1	BEFORE THE POLLUTION CONTROL BOARD
2	STATE OF ILLINOIS
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4 5	IN THE MATTER OF: TIERED APPROACH TO CORRECTIVE ACTION
6	OBJECTIVES (T.A.C.O.) NO. R97-012 35 ILL. ADM. CODE 740
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13	Hearing held, pursuant to Notice, on the 10th day
14	of December, 1996, at the hour of 10:00 a.m., at Room
15	A-1 Stratton Office Building, Springfield, Illinois,
16	before Kevin Desharnais, duly appointed Hearing
17	Officer.
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21	TRANSCRIPT OF PROCEEDINGS
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23	
24	

1 PRESENT:

2	MS.	MARILI McFAWN			Во	ard Memb	ber		
	MR.	JOSEPH YI			Во	ard Memb	ber		
3	MR.	CHARLES FEINEN				ard Atto	-		
	MR.	KEVIN DESHARNAI	S		He	aring Of	ficer		
4		KIMBERLY ROBINS	ON		At	torney,	IEPA		
		H. MARK WIGHT			At	torney,	IEPA		
5	MR.	GARY P. KING	I	IEPA					
		JOHN SHERRILL			ΙE	PA			
6		JAMES PATRICK O							
		DOUGLAS CLAY		IEPA					
7		THOMAS C. HORNS		IEPA					
		TRACEY E. VIRGI	N			PA			
8		KENNETH L. PAGE			IE	PA			
		CHRISTOPHER NIC		LEPA					
9		KENNETH LISS		LEPA					
		VICKY L. VonLAN		IEPA					
10		LAWRENCE EASTEP		-		PA			
		DAVID RIESER			orney				
11		WHITNEY WAGNER		Att	orney				
1.0		JOHN W. WATSON,				torney			
12		KAREN L. PRENA	-			torney			
1.0		RAYMOND T. REOT				torney			
13		HARRY R. WALTON		-		linois F	ower		
14		ELIZABETH A. STI KAREN A. LYONS	LINHOUR	T	IERG Ch	ell Oil	Dreduc	Fa	
14		DEREK D. INGRAM				ack & Ve		LS	
15		MARK ELMER		C		cal Indus		unail	
10		RANDY SCHICK			IDOT		stry to	uncii	-
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1 HEARING OFFICER DESHARNAIS: Good morning. My name is Kevin Desharnais, I'm the hearing officer 2 for this proceeding, which is entitled: In the Matter 3 4 of Tiered Approach to Corrective Action Objectives, 35 5 Illinois Administrative Code Part 742. 6 This is the third day of hearing for the first set 7 of scheduled hearings, which is the Agency's 8 presentation of its proposals, and questions for the 9 Agency's witnesses. 10 Because the Agency has finished its presentation 11 of its proposal, we'll be continuing with the 12 questions that have been prefiled. And there are 13 several sets of prefiled questions that were made to be addressed. 14 15 We're going to actually begin with the questions 16 that the Agency agreed to respond to at the last set 17 of hearings -- at the last two hearings, and then 18 we'll move on to the remaining prefiled questions that 19 proceed by section number. Then we'll address the remaining questions that 20 were prefiled by Ray Reott, and then the additional 21 22 prefiled questions that were filed by Mr. Rieser. 23 Is there anyone present today on behalf of Mayer, 24 Brown & Platt?

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1 MS. PRENA: I am, Karen Prena. HEARING OFFICER DESHARNAIS: Are you going to 2 3 be asking the prefiled questions? 4 MS. PRENA: Yes, I am. 5 HEARING OFFICER DESHARNAIS: Great, thank 6 you. We'll start by introducing the other members 7 here from the Pollution Control Board. 8 To my right is Marili McFawn, Board member. 9 MS. McFAWN: Good morning. 10 HEARING OFFICER DESHARNAIS: To my left is 11 Joseph Yi. 12 MR. YI: Good morning. 13 HEARING OFFICER DESHARNAIS: To his left is Chuck Feinen, Board Assistant. And Anand Rao from the 14 15 Technical Unit is here on the very right. 16 MS. McFAWN: I just want to welcome you all 17 back from last week's hearing. We're glad to have 18 Kevin with us, too. Thank you for coming on such 19 short notice, and I'm sure we can wrap up the prefiled 20 questions today. 21 HEARING OFFICER DESHARNAIS: Does the Agency 22 have any opening remarks at this time? 23 MS. ROBINSON: Would you like me to introduce 24 everybody again?

1 HEARING OFFICER DESHARNAIS: That would be
2 great.

3	MS. ROBINSON: Way over to my far left is
4	Mark Wight, then Gary King, Tom Hornshaw, Tracey
5	Virgin, I'm Kim Robinson, to my right is John
6	Sherrill, Jim O'Brien, Ken Liss and Doug Clay.
7	And I think the way that we think that probably we
8	should proceed this morning is go ahead and answer
9	first the follow-up issues that we committed to bring
10	back today, and then if you'd like to proceed from
11	there.
12	HEARING OFFICER DESHARNAIS: Okay. Since
13	there's not that many people here in the audience, why
14	don't we also have people introduce themselves and
15	state who they represent if anyone on the record.
16	We'll begin with those seated at the table in front.
17	MS. PRENA: I'm Karen Prena from Mayer, Brown
18	& Platt.
19	MS. ROSEN: I'm Whitney Rosen with Illinois
20	Environmental Regulatory Group.
21	MR. RIESER: I'm David Rieser with the law
22	firm of Ross & Hardies. I'm here representing the
23	Illinois Steel Group, the Illinois Petroleum Council,
24	and I'm also a member of the Site Remediation Council

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1 on behalf of the Chemical Industrial Council of

2 Illinois.

3 MR. WATSON: My name is John Watson. I'm 4 from the law firm of Gardner, Carton & Douglas, and I 5 am here on behalf of a number of corporations 6 representing them today. 7 MR. REOTT: Raymond Reott from Jenner & 8 Block. 9 MS. LYONS: Karen Lyons, Shell Oil Company. MR. WALTON: Harry Walton, Illinois Power, 10 11 Illinois Environmental Regulatory Group, Correctional 12 Action Board Group, and I'm also chairman of the Site 13 Remediation Advisory Committee. 14 MS. STEINHOUR: Beth Steinhour, Illinois 15 Environmental Regulatory Group. 16 MR. EASTEP: I'm Larry Eastep with the 17 Illinois EPA Bureau of Land. 18 MR. INGRAM: Derek Ingram, Black & Veatch. MR. PAGE: Ken Page, Illinois EPA Bureau of 19 20 Land. MR. NICKELL: Chris Nickell, Illinois EPA 21 22 Bureau of Land. 23 MR. ELMER: Mark Elmer, Chemical Industry 24 Council of Illinois.

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HEARING OFFICER DESHARNAIS: Thank you.

2 MR. SCHICK: I'm Randy Schick from the3 Illinois Department of Transportation.

4 MS. VonLanken: And I'm Vicky VonLanken with 5 the Illinois EPA.

6 HEARING OFFICER DESHARNAIS: Thank you. I'd 7 also say that the acoustics in here are really bad, so 8 when you're speaking please try to keep your voice up. 9 These blowers on the side are making a lot of noise.

10 Kim, do you want to continue?

11 MS. ROBINSON: From the Agency's perspective 12 I believe that there were six issues that we committed 13 to answer at today's hearings, and the first one I 14 think we're going to let Gary King address regarding 15 the risk factor.

We've got for purposes of illustration, there may be some extra copies over on the bench area over there by Vicky and Randy, it says errata changes on risk issue.

And this is not an actual errata sheet, this will being gone through, an errata sheet number two, but for purposes of illustration and following along today, if you'd like to grab a copy of that. I believe the Board members should all have one of

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1 those.

Mr. King, would you like to proceed? 2 MR. KING: Before I start talking about that 3 4 issue, one of the things I guess I was kind of excited 5 to see a copy of a set of technical comments from 6 USEPA on the proposed T.A.C.O. rules, and we're going 7 to -- we'll be conferring with USEPA as to whether the 8 -- whether it's okay to introduce these into the 9 record. But I wanted to go ahead and read the last 10 comment that USEPA had with regards to the proposed 11 T.A.C.O. rules, and this is coming from their 12 technical staff. 13 It says, and I'll quote it. "Overall the proposed 14 T.A.C.O. rules represent an excellent risk based 15 approach. The equations and technical parameters are 16 scientifically sound and widely recognized by industry 17 experts as appropriate. 18 Individual IEPA staff members who worked on these 19 rules are to be commended for their efforts. Thank you for the opportunity to review this document." 20 21 I guess we're pretty excited about this, because 22 the role that USEPA could play in this process 23 obviously was still kind of up in the air, and I think this kind of tends to kind of solidify what their 24

1 views are relative to the technical issues.

2	They do have a number of questions that they also
3	raise, but I think we will probably be responding to
4	those points as part of the January set of hearings
5	since we got there so late.
6	We've already taken, started taking steps to
7	distribute copies of these comments to appropriate
8	people that we've been involved with.
9	Getting back to the issue on the risk issue
10	MR. RIESER: I'm sorry, Gary, of course we're
11	going to get questions on everything, so I'll start
12	off. What part of the USEPA did the letter come from?
13	MR. KING: The letter was transmitted from
14	Ann Wentz, who is our liaison person with the
15	Underground Storage Tank Section. She was forwarding
16	what's described as Region V's technical comments.
17	The person who was actually doing the comments is part
18	of the UST Section, but he is really their their
19	central technical person as far as understanding the
20	RBCA concepts and looking at risk based approaches for
21	regional offices.
22	MR. RIESER: Thanks very much.
23	MR. KING: Okay, the
24	MS. McFAWN: Wait, Gary, before you go on,

1 have these comments been submitted to the Board?

2	MR. KING: I don't think so, I think they
3	were just transmitted to us and we were just going to
4	we just saw this late yesterday, I just saw it for
5	the first time this morning. We'll check back with
6	USEPA to see whether they intended for us to file
7	these of record. I assume it's okay with them since
8	it's a public document.
9	If it's not we probably should put it on the
10	record anyway, but I think it would be from a
11	courtesy standpoint we should at least make that
12	communication before taking the formal step.
13	MS. McFAWN: Okay, thank you.
14	MR. KING: Okay, talking about the issue of
15	how you vary the either the target hazard quotient
16	
	or the target cancer risk, when we were having our
17	or the target cancer risk, when we were having our discussions at the first two set of hearings, the
17 18	
	discussions at the first two set of hearings, the
18	discussions at the first two set of hearings, the point was I think the point was being made and I
18 19	discussions at the first two set of hearings, the point was I think the point was being made and I think it was correct, that there seemed to be some
18 19 20	discussions at the first two set of hearings, the point was I think the point was being made and I think it was correct, that there seemed to be some inconsistency with the way that the Agency was

1 together a complicated proposal. Our key notion is still that we're looking at applying the risks at the 2 3 point of human exposure, and we've got a definition 4 which sets out what that point of human exposure is. 5 Where I think the confusion was occurring was 6 relative to how that was handled within Tier 2. What 7 we've tried to do with this two page document is set 8 forth a strategy in which the issues about varying 9 target cancer risk or the target hazard quotient would 10 be dealt with exclusively under Tier 3. You'd have to 11 have a specific approval from the Agency before you 12 would vary that. 13 There was some -- I think there was some concern 14 on our part that the way we had it set up, somebody 15 using Tier 2 could simply go in and change the target 16 risk goals without really doing much other than saying 17 they wanted to change those risk goals.

So we thought it was more appropriate to raise that kind of consideration to Tier 3 where we really could look at things in a much more site-specific

21 basis.

That's not to say that you couldn't -- once you had a Tier 3 approval, you couldn't go back and use the Tier 2 equations. You could, and we're

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1 recognizing that. But you'd have to go through a Tier

2	3 process to get approval of that different risk goal.
3	Now, what we've suggested here is that the
4	appropriate mechanism under Tier 3 to do that kind of
5	risk assessment is the formal risk assessment process
6	that's envisioned in Section 742.915. There it's
7	really talking about our concept of a formal risk
8	assessment in which you're using nationally accepted
9	methodologies for when you would vary risk vary
10	risk goals.
11	We have in fact over the years approved risk
12	ranges between greater than one in a million. We
13	think one in a million is the appropriate starting
14	point and should be the could be the risk goal if
15	you're under Tier 1 or Tier 2.
16	But under Tier 3, a Tier 3 approach we have
17	approved risk ranges greater than one in a million,
18	and a target hazard quotient of greater than 1.0 at
19	NPL type sites, sites that are on the Super Fund
20	National Priority List, and at those types of sites
21	there is a requirement that there be a formal risk
22	assessment, and methodology is well understood in
23	those contexts and that is the approach that if risk
24	is if the risk goals are going to be varied we

1 think it needs to have that kind of close scrutiny.

2	And so you'll see what we have laid out here in
3	these various changes is really kind of is an
4	implementation of that approach. That's the extent of
5	my comments relative to those.
6	HEARING OFFICER DESHARNAIS: Follow-up
7	questions, Mr. Rieser?
8	MR. RIESER: Yeah, what would be the factors
9	for approving the changes in the target risk, what
10	issues would the Agency consider?
11	MR. HORNSHAW: Up front if somebody just came
12	in in Tier 3 and said I want a ten to the minus four
13	risk instead of ten to the minus six, and now do a
14	risk assessment based on that assumption, I can't
15	imagine how the Agency would ever approve that kind of
16	an approach.
17	I don't think we should be the ones that would be
18	okaying a greater cancer risk for somebody with no
19	justifying reason basically.
20	What I can envision is that people will go through
21	standard type of risk assessment that's done for Super
22	Fund sites or equivalent, and also whatever controls
23	are on the site, an estimation of short term risks, of
24	doing any kind of remedial action, that kind of a risk

balancing effort that's done at large sites like Super Fund sites, and in cases where the estimated risk either to current or future receptors is greater than one in a million but less than one in ten thousand, we would approve some of those things based on a very site-specific development of facts pertaining to that site.

8 In that case we could approve that and we have 9 done that for sites both in and out of the Super Fund 10 site program.

MR. RIESER: And I'm trying to listen back for that answer where there were specific factors that you're looking for.

14 MR. HORNSHAW: Things like what kind of 15 controls are on the site, what would be the short term 16 risk to people as a result of doing remediation 17 efforts versus not doing them, and balancing those out 18 versus the risk, the long term risk versus the short 19 term risk, evaluations of the incremental cost to achieve a lesser risk level, all the things that are 20 21 routinely done in feasibility studies for Super Fund 22 sites for instance.

23 MR. RIESER: And one could reference USEPA24 guidance for this type of thing?

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MR. HORNSHAW: USEPA's many guidance

2 documents, correct.

3 MR. RIESER: Thank you. 4 HEARING OFFICER DESHARNAIS: Any additional follow-up questions? 5 6 (No response.) 7 HEARING OFFICER DESHARNAIS: Thank you. 8 MS. ROBINSON: The second one that I think I 9 had on my list, and I believe this question came up by Hiten Soni with the Board, was regarding why we didn't 10 11 use the left-hand side in all the equations but rather 12 used them in some, and John Sherrill's going to 13 address this issue. 14 MR. SHERRILL: Yeah, the question was raised 15 regarding the not putting an equal sign in the equations, and we've gone through different iterations 16 17 of how we were going to present this material, and we 18 went through several iterations of how to present the 19 equations in the material. 20 And in one of our iterations we did have an 21 equation sign, and when you put an equation sign, the 22 equal sign on the -- you had to put a corresponding 23 left-hand side of the equation, and which meant we had to come up with another symbol. 24

1 As you've gone through these T.A.C.O. rules you'll see all kinds of abbreviations and symbols and what 2 3 they all mean. And so for three reasons which I'm 4 going to discuss here we did not put an equal sign in 5 these -- the way we presented the equations. 6 HEARING OFFICER DESHARNAIS: Excuse me, Mr. 7 Sherrill, could you address for the record what 8 specific equations you're talking about or if it's 9 general? 10 MS. ROBINSON: I think it's just a general 11 comment that was made by Hiten Soni, and there were 12 some where we did have them in and there were many 13 that where we didn't have them in, and he's going to 14 sort of address that generally in his answer. So we 15 didn't really pick out which ones didn't have them. 16 HEARING OFFICER DESHARNAIS: Okay. 17 MR. SHERRILL: The primary equations that 18 these were addressed to were Appendix C, Table A, SSL 19 equations, and Appendix C, Table C. As discussed in 20 previous testimony, a person must select the 21 applicable remediation objective equation which is 22 dependent upon the exposure route medium population 23 preceptor and whether the contaminant of concern is a 24 carcinogen and a noncarcinogen.

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1 For all these different equations that we've presented, this written explanation, we did not want 2 3 to have to put this on the left-hand side of the 4 equation. 5 To include this written description of the 6 remediation objective and when it was applicable would 7 be redundant of all the work already provided in the 8 testimony and the work in the body of the rules 9 themselves. 10 So that's one issue. 11 The second issue is to differentiate between the 12 different remediation objective equations using 13 distinct symbols we think would confuse the user even 14 more, since these are not really parameters 15 themselves, they're just the answers to the equations. And if these new symbols were to be added to the 16 17 tables, then the rule would have to be revised to 18 address these new symbols in the text. 19 And the third reason is building upon the second one. If we were to add new symbols or acronyms, we do 20 21 not think that it would really help the regulated 22 community or the Board in differentiating between what 23 we're talking about. In other words, we'd have to have a description of 24

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1 And so what this issue is being raised is why don't we have a symbol for that left-hand side there, 2 3 and in the short answer, after what I've just given, 4 it added more confusion when we added a symbol for 5 that instead of a short word description. 6 MR. RAO: So what you are saying is that the 7 description on the left-hand side in the second column 8 in Table C where it says remediation objectives for 9 carcinogenic contaminants, that's the left-hand side? 10 MR. SHERRILL: Yes. 11 MR. RAO: Okay, I don't think we have any 12 problems if you think this works. But the only thing 13 I think Hiten Soni was concerned about was for some of 14 them you have and some you don't. If you go down the 15 equations R9 and R10, which is basically screening levels for air, for carcinogenic contaminants and 16 17 noncarcinogenic contaminants. 18 MR. O'BRIEN: If you'll notice that the only 19 ones that aren't set up as an equation with both sides are the remediation objective equations. Everything 20 21 else that goes into the remediation objective 22 equations are set up in the normal equation format. 23 MR. RAO: Yeah, that's the reason, and I 24 think he raised this question because he thought maybe

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1 you missed something, or now that Mr. Sherrill has

2 explained --

3 MR. O'BRIEN: No, the answer is we did it on 4 purpose in order to reduce confusion. 5 MR. RAO: Okay. 6 MS. ROBINSON: Is the Board comfortable now 7 with our answer on that? 8 MS. McFAWN: Can you just give us a minute? 9 MS. ROBINSON: Sure. 10 HEARING OFFICER DESHARNAIS: Are there any 11 additional follow-up questions? 12 (No response.) 13 HEARING OFFICER DESHARNAIS: Thank you. MS. ROBINSON: The third issue I believe we 14 15 had committed to provide physical chemical constant 16 changes that we've made from the ASTM models, and Dr. 17 Hornshaw's going to address that issue. 18 MR. HORNSHAW: I've prepared a table which 19 lists the value for Henry's Law constant, diffusivity in air, diffusivity in water, and organic carbon 20 21 partition coefficients, which was used by ASTM for 22 their six model chemicals and the corresponding values 23 which is proposed in the 742 rule, which came from USEPA's database, and that's available I think on the 24

1 front table and at the side as well, to answer that

2 question.

3 HEARING OFFICER DESHARNAIS: Does the Agency 4 wish to introduce this as an exhibit? 5 MS. ROBINSON: Yes, we can do that. I don't 6 know what Exhibit Number we're on. 9, okay. 7 HEARING OFFICER DESHARNAIS: Is there any 8 objection to this being admitted as an exhibit? 9 (No response.) 10 HEARING OFFICER DESHARNAIS: Okay, the 11 Agency's table entitled Comparison of 12 Physical/Chemical Constants Used in ASTM's Risk Based 13 Corrective Action Example Look-Up Table (Table X2.1) 14 and Part 742 Tier 1 Tables (Appendix B, Tables A and 15 B) is admitted as Exhibit Number 9. 16 (Agency Exhibit 9 was admitted.) 17 HEARING OFFICER DESHARNAIS: Follow-up 18 questions, Mr. Rieser? 19 MR. RIESER: The source for the 742 values was the USEPA's SSL guidance document, is that 20 21 correct? 22 MR. HORNSHAW: That's correct. MR. RIESER: Do you know what accounts for 23 24 the differences between these values?

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1 MR. HORNSHAW: I'm not sure how ASTM selected the values that they used in their example table from 2 3 the many values which are available in the literature. 4 I know USEPA completed a fairly large review of 5 the database and compiled all that into the database 6 that is currently presented in the SALT screening 7 guidance document. 8 MR. RIESER: Would one be able to use the 9 ASTM values in a Tier 3 setting? MR. HORNSHAW: Yes, they would have to - the 10 11 person would have to present some sort of 12 justification why the value they're proposing is 13 better than the values that appear last in their document. 14 15 MR. RIESER: Would they need more 16 justification than just that that was the value that 17 ASTM used and found acceptable? 18 MR. HORNSHAW: Yes, we decided even prior to 19 this hearing that it's in everybody's best interest to use a standardized set of physical chemical constants. 20 21 We selected USEPA's database partly because of the 22 large review of the data that USEPA did. 23 We were very concerned right from the beginning of 24 this entire procedure because there's -- for some of

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1 the physical chemical constants there's up to two to three orders of magnitude difference for the same 2 3 parameter in various literature citations, which 4 obviously carry the potential for pretty large 5 disputes when these physical chemical constants were 6 substituted into the Tier 2 equations. So we wanted 7 one standardized set of values to be used, and 8 somebody will have to make a case that the value 9 they're proposing is in some way better than the value 10 that USEPA decided on. 11 MR. RIESER: So then we have what USEPA 12 looked at and make a case for why that decision was 13 wrong, as well as why the value that they were 14 selecting was appropriate? 15 MR. HORNSHAW: That's correct. 16 MR. RIESER: Thank you. 17 HEARING OFFICER DESHARNAIS: Just to check, 18 are people in the back able to hear the conversation 19 that's taking place? 20 MR. WALLACE: Mr. Rieser's very hard to 21 understand. 22 MR. RIESER: Hard to hear or hard to 23 understand? 24 MR. WALLACE: Oh, I'm sorry, hard to hear.

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MR. RIESER: I will speak up or use the
 microphone.

3 HEARING OFFICER DESHARNAIS: Yeah, it might 4 be best if everyone used the microphones, they are 5 here to make it easier. Any additional follow-up 6 questions? 7 MR. RAO: I have just a minor clarification. 8 Dr. Hornshaw, you said that the parameter values from 9 the table were derived from the SSL document. Is that 10 the final guidance that came out in 1996 or the one 11 that's attached to your testimony? You had SSL 12 guidance attached to your testimony that is a graph 13 document. 14 MR. HORNSHAW: I thought I --15 MR. SHERRILL: I can answer that. What Tom 16 Hornshaw had attached to his testimony was a user's 17 guide. The 1996 document had -- there's two different 18 publications, the technical background document and 19 the user's guide. Both of those are dated 1996. And that is the final, quote, version and that's what 20 21 we've referenced, incorporated by reference. 22 MR. RAO: Yeah, I just wanted to make sure. 23 Thank you.

24

HEARING OFFICER DESHARNAIS: Mr. Watson?

