(d), in looking at inhalation and soil ingestion, the appropriate criteria is the soils in the top foot, is that right?

MR. SHERRILL: If that's where your

contamination is located within that top foot.

MR. WATSON: Do you have an obligation to sample below that?

MR. SHERRILL: To achieve compliance and if there is contamination below a foot, yes.

MR. WATSON: Where is that requirement set out in here?

MR. SHERRILL: Well, 742.225(d) is -- it states if a person chooses to composite or average to determine compliance, then, we provide the guidelines. Under 742.225(a) and (b), the example for under (b), we say, unless the person elects to composite samples or average sampling results as provided. Then, it goes on to say shall be determined by comparing the contaminant concentrations of discreet samples to the applicable soil remediation objective.

That's like historically, we have always compared discreet sample results, for the most part, to your remediation objectives. What we have done here is provide a little flexibility there.

MR. WATSON: Right. And you have given people a break in terms of looking at the

soil ingestion and inhalation exposure pathways. What you have said is that all you need to sample for when you are compositing is the top foot of the soil. I'm assuming that's where the risk from that kind of exposure comes from, is that right?

MR. SHERRILL: I don't follow your question.

MR. WATSON: To determine compliance with the inhalation and soil ingestion exposure route, all I need to do is -- is it not true that all I need to do is sample -- if I decide to composite an average, all I need to do is sample the top foot of the soil?

MR. SHERRILL: For those contaminants located within the top foot. If you have contamination below a foot, you still need to achieve compliance for those contaminated soils. 742.225(d) is just an option to use.

MR. WATSON: I know it allows you to limit your sampling to the top foot of the soil, does it not?

MR. SHERRILL: Maybe this will clarify this. We have several sites, let's say,

with metal contamination and the metals are within the top two or three inches of the soil and they don't go below those top two or three inches in achieving compliance in those top two or three inches because the site investigation has told us that contamination doesn't really go any deeper than that, you would achieve compliance with the site.

We have other sites where the contamination goes from the surface down ten or twenty feet below the surface and this -- just sampling within the top foot would not grant you compliance.

MR. WATSON: For inhalation and soil injection, is that what you are saying?

MR. SHERRILL: Well, (d) is confined to inhalation and ingestion, correct.

MR. WATSON: Right. Under what circumstances would I be obligated to sample below the top foot of the soil to develop a remediation objective for inhalation and soil ingestion exposure routes?

MR. SHERRILL: If your site investigation shows that your contamination is

below a foot, you would be needing to sample below that to achieve compliance.

MR. WATSON: Can you tell me where in 225 it says that or it imposes that obligation on that?

MR. SHERRILL: Under 742.225(b), unless the person elects to composite samples or average sampling results as provided in Subsections C and D of this section, compliance with soil remediation objectives developed under Subparts D through G and I shall be determined by comparing the contaminant concentrations of discreet samples to the applicable soid remediation objective.

MR. WATSON: Right. So I have elected to composite an average so I go to D and it says all I am obligated to do with respect to inhalation and soil ingestion is sampling the top soil, is that correct?

MR. SHERRILL: I guess I don't interpret it that way, no.

MR. WATSON: Well, how would you interpret it, then?

MR. SHERRILL: The method of D, unless we have provided an alternative method, is for those

contaminants located primarily within the top foot. I laid that out in my -- I explained this in my testimony pretty thoroughly also, the very question you raised about does sampling need to occur below a foot.

MR. WATSON: Then, how far would I have to go to determine the remediation compliance with remediation objectives for inhalation and soil ingestion exposure routes?

I mean, I understand that you have to go through the zone of contamination when you are talking about migration to groundwater. But with respect to inhalation and soil ingestion, I still don't understand.

MR. SHERRILL: Subpart C, which is the pathway exclusion criteria, the exposure route evaluation, we have those -- that three-foot ingestion and ten-foot, those are in there to provide exclusion routes or exposure routes.

Determining compliance, which is under 742.225, is a different issue. So if you are asking how far do you need to go to achieve compliance, it would be as deep as your contamination. It can be any applicable

contamination however deep it may go.

I mean, just because contamination is located five feet below the surface, compliance still needs to be achieved for that contamination unless that has been managed, which we will get into later, doing institutional controls.