1 MR. WATSON: For the record again my name is John Watson from Gardner, Carton & Douglas. Mr. 2 3 Hornshaw, did you do a comparison of the ASTM physical 4 chemical constants and the USEPA physical chemical 5 constants and determine that the USEPA model is 6 superior? 7 MR. HORNSHAW: Model or constants? 8 MR. WATSON: I'm sorry, constants. 9 MR. HORNSHAW: We made a decision to use the 10 table that USEPA has in their final guidance as the 11 values to be used for the -- for all parameters, all 12 physical chemical parameters for both sets of 13 equations. 14 MR. WATSON: Have you done any in-depth 15 analysis of the ASTM constants? 16 MR. HORNSHAW: No, I haven't. 17 MR. KING: If I could just state, one thing 18 if I could just add something relative to that, one of 19 the reasons why we picked the SSL numbers is they're covering the entire range of chemicals that we're 20 21 doing dealing with the ASTM is only what, six 22 chemicals, it's only six chemicals, and if we were to 23 pick the ASTM numbers we would have -- it's in essence 24 a bifurcated system relative to the physical chemical

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1 constants.

2	HEARING OFFICER DESHARNAIS: Any additional
3	follow-up questions?
4	(No response.)
5	HEARING OFFICER DESHARNAIS: Thank you.
6	MS. ROBINSON: The next issue is regarding
7	SW-846 and Jim O'Brien's going to address this. I
8	believe the question came up from Mr. Reott regarding
9	if soils need to be left in their natural state during
10	testing.
11	MR. O'BRIEN: I looked at the applicable ASTM
12	methods, and the one for soil and waste pH is method
13	9045C, Revision 3 dated January, 1995. And the method
14	is very specific, and it states that the 20 grams of
15	the waste sample is to be added to 20 milliliters of
16	reagent water and stirred continuously for five
17	minutes and then the suspension is expected to settle.
18	So it doesn't specifically say you have to crush
19	the soil but it's you have to stir it in solution,
20	and they anticipate that the suspension will occur and
21	that that needs to settle before the electrodes are
22	introduced to measure the pH.
23	MR. REOTT: Just as a follow-up, so you
24	should be able to do anything to it except stir it,

1 stirred and not shaken in other words?

2	MR. O'BRIEN: Yes, that's correct. There's a
3	copy of the copies of the method I believe out
4	there for people to reference.
5	MR. REOTT: Thank you.
6	HEARING OFFICER DESHARNAIS: Any additional
7	follow-up questions?
8	(No response.)
9	HEARING OFFICER DESHARNAIS: Thank you.
10	MS. ROBINSON: Okay, the next issue John
11	Sherrill is going to provide some visual examples to
12	demonstrate how 742.600(e) through (g) work. I think
13	there was some confusion last time around as to how
14	these were all supposed to fit together. So John's
15	going to step over to the easel. If everybody can see
16	that, that's where he's going to be.
17	HEARING OFFICER DESHARNAIS: Before you
18	begin, is the Agency going to be introducing a copy of
19	this as an exhibit?
20	MS. ROBINSON: Yes, we are. This will be
21	Exhibit Number 10, and there are also extra copies
22	over there on that one, too.
23	MR. SHERRILL: There's a three-page handout
24	on the Title of Section 742.600(e) is what I'm

1 referencing right now. The question was asked last week if we could explain and provide an example of 2 742.600(e), 742.600(f) and 742.600(g), so I'm going to 3 4 briefly go through. 5 MS. McFAWN: Mr. Sherrill, before you begin 6 can I interrupt you one more time. I don't believe we 7 have a copy of this three-page handout up here, do we? 8 MS. ROBINSON: I'm sorry about that, we'll 9 get you one. 10 MS. McFAWN: Thanks a lot. 11 HEARING OFFICER DESHARNAIS: Okay, are there 12 any objections to this being introduced as an exhibit? 13 (No response.) 14 HEARING OFFICER DESHARNAIS: Then the Agency 15 handout, three-page handout that begins with Section 16 742.600(e) Tier 2, Example 1, Benzene is the 17 contaminant of concern, will be introduced as Agency 18 exhibit and it's numbered 10. 19 (Agency Exhibit 10 was admitted.) 20 MR. SHERRILL: I'm going to read in 21 742.600(e) just as it's stated in the proposed rule. 22 "If the calculated Tier 2 soil remediation objective 23 for an applicable exposure route is more stringent 24 than the corresponding Tier 1 remediation objective,

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1 then the Tier 1 remediation objective applies."

2	So getting back to our handout, in this example
3	the groundwater classification at a residential site
4	is Class I. The benzene soil remediation objectives
5	from Appendix B, Table A, are as follows: For benzene
6	the soil, the ingestion in milligrams per kilogram is
7	22 milligrams per kilogram. For inhalation 0.8, and
8	migration to groundwater milligrams per kilogram 0.03.
9	So let's suppose someone went and did a as
10	discussed in previous testimony, we look at all three
11	of these exposures routes and the most stringent or
12	health protective route applies.
13	So we're looking at this migration to groundwater
14	route of 0.03. We won't be talking in this particular
15	example about excluding a route.
16	Let's suppose someone were to calculate a Tier 2
17	soil remediation objective that is more stringent than
18	the corresponding remediation objective presented in
19	the Tier 1 tables.
20	In other words, these three tables, these three
21	values I pulled directly from our Tier 1 tables, these
22	are precalculated Tier 1 remediation objectives.
23	Let's suppose someone were to calculate a Tier 2
24	migration to groundwater objective of 0.024. In other

1 words, they went and did their calculations and they came back under Tier 2 with a value, as you can see 2 3 this value is more stringent than the value of the 4 migration to groundwater number of 0.03. 5 So as the rule states, if the calculated Tier 2 6 value, which in this case is here, for an applicable 7 exposure route is more stringent than the Tier 1 8 value, these are all the Tier 1 values, then the Tier 9 1 remediation objective applies. So in this example, this would be our soil 10 11 remediation objective. This would be our -- and in my 12 testimony I discuss this can happen in very few cases. 13 We believe that these as presented in Tom 14 Hornshaw's testimony and my own testimony we feel --15 we have confidence in these Tier 1 objectives. And if you were to calculate a Tier 2 objective that is more 16 stringent than the Tier 1, it would be of usually 17 18 insignificant difference. 19 Did you want to comment anything on that? 20 MR. HORNSHAW: No. 21 MR. SHERRILL: So that's 742.600(e). Are 22 there any questions on that? 23 (No response.) MR. SHERRILL: 742.600(f) a new example, and 24

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1 I'm going to read this as it's proposed in the rules. 742.600(f), "If the calculated Tier 2 soil remediation 2 3 objective for an exposure route is more stringent than 4 the Tier 1 soil remediation objectives for the other 5 exposure routes, than the Tier 2 calculated soil 6 remediation objective applies and Tier 2 soil 7 remediation objectives for the other exposure routes 8 are not required." 9 So in this example, new example, but I've left the 10 contaminant of concern is benzene, here again these 11 are our Tier 1 values, 22 milligrams per kilogram for 12 injection, 0.8 for inhalation, 0.03 for migration of

13 groundwater, these are our Tier 1 precalculated
14 values.

15 In this example assume that we have no routes 16 excluded from consideration pursuant to Subpart C. So 17 the first step of this what under Tier 1, let's say 18 what is the soil remediation objective? It's 0.03 is 19 our most restrictive, our most, quote, health 20 protective remediation objective.

Let's suppose someone then calculates a Tier 2 for the migration to groundwater route and a calculated value of 0.519 milligrams per kilograms is obtained. So someone does a calculation using the equations that

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1 we've provided and they come up with a Tier 2 migration to groundwater of 0.519 milligrams per 2 3 kilogram. And we approve of the number, this is a 4 site-specific number as we've discussed in our -- on 5 how to develop these remediation objectives. 6 In this particular -- we've said it's a Class I 7 groundwater site, so this is protective of Class I 8 groundwater based on the site-specific information 9 that was input into the equations. The Tier 2 calculated value of 0.519 is more 10 11 stringent than the other Tier 1 objectives. Here's 12 the other objectives. 0.519 is more stringent than 13 0.8 and it's more stringent than 22. 14 And as the rule says then, the Tier 2 calculation 15 soil remediation objective applies and the Tier 2 soil remediation objectives for the other exposure routes 16 17 are not required. 18 So what we're saying in this rule is there's no 19 need to go and calculate objectives for this because we already know our Tier 2 calculated for migration to 20 21 groundwater is 0.519. So under this Tier 2 example 22 the soil remediation objective is 0.519 milligrams per 23 kilogram. There would be no reason to calculate these objectives for these two, for the ingestion and

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24

1 inhalation.

2	Any questions on this one?
3	(No response.)
4	MR. SHERRILL: And I'm focusing on soil in
5	this, in these equations, just for simplicity sake.
6	Okay, this is our page three of our handout,
7	742.600(g), and I'll read it as proposed in the rule.
8	"If the calculated Tier 2 soil remediation objective
9	is less stringent than one or more of the soil
10	remediation objectives for the remaining exposure
11	routes, then the Tier 2 values are calculated for the
12	remaining exposure routes and the most stringent Tier
13	2 calculated value applies."
14	For ease of presentation I've there again selected
15	benzene as our contaminant of concern, it's a
16	residential site, and we will assume that it's got
17	Class I groundwater.
18	In this example it kind of makes it add a little
19	twist to it, and it adds for clarification on this
20	site three feet of clean soil covers the site and the
21	injection route is excluded from consideration under
22	Subpart C.
23	So we're looking at inhalation and migration to
24	groundwater in this particular example.

1	The soil remediation objective from benzene from
2	Appendix B, Table A, for inhalation is 0.8, for
3	migration groundwater 0.03 milligrams per kilogram.
4	So it's those same values that we saw before from
5	these are precalculated values that are in the
6	proposed 742 rule.
7	So the soil remediation objective for benzene, you
8	know, before we've done any Tier 2 calculations, would
9	be the most restrictive, so we've we're back to this
10	0.03 which is the most restrictive or health
11	protected.
12	So now someone wants to do a Tier 2 calculation
13	and they come up with a Tier 2 calculation of 1.2,
14	I'll put Tier 2. Let's suppose someone does a Tier 2
15	calculation and they come with a value of 1.2
16	milligrams per kilogram.
17	There again this would be a site-specific, you
18	know. Let's say we approve it. So out of the rule
19	the value of 1.2 is less stringent, this value is less
20	stringent than one or more of the soil remediation
21	objectives for the remaining exposure routes.
22	Then the Tier 2 values are calculated for the
23	remaining exposure routes and the most stringent Tier
24	2 calculated value applies.

1	So then someone says okay, I like this value, I'm
2	going to go ahead and calculate a Tier 2 for
3	inhalation. So let's say they calculate a Tier 2 for
4	inhalation and they come up with 11.0 milligrams per
5	kilogram.
6	So in this Tier 2 example the soil remediation
7	objective for benzene is 1.2 which is the most
8	restrictive Tier 2 value.
9	The purposes in one sense of (f) and (g) is one,
10	so people don't do unnecessary calculations, and then
11	also, you know, unless the calculations or the
12	development of the remediation objectives are
13	presented to us, we're going to assume the most
14	stringent remediation objective.
15	You know, so in this scenario, let's say somebody
16	was just looking at they had calculated in 1.2 and
17	they hadn't calculated the inhalation yet, we're going
18	to say okay, you can calculate it for migration to
19	groundwater of 1.2, but your most restrictive now is,
20	you know, if you did not calculate a Tier 2 for
21	inhalation, we're going to kick you back to this 0.8.
22	So then they'd say okay, well, I'm going to
23	calculate one for inhalation.
24	HEARING OFFICER DESHARNAIS: Any additional

1 follow-up questions?

2	MR. RAO: I just have a comment under let me
3	see, 742.600 Subsection (g). Could you clarify the
4	language that you have proposed by saying if the
5	calculated Tier 2 soil remediation objective is less
6	stringent than one or more of the soil remediation
7	objectives under Tier 1?
8	MR. SHERRILL: I believe the reason we did
9	not do that, why we didn't say that under Tier 1 is
10	because you make Tier 1 isn't the only way to
11	calculate objectives. You can go under Tier 3 and you
12	can also do the background approach.
13	MR. RAO: But you have said Tier 1 under
14	Subsection (f) about Subsection (g).
15	MR. SHERRILL: We'll look into that to see if
16	it's applicable that way.
17	MR. RAO: Because it is kind of confusing to
18	read it, you know. Of course with the example it's
19	very easy to understand what you are trying to say.
20	MR. SHERRILL: Okay. The only thing I'm
21	concerned about is to make sure that we would account
22	for being able to develop objectives under the
23	background approach and the Tier 3 that we I don't
24	want to exclude those processes. But we'll look into

1 it and see if it works.

2	MR. RAO: Okay.
3	MR. WATSON: I've got one more follow-up
4	question. On (g), the second half of that you say
5	that if you say then the Tier 2 values are
б	calculated for the remaining exposure roots, and the
7	most stringent Tier 2 calculated value applies. You
8	don't really mean that you have to go through and
9	calculate all of the Tier 2 values for the remaining
10	exposure routes, right? I mean you sort of take them
11	one by one, right, and if you want to live with
12	whatever the calculated number is, then you'll live
13	with that?
14	MR. SHERRILL: That's correct.
15	MR. RIESER: With regard to Anand Rao's
16	suggestion including Tier 1, if you had a calculated
17	Tier 3 or area background value, that would control,
18	because you would have arrived at that value through
19	an Agency approved process which would support that
20	value, so that would be the value for that route. And
21	so I don't think this would apply in that context
22	because you've already made an Agency decision that
23	that's the appropriate value for the route.
24	So I mean you should think about it some more, but

inconsistent with what is proposed. 2 3 MR. SHERRILL: Okay. 4 MR. HORNSHAW: Except if you're using area 5 background, in some cases that can only be used to 6 exclude a chemical from further consideration. If 7 you're using a statewide background approach you could 8 drop the chemical out, but if it doesn't drop out 9 using that approach then you have to go into one of the tiers to address it. 10 11 MR. RIESER: Thank you. 12 HEARING OFFICER DESHARNAIS: Any additional 13 follow-up questions? 14 (No response.) 15 HEARING OFFICER DESHARNAIS: Thank you. MS. ROBINSON: The last issue, and this was 16 17 also raised by Hiten Soni last time around, was the 18 question regarding safety factors and why we didn't take those into account. So Dr. Hornshaw's going to 19 20 address this. 21 MR. HORNSHAW: As I started to say at the 22 hearing, there are safety factors inherent in both 23 ASTM's and USEPA's approach for Tier 1. We -- there are safety factors in the toxicological data that's 24

I would think that his recommendation is not

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1 used to calculate the various remediation objectives. There are safety factors built into the models and 2 3 based on the -- I guess the similarity of the two 4 approaches, versus what we didn't have in the R94-2B 5 approach, we're comfortable that there isn't a 6 necessity for an additional safety factor at this time 7 where we thought there was a necessity for that in the 8 original LUST Docket B. 9 HEARING OFFICER DESHARNAIS: Any follow-up 10 questions? 11 MR. RIESER: Dr. Hornshaw, just to illustrate 12 the point you just made, there is a great deal of 13 conservatism built into the assumptions that support 14 the models, isn't that correct? 15 MR. HORNSHAW: That's correct. 16 MR. RIESER: And what would some examples be 17 of that conservatism? 18 MR. HORNSHAW: For example in the USEPA's SSL 19 approach, the derivation of the dilution factor that 20 was used -- well, the dilution factor of ten that was 21 in the original proposal for public comments from 22 USEPA and the final value of 20 that's incorporated in 23 this proposal, that was backed by -- I've talked with 24 the people at USEPA who have done the modeling to

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1 derive that value, that was backed up by about 16,000 model runs of the computer model that they used to 2 3 predict migration to groundwater using data from real 4 soils from around the country to generate this Monte 5 Carlo type of analysis. 6 And then the dilution factor was chosen to be, 7 it's either 90th or 95th percentile dilution factor 8 that was derived from these many model runs, so we 9 have confidence that what they've said is an upper 10 limit on the dilution factor and it probably is truly 11 an upper limit. 12 MR. RIESER: And what you've said about the 13 dilution factor would be true of other variables and 14 points in the models as well, is that correct? 15 MR. HORNSHAW: That's correct. 16 MR. RIESER: Thank you. 17 HEARING OFFICER DESHARNAIS: Additional 18 follow-up questions? 19 (No response.) HEARING OFFICER DESHARNAIS: Okay, does that 20 21 conclude the Agency's response to questions from the 22 hearing?

MS. ROBINSON: Yes, it does, and I wouldrequest that we take maybe a five minute break before

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1 we get into the line of questioning so that we can

regroup here for a moment. 2 3 HEARING OFFICER DESHARNAIS: Okay, we'll take 4 a five minute break. 5 (A recess was taken.) 6 HEARING OFFICER DESHARNAIS: The Agency's 7 ready to proceed with the remaining prefiled 8 questions. My understanding is that on the prefiled 9 questions, we're now up to Subpart I Tier 3 evaluation questions beginning with 742.900. So we will turn to 10 11 the first three prefiled questions on that section 12 beginning with the Site Remediation Advisory 13 Committee. MS. ROSEN: Number 1, will the Agency confirm 14 15 that Tier 3 evaluations can be performed for some 16 pathways while other pathways can be excluded by 17 comparison to Tier 1 values? 18 MS. VIRGIN: Yes, Tier 1 evaluations can be 19 performed for some pathways while other pathways can be excluded by comparison to Tier 1 objectives. 20 MS. ROSEN: Number 2, will the Agency confirm 21 22 that Tier 3 represents a level of Agency review above 23 its project managers and is used to resolve complex 24 issues or situations beyond those provided for under

1 Tier 1 and 2.

2 MS. VIRGIN: Yes, Tier 3 represents a level 3 of Agency review above its project managers. 4 MS. ROSEN: Will the Agency also confirm that 5 Tier 3 may be used for any reason, even if not 6 expressed in Section 742.900(c) listed situations 7 considered for a Tier 3 evaluation. 8 MS. VIRGIN: Yes, Tier 3 can be used for any 9 reasonable purposes. 10 MR. WATSON: I've got a follow-up question 11 and it goes to the second question, and that is is 12 there a specific program that's been developed in 13 terms of a committee that will review Tier 3 submittals? 14 15 MS. VIRGIN: There's not a specific committee 16 or specific program. 17 MR. KING: We don't have -- it's not a 18 specific programmatic function like we have some of 19 our other line functions. But what we have done, and we've been doing this for the last several years, is 20 21 we -- where there is a Tier 3 type issue we make sure 22 that we have a consistent determination across our 23 remediation programs. The manager who is head of that remediation 24

1 program is still responsible for making the final decision relative to that project, but we make sure 2 3 that there's a cross program review with the senior 4 managers within the Bureau of Land and in the Office 5 of Chemical Safety to make sure that there's -- that 6 some issue is not being missed that should be 7 otherwise included as far as valuation. 8 MR. RIESER: Is that the same or -- same as 9 the CORE? MR. KING: Right, that's our description of 10 11 it, we call it the Cleanup Objectives Review and 12 Evaluation Group or the CORE Group. 13 MR. RIESER: Are the decisions of the CORE 14 Group recorded in any fashion? 15 MR. KING: There's not a decision of CORE 16 Group. There ends up being a decision by the senior 17 manager who is responsible for that program. But 18 there will be -- they will have gone through and he 19 will have consulted with the other people. 20 MR. RIESER: Is there any way that a --21 someone from outside the Agency can be aware of how 22 the Agency has consistently made the determination in 23 a specific area through its CORE Group? 24 MR. KING: I don't think so, because unless

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1 somebody wanted to look at all the remedial decisions 2 that the Agency has made, it would be kind of a 3 fishing expedition to do that. We really -- I don't 4 know how somebody would know that actually. 5 MR. RIESER: You yourselves don't keep a 6 record of like section by section for example of if 7 742 is adopted and it was being implemented, you 8 wouldn't keep a record section by section of how 9 different issues were handled? 10 MR. KING: We may end up taking some more of 11 a generic kind of data to look at the types of -- the 12 types of sites, just more of a management kind of 13 function so that we can see the kinds of decisions 14 that are being made. I don't think we've really 15 thought that through totally at this point, how to 16 handle that. 17 MR. RIESER: Thank you. 18 HEARING OFFICER DESHARNAIS: Additional 19 follow-up? 20 (No response.) 21 HEARING OFFICER DESHARNAIS: Next question. 22 MS. ROSEN: Question number 4, will the 23 Agency confirm that remedial objectives developed pursuant to Tier 3 offer equivalent protection as 24

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1 values derived under Tiers 1 and 2.

2	MS. VIRGIN: Remedial objectives that have
3	been developed pursuant to Tier 3 offer equivalent
4	protection as values derived under Tiers 1 and 2,
5	provided that the applicable controls and conditions
б	under which the decision was made do not change.
7	MS. ROSEN: Thank you.
8	HEARING OFFICER DESHARNAIS: Just a point I'd
9	just ask the Site Remediation Advisory Committee when
10	you're asking a question when it's we're up to your
11	prefiled question, please read the question into the
12	record so that it will appear in the record and
13	then if there's follow-up questions after the Agency
14	response, please raise your hand, wait for me to
15	acknowledge you, and then we'll have follow-up
16	questions.
17	The next prefiled questions on 742.900 were filed
18	by Gardner, Carton & Douglas. Mr. Watson, I believe
19	you're question 15.
20	MR. WATSON: Subpart I of proposed Part 742
21	sets forth the framework for conducting a Tier 3
22	evaluation. Question number (a), how will the Agency
23	evaluate the appropriateness of proposed Tier 3
24	methodologies?

1 MR. KING: When we're looking at Tier 3 that's going to be a site-specific determination, it's 2 3 going to depend upon the nature of the proposal. 4 MR. SHERRILL: We had gone through kind of a 5 litany of things we do look at. I can repeat those if 6 you want. It was under the last -- it was kind of the 7 general things we look at. 8 MR. WATSON: Why don't you do that for the 9 record. 10 MR. SHERRILL: We look at the concentration 11 of contaminants, the toxicity of the contaminants, the 12 amount of contaminants, the estimated migratory routes 13 and pathways, whether any free phase contaminant is 14 present, whether the soil attenuation capacity is 15 exceeded, whether the soil saturation capacity is exceeded, whether a sheen is visible either in the 16 17 soil, groundwater or surface water, whether remaining 18 contamination will be disturbed by construction 19 workers or other human activities, whether remaining 20 contamination will be disturbed by natural or animal 21 forces, high infiltration rates, highly permeable 22 geological units, sand seams, burrowing animals, 23 whether the release point or release points of the 24 contamination have been located, the intended post

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1 remedial use of the property, in other words, whether it's going to be residential or industrial/commercial, 2 3 whether the contamination is going to be covered by 4 some structure such as a building. That's not all 5 inclusive, but that's what we look at. 6 MR. O'BRIEN: And over all those 7 particularities we look to see if the methodology used 8 is consistent with national consensus methodologies 9 and also whether it represents conditions and factors 10 relative to the site. 11 MR. WATSON: In looking at methodologies for 12 example, the Agency would, however, be open to new and 13 innovative models for instance that are being 14 developed as the program is being implemented, is that 15 right? 16 MR. O'BRIEN: It's the intention of the Tier 17 3 flexibility is to be open to innovation. 18 MR. WATSON: I think my question on sub (b), who will conduct this valuation, has been answered. 19 It's the CORE Group, is that correct? 20 21 MR. KING: Well, I see that as being a little 22 bit different here, the nature of the question. Who 23 is going to review the proposal is going to depend on specifically what's -- what the type of -- what the 24

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1 nature of the proposal is.

2	In the past we've really had a broad
3	interdisciplinary approach to evaluating these kind of
4	issues, and in any specific case we'd have a
5	toxicologist or an attorney or an engineer or a
6	geologist in addition to the project manager. And a
7	chemist as well, we'll include Jim O'Brien.
8	MR. WATSON: My question (c) is what factors
9	will be considered in determining whether further
10	remediation is not practical as referenced at Section
11	742.900(c)(5) when addressing constituents identified
12	in the vicinity of and under permanent structures at a
13	site?
14	MR. KING: This really is very much of a
15	site-specific decision, and where we've looked at the
16	permanence issue, I don't know that we've normally
17	I'm trying to recall instances where we disputed
18	somebody who said it was a permanent structure.
19	Normally it's pretty obvious that it's a permanent
20	structure, and in any case if the building's going to
21	get torn down, it's a contamination issue, somebody's
22	going to have to deal with it at that point.
23	So we've been we've reacted pretty favorably
24	when people have said things were permanent.

1

2 questions. Miss Prena? 3 MR. WATSON: Let me ask one question if I 4 may. What is the -- when you use the term assessment 5 indicates further remediation is not practical, in the 6 context of an existing structure, contamination in the 7 vicinity of a structure, what would be the 8 circumstances under which remediation would not be 9 practical. 10 I mean this is -- what I'm looking for is a little 11 more guidance on this issue as it relates to 12 contamination in and around structures. This is an 13 issue that many of our clients are interested in 14 determining, in developing some certainty as to what 15 circumstances would allow them to -- or not allow 16 them, but under which they could rely on problems 17 associated with remediation to argue for a -- leaving 18 that in place. 19 MR. KING: I don't know how much real

20 certainty we can provide on that, but I'll give you a 21 couple of examples.

22 One that we encounter, we've seen this frequently 23 under the tank program where a person obviously has to 24 do underground remediation, and contamination may have

1 moved under a structure, and we've gotten to the point where further remediation is going to start 2 3 undermining the foundation and the footings of the 4 structure, and when it gets to that point, you know, unless there's -- if you continue to monitor the 5 6 situation and it doesn't look like things are moving 7 anywhere, then that would be the kind of situation 8 that we'd say hey, well, remediation further is 9 impractical. 10 MR. WATSON: Would you consider cost as being 11 a basis for impracticality? 12 MR. KING: I mean I think that comes into it 13 in terms of, you know, if you've got a 50 story 14 structure sitting on top of some contamination, the 15 notion of tearing that down to get to the contamination is certainly a cost issue. I don't 16 17 think we -- we don't do a cost balancing in that kind 18 of context. 19 MR. WATSON: Would you consider for instance 20 incremental costs associated with the technology which 21 would allow you to drill vertically for instance to 22 remediate soil but would cost, you know, significantly 23 more? 24 MR. SHERRILL: We've seen examples in the

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1 site remediation program just through under their -under the umbrella of corporate responsibility where 2 3 people -- I mean where this is not a -- would not be 4 -- where this is not an enforcement issue where people 5 have gone to pretty exorbitant means to get 6 contamination out from under a building that we told 7 them that, you know, that we weren't requiring them to 8 do it, but I mean this is like operational concerns 9 and they would remove six, nine inches of concrete in 10 an operating building to get at it. 11 So it gets -- you know, it's a site-specific call 12 and that when we do this issue with permanence, when 13 we know a lot of buildings trade hands in the Chicago 14 area, other industrial areas, when we know that a 15 building is going to be torn down, that provides a 16 good opportunity to get at that contamination. 17 MR. RAO: I have a follow-up question. In 18 the situation where you were talking about 19 contamination under a structure, if the Agency allows that to be as a condition where it's not practical to 20 remediate the contamination, would the structure be 21 22 considered as an engineered barrier or, you know, like 23 if somebody tears it down maybe ten years from now? MR. KING: Right, that will be considered an 24

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1 engineered barrier and there would need to be an institutional control accompanying that. If at some 2 3 point a future property owner decided to tear the 4 building down, well then they would in essence be 5 violating the conditions of the No Further Remediation 6 Letter, and that would necessitate them coming back in 7 and addressing the contamination that had previously 8 involved the building. 9 HEARING OFFICER DESHARNAIS: Additional 10 follow-up, Mr. Watson? 11 MR. WATSON: No, thank you. 12 HEARING OFFICER DESHARNAIS: Miss Prena. 13 MS. PRENA: Can you provide us with another 14 example of what might be considered a common sense 15 assessment that no further -- that further remediation 16 is not practical, other than the building situation? 17 MR. HORNSHAW: One other situation that's 18 come up in the past is where contamination is already 19 in the saturated zone and the engineered to extract 20 that is pretty novel or nonexistent, in those cases 21 that contamination is allowed to be managed, or if 22 it's real minor it's just said enough is enough. 23 MS. PRENA: Are there any other examples? 24 MR. CLAY: There's one where we've had

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1 fiber-optic cables, so instead of disturbing those,

2	we've allowed a Tier 3 valuation there.
3	MR. O'BRIEN: We've allowed support under
4	other underground utilities like sewer lines and so on
5	that would be where the amount of contamination,
6	you know, has been removed on both sides, but actually
7	supporting the line under it has been allowed to be
8	left in place because essentially the mass of
9	contamination is so small that it wouldn't really
10	contribute to additional risk.
11	And we've also done the same thing with especially
12	in gas station situations where you have canopies over
13	the pump islands and where they those rest on
14	footings, it may just be a foot or two square, and
15	rather than have to tear down the entire canopy or
16	something like that or put restrictions on them
17	removing the footing later, that contamination in a
18	small area is allowed to be left at existing levels.
19	MS. PRENA: Okay.
20	HEARING OFFICER DESHARNAIS: Any additional
21	follow-up, Mr. Watson?
22	MR. WATSON: Would that include also
23	underground structures that perhaps have been taken
24	out of service but not removed from the ground? I

1 mean I guess one of the examples that I -- that we're involved in is that at old gas plant sites where 2 3 you've got all kinds of underground piping that has 4 been left in place because there's a lot of it, and 5 the question is what would be obligations for 6 remediation based on the existence of those no longer 7 used piping, and I guess we're wondering whether or 8 not those would be circumstances under which 9 practicality or common sense assessments would allow 10 you to leave that kind of material in the ground. 11 MR. O'BRIEN: I don't remember that we've ever 12 addressed that particular situation. The references 13 to piping were things that were still in use and 14 therefore that the disruption would cause a -- you 15 know, other effects. I don't believe that we've ever 16 had the argument brought to us that things that were 17 abandoned, that that was a justifiable reason. 18 MR. WATSON: Are you saying that that's not appropriate in your view? 19 MR. O'BRIEN: I don't think we've ever made 20 the decision on that. 21 22 MR. WATSON: So you certainly would allow 23 people to argue impracticality based on the existence 24 of abandoned underground structures?

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1	MR. O'BRIEN: Well, that's what the reason
2	for is to allow us to consider all the factors
3	relevant at a particular site.
4	HEARING OFFICER DESHARNAIS: Additional
5	follow-up on 742.900?
6	MR. RAO: Mr. King, you and Jim O'Brien were
7	giving examples of where this common sense assessment
8	examples of this common sense approach may apply.
9	Could roads and highways be an example if there's
10	any contamination under them? Okay, Gary.
11	MR. KING: I think the issue with roads and
12	highways is kind of a complex one. As Mr. Schick and
13	I have had many discussions about for the last several
14	months, and the fact that contamination is on property
15	that's owned by for instance Department of
16	Transportation, that shouldn't automatically mean that
17	you've got an impractical remediation, okay? I mean
18	because they've got lots of median areas and lots of
19	buffer zones around the actual highway itself.
20	So there may be it may be that it's not
21	impractical in those situations. And that really
22	again comes down to the nature of a case by case
23	situation looking at it. If it is actually under the
24	highway structure and it's an operating highway, you

1 know, it would seem like that's the kind of -- from a common sense standpoint to say well, let's not tear 2 3 that highway up, you know, if there's some other way 4 to deal with the situation and preserve the integrity 5 of the highway, preserve the integrity relative to any 6 future remediation efforts that might go forward. 7 MR. SCHICK: Could I follow up with that? 8 I'm Randy Schick from DOT. And we've also got a 9 specific section under institutional controls to deal 10 with highways. 11 MS. McFAWN: Yes, you have a -- excuse me, 12 you have a specific section? MR. SCHICK: There's a specific section in 13 14 the proposed rules on highway authorities dealing with 15 contamination in the right-of-way. 16 MS. McFAWN: Where is that? 17 MR. SCHICK: 1020. 18 MS. McFAWN: The Agency's pointed out to us that's it's Section 742.1020, is that the one you're 19 20 referring to? MR. SCHICK: That's correct. And so I would 21 22 think that we'd like to enter into an agreement to 23 leave it under the highway under this section if a highway authority didn't -- if you couldn't negotiate 24

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1
      that kind of agreement, then that's going to -- when
      it becomes impractical, I mean in that sense.
 2
 3
           So that could be an example when it might become
 4
      impractical. That leaves open the question then if
 5
      the highway authority later comes back to that area,
 6
      and that party's gotten no a further remediation
 7
      letter, how they would be foreclosed from recovering
 8
      that cost in that situation. But those are -- you
 9
      know, that's just an open issue I think.
10
          But the highway authority, we should have the
11
      opportunity first of all to negotiate leaving it under
12
      the road and protecting the environment if the road is
13
      later excavated at some point in the future. And that
14
      could be addressed in the agreement.
15
                MS. McFAWN: So you're basically saying that
     you would see this as an example of it not being
16
17
     practical and you'd have the institutional control?
18
                MR. SCHICK: Yes, similar to what Gary is
19
      talking about the building. As long as the building
      is in place, I mean we'd be willing, we would be
20
     willing to leave it under the road. But if the road
21
22
      -- you know, if the building's removed or say the
23
     highway's later reopened for utility work or highway
      improvement, it's not impractical at that point.
24
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1 And so we'd like to have an understanding with those parties in that situation that it's okay to 2 3 leave it there except we -- except in the situation 4 where we excavate it, you know, we would like to have 5 an agreement that that cost would be covered by that 6 party that we've agreed to leave it there, to cover. 7 MS. McFAWN: Well, now you're into another 8 issue. The Board's question was just is that an example of being it being practical or not practical. 9 10 I think you've helped us. 11 MR. SCHICK: Okay. 12 HEARING OFFICER DESHARNAIS: Miss Prena? 13 MS. PRENA: Would an example include 14 disturbing natural resources such as unique plant 15 species or important plants or animals? 16 MR. KING: It's never come up, so I don't 17 know what to think about that one. It might be 18 something worth considering. 19 HEARING OFFICER DESHARNAIS: Additional follow-up, Mr. Watson? 20 21 MR. WATSON: Yes. With respect to leaving 22 contamination under permanent structures, you may have 23 answered this question previously, but I'd like to 24 just confirm it.

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1 With respect to the existence of free product underneath the building, is it true that a party would 2 3 be allowed to argue under Tier 3 that leaving free 4 product under a building based on practicality and 5 common sense approaches would be appropriate? 6 MR. O'BRIEN: I believe that they'd also have 7 to make a showing that it wasn't mobile. 8 MR. SHERRILL: But yes is your answer. I 9 mean they could propose it. 10 MR. WATSON: And the Agency would --11 MR. SHERRILL: We'll review it, yes. 12 MR. WATSON: Review it and potentially accept 13 that proposal, and what you're saying there is the 14 primary issue is whether the free product is mobile 15 and migrating off site? 16 MR. SHERRILL: That is one of the primary 17 issues, and then the other issues is what I've listed 18 before. The migratory, you know, you have off-site and on-site concerns, and that's just one of the 19 20 issues. 21 MS. ROBINSON: Could I ask a follow-up? 22 HEARING OFFICER DESHARNAIS: Miss Robinson. 23 MS. ROBINSON: Would it necessarily have to migrate off-site for it to be a concern to us? If it 24

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1 migrated to a preceptor that's on-site would it then

2 be a concern to us?

3 MR. SHERRILL: Yes, that's correct. 4 HEARING OFFICER DESHARNAIS: Additional 5 follow-up? 6 MR. RAO: I have another question. Is this 7 common sense approach a very simple assessment? 8 MR. KING: Yeah, it has been. I mean 9 normally what we see as we're talking about this CORE 10 Group process in the past is the -- normally there's a 11 memo from the project manager that kind of outlines 12 the circumstances and it really is a fairly simple 13 submittal in most every case. It's one of the kind of 14 situations that we look at as being fairly easy to 15 make a decision about. 16 MR. RAO: But when reviewing the information

10 MR. RAO. But when reviewing the information 17 will the Agency consider all the other factors, you 18 know, the exposure of routes and pathways and things 19 like that, if somebody comes to you and says say we 20 have this contamination under a structure so we want 21 to leave it there, but they have to justify their 22 remediation approach with all the other things that 23 are required under the rule?

24

MR. KING: Yeah, I think that's true. I mean

1 it's like we were saying before, there's a series of -- you know, you have to make a site-specific 2 3 evaluation. I mean one of the -- we were just talking 4 about the free product situation, you know. If you 5 had, you know, pure, a pure gasoline spill and it was 6 flowing underneath a building and it was going into 7 sewers and it was threatening to blow up the whole 8 building, well, you know, it wouldn't be very 9 practical to say let's leave that there. 10 I mean you have to look at that site-specific 11 situation and make sure that it was addressed. 12 MR. RAO: Yes, and the reason I ask is that current common sense that it would turn around a lot 13 14 of different programs and some very loosely, so I just 15 wanted to make sure that. 16 MR. KING: Well, we've always used that term, 17 particularly when we've talked to people about making 18 decisions so that they can understand we're on Tier 3, 19 because the normal reaction was we said well, this was a Tier 3 determination, the immediate reaction is that 20 21 people think oh, well, this means formalized risk 22 assessment, you've got to do a risk assessment that's 23 going to cost tens of thousands of dollars. And well, 24 we don't ever want to get into that situation.

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1 Well, that is a potential -- that is a potential way of doing things under Tier 3, but we wanted to 2 3 kind of indicate that there's a different way of 4 looking at those kind of issues that's not to that far 5 of an extreme. 6 MR. RAO: Thank you. 7 HEARING OFFICER DESHARNAIS: Additional 8 follow-up? 9 (No response.) 10 HEARING OFFICER DESHARNAIS: Okay, the next 11 prefiled questions are on Section 742.905 from the 12 Site Remediation Advisory Committee. MR. RIESER: This is number one, on page two 13 14 of Tracey Virgin's testimony she states that "Section 15 742.900 begins by stating that Tier 3 has been developed to be flexible and to address sites that are 16 17 not suitable for Tier 1 or Tier 2 analyses." 18 Is it correct that "suitability" is not a 19 requirement for utilizing Tier 3? 20 MS. VIRGIN: That is correct, suitability is 21 not a requirement. 22 MR. RIESER: It is also correct -- is it also 23 correct that it is the owner's decision as to the 24 mechanism (for example exposure route exclusion, use

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1 of background concentrations, Tier 1, 2 or 3) to be used when developing a remedial action plan? 2 MS. VIRGIN: Yes, it is the owner's decision 3 4 as to the mechanisms to be used, exposure route evaluation under Subpart C use of background or Tiers 5 6 1 or 2 or 3 when developing a remedial action plan. 7 MR. RIESER: May an owner go directly to Tier 8 3 when addressing a recognized environmental condition 9 and bypass Tier 1 or Tier 2 assessments? 10 MS. VIRGIN: Yes, an owner may bypass Tiers 1 11 or 2 and go directly to Tier 3. 12 MR. RIESER: Will the Agency confirm that 13 under Tier 3 a persons could vary any Tier 2 variable 14 for any valid site-specific reason? 15 MS. VIRGIN: Yes, the Agency will consider 16 that Tier 2 variables can be proposed for change under 17 Tier 3 for a valid site-specific reason. 18 MR. RIESER: Thank you. HEARING OFFICER DESHARNAIS: Any follow-up 19 questions on 742.905? 20 21 (No response.) 22 HEARING OFFICER DESHARNAIS: Okay, the next 23 section is 742.910 from the Site Remediation Advisory 24 Committee again.

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1	MS. ROSEN: Question number one, are the
2	elements as to what the Agency will consider when
3	reviewing alternative model requests, as described in
4	Tracey Virgin's testimony, reflected in the proposal?
5	MS. VIRGIN: The elements that the Agency
6	will consider in reviewing alternative model requests
7	as discussed in my testimony are intended to give
8	additional information to justification. The elements
9	are not intended to be requirements but rather are
10	illustrations, and these elements are based on Agency
11	experience between 35 IAC and 811.
12	MS. ROSEN: I'm sorry, could you repeat the
13	end of your answer?
14	MS. VIRGIN: These elements are based on
15	Agency experience including 35 IAC 811.
16	MS. ROSEN: Okay. Do you believe that the
17	elements that you've reflected in your testimony are
18	appropriate given what is contained within the actual
19	proposal?
20	MS. VIRGIN: Yes, they are appropriate.
21	MS. ROSEN: Thank you.
22	HEARING OFFICER DESHARNAIS: Any follow-up
23	questions on 742.910?
24	(No response.)

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1 HEARING OFFICER DESHARNAIS: The next questions concern 742.915, formal risk assessments, 2 3 from the Site Remediation Advisory Committee. 4 MR. RIESER: Are the elements as to what the 5 Agency will evaluate when reviewing formal risk 6 assessments, as described in Tracey Virgin's 7 testimony, reflected in the proposal? 8 MS. VIRGIN: The elements when reviewing risk 9 assessments that I described in my testimony are 10 informational and are not descriptive, and again they 11 were rather to serve as illustrations. And again 12 these elements are based on Agency experience and also 13 including the USEPA's risk assessment guidance for 14 Super Fund document. 15 MR. RIESER: So they're examples of how people would do what's required under 915. 16 17 MS. VIRGIN: Right, they're to serve as 18 illustrations and examples. 19 MR. RIESER: And it's your testimony that 20 they're appropriate to -- these are appropriate steps 21 in performing the steps under 915. 22 MS. VIRGIN: Yes, they are appropriate. 23 MR. RIESER: Thank you. HEARING OFFICER DESHARNAIS: Any follow-up on 24

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1 742.915?

2	(No response.)
3	HEARING OFFICER DESHARNAIS: Next section on
4	which there's prefiled questions is 742.920 entitled
5	impractical remediation, again from the Site
6	Remediation Advisory Committee.
7	MS. ROSEN: These have been touched on
8	briefly, but we would like to ask them for the
9	purposes of the record.
10	Question number one, what standards or criteria
11	will be used for determining technical
12	impracticability under this section?
13	MR. KING: This is kind of a long answer, so
14	I'm going to just read these. These are kind of the
15	factors that we have ascribed in reviewing this
16	question.
17	The concentration of the contaminants, the
18	toxicity of the contaminants, the amount of the
19	contaminants, the estimated migratory pathways, the
20	presence of any free phase contaminants, whether soil
21	attenuation capacity is exceeded, whether soil
22	saturation limits have been exceeded, whether a sheen
23	is visible either in the soil, groundwater or surface
24	water, whether remaining contamination will be

1 disturbed by construction workers or other human activities, whether remaining contamination will be 2 3 disturbed by natural or animal forces, such as 4 infiltration, highly permeable units such as 5 geological units, sand seams and burrowing animals, 6 whether the release point of the contamination can be 7 located, for instance under -- the comparison is 8 between the LUST program, which we already have 9 identified a tank with a known release point versus 10 the -- a site in the -- under the Part 740 rules where 11 the release point is more unknown, and thus you have 12 to have a different characterization of contamination, 13 the intended post remedial use of the property, and 14 whether there's a permanent structure such as a 15 building over the contamination. 16 MR. RIESER: Is there an element of technical 17 impracticality that you've listed there? In other 18 words, the infeasibility of getting to or removing the 19 contamination? 20 MS. McFAWN: Mr. Rieser, can you use that 21 microphone? 22 MR. RIESER: I'm sorry, the infeasibility, 23 would you also consider the infeasibility or 24 impracticality of either getting to or removing the

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1 contamination?

2 MR. KING: That would be an included factor, 3 yes. 4 MR. RIESER: And the relative cost of dealing 5 with the contamination compared to the risk of leaving 6 it in place? 7 MR. KING: Yeah, in a -- again you always 8 come back to the issue of being practical. But yeah, 9 it would be a pragmatic kind of thing. I don't think 10 we are going to look at specific cost analysis things, 11 but it's going to be more of a pragmatic 12 consideration. 13 MR. RIESER: Is this different from the 14 factors you talked about with respect to the common 15 sense type issues? 16 MR. KING: No, these are -- this is an 17 amplified list where we got to that specific question. 18 MR. RIESER: Okay. Thanks. If I can go back 19 to something on Section 915(a), you talk about one of the standards for looking at risk assessment is 20 21 whether the risk assessment procedures is nationally 22 recognized and accepted, and I think Mr. O'Brien 23 addressed this in response to another question on 24 another section, but would the Agency look at risk

1 assessment procedures that are new and not nationally
2 recognized?

MR. O'BRIEN: Well, I think we'd consider in 3 4 -- this is the section on formal risk assessment, and there I think we'd look at how much deviation there 5 6 was from national consensus approach and whether that 7 made sense considering the factors at the site. 8 HEARING OFFICER DESHARNAIS: Miss Prena. 9 MS. PRENA: Well, for example if there were 10 new risk assessment procedures being used in 11 California, would those be -- and they were used in 12 California but not in the rest of the country because 13 they were new, would that still be something that 14 you'd look at? 15 MR. O'BRIEN: Well, we have to look at them in the context of this, of the site and what it was. I 16 17 mean it's -- the point of Tier 3 is to have an area of 18 flexibility so where we can look at some things that 19 aren't nailed down to let us look at innovative 20 approaches to things, but we've still got to kind of 21 consider whether that's relevant to the site and to 22 general principles underlying national consensus, the 23 approaches to this.

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MS. VIRGIN: We'd also want to make sure that

1 the new risk assessment procedures offered equivalent of protection as the other nationally recognized 2 3 procedures. 4 MS. PRENA: Well, that is you'd be looking at 5 the quality of the approach rather than whether it was 6 nationally recognized? 7 MS. VIRGIN: Right, right. 8 MR. RIESER: Thank you. 9 HEARING OFFICER DESHARNAIS: Any additional 10 follow-up again on 915? 11 (No response.) 12 HEARING OFFICER DESHARNAIS: Did the Site 13 Remediation Advisory Committee wish to ask its second question on 742.920? 14 15 MR. RIESER: Yes, this also has been touched 16 on in the context of the common sense approach, but I 17 think it makes sense to ask it under this section as 18 well. 19 Will the impractical remediation provision apply 20 for areas off-site, i.e. under roadways? 21 MR. KING: That's again as we were saying 22 before, that's really a site-specific kind of issue, 23 and I think I really don't have too much to add beyond 24 the colloquy that Randy Schick and I were having

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1 relative to that issue.

2	MR. RIESER: But let's take it out of the
3	roadway context, let's suggest that there is a
4	building right on the property line that's off-site
5	and the contamination is under that off-site
6	structure.
7	MR. KING: It's possible, again the issue
8	with off-site contamination, the key issue there is
9	relative to the acceptance of that remediation
10	strategy by the off-site landowner.
11	MR. RIESER: Which kind of begs the next
12	question, which is what happens then if a it says
13	roadway, but let me substitute it for this adjoining
14	property owner, will not agree to an institutional
15	control regarding remaining contamination under the
16	structure, even if it is technically impractical to
17	remove it?
18	MR. KING: Well, I think what happens then is
19	it changes the nature of the NFR determination. The
20	NFR determination is not going to cover that off-site
21	area.
22	MR. RIESER: Unless you got the approval of
23	the adjoining property owner to expand the remediation
24	site?

1

2

MR. KING: That's correct. MR. RIESER: Okay.

3 HEARING OFFICER DESHARNAIS: Additional 4 follow-up on 742.920? 5 MS. McFAWN: I have a question. You know 6 that list you read, Gary? And maybe you already 7 answered this, but is that in the rules anywhere? 8 Because that was the second time I'd heard that list 9 of factors you would consider. 10 MR. SHERRILL: No. 11 MS. McFAWN: Thank you, Mr. Sherrill. 12 MS. ROBINSON: Is that list meant to be all 13 inclusive? 14 MR. SHERRILL: No. 15 HEARING OFFICER DESHARNAIS: Mr. Watson? 16 MR. WATSON: How was that list developed? 17 MR. KING: Well, it was kind of a -- as 18 follow-up to the questions that were presented 19 relative to this hearing process, and we kind of sat down and reviewed our experience relative to these 20 issues and set forth what the different issues were 21 22 that people were considering when they went through 23 this process. 24 MR. WATSON: So it doesn't comes from a

1 specific guidance document?