MS. McFAWN: I'm not sure that I'm following this question and answer. Let me ask a couple of questions.

Under 225(b), you can either choose to sample using composites or you can choose to sample using discreet samples, is that right?

MR. SHERRILL: Averaging, compositing, and discreet.

MS. McFAWN: You can choose between those?

MR. SHERRILL: If it's applicable.

MS. McFAWN: What's applicable?

MR. SHERRILL: Okay. Compositing is an applicable mix of those.

MS. McFAWN: You mean if you are able to do or if it's an appropriate thing to do?

MR. SHERRILL: Correct.

MS. McFAWN: Now, does B address soil remediation objective only?

MR. SHERRILL: Yes.

MS. McFAWN: Okay. Now, you turned to C and D. I'm sorry. D. Here, it says you can use a composite sample or an average sample, correct?

MR. SHERRILL: It states if a person chooses to composite average soil samples or average soil sample results.

MS. McFAWN: Okay. So you may do that if you choose. This subparagraph or Subsection D is intended to determine compliance only with an inhalation exposure route or the soil ingestion exposure route, right?

MR. SHERRILL: Generally, for that contamination located within the top foot.

MS. McFAWN: Well, no. I mean D is only addressing inhalation exposure.

MR. SHERRILL: Yes.

MS. McFAWN: That's why you are concerned about the top foot?

MR. SHERRILL: Correct.

MS. McFAWN: Because inhalation or

ingestion is going to occur primarily in the top foot unless you are talking about residential?

MR. O'BRIEN: No.

MS. McFAWN: Okay. Now, I'm getting tangled up in this.

MR. KING: Can I just say something?

MS. McFAWN: Yes.

MR. KING: I think this series of questions and answers has indicated there may be some ambiguity as to how these are relating to each other.

MS. McFAWN: Yes.

MR. KING: Why don't we -- if the board would give us an opportunity, we can go back and rethink how these two provisions are interrelating to see if there is a way to kind of clarify what is going on here.

MS. McFAWN: That would be good.

MR. KING: Rather than spending more time on it now, I would suggest we do that.

MS. McFAWN: That's a good suggestion.

MS. ROBINSON: What we can do is since we are going to have errata sheet number two done before the second set of hearings also, we will

just incorporate a clarification to try to tie these together better with a further explanation so that it's clear. We go through those line of questions maybe the first day at the second set of hearings.

MR. WATSON: That would work for me.

MS. McFAWN: I think there is yet another question that has to be addressed and that's your original question.

MR. WATSON: Right. Okay. Thank you.

THE HEARING OFFICER: Mr. Watson, do you have additional questions on this?

MR. WATSON: I'll reserve all of my questions with respect to this.

THE HEARING OFFICER: Okay. The next prefiled question concerns 742.300. That was filed by the site remediation advisory committee. There are additional questions from Mayer, Brown & Platt and Gardner, Carton & Douglas. We will take those after.

MR. RIESER: With the understanding that the requirements of Section 742.305, contaminant source and free product determination, have been met, will the agency clarify that if a pathway is excluded

under this section, no numeric objective need to be developed for that pathway and this is true even if all the pathways are excluded?

MR. KING: Yes, that's correct. We had a similar question to that earlier just with the caveat that we were still meeting soil attenuation capacity and evaluation soil saturation limits.

MR. RIESER: That's a matter of taking your site characterization values and applying those values to those sections, Sections 215 and 220, but not a question of establishing a numeric objective for that site?

MR. KING: That's correct.

MR. RIESER: If a pathway cannot be excluded under Subpart C, can it still be excluded under Tier 3?

MR. KING: Yes. That's a possibility.

MR. RIESER: Can this step also be taken at a preliminary stage, for example, without performing a Tier 2 analysis?

MR. KING: That's correct.

MR. RIESER: And it could be taken with regard to one of the three pathways, but not as to

the other two?

MR. KING: Yes, that's correct.

MR. RAO: I have a follow-up question.

You said you can exclude a pathway under Tier 3. Could exclusion under Tier 3 also meet all the requirements that are set up under Subpart C for pathway exclusion or would that be considered a remediation objective under Tier 3?

MR. KING: A Tier 3 evaluation would not be -- would not have all of those restrictions under 305 applied.