2	MR. KING: No, it does not.
3	HEARING OFFICER DESHARNAIS: Additional
4	follow-up?
5	(No response.)
6	HEARING OFFICER DESHARNAIS: The next section
7	on which there are prefiled questions is 742.925
8	concerning exposure routes by the Site Remediation
9	Advisory Committee.
10	MS. ROSEN: Number one, on page 6 of Miss
11	Virgin's testimony she states that "Section 742.925
12	provides guidance for submittals made to the Agency
13	demonstrating that a particular exposure route is not
14	viable at a site."
15	When Miss Virgin uses the term viable, does she
16	mean that Section 742.925 is another mechanism to
17	exclude an exposure route that is not complete, for
18	example meaning a contaminant of concern, an exposure
19	route, and a receptor activity at the point of
20	exposure that could result in contaminant of concern
21	intake?
22	MS. VIRGIN: Yes, Section 742.925 is another
23	mechanism to exclude a route.
24	MS. ROSEN: Okay. And when you use the word

1 viable, that's what you intended?

2	MS. VIRGIN: Yes.
3	MS. ROSEN: Okay, thank you.
4	HEARING OFFICER DESHARNAIS: Any follow-up
5	questions? Mr. Reott.
б	MR. REOTT: If you exclude a route under that
7	section, do you need to also do the analysis under I
8	think it's 305 and the other sections that immediately
9	follow it? That's the pathway exclusion, Subpart C.
10	MR. SHERRILL: It's not specifically
11	required, but we would look at those issues.
12	MR. REOTT: When you say you would look at
13	those issues, the pathway exclusion, pathway exclusion
14	rules in Subpart C have some very specific
15	requirements that must be met in order to exclude
16	pathways. Do you have to meet those specific
17	requirements in order to exclude a pathway under the
18	Tier 3 provision?
19	MS. VIRGIN: No, you do not have to meet
20	those requirements.
21	HEARING OFFICER DESHARNAIS: Additional
22	follow-up on 925?
23	MS. McFAWN: I just want to make sure I
24	understand this. So if you go this route through the

1 925 provisions you don't have to do anything

addressing Subpart C? 2 MS. VIRGIN: Well, we would look at some of 3 4 those factors if the site warrants it. The factors in 5 Subpart C are not required. Tier 3 is designed to be 6 more flexible than Tier 2. 7 MS. McFAWN: Okay, so you say you would look 8 at it, that being the Agency. What if the applicant 9 hasn't provided you any information under it, because they're thinking well, I don't have to address that? 10 11 MR. SHERRILL: Well, under 742.225 -- I'm 12 sorry, under 742.925, we have this (a) through (f), we 13 have this (a) through (f) which kind of they need to 14 address those particular parameters, and by addressing 15 those you indirectly address some of those issues 16 under Subpart C. Because the --17 MS. McFAWN: But it's probably not all 18 inclusive, it's probably not as detailed as Subpart C, 19 or is it? 20 MR. SHERRILL: It's not intended to be. There again, you know, it's a site-specific call. And 21

22 like for example that under (a) description of the 23 route evaluated, you're either going to be looking at 24 ingestion, inhalation, migration to groundwater,

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injection of groundwater, you know, which Subpart C
 lays out in detail.

3 Well, so a description of the route, you're going 4 to have to provide an applicant or a respondent's 5 going to have to provide something describing that 6 particular route they're wanting to exclude.

7 MR. KING: I think part of the reason why 8 we're a little bit unclear perhaps in our answer here 9 is that we want to -- I think the answer really those 10 criteria in Subpart C are going to be looked at as 11 sort of a bench mark, even if they're not directly 12 applicable.

13 If somebody came in and they said well, I don't 14 meet this requirement for three feet of cover, but I 15 can show that it's going to be two feet nine inches, I can't make it three but I can make it two feet nine 16 17 inches, and it's really going to be okay with that 18 kind of level, you know, I think that using that as 19 kind of a factor or bench mark makes the decision 20 process a little easier for us.

21 So I think it will be -- they'll be used not in a 22 mandatory sort of way, but as a way to kind of help 23 guide some of the process under 925. And there may be 24 -- there may be totally different approaches, you

1 know.

2	For instance I think under the when we look at
3	some of the groundwater issues and the migration to
4	groundwater issues, we really we haven't
5	Subpart C doesn't has an exclusion, a way of
6	excluding the groundwater pathway based on the when
7	the contamination is in the groundwater, but doesn't
8	talk about the migration to groundwater issue.
9	And I think we'll get into some situations under
10	925 where that will become a proposal as far as
11	excluding a pathway.
12	MR. RAO: So would it make sense for somebody
13	who cannot meet all the criteria under Subpart C to
14	exclude a pathway to do it under Tier 3?
15	MR. KING: I think we will see proposals like
16	that, yes.
17	HEARING OFFICER DESHARNAIS: Mr. Rieser?
18	MR. RIESER: Yes, just two issues, but to
19	clarify on the last part. There's actually a
20	provision under Subpart C that references Subpart I so
21	that pathways can be excluded. It is clear from a
22	review of Subpart C that even if you don't meet the
23	Subpart C factors you can still exclude a pathway
24	under this section, correct?

1 MR. KING: I would agree with that. MR. RIESER: And one other clarification, and 2 3 this is a follow-up on Mr. Reott's point. 742.305 has 4 some very, very specific factors in terms of 5 saturation, soil attenuations, soil saturation, those 6 levels which would exclude you from a demonstration 7 under Subpart C, and I want to clarify that an 8 exceedance of any of those would not automatically 9 exclude you from a demonstration under 925. 10 MR. KING: I think that's correct. 11 MR. RIESER: Thank you. 12 MR. HORNSHAW: Can I follow up just a little 13 bit? Going a little bit beyond that, if I understood 14 Mr. Reott's question correctly, I thought if you 15 excluded a pathway under 925, that you wouldn't have 16 to meet any of the things in Subpart C. And I can see 17 situations for instance where as Gary pointed out if 18 somebody comes in with two feet nine inches of clay, 19 we would probably agree that the ingestion pathway is excluded from further consideration. 20 21 But I can see where we'd still be concerned for 22 instance if the soils at the site in 305(d) where 23 you're talking about pH, if we had real acidic or real

basic soils, we'd still be concerned about that, even

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1 if the pathway of ingestion has been excluded.

2	MR. RIESER: But you could still make a
3	demonstration that the pathways, that all the pathways
4	are excluded based on site-specific factors, even if
5	that was the case.
6	MR. HORNSHAW: That's correct.
7	HEARING OFFICER DESHARNAIS: Mr. Feinen.
8	MR. FEINEN: The Agency doesn't intend to
9	exclude or make a determination that someone didn't
10	demonstrate exposure pathway exclusion based on 925
11	because it didn't meet the requirements of Subpart C.
12	That's not going to be done. You're not going to list
13	something in Subpart C and say you didn't do this and
14	therefore we're not going to give you a 925 exclusion.
15	MR. KING: That's correct.
16	MR. RAO: I have a question about this
17	exposure in a route exclusion. What's the difference
18	between a Subpart C exclusion and a Tier 3 exclusion
19	pathways? You know you have the Subpart C criteria
20	and then you say well, as an alternative you can go to
21	Tier 3.
22	MR. SHERRILL: When we were developing the
23	742 rules with the site with the committee, the
24	Agency's initial proposals we didn't even there was

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1 not a Subpart C, and the advisory committee provided guidance on developing Subpart C, which would be a 2 3 prescriptive by rule approach to excluding pathways. 4 And through consultation with various Agency 5 people and people outside the Agency and working with 6 the committee, we came up with Subpart C. And then --7 but Subpart C is a prescriptive by rule approach where 8 those certain guidelines had to be met, and the Agency 9 has experience where there are sites where other 10 routes, where routes cannot be excluded by meeting 11 those criteria, such as what Gary brought up on let's 12 just say if you just wanted to look at the migration 13 to groundwater route, and there's so many variables 14 that can go into that, we wanted to offer a flexible

15 procedure under Tier 3.

MR. KING: If you think about Subpart C as really creating what I would call a safe harbor, if you meet these criteria, then that's going to be an acceptable proposal. One of the -- I think the committee saw one of the problems, from their point of view one of the problems with Tier 3 on this issue was there was just not enough specificity.

And so this is a way that creates a specific wayof doing it that somebody can use as a safe harbor,

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1 and, you know, so we agreed that there should be that kind of safe harbor. We just wanted to make sure that 2 3 there was flexibility to consider types of proposals. MR. RAO: Thank you. 4 5 MS. McFAWN: Mr. Rieser or maybe Mr. Watson 6 can answer this. Is the committee going to testify 7 about this development of Subpart C? This is the 8 second time I've heard this come up that really 9 originated with the committee versus the Agency. 10 MR. RIESER: We can certainly, we can offer 11 testimony on this issue. 12 MS. McFAWN: That would be appreciated. MR. RIESER: Okay. 13 14 HEARING OFFICER DESHARNAIS: Mr. Watson? 15 MR. RIESER: Then we will. 16 MR. WATSON: I'd just like to clarify in my 17 mind the discussion here and how it relates I think to 18 discussions we had at the initial hearing, and it 19 relates to 305 specifically (c) through (e), and again 20 we've talked today about this is being a prescriptive 21 approach, and really what these are is there are 22 specific criteria, if you don't meet them under 23 Subpart C then you cannot exclude the exposure 24 pathway.

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1 And arguably they do not consider a formal risk assessment approach as you would consider in 925, and 2 3 I guess what I would like is clarification that the 4 Agency will not use the values generated in the 305 analysis to automatically kick you out of exposure 5 6 route exclusion under Tier 3 925, is that correct? 7 MR. KING: Yeah, I think that's what I said 8 earlier. And I'll just -- but again we have to get 9 back to the point that Tom was saying, these criteria, 10 although they may not be specific denial points, 11 certainly are the kinds of issues that need to be 12 considered and evaluated in determining whether a 13 pathway is excluded. I mean if we are -- if the contaminant levels are 14 15 such that they're above the soil saturation limits, then that's indicative of -- for instance those Tier 2 16 17 models, they're just not going to work right. So we 18 are going to look at those as factors to consider 19 whether the proposal itself makes sense. 20 MR. WATSON: Right. And for instance again 21 if you have high pH levels, you've got to deal with 22 those in a 925 risk assessment analysis of course. 23 But the mere existence of those levels above what

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would be -- what would allow you to get out of section

24

1 -- a pathway under 305 would not -- could not be a basis for the Agency to say that you can't exclude a 2 3 pathway under a risk assessment approach, correct? 4 MR. KING: That's correct. 5 HEARING OFFICER DESHARNAIS: Additional 6 follow-up on 925? 7 (No response.) 8 HEARING OFFICER DESHARNAIS: Okay, the next 9 prefiled questions concern 742.935, which is entitled agricultural uses and ecological receptors, and it's 10 11 listed as a reserved section. 12 I would just clarify at this point that the Joint 13 Committee on Administrative Rules does not allow us to 14 include reserve sections in a proposal, so therefore 15 this would not be present in the final adopted 16 proposals as it exists there as a reserve section. 17 It may be something that the Agency is considering 18 drafting a proposal for, and it's a good indication of where they would put that. But it's not something 19 that will be included in the final adopted proposal by 20 21 the Board. 22 So with that we'll turn to the prefiled question 23 from the Site Remediation Advisory Committee. 24 MR. RIESER: And the questions are still

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1 valid, even if this section is removed, because there was a discussion earlier last week in terms of how the 2 3 issues were going to be handled, and that comes up 4 under some footnotes in the Tier 1 tables. And so 5 they still need to be addressed because there's an 6 underlying issue in agricultural issues back there. 7 So is it correct that unless there's evidence to 8 indicate the presence of an ecological issue at the 9 site, a detailed ecological assessment will not be 10 required? 11 MR. O'BRIEN: We anticipate that unless there 12 is evidence to indicate the actual presence of an 13 ecological issue, that we won't require detailed 14 ecological assessment, but we haven't proposed any 15 specific wording in this section, and we don't really 16 have the specifics of an approach in mind. So I 17 wouldn't want to make statements at this time that 18 would lock us into something without having the 19 flexibility of developing an approach, being able to articulate it in detail and having discussion and 20 21 consideration at some future point. 22 MR. RIESER: And the reason the Agency 23 doesn't have a proposal here at this time is that

24 nationally there's not really recognized means for

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1 doing that, is that correct?

2	MR. O'BRIEN: Yes, well, nationally there's a
3	lot of talk and theory, but there's not the kind of
4	specifics regarding exposure factors, et cetera, that
5	and national consensus on how to go about doing
б	that to the degree that there is with respect to human
7	health.
8	MR. RIESER: What standards or factors will
9	be used to determine the presence of an ecological
10	issue?
11	MR. O'BRIEN: We anticipate that the presence
12	of wet lands, presence of threatened or endangered
13	species in the post remedial use was intended to be a
14	conservation area, or if commercial or sport fishing
15	is evident, those types of factors would be the types
16	of things we'd look forward to in determining whether
17	or not there was a significant ecological issue.
18	MR. RIESER: And those would be factors
19	associated with the area where the contamination was
20	or where it might impact?
21	MR. O'BRIEN: Right, where the exposure to
22	the organisms, to the ecological organisms would
23	occur.
24	MR. RIESER: If the section well, this may

1 be modified based on the Hearing Officer's discussion, but if section for ecological assessment were to be 2 3 added in a rule making at a later date, is it correct 4 that the Agency does not intend to reopen all of the 5 sites where NFR determinations have been issued and 6 require an ecological assessment at those previously 7 closed sites? 8 MR. O'BRIEN: That's correct, the Agency does 9 not intend to reopen sites that have been dealt with. 10 MR. RIESER: Thank you. 11 HEARING OFFICER DESHARNAIS: Any additional 12 follow-up on 935? 13 (No response.) 14 HEARING OFFICER DESHARNAIS: Okay. The next 15 sections in the prefiled questions that specifically 16 address a particular section would go on to the 17 institutional control. Before we move on to that, Mr. 18 Reott, do you have any additional questions on --19 MR. REOTT: They've all been dealt with. HEARING OFFICER DESHARNAIS: Then what we're 20 21 going to do is after lunch we'll continue with the 22 institutional controls and the D questions. We'll 23 take an hour break for lunch, so we'll be back here at 24 approximately quarter after.

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1	(A recess was taken for lunch.)
2	HEARING OFFICER DESHARNAIS: If we could get
3	ready to go back on the record. Welcome back from
4	lunch everybody. We're going to continue with the
5	prefiled questions. Beginning with Subpart J,
6	institutional controls, Part 742.1000. Beginning with
7	the questions of the Site Remediation Advisory
8	Committee.
9	MR. RIESER: Our first question is on page 24
10	of Mr. Sherrill's testimony he discusses the fact that
11	remediation objectives based on an
12	industrial/commercial property must have an
13	institutional control in place. He also states in
14	conclusion that "it is anticipated some commercially
15	zoned property could be subject to residential use if
16	it is evident that children have the opportunity for
17	repeated exposure to contaminants through ingestion or
18	inhalation."
19	Is it the intent of his testimony to say that
20	zoning is insufficient as an institutional control?
21	MR. SHERRILL: Yes.
22	MR. RIESER: And why is that?
23	MR. SHERRILL: We've gone through and put in
24	definitions of what an institutional control is, and

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we do not think that zoning provides the proper intent of our definition to restrict on how you would restrict property use as far as an institutional control. MR. RIESER: It wouldn't be sufficiently specific to an individual site, is that what you're saying?

8 MR. SHERRILL: Potentially, yes. I think we 9 had gone over this somewhat, Gary King had, Mr. King 10 had in our previous testimony on what we wanted to 11 make clear was the distinction between commercially 12 zoned and our definition of residential under Part 13 742.

14 HEARING OFFICER DESHARNAIS: Mr. Watson? 15 MR. WATSON: I've got a follow-up question on that. 16 And I guess I don't understand the distinction 17 between an ordinance, which is a municipal action, and 18 a zoning, which seems to be a similar sort of 19 municipal action that would control and dictate land 20 uses, and I guess I just don't see how the distinction 21 that the Agency is drawing in terms of why one is 22 acceptable and one is not acceptable. 23 MR. KING: I think if you look at a typical

24 zoning ordinance for instance that a community adopts,

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1 where it designates what is industrial/commercial property, it's not automatically excluding all other 2 3 uses relative to that property. So you could clearly 4 have certain things that we would consider residential 5 for purposes of the Part 742 definitions could be a 6 legal use within a commercial zoning designation that 7 would be typically enacted by a local government. 8 MR. WATSON: What if there was a showing made 9 that there were no residential uses being placed on a 10 property that was zoned commercial or industrial? If 11 we could make that showing, would that allow you to 12 point to the zoning as being something that could be a 13 potential institutional control? 14 MR. SHERRILL: Well, the purpose --15 MR. KING: No. 16 MR. WATSON: And why not? The reasons stated 17 previously? 18 MR. KING: Because we designated certain 19 things as institutional controls. This is not a Tier 20 3 issue. This is an issue of what our -- should be 21 the legally recognized mechanism. 22 Now if somebody were -- I mean if somebody were to 23 come in and make a demonstration, I suppose that our 24 general understanding of the way these ordinances work

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is totally wrong, I suppose that would be something to
 consider, but I don't think that's the case.

3 MR. RIESER: Let me finish up on the rest of 4 this question one. Would the Agency refuse to accept 5 a land use identification as commercial use if 6 children happen to be present, and if so, what 7 criteria would be used to make such a determination? 8 MR. SHERRILL: I'll give the example where we 9 may have a property that may be zoned commercial but 10 is being used as a child day care center with open 11 playgrounds, potential soil exposures, we would 12 consider that per our definition of residential 13 property to be considered residential property. 14 MR. RIESER: But a children's activity spot 15 such as Discovery Zone for example in a strip mall 16 where there's no outside exposure, that wouldn't come 17 into that example, would it? 18 MR. KING: You know I hate to get too 19 specific in trying to figure out whether Discovery Zone is -- should be qualified as a residential 20 21 property. My kids like to go there, too. But I don't 22 know if we want to make that kind of site-specific 23 exclusion.

MR. RIESER: Well, I'm using this as an

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example of something that's totally -- at least the one I'm familiar with totally enclosed, has no outdoor exposure, is not really different from being in any type of other store, commercial establishment, and establishing that the key factor is exposure to the soil rather than the fact merely of children being present.

8 MR. SHERRILL: I guess I, you know, just keep 9 going back to the definition under 742.200. 10 Residential property means any real property that is 11 used for habitation by individuals or properties where 12 children have the opportunity for exposure to 13 contaminants through ingestion or inhalation, and educational facilities, health care facilities, child 14 15 care facilities or playgrounds, and then the 16 definition for industrial/commercial means any real 17 property that does not meet the definition of 18 residential property, conservation property or 19 agricultural property. So, you know, I mean if children did not have the 20 21 opportunity under residential property for exposure to 22 contaminants through ingestion or inhalation, you 23 know, I mean that's something we can look at.

MR. RIESER: And that would be the

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1 determining factor?

2	MR. SHERRILL: I guess there again it's that
3	definition of residential property, yes.
4	HEARING OFFICER DESHARNAIS: Mr. Watson?
5	MR. WATSON: Could you provide some
6	amplification with respect to what you mean by a
7	playground? I mean I think that that's an area where
8	I see as being a real problem area. Certainly we want
9	it to the extent that there are children that are
10	being exposed at a particular activity, that that, you
11	know, that's something that we certainly want to
12	protect against.
13	But, you know, you start getting into things like
14	Discovery Zone and a McDonald's that has an outdoor
15	slide or swing, and then you've got hotels that maybe
16	have a swing set or something, and I think the concern
17	is that we've got that broad term that brings in a lot
18	of historically commercial uses where there really
19	isn't a realistic exposure to children on a chronic
20	basis, and yet, you know, it just becomes a very
21	difficult issue to deal with, especially since so much
22	of this program is dependent upon how you classify

23 your site.

24

MR. KING: Well, you also have to remember

when we started off developing these definitions, like over a year ago, we had the catchall definition was residential. And so everything fell to that. Okay, and the argument was made to us that no, you really -you should do it the other way.

6 Well, so we agreed that yeah, okay, let's change 7 it around and do it the other way. So I think there 8 has to be -- I mean one way to do things would be to 9 leave that residential as kind of open ended as kind of the catchall thing, and then try to define other 10 11 uses specifically. But we really concluded that, you 12 know, for purposes of the program working properly, it 13 was better to do it this way.

Now, there's admittedly as we sit here today, we can't make decisions on every potential exposure to children. I think that's something that is going to have to come up on specific cases, and I think most of the time when the opportunity arises, you know, owners tend to design their projects to minimize those kind of exposures.

If somebody is designing a shopping center and they know there's contamination in a specific location, they intend to leave it there, well, I'm sure they're going to try to not put it underneath

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1 something they know where children are going to be exposed to, because it's just creating a potential 2 3 problem for themselves long term. 4 So I think again it's one of those kind of -- you have to look at it and figure out what's the most 5 6 sensible practical application. 7 MR. WATSON: Okay, thank you. 8 HEARING OFFICER DESHARNAIS: Additional 9 follow-up questions? 10 (No response.) 11 MS. ROSEN: Number two. Assume that there is 12 a piece of property in an area that is both 13 residential and commercial and the background levels 14 on the piece of property equal the Tier 2 residential 15 levels. The owner demonstrates that the site is at or below those levels. 16 17 Is it required that an institutional control 18 restricting land use be imposed, and will any other 19 conditions be imposed on the site? 20 MR. SHERRILL: We needed clarification -- at 21 the beginning of your question, assume that there's a 22 piece of property in an area that is both residential 23 and commercial. We're not clear what you mean by 24 that.

1	MS. ROSEN: Well, I'm sure we've all seen
2	areas where there are both residences but there are
3	also commercial businesses. So you have a piece of
4	land that might have residences next to it, but at the
5	same time there might be a business being conducted, a
б	commercial business being conducted in a the other
7	direction.
8	MR. SHERRILL: Are you saying that you have a
9	site that's large enough that would incorporate, part
10	of the site is residential and part of the site is
11	commercial?
12	MS. ROSEN: No, not necessarily. I'm just
13	saying that the area where your site is located is
14	surrounded by a mix of residential and commercial
15	properties.
16	MR. SHERRILL: Well, which one is the site?
17	Is the site residential or is the site commercial?
18	MS. ROSEN: Let's assume that the site is
19	residential.
20	MR. SHERRILL: So then what's your question
21	then?
22	MS. ROSEN: Are you going to require that an
23	institutional control restricting land use be imposed
24	on that site, merely because I've utilized Tier 2 to

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1 show that I meet levels.

2	MR. SHERRILL: If you meet Tier 2 residential
3	levels and it's a residential site, are you saying do
4	you need an institutional control?
5	MS. ROSEN: Yes, that's my question. May I
6	change the question? Assume that it's a commercial
7	property.
8	MS. McFAWN: Can you just answer the question
9	they did pose?
10	MR. SHERRILL: Well, no, because I'm
11	confused. Because they said the site is both
12	residential and commercial.
13	MS. McFAWN: But now the site's residential.
14	MR. SHERRILL: Okay, if you
15	MS. McFAWN: It meets the Tier 2 residential
16	levels and they asked you if you need an institutional
17	control.
18	MR. SHERRILL: There could be the scenario
19	Part 742 is not intended to make waste determination
20	decisions, and so I know Mr. King had brought up, you
21	know, we had talked about RCRA in our last hearing,
22	which touches on waste determination decisions, and in
23	the if this is touching on somewhat what you're
24	getting at is there controls, there may be controls on

1 disturbing that waste that's in place and the

2 management of that potential waste. 3 MR. RIESER: I'm sorry, I thought that --4 we're getting a little far afield. I thought there 5 was testimony that that would not be one of the 6 restrictions imposed, because that's common to all 7 sites. That the types of restrictions would be land 8 use or use of drinking water, things of that nature. And I think the first question Whitney asked was 9 10 given a residential property that achieves Tier 2 11 residential levels, are institutional controls 12 required. 13 MS. ROSEN: That's correct, that's what I 14 asked. 15 MS. McFAWN: So Mr. Rieser, you're saying 16 that when this question was posed you assumed the 17 answer would be no? 18 MR. RIESER: It was my belief that the answer 19 would be no. But --20 MS. McFAWN: So when it was written that's 21 what you assumed? 22 MS. ROSEN: Yes, correct. 23 MS. McFAWN: Does that make sense to the 24 Agency?

MS. McFAWN: Okay. 3 MR. KING: I mean if it's a residential use 4 and it meets -- well, if it's a commercial use and its 5 meets those Tier 2 residential numbers, then it would 6 not need an institutional control relative to use. 7 MS. McFAWN: Okay. 8 MS. ROBINSON: I think we were just confused 9 by the way the question was structured. It started to 10 make us wonder if there was more to the question. 11 MS. ROSEN: We aren't trying to trick you. 12 MR. RIESER: Would there be other -- you used 13 the phrase regarding use. Would there be other 14 controls, will other conditions be imposed on this 15 site? 16 MS. ROBINSON: Do you mean as far as 17 institutional controls?

MR. KING: Yes, I think the answer is no.

1

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18 MR. RIESER: Yes. Thank you.

19 MR. KING: Offhand I can't think of any institutional controls that would be required. There 20 21 obviously would be conditions on the NFR letter, I 22 mean there's all sorts of things that would be 23 included, but I don't know if those would be 24 necessarily in the NFR letter would be recorded as

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1 control relative to the site.

2	MR. RIESER: Right. So you'd have a recorded
3	NFR and it would have the standard conditions for NFR
4	letters as described in 740, but it wouldn't have any
5	specific land or use restrictions, land use or other
6	types of use restrictions on them?
7	MR. KING: I think that's correct, yes.
8	HEARING OFFICER DESHARNAIS: Miss Prena, did
9	you have some follow-up?
10	MS. PRENA: Just to clarify this, that means
11	that if you have a commercial property that cleans up
12	to residential standard, that no institutional
13	controls would be required?
14	MR. KING: That's basically correct.
15	MR. GOBELMAN: My name is Steve Gobelman, I'm
16	with the Department of Transportation. If you meet
17	residential numbers, does that mean that and
18	there's no institutional controls, can a person then
19	go back and excavate and haul that material off-site
20	without any problems with waste management? Can it be
21	excavated off, that's considered clean fill?
22	MR. SHERRILL: At this time we're not
23	intending to answer waste determination decisions
24	through Part 742 in that manner.

1 MR. GOBELMAN: So it could be considered a 2 waste is what you're saying? 3 MR. CLAY: It would not automatically be 4 considered clean fill. It would have to be determined 5 whether or not that was waste or not. 6 MR. GOBELMAN: Through solid waste 7 determination process? 8 MR. CLAY: Well, through the -- I think it's 9 807 determining whether it's a waste, and that takes 10 into account the use of that material. 11 MR. GOBELMAN: Okay. 12 MR. RIESER: This brings up a question in my 13 mind about some other testimony that I think was 14 delivered, but I'm not sure, which was that I remember 15 some testimony to the extent that any soil which 16 exceeded the Tier 1 residential would be deemed 17 special waste. 18 Is the Agency saying that that's not the case 19 anymore and that that determination is based on the 20 appropriate waste determination rules? 21 MR. SHERRILL: Is the question soils that 22 exceed Tier 1 numbers, is that a special waste? 23 MR. RIESER: Just by virtue of that fact. 24 HEARING OFFICER DESHARNAIS: Mr. Rieser, do

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1 you believe that testimony was given at this set of

2	hearings?
3	MR. RIESER: Yes.
4	MR. REOTT: I don't believe so.
5	MR. RIESER: I'm sorry, I've been informed
б	that that was in the 740 proceeding and it was
7	clarified at that time. 740 clarified at that time
8	that that was not the case.
9	MS. McFAWN: So do you withdraw your
10	question?
11	MR. RIESER: Yes.
12	MR. SHERRILL: Thank you.
13	Mr. RIESER: You're welcome.
14	HEARING OFFICER DESHARNAIS: Moving on to the
15	next question. We have questions on 742.1000 that
16	were filed by Mayer, Brown & Platt. Miss Prena.
17	MS. PRENA: This is question 14. Where
18	contamination extends onto neighboring property, can
19	institutional controls be proposed by an RA,
20	remediation applicant, who doesn't own the property?
21	MR. KING: They can be proposed. However, it
22	has to there certainly would have to be a
23	recognition that there has to be a way of legally
24	effectuating those restrictions for a proposal to be

1 granted or to make sense.

2	MS. PRENA: I guess for example if you looked
3	at (c) sections 4 and 5 discussing ordinances that
4	might be adopted by a unit of local government or
5	agreements between the property owner and highway
6	authority, those would be institutional controls that
7	might be acceptable?
8	MR. SHERRILL: Are you citing 742.1000(c)?
9	MS. PRENA: Yes.
10	MR. KING: Yes, those are yeah, those are
11	two identified institutional controls that can go
12	off-site.
13	MS. PRENA: So even though those might affect
14	a neighboring property, they could still be
15	considered?
16	MR. KING: Well, yeah, because with an
17	ordinance that's an ordinance, obviously it's been
18	adopted by a unit of local government under its
19	authorities as defined by the statute adopt ordinances
20	regulating its own behavior and the behavior of people
21	within it. And an agreement with a highway authority,
22	I mean that's something that the highway authority
23	would be accepting.
24	MS. PRENA: What about with respect to No

1 Further Remediation Letters, restrictive covenants,

deeds, restrictions and negative easements? 2 3 MR. KING: For those items there would have 4 to be an acceptance by the off-site person relative to 5 those. 6 MS. PRENA: Okay. The next question. 7 MS. ROBINSON: Could I just ask a question of 8 you? When you ask this question, you use the term 9 remediation applicant, which is a term specific to the Part 740 regulations. I just want to clarify that if 10 11 it's in the term, if you're using it in the context of 12 740, that would be correct. But if you're using it in 13 the context of the 732 open regulations it may be an 14 owner/operator. So was your question directed 15 specifically to 740 or in general? 16 MS. PRENA: No, I think we should clarify in 17 the record that that would include an owner/operator 18 or any person that would be an applicant. 19 MS. ROBINSON: Okay. 20 MS. PRENA: Can I ask the next question? HEARING OFFICER DESHARNAIS: Sure. 21 22 MS. PRENA: Why are acceptable institutional 23 controls limited to those "recognized" in Subsection (c)? 24

1	MR. KING: We thought that it was very
2	important to have a clear set of designated
3	institutional controls. When we started out with our
4	initial development of the proposal we only had the
5	first three NFR letters, restrictive covenants and
6	negative easements and it was we added four as a
7	result of discussions with the advisory committee, I'm
8	not sure when, but at some point we had those
9	discussions, and then the fifth one was added because
10	of discussions with Department of Transportation.
11	Now if there are other institutional controls
12	which can take the kind of legal effect and
13	significance that these type of controls do, then
14	yeah, I think that is should be presented and
15	something to be considered.
16	MS. PRENA: Okay.
17	MR. WATSON: I'm sorry, I've got a follow-up.
18	HEARING OFFICER DESHARNAIS: Mr. Watson,
19	follow-up.
20	MR. WATSON: Were you following up on that?
21	MS. PRENA: Yeah.
22	MR. WATSON: I'm sorry.
23	MS. PRENA: Would that include under
24	Subpart (k) engineered barriers, 742.1100 Subpart (d)

1 discusses maintenance requirements for engineered barriers being considered an institutional control on 2 3 page 74. 4 MS. McFAWN: Could you give the section 5 number for that? 6 MS. PRENA: 742.1100, subparagraph (d). 7 MS. McFAWN: Thank you. 8 MR. KING: Well, that provision is saying 9 that those maintenance requirements are included in an 10 institutional control. So you'd go back to 11 Subpart (j) and it would be one of those institutional 12 controls, most likely one, two or five. 13 MS. PRENA: Okay. So you look at that as 14 being part of a No Further Remediation Letter or some 15 kind of deed restriction? 16 MR. KING: Right. 17 MS. PRENA: Okay. 18 HEARING OFFICER DESHARNAIS: Mr. Watson, did 19 you have some follow-up? 20 MR. WATSON: How would a party -- when you 21 said that additional institutional controls may be 22 considered, how would a party go about or how would 23 Illinois EPA consider that? Are you suggesting that you could -- we could propose additional institutional 24

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1 controls, or would that necessitate amending the

2 regulations? 3 MR. KING: In my mind it would necessitate 4 amending the regulations. 5 HEARING OFFICER DESHARNAIS: Any additional 6 follow-up on that point? 7 (No response.) 8 HEARING OFFICER DESHARNAIS: Next question. 9 MS. PRENA: Why wouldn't an agreement with a 10 governmental body other than a highway authority be 11 acceptable? 12 MR. KING: It could be. The issue would 13 become how you effectuated that agreement. I would think it could be done in terms of the NFR letter 14 15 extended and placed on that additional property or 16 restrictive covenant placed on that additional 17 property. 18 Number five is there because of the real 19 interesting problem that the Department of Transportation has relative to allowing restrictive 20 21 covenants to be applied with regards to property they 22 own. 23 They have -- there's legal restrictions relative 24 to that. So they needed to have a special provision,

1 because the other provisions relative restrictive

2 covenants wouldn't work for that.
3 MS. PRENA: So other institutional controls
4 could be developed under and fit within the No Further
5 Remediation Letter?

6 MR. KING: Right, if there was an agreement. 7 If for instance the local government property was the 8 off-site property, and they were willing to accept a 9 use restriction, the local government was willing to 10 accept a use restriction relative to that property 11 they owned, and was -- and could put that on a deed of 12 record, that would be acceptable. 13 MS. PRENA: I'm going to have another 14 question on -- a follow-up question on this, but I 15 just need a moment. 16 MR. RIESER: The question, the further 17 question being considered is the No Further 18 Remediation Letter specified here in (c)(1) is 19 specific to the site remediation program under part 20 sub 4, correct, or 732? 21 MR. KING: Yes, that's correct. 22 MR. RIESER: So for a RCRA site the 23 institutional control would be whatever the Agency 24 would issue, whatever closure document it would issue

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1 in that context, and we talked about that at the beginning of the hearings, and the restrictive 2 covenants and deed restrictions would be the documents 3 4 that were reported to put the limitations on the 5 property that were required under this section, is 6 that correct? 7 MR. KING: That's correct. 8 MR. RIESER: So the restrictive covenants and 9 deed restrictions are to be used in circumstances where you don't have a No Further Remediation Letter 10 11 that's being recorded as part of the program? MR. KING: That's the way I would see it, 12 13 yes. 14 MR. RIESER: Okay. 15 MS. McFAWN: They could be used for other purposes though, too, couldn't they? 16 17 MR. KING: Yes, that's correct. 18 MS. PRENA: So that could include the 19 agreements with other -- with agencies other than the 20 highway authority and some of the other examples that 21 we talked about? 22 MR. KING: Yes, that's correct. 23 MS. ROBINSON: I'm not sure I know what 24 you're getting at. Could you give an example of what

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1 you might have in mind as another --

2	MS. PRENA: Yes. Stepping back, we were
3	talking about the fact that under this definition the
4	only things that are considered recognized
5	institutional controls are listed as 1 through 5, but
6	that there are other types of institutional controls
7	that are not on this list, and that the Agency will
8	consider them as being acceptable institutional
9	controls.
10	However, it appears that they seem to fall under
11	like 1, 2 and 5.
12	MS. ROBINSON: I don't think that's what our
13	testimony was. I think what we said is there there
14	may be conditions that fall under one of these as part
15	of 1 through 5, but I don't think we had there are
16	other institutional controls that are necessarily
17	acceptable, and I think what we testified was that if
18	there were it would require an amendment to the rule
19	making.
20	MS. PRENA: So what are those how are
21	those factors considered? Are they not considered
22	institutional controls? What are those factors
23	called?
24	MS. ROBINSON: I don't want to get sworn in

1 here so I'm trying to --

2 MS. PRENA: Yes. 3 MR. KING: I guess I'm confused by the 4 question. When you say factors, I guess I'm not quite 5 sure what you mean. You mean why would -- why did we 6 -- why would we not have an item number six, is that 7 what you're getting at? 8 MS. PRENA: Yeah, we're getting into the 9 issue that you've limited the number of institutional 10 controls to these five types of items. 11 MR. KING: Right. 12 MS. PRENA: And we've just spent the last few 13 minutes talking about other types of controls that can 14 be placed upon properties, and at the moment we're --15 the discussion is that those can't be considered, quote, institutional controls, but that they are 16 17 conditions or factors that are evaluated by -- in the 18 application, and would have to be included under -- in 19 a No Further Remediation Letter or as a deed 20 restriction, et cetera. 21 And I was -- what I was get getting at is trying 22 to flesh out where -- or further describe those types 23 of conditions that might appear. MS. ROBINSON: Would it help if we provided 24

1 an example, just make a hypothetical type of site where these conditions, which I think is what you're 2 3 getting at is conditions of for instance an NFR 4 letter, which the NFR letter is the institutional 5 control, I think you're trying to get at the 6 conditions that might go into something like that, is 7 that right? 8 MS. PRENA: Yeah. 9 MS. ROBINSON: If we provide an example, 10 would that help illustrate? 11 MS. PRENA: Yes. 12 MR. SHERRILL: A typical condition that we'd 13 put in the NFR letters that have gone out, the ones 14 I've seen, a typical condition could be there would be 15 a brief sketch or map attached to the NFR letter, and 16 in this brief sketch or map there would be a 17 designated area on this map, and it would say in this 18 area no well is to be installed for groundwater purposes for potable use. That's a typical condition 19 contained within an NFR letter. 20 21 And then that NFR letter gets recorded with the 22 local county or county recorder. That's a typical 23 condition. 24 MS. PRENA: Okay. Is that a condition that

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1 would also -- could also be used under number 2,

2	restrictive covenant and deed restriction, or not?
3	MR. SHERRILL: I would think so.
4	MS. PRENA: Are there any other examples?
5	MR. SHERRILL: Another example on the NFR
6	letter could be that the property remain
7	industrial/commercial as per the definition in the
8	deciding question or the piece of property the
9	question remain industrial/commercial.
10	Or another condition would be that a someone
11	comes in and they say we have a paved barrier over the
12	contamination that we wish to leave remaining in
13	place, and so the condition in the NFR would be well,
14	as long as that paved barrier remained there, you
15	know, the contamination can remain in place.
16	Those are typical conditions within an NFR.
17	MS. PRENA: And would those be also of
18	several conditions under a restrictive covenant and
19	deed restriction?
20	MR. SHERRILL: Yeah, that would be something
21	typical. Another typical one is people leave
22	contamination in place and it would warrant a worker
23	caution if someone were to do excavation or some type
24	of future activity in that contaminated area. So the

1 condition we'd put in the letter is that

2	owner/operator, whoever, is someone has a duty to
3	inform, notify, provide protective equipment for these
4	workers in this contaminated area.
5	MS. McFAWN: It would seem like that's a
6	fairly common condition if the contamination is
7	allowed to remain, wouldn't it be?
8	MR. SHERRILL: Yes.
9	MR. WATSON: I've got a question.
10	HEARING OFFICER DESHARNAIS: Follow-up, Mr.
11	Watson.
12	MR. WATSON: A follow-up question. Do No
13	Further Remediation Letters and deed restrictions,
14	restrictive covenants always work in concert with each
15	other? You're most and you going to have both of
16	them at a site, correct? You'll have the
17	MR. SHERRILL: The ones I've been familiar
18	with is people have had No Further Remediation Letters
19	and conditions that I've just described but they
20	the NFR I believe is the deed restriction. There's
21	not a duplicity of efforts here.
22	MR. WATSON: Under what circumstances would
23	you use a deed restriction then and not an NFR?
24	MR. KING: I think we went over that. You

1 use that in the context of a program where you didn't

2 have the NFR letter.

3 MR. WATSON: All right, thanks. 4 HEARING OFFICER DESHARNAIS: Additional 5 follow-up? 6 MS. McFAWN: I have one. At (c)(4) when the 7 Agency talks about ordinances, I assume you mean 8 excluding zoning ordinances, is that right? 9 MR. KING: Right. What we're referring to 10 there is the -- specifically the type of ordinance 11 that's set out in 1015. 12 MS. McFAWN: Set out in, pardon me? 13 MR. KING: Section 742.1015. 14 MS. McFAWN: Thank you. 15 HEARING OFFICER DESHARNAIS: Before we move 16 on to the next section, the Agency has included a work 17 note that says definitions in the Illinois Highway 18 Code for highway authority, highway and right-of-way 19 are applicable to this part. 20 Would the Agency have any objection to including those definitions in the section number rather than a 21 22 Board note? 23 MS. ROBINSON: I don't think we have any 24 problem with that. Do you mean you want them in the

1 definitions section itself?

2	HEARING OFFICER DESHARNAIS: That would be
3	one way to handle it.
4	MS. ROBINSON: That's fine. I would request
5	then that Illinois Department of Transportation maybe
6	provide those as a piece of testimony. This was your
7	suggestion I believe.
8	MR. SCHICK: All right.
9	HEARING OFFICER DESHARNAIS: Thank you.
10	MR. SCHICK: And I've got a question for you.
11	I have a question on the boundary of the area that the
12	institutional control applies to, which I believe John
13	Sherrill said a sketch would do, you don't need a
14	meets and bounds or legal description of that area?
15	Maybe I should ask a lawyer.
16	MR. SHERRILL: I believe under 740, the site
17	remediation program, I believe we do require a legal
18	description of the property, if that's what you're
19	getting at.
20	MR. SCHICK: The boundary to which the
21	institutional control applies?
22	MR. SHERRILL: Correct. Is that was that
23	your question?
24	MR. SCHICK: Yeah. I guess also then that

1 also can apply to the engineered barrier, I guess the question is do you want a legal description of the 2 3 engineered barrier? 4 MR. KING: I don't think we need that, 5 because the engineered barrier is always coupled with 6 some institutional controls anyways. You know, I'm 7 sure there would be an engineered description of the 8 engineered barrier. 9 MR. SHERRILL: I want to make a distinction. 10 You know, this whole thing with conditions and NFR's 11 and the property boundaries, it's not uncommon that 12 people will ask for a condition only on one part of the site or that the NFR covers only one piece of the 13 14 property. 15 So I don't want to -- I just want to make that distinction, that we've tried to construct the NFR's 16 17 or utilize the NFR for that distinction is clear. 18 HEARING OFFICER DESHARNAIS: Mr. Rieser? MR. RIESER: Yeah, with respect to the (c)(5) 19 20 issue on highway authority. When you use the term and 21 a highway authority, would those cover other highway 22 authorities than the Illinois Department of 23 Transportation? 24 MR. KING: That's correct.

1 MR. RIESER: Okay. And the definitions in the Illinois Highway Code, and maybe this will be 2 questions for Mr. Schick if he testifies regarding 3 4 this matter, would those apply to other highways and 5 highway authority other than those controlled by the 6 Illinois Department of Transportation? 7 MR. KING: I think the answer to that is 8 going to be yes. 9 MR. RIESER: Okay. But we'd have to review those definitions to confirm that. 10 11 MR. KING: Right. Just to give you 12 background, our discussions with Department of 13 Transportation have been with regards to that kind of issue, that they would -- they will be providing 14 15 guidance to local highway authorities as to the -- as 16 to what their views are the way this should be 17 handled. 18 MR. RIESER: Thank you. 19 HEARING OFFICER DESHARNAIS: Any additional follow-up on Section 1000? 20 21 (No response.) 22 HEARING OFFICER DESHARNAIS: Okay, the next 23 prefiled question concerns Section 1005, and again filed by Mayer, Brown & Platt. Miss Prena. 24

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1 MS. PRENA: Can a "focused" NFR letter be used as an institutional control? 2 3 MR. KING: My assumption is you mean --4 you're referring to a NFR letter resulting from a 5 focused investigation Part 740. And if that's true 6 then the answer is yes. 7 MS. PRENA: Okay. 8 HEARING OFFICER DESHARNAIS: Any follow-up? 9 (No response.) 10 HEARING OFFICER DESHARNAIS: The next 11 prefiled question concerns 742.1010, again filed by 12 Mayer, Brown & Platt. 13 MS. PRENA: If an NFR letter itself acts as 14 an institutional control, when would a restrictive 15 covenant, deed restriction or negative easement also 16 be necessary? 17 MR. KING: I think we've talked about that 18 already. I'm not sure if I have anything really to 19 add to what we were saying earlier. 20 You're really talking about programs where the NFR 21 letter is not going to be applicable, or you could 22 also be in a situation where for some reason the 23 off-site person is willing to accept a deed 24 restriction on the property but doesn't want the No

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1 Further Remediation Letter filed on the property.

2	MS. PRENA: Well, you've just described two
3	situations where you would use either an NFR letter or
4	a restrictive covenant. What is the situation where
5	you would be using both?
6	MR. KING: On a single piece of property, is
7	that what you're referring to?
8	MS. PRENA: Yes.
9	MR. KING: As John Sherrill said earlier,
10	we're really not anticipating that that would occur.
11	I suppose if somebody wanted to file an NFR letter and
12	file a separate document called a deed restriction, I
13	suppose somebody could do that. We're not requiring
14	that to occur.
15	MS. PRENA: All right.
16	MR. KING: From our perspective the NFR
17	letter works effectively like a deed restriction,
18	because it's running with the land, so there's no need
19	to have a separate document if the NFR letter is
20	there.
21	MS. ROBINSON: And isn't it true as properly
22	recorded it's attached to the chain of file, so
23	therefore if somebody does a proper title search on a
24	transfer of property it's going to show up as

1

effectively a deed restriction?

2 MR. KING: That's correct. 3 HEARING OFFICER DESHARNAIS: Additional 4 follow-up? 5 (No response.) 6 HEARING OFFICER DESHARNAIS: Next question. 7 MS. PRENA: The next question, if remediation 8 objectives must be met before any of these mechanisms 9 can be considered "institutional controls", why do subsections (b) (2), (3), and (4) refer to areas and 10 11 extent of contaminants which exceed objectives? 12 MR. SHERRILL: To clarify that question, when you say if remediation objectives must be met, which 13 14 remediation objectives are you talking about? 15 MS. PRENA: General cleanup objectives. 16 MR. SHERRILL: I mean if you met a Tier 1, 17 for example if you met a Tier 1 remediation objective, 18 is that what you're talking about? 19 MS. PRENA: (2), (3) and (4) talk about concentrations of contaminants and remediation 20 21 objectives. So to clarify I'm talking about if you 22 are required to meet those types of remediation 23 objectives. MR. SHERRILL: What the intent there of this 24

1 (b), (2), (3), and (4) then just to clarify, you're
2 talking about 742.1010 (b) (2), (3) and (4), is that
3 correct?