MR. RAO: Essentially, you are developing remediation objectives within a tier, is that right?

MR. KING: Right.

MR. RAO: It's not like a pathway exclusion under Subpart C?

MR. KING: One of the examples is something that we encounter frequently, our situation where you have permanent structure. If you have contamination under permanent structure, the levels may be such that you would be above the 305 criteria, but we wouldn't say that you have to tear the building down to deal with that

contamination.

So you are really developing a completely new set of criteria under Tier 3. You wouldn't necessarily, even under that situation, come up with a numeric objective. It still would be looking at the context of the engineered barrier whatever the situation is.

MR. RAO: Okay. Thank you.

THE HEARING OFFICER: Okay. The next prefiled question on 742.300 is Mayer, Brown & Platt.

MS. SHARKEY: I'm not sure this is the same question we have been asking under different sections. I think it is slightly different here.

Can the groundwater ingestion route -- exposure route be eliminated from consideration if a remediation applicant elects to do a focused investigation and remediation under Part 740?

MR. KING: That's generally true. I would quibble with the use of one terminology there and with the use of the word eliminates and the proper word would be exclusion there.

MS. SHARKEY: Okay. Thank you.

THE HEARING OFFICER: The next prefiled question on 742.300 is from Gardner, Carton & Douglas.

Mr. Watson?

MR. WATSON: This was answered last week. There is no need for me to ask it here.

THE HEARING OFFICER: All right. The next question from the site remediation advisory committee is concerning 742.305.

MR. RIESER: What is the intent of Subsections A and B of Section 742.305?

MR. SHERRILL: The intent of 742.305(a) and (b) is a three-part answer. The first part is to ensure there is no migration of mobile free products. The second part is to ensure that no potential unacceptable health risk remains where there is a violation to either an engineered barrier or institutional control by unintentional or accidental exposure to the contamination left in place.

This assumption could be violated if one is exposed to high concentrations from contaminant either dermal, inhalation, ingestion, reactivity, pH, many different ways.

The third is to provide a ceiling control to limit the level of exposure from high contaminant concentrations from multiple organics.

MR. RIESER: At least one of the purposes of A and B is to address the potential of free product on the site?

MR. SHERRILL: Yes.

MR. RIESER: Is it correct that there is language within the referenced Sections 742.215 and 742.220, which would allow the owner to utilize the methods prescribed in those sections or an alternate method if such is approved by the agency?

MR. SHERRILL: Yes. All such methods could be proposed and used.

MR. RIESER: And they could be included under Section 305 as far as pathway exclusion?

MR. SHERRILL: Yes.

MR. RIESER: What is the basis for excluding soils which meet certain hazardous waste characteristics if the risk pathways from this soil to receptors are not complete?

MR. SHERRILL: The basis of excluding soils which meets hazardous waste characteristics includes two parts; one, ensure that no potential

unacceptable health risk remain where there is a violation to either an engineered barrier institutional control by unintentional or accidental exposure to the contamination left in place. There again, this could be violated through high concentrations.

The second part is the agency did not intend 742 to be used so as to create new and many, m-a-n-y, hazardous waste landfills all over the state. Regulations already exist on the management of land disposal of hazardous waste.

MR. RIESER: The contaminated media, if you will, that you are evaluating would not be a hazardous waste if left in place, isn't that correct?

MR. SHERRILL: Generally, true.

MR. RIESER: So the real purpose here is just to -- it's just to provide a cutoff for certain soils that are deemed to be of higher risk than others and in that case, you would still have available to you other methodologies including Tier 3 to not eliminate, but to exclude the pathway?

MR. SHERRILL: True.

MR. WATSON: I have a follow-up

question.

Does the focus here on hazardous waste characteristics find any technical support or basis in the ASTM or the soil screening guidance?

MR. SHERRILL: No.

MR. KING: Let me add some amplification to that. No, there isn't anything in the ASTM in there, but there is not anything equivalent to Subpart C in the ASTM process either.

That's something we have added in and really found that adding that in, we needed to have some additional safeguards.

MR. WATSON: Subpart C is not a risk-based alternative, is that correct?

MR. SHERRILL: We believe it's an Illinois-specific risk-based alternative or procedure, yes.

MR. WATSON: But it is not consistent with the methodologies contained in the USEPA and ASTM methodologies?