4 MS. PRENA: Yes, right. 5 MR. SHERRILL: What we're looking at there is 6 someone's proposing to leave behind contamination, and 7 it is important to know where that contamination is 8 left in place and the applicable concentrations. And 9 for example a construction worker may enter the contamination area, and we want to know kind of on 10 11 public record recorded and so forth where these 12 respective environmental concerns are still located. 13 And the applicable way to do that is, you know, that the NFR letter or as we've said, recorded with the 14 15 title of the property. 16 MS. PRENA: Under Section 742.1010(a) it says 17 the Agency has determined that a No Further 18 Remediation is required as to the property. And I 19 understand that to mean that this section means that you would have met remediation objectives. I just 20 need clarification on how this works. 21 22 MR. SHERRILL: The term No Further 23 Remediation kind of, correct me if I'm wrong, you 24 could kind of interpret that as no further corrective

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1 action in a sense. Because you've -- you know,

2	because you're proposing to use or you have instituted
3	these institutional controls.
4	MR. RIESER: I think the real the question
5	is did (2), (3), and (4) require a demonstration
6	showing the horizontal extent of contamination above
7	the applicable remediation objectives, and the
8	question is what are the applicable remediation
9	objectives that you're showing? You've already
10	decided that, you know, you've had your remediation
11	objectives at the boundary, so what does this map
12	demonstrate?
13	MR. KING: Part of the confusion is, because
14	you guys caused it on this, because when we originally
15	drafted this we had it as above the Tier 1 remediation
16	objectives, which made it very clear. Then you go in,
17	you go into the table, you look up your Tier 1 number,
18	there it is, and now you can show on a map what's
19	above the Tier 1 number.
20	The suggestion was made by the committee that that
21	might not be the you know, wouldn't be good if you
22	had if your remediation objectives were established
23	under Tier 2 or Tier 3. So we put it in terms of
24	applicable, so it was clear that it could be one of

1 the other levels.

2	MR. RIESER: Or a construction worker
3	scenario, to go back to Mr. Sherrill's example, if the
4	issue is the construction worker, you want to show a
5	construction worker where they are and that's what
6	your map would demonstrate.
7	MR. KING: Right, I guess I was thinking of
8	as a for example you could have determined your
9	remediation objectives based on under Tier 2, okay?
10	And you might have an area that's above those Tier 2
11	remediation objectives. But the conclusion was that
12	could stay there because of an engineered barrier or
13	whatever.
14	So then your map would show where on the site the
15	contaminants were above the Tier 2 numbers.
16	HEARING OFFICER DESHARNAIS: Mr. Reott,
17	follow-up?
18	MR. REOTT: Can I just offer a suggestion?
19	Maybe the language would be clearer, and I think it
20	would meet what you're trying to get at, Gary, if it
21	said above the otherwise applicable remediation
22	objectives that would apply in the absence of the
23	institutional control or the engineered barrier or
24	whatever, you know.

1	MR. KING: Well, that's something we can
2	certainly think about, whether that might make it
3	clearer. I'm not sure that it I think that the key
4	difficulty here that's been expressed with the
5	questions is what does applicable mean in this
6	context, and saying otherwise applicable, I'm not sure
7	that resolves that question. But we can take a look
8	at it and think about it.
9	HEARING OFFICER DESHARNAIS: Any additional
10	follow-up on that question?
11	(No response.)
12	HEARING OFFICER DESHARNAIS: Mr. Rieser, did
13	you have anything further?
14	MR. RIESER: No, I did not, I'm sorry.
15	HEARING OFFICER DESHARNAIS: Additional
16	questions on 742.1010, Mr. Watson?
17	MR. WATSON: You know I'm going to ask my
18	question. When you talk about in $742.1010(b)$ (2), (3)
19	and (4), this does not impose upon a party an
20	obligation to identify the extent of contamination
21	above Tier 1 numbers, does it?
22	MR. KING: Well, it does if that's the
23	remediation objectives that were determined from the
24	site.

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1	MR. WATSON: But if not, if you're relying on
2	something other than Tier 1 numbers, there isn't a
3	general obligation to define site conditions above
4	Tier 1 standards, is that right?
5	MR. KING: At this point?
6	MS. ROBINSON: Do you mean something other,
7	meaning Tier 2 or Tier 3?
8	MR. WATSON: Right.
9	MS. ROBINSON: I think he already answered
10	that, but go ahead, Gary.
11	MR. KING: Now you're not talking about the
12	whole site investigation and all that kind of stuff,
13	are you?
14	MR. WATSON: No.
15	MR. KING: Well, then to you no.
16	MR. WATSON: Okay.
17	HEARING OFFICER DESHARNAIS: Moving on to the
18	next prefiled question on 742.1010 filed by Gardner,
19	Carton & Douglas, Mr. Watson?
20	MR. WATSON: I think that all of my
21	questions, all of my remaining questions have been
22	answered. So I don't have anything further from my
23	prefiled questions.
24	MS. McFAWN: Your question number 10 has been

1 answered?

2 MR. WATSON: I think we went over this issue 3 in extensive detail in the 740 hearing, and I don't 4 see a need to go through that issue again. If you'd 5 like me to ask it again and get it on the record in 6 this proceeding, I'd be happy to. 7 MS. McFAWN: No, it's fine, if you're 8 satisfied. 9 HEARING OFFICER DESHARNAIS: Okay, the next prefiled questions concern 742.1015. We'll start with 10 11 those filed by the Site Remediation Advisory 12 Committee. 13 MR. RIESER: Has the Agency confirmed whether an ordinance really exists which prohibits the use of 14 15 groundwater within the Chicago city limits? 16 MR. KING: As far as we know there is no such 17 ordinance. 18 MR. RIESER: So the Agency cannot provide a 19 citation for that ordinance? 20 MR. KING: That's correct. 21 MR. RIESER: And that takes care of the next 22 questions as well. Does the Agency intend to enter 23 into a memorandum of understanding with the city of 24 Chicago?

1	MR. KING: Once they it's our
2	understanding they are intending to adopt an ordinance
3	that will satisfy the criteria of 1015 and be acting
4	just it's our belief that they're going to be
5	once that ordinance is in effect they'd be willing to
б	pursue the type of MOU that we've discussed.
7	MR. RIESER: Does the Agency intend to enter
8	into such memorandums of understanding with any other
9	local communities?
10	MR. KING: Right now we don't have any
11	requests to do so, but if we do get those we certainly
12	will consider them.
13	MR. RIESER: Does the Agency know of a city
14	which does have an ordinance?
15	MR. KING: At this point we've approved three
16	of them. Tazewell County, the city of LaGrange, and
17	the village of Orland Park.
18	MR. RIESER: Thank you. With respect to
19	Subsection (d) of the Section 1015, what is the
20	purpose of this requirement? This is the requirement
21	to monitor activities of the unit of local government
22	in the future.
23	MR. KING: The purpose there is to maintain
24	assurances in the event there's not a memorandum of

1 understanding with a local government that the

institutional control is going to remain in effect. 2 3 MR. RIESER: Is the Agency aware of whether 4 these ordinances are typically modified in any 5 respect? 6 MR. KING: I think generally they are 7 modified, but I don't know that they're modified in 8 ways that really undermine the total integrity of the 9 ordinance, no. 10 MR. RIESER: In other words, they might be 11 modified as to the extent of their coverage but they 12 wouldn't be -- I should say to expand the extent of 13 their coverage but not to reduce it? 14 MR. KING: I think that's typical. These 15 ordinances have been adopted for -- typically have 16 been adopted for reasons of maintaining the integrity 17 of the public water supply system, so it really --18 there really is not an incentive for them to eliminate 19 them. MR. RIESER: And they might also be adopted, 20 21 and I don't know if you've included this, maintaining 22 the integrity, but also in the context of insuring 23 that everyone within the municipality uses the water 24 supply so that they've all hooked on and paying their

1 water fees.

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3	but they do have, you know, grandfather clauses and
4	those kinds of things.
5	MR. RIESER: Once a local ordinance is
6	present restricting the use of groundwater, would not
7	the State Water Well Code (415 ILCS $30/1$ et seq. 77
8	Ill. Adm. Code 920) preclude drilling a potable well
9	in the area of contamination?
10	MR. KING: I don't have the greatest
11	familiarity with the Water Well Code, but it's one of
12	the problems that is the case relative to the Water
13	Well Code is it's not something that we're able to
14	directly enforce. And the Water Well Code I don't
15	think is really addressing the potential of
16	contamination to yeah, we were just talking about
17	there's also an issue of how the notification would
18	occur relative to that issue.
19	So it's just sort of a combination of factors. We
20	just we don't think that the Water Well Code fits
21	very well in the context of 742.
22	MR. RIESER: And that would answer our last
23	question on that issue, which is why is the Water Well
24	Code not available as an institutional control.

MR. KING: Yeah, that's one of the purposes,

1 I have one question on notification. The regulation requires notification of landowners to 2 3 properties that are affected by groundwater 4 contamination that the institutional control is being 5 -- ordinance is being used as an institutional 6 control, but when it has access to the property on 7 those properties. Would you have to notify an 8 adjacent property owner if that property owner had 9 signed off on including that adjacent property within 10 the remediation site? 11 MR. KING: The way this is phrased the answer 12 would be -- the answer would be yes. 13 MR. RIESER: Would it be possible -- would 14 the Agency be interested in language that would allow 15 for an exception for those situations where the 16 adjacent property owner's permission had already been 17 obtained prior to the remediation site? 18 MR. KING: I think we could review that type 19 of language. We'd have to make sure that everything obviously fits together properly, but we could review 20 21 that. 22 MR. RIESER: Thank you. 23 HEARING OFFICER DESHARNAIS: The next 24 prefiled question's concerning 742.1015 filed by

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1 Mayer, Brown & Platt. Miss Prena.

2 MS. PRENA: Must an ordinance restrict 3 groundwater use county-wide to qualify as an 4 institutional control? 5 MR. KING: No. 6 MS. PRENA: Could you elaborate? 7 MR. KING: Well, you know, for instance if 8 you have a unit of local government that's a 9 municipality that's within a county, its jurisdiction 10 would not extend throughout the entire county. So it 11 couldn't be county-wide. 12 MS. PRENA: Well, could it be an ordinance 13 that would only restrict portions of groundwater use 14 within the municipality or jurisdictional boundary? 15 MS. ROBINSON: What do you mean by portions, 16 I'm sorry? 17 MS. PRENA: I guess I'm trying to understand 18 how narrow the ordinance can be in restricting groundwater use. Narrow in terms of the area of 19 groundwater affected. 20 21 MR. SHERRILL: That would kind of be up to 22 the unit of local government on how they adopt their 23 ordinance. And under 742.1015(a) it's written in an 24 ordinance adopted by a unit of local government that

1 effectively prohibits the use of groundwater as a

2 potable supply of water.

I'm kind of paraphrasing, it's got a little bit 3 4 more, but that's our intent there. 5 MS. PRENA: So that could just cover a 6 specific portion of groundwater within that 7 locality --MR. KING: Yeah, we hadn't really thought of 8 9 it in that context, but I don't know why that wouldn't be a possible option. Normally what our experience 10 11 has been -- we've seen is that a community is going to 12 -- if a community is going to adopt one of these 13 ordinances it covers the entire local government. So 14 we hadn't really thought about it in the context of a 15 partial -- being partially applicable. 16 MR. O'BRIEN: What would be necessary though 17 is to satisfy 742.320(c) if you were using that type 18 of ordinance to restrict a water supply. The 19 groundwater ingestion route, exclusion if it was used in that context, then it would have to cover the area 20 indicated there, 2500 feet from the source. 21 22 MS. PRENA: Can you give me that site again? 23 MR. O'BRIEN: 320(c). MR. SHERRILL: Of 742.320(c). 24

1 MR. O'BRIEN: It's at the end of Subpart C.

MS. PRENA: Okay.
HEARING OFFICER DESHARNAIS: Next question.
MS. PRENA: Can other property owners'
objections preclude the use of an ordinance as an
institutional control?

7 MR. KING: I think -- I'm not sure that 8 preclude is the right kind of terminology. Obviously 9 if we received information as a result of -- as a 10 result of notification, that information could change 11 our conclusions as to the applicability of what was 12 being suggested.

13 For instance, if as a result of one of these 14 notifications somebody reported back that they were --15 had an ongoing use of a water supply well, and that 16 was an illegal use, and that condition had not been 17 identified before, that would be the type of 18 information I think we would certainly have to factor 19 in as far as looking at the entire remediation 20 activities.

The other possibility is, you know, perhaps the person objects to the ordinance and the local government ends up changing their ordinance, so if that happened then we would have to account for that

1 as well.

2	MS. PRENA: Would you account for the fact
3	that the ordinance was passed?
4	MR. KING: Right, or had been amended or
5	whatever as a result of the notification.
6	MR. RIESER: Just to follow-up, just for the
7	the objection would be sufficient, there would have
8	to be a demonstration that there was an actual use in
9	that instance?
10	MR. KING: Right, it's not the fact that the
11	objection is received that results in the different
12	decisions, it's what that what was the basis for
13	that objection.
14	HEARING OFFICER DESHARNAIS: Next question?
15	MS. PRENA: Are the duties in Subsection (d)
16	to monitor local government activities and notify the
17	Agency intended to be perpetual?
18	MR. KING: They are intended to remain in
19	effect as long as the NFR letter is in effect.
20	MS. PRENA: In the case where there's a deed
21	transfer, I would assume that the new owners would
22	then take on the responsibility by assignment?
23	MR. KING: They would certainly take on that
24	responsibility. I don't know if by assignment is the

1 right term, but they would take on that

2 responsibility. 3 MS. PRENA: Okay. 4 MS. ROBINSON: Do they have the option of 5 coming back to the Agency and for instance getting new 6 remediation objectives if they decide they want to 7 clean up the site completely to Tier 1 levels? MR. KING: Yes, that's an option. 8 9 MS. ROBINSON: Okay. HEARING OFFICER DESHARNAIS: Next question? 10 11 MS. PRENA: Does a memorandum of 12 understanding MOU between the Agency and the local 13 government relieve the applicant of the duty to 14 perpetually monitor the local government's activities? 15 MR. KING: Yes, that would be correct, as 16 long as the MOU remained in effect. 17 MS. ROBINSON: Same clarification here on the 18 term remedial applicant. It could be owner/operator 19 or other person, depending upon what program they're 20 coming in? 21 MS. PRENA: Yes. 22 HEARING OFFICER DESHARNAIS: Mr. Reott? 23 MR. REOTT: One of my prefiled questions relates to this section. I thought I'd ask it now. 24

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1 And I'm going to phrase it slightly differently from the way it was filed, it's number 30, just because in 2 this context I think it comes out a little 3 4 differently. 5 The requirement that you get an ordinance for 6 people within 2500 feet of your source of your 7 release, does that apply at all directions, in other 8 words, including upgradient of the release? 9 MR. KING: I thought you asked that last 10 time. The answer is yes. 11 MR. REOTT: Okay. What's the basis for 12 making you get an ordinance or worry about the impact 13 to groundwater systems that are upgradient the 14 release? 15 MR. SHERRILL: You're making the assumption 16 that upgradient, downgradient are fixed physical 17 constraints. And it's been our experience, you know, 18 when you have pumping wells and so forth, depending 19 upon where your site is, or depending upon if you're near a river, that groundwater flow can change 20 direction. 21 22 There are seasonal fluctuation changes, changes in 23 river levels, so forth. 24 MR. REOTT: If there was a site where those

1 physical characteristics weren't present -- would the Agency be willing to consider -- I guess this would 2 3 occur in Tier 3, excluding the groundwater pathway 4 where the ordinances that were available and that were 5 used to exclude that pathway were only the 6 downgradient 2500 feet communities? 7 MR. KING: I think that as I recall that also 8 applied to Tier 2. I mean the Tier 2 groundwater 9 equation allows for that type of approach. 10 HEARING OFFICER DESHARNAIS: Mr. Rieser? 11 MR. RIESER: The issue of the 2500 foot only 12 applies in the context of Subpart C, is that correct? 13 MR. KING: That's right. 14 MR. RIESER: So that's really sort of the --15 sort of the instant pathway exclusion provision? 16 MR. KING: Right, that's correct. 17 HEARING OFFICER DESHARNAIS: Mr. Reott, did 18 you have any additional questions? 19 MR. REOTT: I think the others were covered. 20 HEARING OFFICER DESHARNAIS: Mr. Watson, did 21 you wish to ask a question on this section? 22 MR. WATSON: No. HEARING OFFICER DESHARNAIS: Then move on to 23 24 742 Appendix D which we have questions filed by the

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1 Site Remediation Advisory Committee.

2	MR. RIESER: With respect to page one,
3	paragraph two, is there language missing in this first
4	sentence?
5	MR. KING: We looked at this and we didn't
б	see that there was language missing.
7	MR. SHERRILL: You're referring to Section
8	742 Appendix D, procedures for determination of Class
9	II groundwater?
10	MR. RIESER: That's correct. With respect to
11	page two, paragraph two, what is the basis for the
12	requirement that all potable wells located within one
13	mile of the site be identified if the maximum setback
14	zone for potable well is 2500 feet?
15	MR. KING: I think we changed that on errata
16	sheet one to change that from one mile to 2500 feet.
17	MR. RIESER: The appendix on referring
18	specifically to page three, this appendix discusses
19	the possibility of a perched zone. Will the Agency
20	consider a perched zone differently than a saturated
21	unit and not as a Class I groundwater?
22	MR. SHERRILL: Regarding perched groundwater,
23	the Agency can consider a perched zone differently
24	than a Class I groundwater unit. This determination

1 depends upon many site-specific and program-specific factors, including the size of the perched zone, its 2 3 communication with other groundwater units, the amount 4 and concentration of contamination, sources and 5 availability of potable water supply wells, local 6 geology, whether the perched zone is covered or not, 7 the source of the contamination. 8 MR. RIESER: Why would the amount or source 9 of the contamination be a factor in a determination 10 whether something was a perched zone as opposed to a 11 Class I aquifer? 12 MR. SHERRILL: If you had a -- the size of 13 your -- and concentrations of your contaminants, it's 14 been the -- because that would factor into the 15 communication with the other groundwater units, 16 because it's been our experience that a lot of perched 17 zones are in communication with other groundwater 18 units. And when you have very highly contaminated 19 perched zones, those can communicate with other 20 groundwater units. 21 MR. RIESER: How are you defining perched 22 zone when you use it in this appendix? 23 MR. LISS: Basically standard textbook for 24 hydrogeology. It's a zone of saturation that really

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1 we don't consider an aquifer. It sits -- say you want to call it a lens of water having some aerial extent 2 3 above a more impermeable geologic formation. 4 MR. RIESER: And it usually is perched 5 because it doesn't have any communication with other 6 water bearing units, isn't that correct? 7 MR. LISS: That's the concept in 8 understanding perched zone, but in Illinois in the 9 glacial environment these things could be localized 10 across a site, several perched zones across a site, 11 not aerially extensive across an entire site. So it 12 would have vertical communication. 13 I guess if you want to consider it, they would 14 spill over eventually. There's this lens of water on 15 this impermeable geologic material, and as 16 infiltration recharges this eventually it would 17 migrate, you know, laterally and then go vertically 18 downward. 19 MR. RIESER: Migrate laterally until it found 20 an area of lesser or greater permeability and it would 21 infiltrate downwards is what you're saying? 22 MR. LISS: Right, to migrate downwards. 23 MR. RIESER: Is it accurate to state that a 24 person only needs to consult the Illinois State Water

1 Service or the Agency's Division of Public Water Supplies regarding the existence of potable water 2 3 supply wells and that one does not have to consult 4 other sources? MR. SHERRILL: To check for the existence of 5 6 potable water supply wells, local, state and federal 7 record, governmental records as appropriate should be 8 consulted. In addition to a visual inspection of the

9 area, I think we have within 200 feet of the area of 10 concern.

MR. RIESER: But don't you specify the use of the Illinois State Water Service and the Division of Public Water Supplies in this document?

14 MR. SHERRILL: In Appendix D, yes, the 15 Illinois State Water Survey and/or the Division of 16 Public Water Supply or the Agency should be contacted 17 as I'm reading out of it, as well as other appropriate 18 state and federal entities to obtain this information. 19 And then we also have on there also a visual inspection of the area within 200 feet of the units of 20 21 concern should be conducted when possible. 22 MR. RIESER: What other state and federal 23 agencies would have to be consulted?

24 MR. SHERRILL: Well, I know a lot of times --

1 I mean USEPA's done a lot of work and they have a lot of good information on investigation of sites and 2 3 investigation of where potable wells are in use and so 4 forth. 5 MR. RIESER: So for any Class II 6 determination you'd have to consult the USEPA? 7 MR. SHERRILL: No, the -- what we're getting 8 at is just when it's applicable. 9 MR. RIESER: And when is it applicable? 10 MR. LISS: I can provide you with a pretty 11 relevant example. This is in the East St. Louis area. 12 We looked for the usual sources, water survey, wells 13 that were dug in an area, found the ones on record. 14 There's a city water supply that was -- that was 15 supplied to the residents, and this is a creosoting 16 type operation, PNA's that were multiple across the 17 site. We were attempting to do the cleanup. The city 18 didn't have any real good records except who paid for 19 water and who did not. 20 And the company thought it was their 21 responsibility to diligently look for anyone that 22 might be using that water, illegally or not, you know, 23 whether there was an ordinance in the city that said 24 that you have to hook up to the city's water. This

1 example that we looked at the map of the city, they 2 plotted out those individuals who were paying for 3 water, and then went around the area to houses that 4 looked like they contained people, even though they 5 weren't paying for water.

6 We turned up I know about seven people that were 7 using a private well that that's the only record, 8 there were no records, that was the only way we could 9 find them.

10 MR. RIESER: Thank you. I guess I'm trying 11 to get to the question of when other governmental 12 sources need to be consulted and what those sources 13 are.

MS. McFAWN: Well, wasn't that an example of when they contacted the city, another governmental entity?

17 MR. RIESER: That was one example where the 18 Agency was doing the investigation. This is basically 19 putting into regulatory form some guidance on making a Class II determination which is in addition to the 20 21 Board's, in a way in addition to the Board's Part 620 22 regulations. This is I think different answers about 23 what governmental entities you have to speak with to 24 verify that you've done a thorough enough

investigation to document a water well. And I just - additional existence of water wells.

3 So I'm trying to find out what the extent of that
4 investigation has to be with respect to contacting
5 other governmental agencies.

6 MR. SHERRILL: I guess it's a professional 7 opinion, but, you know, I mean when you're checking 8 for potential potable water supply uses, you want to 9 really be thorough in making sure, as Ken Liss has 10 said, you want to make sure nobody's drinking the 11 water there if you're planning on investigating the 12 groundwater of that area. I mean so if you thought 13 you needed to contact USEPA, you know, I would do 14 that.

MS. ROBINSON: Would it be clearer, Mr. Rieser, if we changed the wording around a little bit so that it read as well as other state and federal entities where appropriate, rather than other than appropriate state and federal agencies?

20 MR. RIESER: I just don't know when it's 21 appropriate.

22 MR. KING: The other option is we just go --23 we can go through them and list about three or four 24 other potential agencies that would have to be

contacted in every situation. I mean we can do that.
 I'm not sure that we want to do that. It's a little
 over --

4 MR. RIESER: I guess my point is if there are 5 other agencies, and I'm aware of instances where it's 6 required that other agencies be contacted other than 7 those two that have been specified here, if it's the 8 Agency's practice to require those to be contacted all 9 the time, it strikes me that that should be in the 10 regulation.

11 If these are the only two agencies that have to be 12 contacted all the time, then you would -- and you 13 would only have to contact other agencies in certain 14 situations, then that should be specified, and there 15 should be some idea of what those situations are in 16 which those other agencies ought to be contacted.

17 I think when you're requiring people to do certain 18 things you have to give them some idea of when you do 19 those things, or if you're always going to require 20 that the people contact other agencies besides those 21 two, that should be documented.

If not, if those are the only two except in special circumstances, and we can talk about what those special circumstances are, then that's what you

1 say.

2 MS. ROBINSON: I think we'll take another 3 look at that language and see if we can't tighten it 4 up a little bit, at least clarify when we think it 5 would be appropriate for them to look at these other 6 agencies. 7 MR. RIESER: Right, thanks. 8 MS. ROBINSON: All right. 9 MR. RIESER: Paragraphs (B) and (c), this is 10 again on page three, discuss providing documentation 11 as to formations beneath the site. How deeply does a 12 person need to go to identify the formations beneath 13 the site? 14 MR. SHERRILL: Documenting the formation and 15 depth at which to identify beneath the site can be 16 programmed is site-specific issues. Consideration is 17 given to local and regional geological information 18 that could be obtained let's say from public records 19 and ISGS documentation, state geological survey. The concentration of contaminants, toxicity of the 20 21 contaminants, the amount of contaminants, the 22 estimated migratory pathways, whether any free phase 23 product or contaminants is present, whether the soil 24 attenuation capacity is exceeded, whether the soil

1 saturation is exceeded, whether remaining contamination will be disturbed by natural forces, 2 3 highly permeable units, getting back to whether the 4 release points of the contamination could be 5 identified, and the availability of public water 6 supplies. 7 MR. RIESER: So those are all the factors 8 that go into the depth of the formation that you need 9 to examine, is that correct? MR. SHERRILL: I don't know if I would 10 11 consider that all inclusive. 12 MR. RIESER: Okay. But use of geologic maps 13 such as the IGS stratigraphy map for example would be 14 acceptable? 15 MR. SHERRILL: We commonly reference those, 16 yes. 17 MR. RIESER: Thank you. 18 HEARING OFFICER DESHARNAIS: Any additional 19 follow-up questions on that? 20 MR. LISS: It wouldn't be appropriate for all 21 programs. I mean say you're going to apply that to 22 the RCRA program, I don't think we accept just the 23 fact that you referenced a map. Because our programs 24 require that a certain amount of work, you know, CAPITOL REPORTING SERVICE, INC. SPRINGFIELD, ILLINOIS 217-525-6167

1 physical work be done on-site.

2 MR. RIESER: By virtue of the RCRA 3 regulations? 4 MR. LISS: Yes. 5 MR. RIESER: Okay, thank you. 6 HEARING OFFICER DESHARNAIS: Any additional 7 follow-up on Appendix D? 8 MR. REOTT: I had a prefiled question on 9 Appendix D. 10 HEARING OFFICER DESHARNAIS: Mr. Reott. 11 MR. REOTT: This has to do with what I'll 12 call straddling units, units that straddle the ten 13 foot line in 620. 14 MS. ROBINSON: The question number? 15 MR. REOTT: It's question number 42. I'll 16 just give you a couple examples here. You know, there 17 is a straddling unit that straddles the ten foot line 18 in 620, in Part 620 the Board left --MS. McFAWN: Mr. Reott, you need to explain 19 that for the record. 20 MR. REOTT: Okay. In Part 620 the Board 21 22 determined that water systems, aquifers that were 23 within the top ten feet were by definition not Class I systems. And there's a lot of testimony about that in 24

the 620 regulation as to why that occurred, having to do with surfacial impact to them, that even if they met all the hydraulic definitions they were simply not going to be treated as Class I.

5 MS. McFAWN: Could I interrupt? You seem to 6 be paraphrasing your question that you presubmitted at 7 number 42. Could you just read that into the record? 8 MR. REOTT: Well, we could just read that 9 into the record, yes. In Part 620 the Board 10 established that groundwater within ten feet of the 11 surface cannot be Class I groundwater. In Section 12 742. Appendix D, the Agency proposes that the Board adopt the Agency's internal interpretation of Part 620 13 14 for how to classify groundwater systems that straddle 15 the upper ten foot prohibition on Class I groundwater. 16 In other words, you know, a groundwater system 17 that's partially above, partially below the ten foot 18 line.

Why should such a straddling unit be treated generally as Class I rather than Class II when the original Part 620 regulations prohibit a Class I designation based on 1, the likelihood of surface impacts for groundwater systems shallower than ten feet, and 2, the inappropriateness of using such

1 shallow water for Class I drinking water purposes.

2	MR. SHERRILL: If I could read in 742
3	Appendix D, I'm starting at the third line, and then
4	I'm going to jump to number two, because I think we
5	provide clarification in Appendix D.
6	Groundwater is classified in 35 Illinois
7	Administrative Code 620 as a Class II general resource
8	groundwater when it, and then I'm going to jump to
9	number 2 here, has been found by the Board to be a
10	Class II groundwater, pursuant to the petition
11	procedure set forth in 35 Illinois Administrative Code
12	620.260, if a continuous zone containing groundwater
13	begins within ten feet of the ground surface and
14	extends greater than ten feet below the ground surface
15	it will not be considered a Class II groundwater if an
16	additional criterion is met under 35 Illinois
17	Administrative Code 620.210, in this case it would be
18	considered Class I groundwater.
19	Although, and this is the point I'm emphasizing,
20	it may be possible, it is unrealistic to try to
21	designate two distinct classes of groundwater within
22	the same saturated hydrogeological unit.
23	But, if the person conducting the remediation can
24	demonstrate that by cleaning the groundwater within

1 ten feet of the surface to Class II specifications will not degrade the groundwater greater than ten feet 2 3 below the ground surface above Class I standards, the 4 Agency may approve both Class I and II standards in 5 accordance with the location of the groundwater. 6 MR. REOTT: Let me go back to my question, 7 John, because I'm not sure that answered it. What I 8 think what I understand you right is what you're 9 saying is for the portion of the groundwater system that's above the ten foot line, if someone makes that 10 11 demonstration, you're willing to say that that's Class 12 II and that the portion below the line is Class I, 13 right? 14 MR. SHERRILL: Correct. 15 MR. REOTT: Now, the other alternative here would be to classify a straddling unit either always 16 17 Class I or as Class II. I mean you could make it 18 another -- you could essentially agree with you that 19 it's unrealistic to try to designate two different classes for a straddling unit, and I don't think 20 21 anyone would dispute that. 22 Why did the Agency choose this pathway, which

23 tries to give different designations to different
24 portions of the same unit of groundwater, rather than

1 just accept the single classification of it being Class II? That's -- I'm trying to redo my question to 2 3 _ _ 4 MR. KING: What's the depth of the bottom of the Class I, the bottom of that? 5 6 MR. REOTT: This here? 7 MR. KING: Yes, how deep is that? 8 MR. REOTT: It could be anything, 9 theoretically, Gary. It could be an inch, it could be two feet, it could be 50 feet. 10 11 MR. KING: What's at 50 feet? 12 MR. REOTT: It could be 50 feet. 13 MR. KING: What's at 200 feet? 14 MR. REOTT: It could be anything, it's a 15 site-specific question. But the Board has said 16 specifically that this part can't be Class I, and then 17 since I think everybody would agree that it's 18 unrealistic to really try to treat it as two separate 19 units, the question is what label do you put on it. And what I'm trying to get at, John, is why you 20 21 choose to do it this way where you have two different 22 labels potentially for the same unit, rather than just 23 picking a label and having the Board make that 24 decision now?

1 MR. SHERRILL: Are you saying why in your example there the area of above the ten foot, why we 2 3 would consider that Class I? Is that what you're 4 asking? 5 MR. REOTT: No, your Appendix D reference 6 that you just read creates the possibility that you'll 7 have two different classes in the same groundwater 8 unit, even though you agree that's unrealistic. And I think everybody else would agree that's unrealistic. 9 10 It's really one body of water. 11 The other alternative choice for the Agency in the 12 rule making was to give this unit, a straddling unit, 13 one designation, either Class I or Class II, but only 14 one designation. 15 MR. LISS: It might help if you -- to understand how this occurred first of all. That the 16 17 -- when the rule was written there was a concern that 18 this being an agricultural state that there might be 19 certain things subject from surface infiltration say 20 due to crops, pesticides, et cetera. 21 MR. REOTT: When you say the rule, you mean 22 the 620 rules? 23 MR. LISS: The 620 rules and that's how this 24 ten foot line came here. The only other time it comes

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1 into effect in this manner here is the Class II would be considered ten feet below the bottom of a fill. 2 3 That's something else in 620. 4 So yes, and there is no guidance really in the 5 rule itself as to how to do that. 6 When you look at cleaning up a contamination, if 7 there is a -- this Class I down there, beneath your 8 Class II or this portion of the unit that is now 9 greater than ten feet below the surface, what if that 10 is potable? 11 MR. REOTT: This portion? 12 MR. LISS: Right, it is potable, it's Class 13 I. Now what if there's sufficient volume there to use it? I think it's best to take a look at the 14 15 protection of that groundwater, and that's how we've 16 interpreted 620, and that's how that Appendix D, 17 that's why it was written that way. 18 There's instances I think through these new rules 19 here that we're discussing that you could make a 20 demonstration probably that the Class I is Class I, 21 but it's not going to be used maybe because there's 22 only four feet of Class I, ten feet of Class II. 23 And a different -- that might be done through a 24 different tier, but you might apply the Class II to

1 the Class I instead of. Do you understand what I'm 2 saying? I think that's -- if you go into a different 3 tier, I would say that would be something we could 4 probably accept.

5 MR. REOTT: Let me follow up with a reference 6 to what Gary said before. In other words, what you're 7 saying is that in the lower tiers if the -- let's say 8 if there's, you know, eight feet above the ten foot 9 line and only one foot below, that might be a reason 10 that you would classify it as Class II, you know, 11 lower tier, if it's eight feet above ten foot and 50 12 feet below, you know, that's a reason you might tend 13 to classify it as Class I, is that what you're saying, 14 Ken?

MR. LISS: The protection of that 50 feet of Class I. And until these rules here, these 742 rules came along, it's been difficult to figure out a way to do that I'll admit.

MR. O'BRIEN: To clarify things, the reason that ten foot, that ten was chosen, because the Department of Public Health's Water Well Code requires a sanitary seal ten foot below the surface, so you can't have a screened interval above that ten feet and install a new legal well.

1	MR. RAO: I have a follow-up question. So
2	are you saying that, you know, if the depth of the
3	hydrogeologic unit below ten feet is, you know,
4	relatively less, then it would be considered Class II?
5	Because Appendix D doesn't seem to say that.
б	MR. SHERRILL: We're not by the 742 rules
7	we're not proposing in the 620 rules are the
8	classifications of groundwater with I and II being the
9	ones we primarily deal with most often. And through
10	the 742 rules we are not proposing on new definitions
11	for classification of groundwater.
12	MR. RAO: So what you have proposed under
13	Appendix D is consistent with the 620 rules?
14	MR. SHERRILL: We believe so. And whereas
15	620 identifies the four classes of groundwater, 742 is
16	addressing how do we, quote, clean up, remediate
17	groundwater, what kind of objectives we're trying to
18	achieve.
19	MR. RAO: Okay, under 742 Appendix D, number
20	2, you talk about a scenario where you say which may
21	be highly unrealistic but could happen, where a person
22	conducting remediation can demonstrate the groundwater
23	above ten feet with Class II specifications can show
24	that it will meet the Class I standards below ten

1 feet.

2 MR. SHERRILL: Correct. 3 MR. RAO: Okay, if we found this to be, you 4 know, really unrealistic, what would be the classification for such a hydrogeologic unit? 5 6 MR. SHERRILL: What the -- from a practical 7 or technical viewpoint here, when you screen 8 groundwater and you're collecting groundwater samples, 9 and we're kind of cutting hairs here in the sense of 10 saying are you collecting a groundwater sample at 11 exactly nine feet eleven inches versus ten feet one 12 inches, in a practical viewpoint most screens that we 13 deal with are ten feet screens, and in our groundwater 14 collection monitoring wells, and it becomes an 15 engineered difficulty to try and really cut hairs in 16 saying water is above ten feet and water is below ten 17 feet, and they're not in communication with each 18 other. 19 MR. RAO: So what would be the classification of such unit? 20 21 MR. SHERRILL: Of which units? 22 MR. RAO: Would it be Class I as you say in 23 Appendix D? 24 MR. SHERRILL: The classification would be as

1 what 620 is, as what 620 would dictate.

2	MR. RAO: So as Mr. Reott was saying, if you
3	assign a single designation to the example he has put
4	up on the
5	MR. SHERRILL: In the example that I see over
6	here on the flip chart for practical it would
7	probably be argued that when you were collecting a
8	groundwater sample from this type of scenario, your
9	sample is actually being collected from the unit above
10	and below the this ten foot interval, therefore
11	you're looking at Class I groundwater. You would have
12	to do some kind of feat to be able to collect a sample
13	and prove or demonstrate that it was only being
14	collected and only being impacted above that ten foot
15	area.
16	MR. RAO: Thank you.
17	MS. McFAWN: Just for the record, the diagram
18	that Mr. Reott put up for us, it shows a ten foot line
19	and Class II above the ten foot line with eight foot
20	indication, below the ten foot line is a Class I
21	designation with a 50 foot increment.
22	HEARING OFFICER DESHARNAIS: Mr. Reott, did
23	you have some follow-up?
24	MR. REOTT: Yeah, just a follow-up, John.

Suppose your well screen is actually much smaller, you
 know, a foot, and your well is screened well above a
 ten foot line, you know, it's screened only six foot
 below the surface and it's only a one foot screen, and
 so you're pulling your water from the water that the
 Board in Part 620 has said is Class II water.

7 Should you look at the Class II standards then for 8 determining whether your groundwater meets cleanup 9 objectives, because that's where the well is screened? 10 MR. LISS: I think that's a program-specific 11 call on the site classification. If it's appropriate 12 to limit your screens to say this Class II zone in the upper portion, then that would be borne out in your 13 14 site classification, because you would have 15 demonstrated that there is no contamination I would 16 assume in that lower part of the aquifer which would 17 be called Class I.

I mean that's the way we handle it right now. When we get to this invisible line we look at it that way. If there's no contamination down at -- in the Class I based on your illustration, during the site classification then we might concentrate our efforts and the rest of the investigation on the Class II part of the groundwater. And then you would try to achieve

1 Class II objectives.

2	MR. SHERRILL: I do have I'm familiar with
3	a site in Chicago that I'm reviewing that the
4	hydraulic conductivity of the upper ten feet would
5	tend to make it Class I. It's like ten to the minus
б	three or ten to the minus four hydraulic conductivity,
7	and there is a clay layer starting at exactly within
8	an inch of ten feet. And it's like the perfect
9	scenario, and so that class has Class II groundwater.
10	Because the permeable water is all within the upper
11	ten feet. That's just a that just happens to be
12	specific to that site.
13	MS. McFAWN: Is that why there's this caveat
14	in paragraph 2 of Appendix D?
15	MR. SHERRILL: The caveat in number two is
16	because there's many, many places in Illinois where
17	the I'll think of like Henry County, Moline area,
18	many areas up in our agricultural belts up in
19	northwest Illinois where the groundwater starts three,
20	four, five feet below the surface, but it continues on
21	down to 40 or 50 feet below the ground surface, and we
22	have this and people are actively using that for
23	their water supply, their drinking water supply.
24	And so this zone of their water that they're

drawing from is from four feet below the surface to 50
 feet below the surface. And their spills, releases
 and so forth can occur on the surface.

4 MR. REOTT: John, as a follow-up, if the 5 Board wanted to have a more predictable system 6 for classifying a straddling unit where the regulated 7 community knew always how the Agency was going to 8 react to the situation, you could theoretically base 9 that kind of system, a more predictable system just on 10 the ratio of the portion of the unit that's below the 11 ten foot line to the portion of the unit that's above 12 the ten foot to the line. In other words, if you had 13 eight feet above and one foot below, eight-ninths of 14 it is above, therefore you shifted into the Class II 15 category. If it's eight feet above and 50 feet below like the diagram on the chart, then the majority of 16 it's in the Class I, and then you shifted into Class 17 18 I.

19 What would the Agency think about that sort of 20 system? Just so that you'd have more predictability 21 for people trying to figure out what classification 22 they're in.

23 MR. SHERRILL: I think we want to live with24 620 the way it is, on classification of groundwater.

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1	MR. LISS: I mean if somebody were to make a
2	proposal and open a docket for 620, my personal
3	opinion and professional opinion would be to get rid
4	of the ten foot zone then and call it all Class I if
5	it's straddling Class I and Class II. Because I think
6	we've we're trying to approach it based on this
7	risk where assessment procedures where the 620 rule
8	says ten feet down and you have Class I below it, and
9	then looking at the risk assessment, and in 742, if
10	you can demonstrate that some other standard could be
11	applied to that Class I groundwater, and it fits into
12	these tiers, it's acceptable. I think right now
13	that's the best way we could do this.
14	Let me clarify for the record, too, that I'm not
15	suggesting we open 620.
16	MR. REOTT: Well, no.
17	MR. LISS: I was trying to explain to you
18	that we found a way to work through this and are
19	comfortable with it right here.
20	MR. REOTT: Wouldn't this effectively amend
21	620 by doing it, by putting this Appendix D here with
22	this language?
23	MR. LISS: I don't think so.
24	MR. SHERRILL: No, I don't think so.

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1 MS. McFAWN: Is that because of the statutory exception? I mean why wouldn't you think so? I kind 2 3 of understand where Mr. Reott's coming from, and I'm 4 wondering if the Agency -- I've heard two of you say 5 no, and I'm wondering if that's because of the 6 statutory exception which allows 620 to be bypassed by 7 this. 8 MS. ROBINSON: Is that question for Mr. 9 Reott? MR. REOTT: I'll answer it, I think this 10 11 amends 620. 12 MS. McFAWN: I know you do by your question. 13 I'm wondering what the Agency thinks. 14 MR. SHERRILL: Our question, you know, 15 Appendix D is really just procedures for determination 16 of Class II groundwater. I really don't follow your 17 question. 18 MR. RAO: I think what Miss McFawn was 19 talking about was the statute allows the adoption of groundwater objectives which may be higher than 620 20 numerical standards. 21 MR. SHERRILL: The Appendix D was not put --22 23 MR. REOTT: I know. MR. SHERRILL: -- does not talk about that. 24

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1 MR. RAO: I know. So Appendix D is the Agency's interpretation of what, you know, how to 2 3 classify groundwater as Class II. There may be other 4 interpretations. Right? 5 MR. SHERRILL: Correct. 6 MR. RIESER: Are there other interpretations 7 which the Agency would accept other than what's in 8 Appendix D? 9 MR. SHERRILL: I guess I'd go back to, you 10 know, we look at 620. 11 MR. KING: I'm getting awfully confused by 12 all of this. I mean we had a very simple purpose in 13 putting Appendix D in here. The 742 discusses the 14 fact that you establish remediation objectives based 15 on whether it's a Class I or a Class II groundwater. 16 This was intended to provide a procedure for making 17 that determination, that distinction, and that's what it's there for, it's not --18 MR. REOTT: But Gary, doesn't Appendix D, 19 number 2 here, create a presumption that a straddling 20 unit is Class I? I mean it's not just procedural. 21 22 MR. KING: Well, tell me, does 620 answer 23 that question? 24 MR. REOTT: No, I don't think 620 answers

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1 that question. But I just want to make sure the Board understands that question, that it's being asked, a 2 3 really important question, that's really a 620 4 question that was not resolved in 620. 5 MR. KING: It's a 742 question because the 6 issue comes up under 742 and will come up under 742. 7 So we wanted to try to answer that question in this 8 proceeding. I don't want to go back and reopen 620 to 9 answer it there. We want to try to answer questions 10 related to how you determine remediation objectives in 11 the context of this proceeding. And if there isn't --12 you're right, there is a question about how do you 13 handle a straddling unit. We felt that the more 14 environmentally protective way to do that was to do it 15 the way we're doing it here. 16 HEARING OFFICER DESHARNAIS: Why don't we go 17 ahead and take a ten minute break and we can answer 18 any additional follow-up on this when we get back. 19 (A recess was taken.) 20 HEARING OFFICER DESHARNAIS: Let's go back on the record, please. We've been addressing questions 21 22 concerning 742 Appendix D. Does the Agency have 23 anything further on that section at this time? 24 MS. ROBINSON: No, we do not.

1 HEARING OFFICER DESHARNAIS: Are there any additional follow-up questions on that section at this 2 3 time? 4 (No response.) 5 HEARING OFFICER DESHARNAIS: Okay, that 6 brings us to the --7 MS. McFAWN: Before we move on then can I ask 8 will the committee be testifying about this at all or 9 will there be any further testimony from the Agency or 10 the committee, any further consideration of our 11 discussion about Appendix D? MR. RIESER: With respect to the committee, 12 13 there may be on this issue. That is something the 14 committee has to discuss. Harry Walton was involved 15 in the 620 proceedings significantly with all our 16 clients, so it may be something we'll look at. 17 MS. McFAWN: Is there any chance that 18 Appendix D and especially this language originated 19 with the committee, or is this from the Agency? 20 MR. KING: It's from the Agency. 21 HEARING OFFICER DESHARNAIS: Would the Agency 22 be intending to address this further? 23 MR. KING: I don't know. I was trying to 24 summarize our position as clearly as I could. If that

was understood, then I don't think we have anything
else really to add.

MS. ROBINSON: We may address the issue 3 4 further in public comments, but at this point I think 5 the Agency needs to reconvene on its own and just make 6 sure that we're clear. 7 HEARING OFFICER DESHARNAIS: Okay, thank you. 8 Mr. Reott, you had indicated that you had two 9 additional questions remaining on --10 MR. REOTT: Yeah, I had the only questions on 11 engineered barriers, Part 1100. There are questions 12 32 and 33. 13 HEARING OFFICER DESHARNAIS: Would you please 14 begin by reading the questions into the record, 15 please. 16 MR. REOTT: How will the Agency, number 32, 17 how will the Agency make certain that engineered 18 barriers such as paving remain intact and in place in 19 the future? 20 MR. KING: I think that's one of the

functions of an institutional control. That's why we've always coupled the notion of an engineered barrier with an institutional control. That's primarily going to be the responsibility of owners,

1 successive owners to make sure that that engineered

2 barrier remains in place.

I anticipate at some point we'll end up doing some
spot checking of these sites to see if things are
being maintained.

6 MS. McFAWN: What will you do if you find out 7 they're not being maintained?

8 MR. KING: Well, the rules provide a process 9 for voidance which would begin with a notification to 10 the owner that would identify our findings that a 11 barrier was not being maintained, and then it would be 12 given an opportunity to correct that. If they didn't 13 then the letter could be -- the NFR letter could be 14 voided.

15 HEARING OFFICER DESHARNAIS: Miss Rosen? MS. ROSEN: How would that work in the 16 context where you don't have a No Further Remediation 17 18 Letter that's acting as your institutional control? 19 MR. KING: You still where you have a -- for instance where you have a deed restriction, you still 20 have an NFR determination which would be voidable. 21 22 MR. FEINEN: My question was along those 23 lines. When you say voidance procedures, are you 24 talking about the voidance procedures in 742 if there

1 are any, or 732 like we talked -- well, the hearing

that was held yesterday, or 740? 2 3 MR. KING: I believe they're all pretty 4 similar. We tried to keep them as consistent as 5 possible. As I was saying, I think we have to look at 6 the individual rules that are governing that. They 7 were intended to be consistent. 8 MS. ROBINSON: Could I ask a clarifying 9 question here? Gary, if we're looking at procedures 10 to void an NFR letter, say it's a LUST site, would we 11 then look to 732 for those procedures? 12 MR. KING: That's correct. 13 MS. ROBINSON: And likewise, if it were a 14 site remediation site, would we then look to the Part 15 740 procedures for voiding an NFR letter if that were 16 the issue? 17 MR. KING: That's correct. 18 HEARING OFFICER DESHARNAIS: Mr. Reott? 19 MR. REOTT: As a practical matter does the 20 Agency view any standards as to whether pavement's 21 being maintained, quote, unquote, how will someone 22 know whether they're doing what the Agency thinks they 23 ought to be doing? 24 MR. KING: Well, there will be a condition

1 relative to an engineered barrier, that's one of the conditions of the NFR determination. So I suppose if 2 3 somebody wants a specific set of maintenance criteria 4 in there, I suppose they could propose those. 5 MR. REOTT: Okay. 6 MS. ROBINSON: Is it possible that if they're 7 using a cement block, like a paved parking lot or 8 something as an engineered barrier, that it might be 9 in the NFR letter that they maintain that so that 10 there's not significant cracks where something could 11 migrate? Would that be a possible example? 12 MR. KING: Yes, I think so. 13 MR. REOTT: Number 33, if caps are recognized 14 engineered barriers for the migration to groundwater 15 pathway, and there's a cite here to the portion of 16 this subpart that recognizes that, 742.1105(c)(1)(A), 17 should 742.305 and 742.320 be amended to allow the use 18 of engineered barriers to exclude the migration to 19 groundwater pathway, you know, through a cap? 20 MR. KING: No, I don't think so. That's not the way 320 is functioning. Really what 320 is 21 22 assuming is that you really have contamination in the 23 groundwater already, and in that context a barrier 24 isn't doing any good. I mean you're not looking at

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the migration of groundwater pathway under 320, you're looking at the actual groundwater itself. So it's a little bit -- you're comparing apples and oranges to do that.