MR. KING: We would disagree with that. Just because it's not listed in there doesn't mean it's not consistent with what's set forth here.

MS. SHARKEY: Could I ask which ASTM

are you referring to -- everyone is throwing around ASTM methodologies here? Are we going back to the incorporated ASTM methods here?

MR. KING: The reference was from the question and I believe he was referring to the ASTM RBCA procedure?

MR. WATSON: That's correct.

MS. SHARKEY: Which is not incorporated in here?

MR. KING: It is incorporated.

THE HEARING OFFICER: Is there any additional follow-up?

MS. SHARKEY: Yes.

THE HEARING OFFICER: Ms. Sharkey?

MS. SHARKEY: I guess this goes to my question. I don't know if I'm next on this or not, but I'm trying to understand are we saying that the characteristics of reactivity on Subsection C here for hazardous waste is one of the requirements that -- I guess I'm wording this kind of backwards.

If you've got reactivity hazardous waste by characteristic, you basically cannot exclude a route?

MR. SHERRILL: That's correct, not under 742(c).

MS. SHARKEY: All right. Does that have anything to do with free product? Mr. Rieser talked about (a) and (b) having to do with free product at least in part.

MR. SHERRILL: Does reactivity have anything to do with free product?

MS. SHARKEY: Yes.

MR. SHERRILL: No.

MS. SHARKEY: I'm just looking at the heading here being a contaminant source of free product determination.

All right. Now, does the characteristic of reactivity somehow affect a pathway? I'm lost in terms of how this hazardous waste characteristic affects a pathway.

MR. KING: Mr. Washburn asked a question later on, which we won't get to today, but really the basis of this question is where did this come from? Where did this Subpart C come from?

Let me explain where it came from. When we initially put together a proposal

back in March of this year, we did not include a Subpart C dealing with exposure route evaluations. When we went out and began speaking to people and they asked us about -- they talked to us about how do you exclude a pathway? Our answer was, well, use Tier 3.

Well, it didn't seem like that was the most satisfactory answer because if we just said Tier 3, it really didn't give any specific guidance as to what approach to use. We felt that it was important to really look at coming up with some kind of methodology for excluding exposure routes.

Well, when we met with the advisory committee, I believe, it was at the May meeting, they very strongly recommended that a provision be included for -- a specific set of criteria be included relative to exposure route exclusions.

They had put together a methodology which really focused on making sure that the source material was gone and then certain criteria to make sure that the pathway wasn't complete. We thought that was a good methodology.

That made sense. Get rid of the source. Make sure that there are sufficient barriers so that there is no completion of the pathway.

The problem became one of how do you define the term source? Well, when you say the term source, what do you mean? Well, what we tried to do here is in an analytical fashion, come up with the factors that would really have relevance in saying contamination in the ground is at a sufficient level to constitute a source type material.

So we have used these various criteria as an analogue relative to describing a source. That's why we have done it the way we have done it there. I don't know if that provides any help for your evaluation, but that's the context.

MS. SHARKEY: My question under my first bullet there is both related to C and then D, which talks about pH, which may be different, and E, which talks about inorganic chemicals as to whether or not we are actually creating a new contaminant of concern and when you use the term sources, I'm assuming the contaminants of concern

are the source, at least in many of these cleanups.

Aren't we saying that I could be out there doing a focused investigation that relates to a specific known spill and I'm now required to look for hazardous reactivity for pH? My assumption had been what the agency was saying is that these have something to do with the pathway, that these were going to affect the migration of whatever my contaminants of concern was, but now it's sounding like we are just -- we have basically added new contaminants of concern. I'm wondering if the basis of adding the reactivity --

MR. SHERRILL: There is a question that we haven't gotten to that says are these required to be tested for.

The answer to that is generally not. In most sites, we don't have to test for reactivity. It's usually not a problem. These are not requirements unless it's thought to be a problem.

You're not going to have to test TCLP for metals unless you think metals are going to be there. There again, this gets back to a site investigation.

That information -- you know, if there is no reason to believe that your pH is going to be less than two or greater than 12.5, you don't need to run that analysis. That question gets asked, I think, a couple times.

MS. SHARKEY: Could I say I think it gets asked because of the way this is worded because it indicates any contaminants of concern shall not exhibit any of the characteristics -- any soil which contains contaminants of concern shall not exhibit as though it's an additional requirement. That's true, then, for D as well, any soil which contains contaminants of concern shall not exhibit pH, and again in E?

MR. SHERRILL: Well, the reports that we have been getting in from environmental consultants that we have been approving, they have said they will list this 742.305, let's say, these criteria, A through E.

Sometimes, they will put a word or two -- a sentence or two after each criteria and say we do not believe this needs to be sampled due to the following reasons.

MS. SHARKEY: That's acceptable to the

agency?

MR. SHERRILL: That's been acceptable.

MS. SHARKEY: I guess what we have at this point is the opportunity to clarify this so in the future, people understand that they don't need to address it if it's not a contaminant of concern.

Would that be acceptable to the agency?

MR. SHERRILL: I guess the way they have addressed it in the reports is they will give a reason on why they believe that requirement has been met.

Sometimes it's a narrative and sometimes it's been my testing, but more than not, they haven't -- I haven't had a site yet that has had to test for every one of these.

THE HEARING OFFICER: Mr. Reott, do you have a follow-up question?

MR. REOTT: Yes. I think to follow-up on what you're saying, the problem is that the subject of the sentence -- in all three sentences -- is really the soil.

I think from what you are saying, the subject to the sentence being a

contaminant of concern, and it simply is a way of rewording the sentence. Maybe I'm wrong about that, in which case we have a more serious issue to discuss.

MS. SHARKEY: Thank you. That was exactly what I was getting at.

MR. KING: Then you have a much different proposal. Then, you would simply be saying that you have a contaminant of concern if you have it there and it could exhibit the characteristics of reactivity, you have a whole different sampling. It would change the nature of the sampling. I don't think you want to do that at all.

THE HEARING OFFICER: Mr. Rieser?

MR. RIESER: Wasn't the purpose of using soil rather than contaminants of concern so that you weren't sampling a lot of additional contaminants of concern, that you weren't evaluating -- that additional contaminants of concern concerns reactivity or TCLP characteristics or anything of that nature, that you were looking at the soil, the contaminant media itself without identifying the specified contaminants of concern

in performing that investigation?

MR. KING: Yes, that's correct.

MR. RIESER: One could say, as one has at this hearing, as with my proposed language, that says that these issues may be addressed in a narrative format by using site characteristics identified in your investigation without performing actual sampling for these particular characteristics, which I think is what Mr. Sherrill has testified.

MS. ROBINSON: Can we maybe take a five-minute break to confer on this a little bit?

MS. McFAWN: You know, we're very close to 5:00 o'clock. How about if we leave you overnight to talk about this?

MS. ROBINSON: Great.

MS. McFAWN: Why don't we leave the participants in the audience -- why don't we go on to the questions that we have for Section 742.320.

THE HEARING OFFICER: Okay. Moving on to 742.320, then, the question is from Gardner, Carton & Douglas.

Mr. Watson?

MR. WATSON: Question number four says proposed Section 742.320 contains the standards

for excluding the groundwater ingestion exposure route from consideration. Nowhere in this proposed section is a remediation applicant allowed to use geology to demonstrate that the groundwater pathway should not be a concern. Does the agency believe that geology is relevant to the groundwater exposure route evaluation at a site?

MR. SHERRILL: I can answer that two different ways. Under 742.320, geology is considered under 742.320(d) where you use the equation R26 and it requires the use of a groundwater model equation that takes into account site-specific geological conditions.

Also, under Tier 3, it's very common that people base this route exclusion almost strictly on geology. So yes, we do believe that it's relevant.

MR. WATSON: Are you saying, then, that it's absent from the application of equation R26 and how that takes into account geology?

You are saying that an evaluation of geology would be complete as part of a Tier 3 analysis?

MR. SHERRILL: Under 742.320, that

is a Subpart C, which you can do outside of any tier.

What I'm saying also is you can go to Tier 3 as an option and based on the exposure route exclusion, strictly on -- just about where geology is one of the main components.

MR. WATSON: Okay.

THE HEARING OFFICER: There is an additional question on 742.320 by Gardner, Carton & Douglas.

Mr. Watson, you have your question fourteen.

MR. WATSON: Subpart C of proposed Part 742 sets forth the specific requirements for the exclusion of contaminant exposure routes. How were these exposure routes developed including the 2,500-foot boundary for the potable water supplies in Section 742.320?

MR. KING: That was the discussion I was having earlier as far as the background for developing Subpart C.

The only thing I would really care to add to that discussion is relative to the 2,500-foot boundary issue. That was really picked to coincide because that coincides with the larger

setback zone that is available for water supply wells under the act.

MR. WATSON: What was the basis for the 10-foot limitation in 742.310(c) and the three-foot limitation in 742.315(c)?

MR. KING: As I described in the testimony that was presented, the three-foot and the 10-foot figures, that was part of the proposal that came from the advisory committee.

We didn't do any specific modeling relative to those two numbers, but when they were presented to us, we felt that those would be sufficiently protective relative to the pathways that we were dealing with.

MR. WATSON: So you don't have an understanding as to how those numbers were derived?

MR. KING: To some extent, it's speculative for us. I mean, obviously, there are some kind of obvious practical factors with regard to those.

Like, the three-foot distance is really -- that's if you are talking about a gardening situation, for instance, that would be typical limits that you would have an intrusion

below the surface. I believe they are probably more practical in nature than anything.

MR. WATSON: Okay.

THE HEARING OFFICER: Mr. Rieser?

MR. RIESER: I just have a follow-up on one of the errata issues that were added to 320(b). My question is what was the purpose of adding this additional language?

MR. SHERRILL: On 742.320(b), I believe what you are referencing is it says to the maximum extent practical, corrective action has been taken to remove any free product.

That was addressed because when we looked under this 742.305 contaminant source of free product determination, those criteria primarily deal with soil contamination and under 742.320, we are back to dealing with groundwater.

We didn't want to leave out removing free product in groundwater, which I know is consistent with LUST, federal LUST regulations.

MR. RIESER: But wasn't the whole point of (b) and (b) under 305 to provide some type of objective methodology for evaluating free product?

MR. SHERRILL: It is in soil. If you follow the logic of it, it did not really address free product in groundwater. You could have a five-foot LNAPL layer on top of the groundwater and it may not be addressed in 742.305.

MR. RIESER: All right. Thank you.

THE HEARING OFFICER: Is there any additional follow-up on that?

Okay. We are getting very close to 5:00 o'clock. So we're going to wrap it up for today. We are at a pretty good breaking point. The next question concerns Subpart D, area of background. We will begin with those questions tomorrow.

Tomorrow's hearing will be held in this same location beginning at 10:00 a.m. I am not going to be here tomorrow. Chuck Feinen will be acting as the hearing officer.

MS. ROBINSON: Is there any chance we might start at 9:00 o'clock just in case things move slowly tomorrow?

THE HEARING OFFICER: Does anyone have any objections to starting at 9:00 o'clock?

Is there any response to that? Does anyone have any problems?

MR. WALTON: Earlier if we could.
MS. SHARKEY: 8:30?
THE HEARING OFFICER: The hearing will reconvene tomorrow at 9:00 o'clock.
All right. Does the agency have any additional matters that need to be addressed?
MS. ROBINSON: Not at this time.
THE HEARING OFFICER: The hearing is adjourned until 9:00 o'clock tomorrow. Thank you.
(Whereupon, the proceedings in the above-entitled cause were adjourned until December 3, 1996, at 9:00 o'clock a.m.)

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STATE OF ILLINOIS)
) SS.
COUNTY OF C O O K)

I, LORI ANN ASAUSKAS, CSR, RPR, notary public within and for the County of Cook and State of Illinois, do hereby certify that the testimony then given by all participants of the rulemaking hearing was by me reduced to writing by means of machine shorthand and afterwards transcribed upon a computer, and the foregoing is a true and correct transcript.

I further certify that I am not counsel for nor in any way related to any of the parties to this procedure, nor am I in any way interested in the outcome thereof.

In testimony whereof I have hereunto set my hand and affixed my notarial seal this 10th day of December, A.D., 1996.

_____
Lori Ann Asauskas, CSR, RPR
Notary Public, Cook County, IL
Illinois License No. 084-002890

SUBSCRIBED AND SWORN
before me this 11th
day of December, 1996.

_____
Notary Public