5 MR. REOTT: Well, let me just follow-up, 6 Gary. You know, there are various requirements in 7 Part 742.320 for excluding the ingestion of groundwater pathway, 742.1105 the Agency recognizes 8 9 that a cap is a recognized and acceptable engineered 10 barrier for the groundwater ingestion route, and -- I 11 guess what I'm looking at is it sort of seems 12 inconsistent to recognize that a cap is an engineered 13 barrier back in Section 1100, but not in the Subpart C 14 determination for pathway exclusion. 15 MR. KING: Well, I don't -- they're different, because if you look at 1105(c), we've 16 17 described the ones that are applicable for the 18 migration to groundwater portion of the groundwater 19 ingestion route, and then we've got other engineered barriers, this is under (c)(4), which talk about the 20 21 actual ingestion of groundwater exposure routes. 22 So we have really followed the logic of that 23 there's two portions to the overall groundwater 24 ingestion exposure route. There's the migration of

1 contaminants through the soil to the groundwater, and then movement of the groundwater -- contaminants in 2 3 the groundwater to the exposure point. 4 And I think what you're suggesting be done, you 5 can't do it, because as I said, like I said before, 6 you're mixing apples and oranges. Because 320 is not 7 looking at the migration to groundwater. 8 MR. REOTT: It's looking at both parts of the 9 groundwater ingestion route? 10 MR. KING: No, it's just looking at the 11 latter, it's only looking at the portion dealing with 12 how the contamination moves in the groundwater. 13 MR. SHERRILL: We have said under testimony 14 that under this 742.320 that when you exclude the 15 groundwater ingestion exposure route, you're excluding 16 both. But what we're doing in 1105 is we're breaking 17 down those two components as far as under engineered 18 barriers. 19 MR. REOTT: To make the two portions consistent then, wouldn't it be appropriate 20 21 to amend 320 to say that with regard to that one 22 portion of the groundwater ingestion route, a cap is a 23 recognized means of controlling that exposure route? 24 MR. KING: You know, when we were first --

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1 when we were first discussing -- began discussing this issue with the advisory committee back in the spring 2 3 of this year, we had internally put together something 4 that would have dealt with this migration to 5 groundwater exposure part, but it was really a long --6 I mean it was -- you know, it would be another whole 7 section of material that you'd have to deal with. 8 I mean it would be its own kind of complicated 9 thing. And that was as we talked to the advisory 10 committee, I mean their preference was to go with the 11 procedure that's outlined in 320 as opposed to the 12 migration of groundwater aspect. 13 MR. REOTT: So other than that was their 14 preference, is there any reason you can think of that 15 you couldn't amend 320 to provide that a cap does 16 exclude that pathway, that portion of the groundwater 17 pathway? 18 MR. SHERRILL: An attempt was made to address 19 how you could exclude the migration to groundwater route. There is a literature review and so forth, and 20 21 there was not a consensus on how that particular -- if 22 you wanted to just look at only that particular route, 23 in a rule format with equations and so forth, how you 24 could exclude that route, and so what we envision is

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1 that most people if they're going to try to -- if

2	they're going to just try to exclude this migration to
3	groundwater route, just that portion of it, that
4	they're going to do it under 742.925.
5	MR. REOTT: In Tier 3 then.
6	MR. SHERRILL: Correct.
7	HEARING OFFICER DESHARNAIS: Follow-up
8	questions.
9	MR. NICKELL: In line with that then it would
10	seem that it would be the Agency's position then that
11	a cap by itself would not be sufficient to exclude the
12	pathway of migration to groundwater, which is what you
13	would be asking to be done by amending Subpart C to
14	include caps as a way to exclude migration to
15	groundwater pathway.
16	MR. SHERRILL: If I can you know, just a
17	cap in itself would not exclude the migration to
18	groundwater route.
19	HEARING OFFICER DESHARNAIS: Excuse me, could
20	you identify yourself for the record?
21	MR. NICKELL: Chris Nickell, I'm with the
22	IEPA Bureau of Land.
23	HEARING OFFICER DESHARNAIS: Thank you. Any
24	additional follow-up questions?
<u> </u>	addressing for the deperture.

1	(No response.)
2	HEARING OFFICER DESHARNAIS: Moving on, then
3	that finishes up the original prefiled questions. We
4	do have a set of additional prefiled questions that
5	were filed.
6	MR. RIESER: Now that it's late in the
7	afternoon I ask my heavy technical questions here to
8	keep everybody awake, but I'll try to get through
9	these as quickly as I can. These are some questions
10	filed on behalf of the Illinois Petroleum Council in
11	particular.
12	In Tier 2 is it correct that chemical specific
13	default degradation rates, as listed in Appendix C,
14	Table E, can be used in Equation R26?
15	MR. HORNSHAW: Yes.
16	MR. RIESER: In Tier 2 is it correct as
17	stated in Section 742.810(a)(1)(H) that the first
18	order degradation constant to be used in Equation R26
19	can be obtained either from Appendix C, Table E, or
20	from "measured groundwater data"?
21	MR. KING: You know, it says that, and after
22	we saw that we realized we shouldn't say it that way.
23	That phrase shouldn't be there at all. That really
24	should be a Tier 3 issue.

So I mean we're planning on going back and taking
 that phrase "or from measured groundwater data" out of
 Tier 2.

4 MR. RIESER: Okay, but under Tier 3 the first 5 order of degradation constant could be a measured 6 value?

7 MR. HORNSHAW: That's correct. And actually 8 we looked further into that when we got this 9 additional set of prefiled questions. We don't 10 believe it's appropriate that measured groundwater 11 data referred to in the field type of measurements, 12 the degradation if it's measured in the field is most 13 likely going to be confounded in with loss of a 14 chemical due to dispersion in all three directions, so 15 we feel that the degradation rate should be measured 16 in the laboratory, and there are at least four ASTM 17 standard methods for doing that in the lab. 18 HEARING OFFICER DESHARNAIS: Excuse me, could 19 the Agency clarify that the changes to the language 20 concerning measured groundwater data would be addressed in the next errata sheet? 21 22 MR. KING: That's correct. HEARING OFFICER DESHARNAIS: Thank you. 23

24 MR. RIESER: So are you saying you would not

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1 approve a Tier 3 demonstration the first order of

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2	degradation constants based on field measurement?
3	MR. HORNSHAW: At this time we're not aware
4	of measures that can effectively ferret out the loss
5	of compound that's truly due to degradation of the
6	compound versus loss of the compound due to dispersion
7	on the X, Y and Z axis.
8	MR. RIESER: If you took the current model
9	and had the information about talked about velocity
10	along the centerline and actually measured that,
11	couldn't you use that same model and use that to
12	calculate the dispersion, I'm sorry, not the
13	dispersion but the first order of degradation
14	constant?
15	MR. HORNSHAW: You would also need to have
16	estimates of the dispersion in the Y and Z direction,
17	too, as well as along the centerline of the boom.
18	MR. RIESER: So if you had that information
19	to control the dispersion, would that allow you to
20	calculate with field measurements the first order
21	degradation constant?
22	MR. HORNSHAW: I suspect it could be done. I
23	might add that would be done under Tier 3.
24	MR. RIESER: Understood, understood.

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1 Assuming source and free product removal, if site-specific data taken over a period of time 2 3 demonstrates that a dissolved chemical groundwater 4 plume is stable or shrinking, is this a sufficient 5 demonstration pursuant to 742.805(a) (4) and (5) 6 respectively to demonstrate that groundwater within a 7 minimum setback zone of a well will meet Tier 1 8 groundwater remedial objectives and groundwater 9 discharged into surface water will meet the applicable 10 surface water standard for that chemical? 11 MR. SHERRILL: No. 12 MR. RIESER: Why not? MR. SHERRILL: You could -- it's somewhat 13 14 common to have a -- you could have a stable or 15 shrinking plume but it is still migrating, and it can 16 be migrating to someone's potable supply well. 17 MR. RIESER: If it's stable --18 MR. SHERRILL: I did not interpret -- when 19 you said stable, I did not interpret -- I interpreted 20 that it could still be moving. MR. RIESER: I think stable here was meant in 21 22 the sense of static or not moving. And shrinking was 23 used in the sense of getting smaller. MR. KING: I think John's point still holds, 24

you still -- whether it's stable or shrinking, if you
 have a well in that plume, it wouldn't meet those
 criteria.

4 MR. RIESER: Okay. So if you would already 5 impact the well, then it wouldn't meet those criteria, 6 I understand that. But I guess the other assumption 7 that we needed to put here is assuming that that was 8 not the case, that having established the extent of 9 the contamination and establishing by virtue of field 10 measurements that it wasn't getting larger, either not 11 getting larger or in fact getting smaller, would that 12 be -- and assuming that it did not impact the minimum 13 maximum setback zone of well or surface water system, 14 would that be a sufficient demonstration? 15 MR. CLAY: I think there would need to be a lot of data, because we see a difference in 16 17 concentrations on quarterly sampling all the time. 18 One time it's up, one time it's down. I mean they're 19 all over the place. So I think there's a lot of different situations 20 21 that could indicate or could give you a false 22 indication that it is shrinking or stable. 23 So there would probably have to be a lot of data 24 collected over a long period of time for us to make

1 that demonstration. Ken, do you have anything?

2	MR. LISS: No, you're going to make the
3	decision basically on a limited amount of data over a
4	certain period of time, a snapshot. John's earlier
5	description when we talked about the setbacks, what if
6	somebody developed groundwater in the area, maybe due
7	just to construction, dewatering, that might cause
8	that to be mobile.
9	Now I mean in the future, also the chemical
10	dispersion itself is a slower process, and I guess we
11	would want to take that into account. Just because
12	you might show based on this time data, this snapshot
13	that things appear to be stable, there might be the
14	chemical dispersion itself that's occurring.
15	MR. RIESER: But if you had sampling over a
16	period of time, and had a mechanism such as an
17	institutional control where you could rule out other
18	influences on the groundwater system such as the one
19	you described
20	MR. LISS: You mean such as monitoring and
21	some responsive action?
22	MR. RIESER: Well, monitoring, yeah, I'm
23	talking monitoring movable free product.
24	MR. KING: Well, I think we probably can

1 devise enough criteria as we sit here to finally get to the kind of the conclusion we want to get. But, 2 3 you know, what it really comes down to is there would 4 be a lot of site-specific factors to consider before 5 you reach that kind of conclusion. 6 MR. RIESER: Site-specific factors having to 7 do with enough information to reach that conclusion 8 and enough information to demonstrate that stability, 9 that those conditions would maintain over time. 10 MR. KING: Right. 11 MR. WATSON: I've got a follow-up question. 12 HEARING OFFICER DESHARNAIS: Mr. Watson? 13 MR. WATSON: Once you've made the appropriate 14 demonstration during your -- as you refer to as a 15 snapshot, is it true that your obligations with 16 respect to these establishment of these remediation 17 objectives has been satisfied? 18 MR. LISS: We're talking about source and 19 free product removal is what we're talking about. I 20 thought we were in the context of leaving free product 21 behind. I'd say that the snapshot in time is 22 appropriate to evaluate that these things can be left 23 there and your obligation based upon the current 24 snapshot, you know, is satisfied with these

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1 objectives.

2	MR. SHERRILL: When we make any of our
3	determinations we base it on the information we have
4	at hand, you know, whether it be long term or I
5	mean all historical data and up to that present. And
6	that's what the information is made on. If I think
7	I think this is what you're getting at. If conditions
8	change upon which we made that NFR, I believe some of
9	the NFR's we've written, I mean we state in there we
10	made this decision based upon the information we have,
11	and so if those conditions change, there could be
12	steps taken to void an NFR.
13	MR. WATSON: To the extent there's any post
14	remediation obligations to do sampling or confirm site
15	conditions, that would be included in the NFR, is that
16	right?
17	MR. SHERRILL: Well, correct, but I can think
18	of a scenario. I mean if you had a site I guess
19	this relates back to criteria on when an NFR is voided
20	or steps to take to void an NFR.
21	MR. WATSON: Okay.
22	HEARING OFFICER DESHARNAIS: Additional
23	follow-up?
24	(No response.)

1 MR. RIESER: Going on to my question four. Can a site-specific and compound-specific degradation 2 rate be determined by calibrating Equation R26 using 3 4 site-specific data obtained over time, and can 5 Equation R26 be used with this degradation rate in 6 742.805(a)(4) and (5)? 7 MR. KING: Is this the same question --8 MR. RIESER: I think it's basically the same 9 question which is --MR. KING: Okay. And it would be basically 10 11 the same answer. 12 MR. RIESER: And my understanding of the 13 answer was yes. 14 MR. HORNSHAW: With a lot of site-specific 15 data. 16 MR. RIESER: I guess the fundamental question 17 is, you know, the Tier 2 basically requires that 18 certain modeling be done, and the fundamental question 19 is if you have actual site data, instead of a model, in other words, the model is there to predict the 20 21 results, and you've got the site data over time which 22 gives you a picture of what those -- of how this 23 system actually operates over a time period, is it 24 acceptable to use those results in a Tier 3 setting?

1	MR. HORNSHAW: It's approved in Tier 3 and
2	then the results are plugged into the Tier 2 model.
3	Is that what you're asking?
4	MR. RIESER: I think even whether model is
5	used or not, that that actual site data will tell you
6	what the site how the site's going to behave
7	instead of the model, and is that acceptable for the
8	Agency to use the real time, real data, rather than
9	modeling information to determine how that site's
10	going to behave?
11	MR. SHERRILL: When I read calibrating
12	Equation R26, under 742.910 we have the provision
13	that, you know, alternative models can be proposed.
14	MR. RIESER: And as I said, I think I'm
15	talking about using as opposed to modeling, using
16	real data to demonstrate how that system behaves,
17	assuming you had enough data to make that
18	demonstration.
19	MR. O'BRIEN: But I think the point he was
20	making is that in practicality you pick a point to put
21	your monitoring well in, and then you extrapolate from
22	the data you collect from your monitoring wells based
23	upon your original model of how things work to
24	describe it, and that's what he was getting to when he

1 talked about calibrating the model using actual site

2 data.

3 MR. RIESER: Oh, I see. Okay. 4 HEARING OFFICER DESHARNAIS: Moving on to the 5 next question. 6 MR. RIESER: And I think number five is 7 really along those -- I believe number five's also 8 been answered in the affirmative, that this monitoring 9 over a specified period of time to acquire data to 10 demonstrate that a chemical plume is stable or 11 shrinking. 12 Just let me go on to six. Under Tier 3 can the 13 inhalation pathway be eliminated by measuring soil 14 vapor concentrations at the site? 15 MR. SHERRILL: I know under six, you know, just a clarification, we don't use the word eliminate. 16 17 MR. RIESER: Thank you. 18 MR. SHERRILL: Please exclude. 19 MR. RIESER: Exclude it. 20 MR. SHERRILL: But this measuring soil vapor 21 concentrations, the concern there is, you know, you 22 can measure them one day, and then due to disturbances 23 at the site we may have a control that we would make 24 the NFR determination based upon the information that

1 we had, so things that -- this thing of like vapor concentrations, you have temperature changes, whether 2 3 there's been rain events before and after when you do 4 this measuring. So other things go into this, and I 5 guess under a simple answer would be yes, but there's 6 other things, other considerations that go into it. 7 MR. RIESER: But the other considerations 8 would be whether they're representative of site 9 conditions, and so it would evaluate how those 10 measurements were taken and make some determination 11 about whether they were representative of site 12 conditions, is that correct? 13 MR. SHERRILL: Correct. 14 MR. RIESER: Seven is taken care of by the 15 changes that we started the day talking about. 16 Eight, with regard to the variable GWobg in Appendix C, Table B --17 18 MR. REOTT: obj. 19 MR. RIESER: Thank you, for people who know the alphabet. If the Agency used USEPA Health Based 20 21 Levels from the SSL for deriving Tier 1 soil 22 remediation objectives for contaminants which do not 23 have an MCL, and identified those values in the newly added Appendix C, Table F, should not those same 24

1 values be used in this table, that being Table B?

2	MR. HORNSHAW: We chose the USEPA Health
3	Based Levels to try and maintain consistency as much
4	as possible in the Tier 1 approach. When we got to
5	the Tier 2 approach we felt it was probably more
б	appropriate to use state values, and that's why that
7	table was only intended to be used to calculate Tier 1
8	values.
9	As I stated in my testimony, we put that table in
10	because consultants were calling and saying how come I
11	can't recreate the Tier 1 numbers using the Tier 1
12	groundwater remediation objectives.
13	And the reason for that is there were some
14	significant differences in a few cases of
15	noncarcinogins, so we put that table in so people
16	could recreate the Tier 1 numbers.
17	MR. RIESER: If you used the SSL's for
18	creating the Tier 1, then why isn't it appropriate to
19	use them in and in doing so you ran them through
20	that same SSL model that at least forms the basis for
21	Tables A and B under Appendix C, why isn't it
22	appropriate to use those same values for a Tier 2
23	demonstration?
24	MR. HORNSHAW: As I stated before, we thought

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1 in Tier 1 only we wanted to maintain consistency as much as possible with USEPA's look-up table which was 2 3 intended to be applied nationwide. We feel it's more 4 appropriate in Tier 2 to use the state's groundwater 5 criteria as the values. 6 MR. RIESER: And the basis for that is what? 7 Why is it more appropriate? 8 MR. HORNSHAW: In Tier 1? 9 MR. RIESER: In Tier 2. 10 MR. HORNSHAW: In Tier 2 I guess it's just an 11 Agency decision. 12 MR. RIESER: And it's based on? 13 MR. KING: It comes down to really you have 14 to make a decision as to how things are going to be 15 put together, and perhaps it would have been more logical for us to use the state derived numbers and 16 17 then develop other cleanup objectives under Tier 1. 18 That perhaps would have been a more consistent way of 19 doing things. 20 I think we didn't want to do that. I think you 21 would end up generating for those contaminants in at 22 least a number of occasions you'd be coming up with 23 remediation objectives which are more conservative 24 under Tier 1.

1 We felt that the Tier 1 numbers were -- that the SSL document had come up with were consistent enough. 2 3 So it really was not so much a question of using the 4 SSL process in Tier 2, but whether should we use those 5 state numbers in Tier 1. We concluded that those 6 would generate numbers that would be more conservative 7 than we needed. 8 MR. RIESER: But having decided to use the 9 SSL values in Tier 1, why not use them in Tier 2 as 10 well? 11 MR. KING: Well, I think we saw the Tier 2 12 process as being more of a -- more of a -- I don't 13 know if state oriented is the way to do things, but 14 there you're taking the remediation objectives in --15 for groundwater and doing the calculations in Tier 2 16 based on those. So that otherwise you'd be using a 17 number, your input number for your groundwater 18 objective would not be consistent with what's in Tier 19 1 for those groundwater numbers. 20 MR. RIESER: But I thought the Tier 1 was the SSL's. So we're talking about using the SSL's in Tier 21 22 1 and in Tier 2? 23 MR. KING: No, I don't think that's what 24 we're saying.

1	MR. RIESER: It was my understanding that
2	Tier 1 is the SSL, but Tier 2 is the state values and
3	the question is why you use the
4	MS. ROBINSON: Could we maybe have a five
5	minute break to caucus?
6	MS. McFAWN: Why don't we move on to
7	questions 9, 10 and 11. I think everyone's getting
8	rather tired, and the Agency has tried to answer this,
9	and why don't you take the next you know, take a
10	look at the transcript afterwards and see if you need
11	to readdress it or if you're satisfied with your
12	answer.
13	MR. RIESER: I'm fine with that.
14	MS. McFAWN: Okay. I just the reason I
14 15	MS. McFAWN: Okay. I just the reason I interjected here is I would note that I think that
15	interjected here is I would note that I think that
15 16	interjected here is I would note that I think that exhaustion is setting in. So I just mean these are
15 16 17	interjected here is I would note that I think that exhaustion is setting in. So I just mean these are very complex questions.
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1 I have a question about Appendix B, Table F. I note that there are attributions for some but not all of 2 3 the values as either from equation -- that's 17 from 4 the health based limit or from the 620 standards. And 5 for those that aren't attributed, where are they from? 6 MR. HORNSHAW: Could you repeat that again? 7 MR. RIESER: In Appendix B, Table F, there 8 are notes on what I'm calling attributions to some but 9 not all of the values. And for those values without 10 footnotes, where are they from? This is not all of 11 them, but just generally. 12 MS. ROBINSON: Is this a new question? 13 MR. RIESER: It is a new question, I'm sorry. 14 There's so much to explore here. 15 HEARING OFFICER DESHARNAIS: We'll take a five minute break now and then we'll continue. 16 17 MR. RIESER: I can move on to the --18 MS. McFAWN: We'll take a break. 19 MR. RIESER: We'll take a break? Okay. 20 (A recess was taken.) 21 HEARING OFFICER DESHARNAIS: If we could get 22 ready to reconvene, please. We have three remaining 23 prefiled questions, and the additional prefiled 24 questioned are number 9, 10 and 11.

1 What we're going to do is we'll have those 2 questions read into the record by the proponent, have 3 the Agency response, not allow any follow-up at this 4 time. If there's any follow-up, that will occur next 5 time.

6 MS. McFAWN: Is that acceptable to you, Mr.7 Rieser?

8 MR. RIESER: Sure. Number 9. In Appendix C, 9 Table B, a value for both infiltration rate or "I" and 10 for infiltration rate for migration to groundwater 11 mass limit equation, Im-1, is provided. Functionally 12 are there any differences between these infiltration 13 rates? If so what are the differences? 14 MR. SHERRILL: Yes, they are fundamentally 15 different. This is a good question that also relates

16 to question ten. In the Part 742 appendices the value 17 under the ASTM RBCA infiltration rate is .3 meters per 18 year. This "I" is the default rate in the ASTM 19 standard. I just want to note that .3 meters is 20 approximately 11.7 inches a year.

For the 742 SSL's the infiltration rate equals .3 meters per year, which we adopted from this ASTM and RBCA standard. Under the USEPA SSL user's guidance provides an infiltration for the mass limit the Im-1

1 is .18 meters a year, and I'll explain how these two infiltration rates are functionally different.

2

3 "I" is just one parameter that is used to 4 calculate a dilution factor. When developing a new 5 dilution factor all assumptions and inputs must be 6 reviewed and not just infiltration.

7 I would like to point out that a dilution factor 8 of ten was originally proposed by the USEPA during 9 1994, but after much national review was revised to 10 20. A dilution factor of 20 provides a less 11 restrictive remediation objective than a dilution 12 factor of ten.

13 So when we were discussing infiltration for the 14 SSL infinite source model, we need to review the 15 dilution factor in its entirety. The dilution factor 16 in the numerator is one plus the aquifer hydraulic 17 conductivity times hydraulic gradient times the mixing 18 zone depth, and then the denominator is infiltration 19 rate times source length parallel to groundwater flow. 20 And this is a quote out of the USEPA Soil 21 Screening Guidance User's Guide, "Because of the 22 uncertainty resulting from the wide variability in 23 subsurface conditions that affect contaminant 24 migration in groundwater, defaults are not provided

1 for the dilution model equation. Instead, a default of 20 has been selected as protective for contaminant 2 3 sources up to half acres, a half acre in size. A 4 further discussion of the basis for this default is provided and a description of the mass limit analysis 5 6 is provided in the USEPA technical background 7 document", and we provided earlier testimony on this 8 source size versus site size. 9 The dilution factor is demonstrating as 10 contaminant, as contamination of the soil leachate 11 moving through the soil and groundwater and 12 contaminant concentrations are attenuated by 13 absorption and degradation. 14 In the aquifer, dilution by clean groundwater 15 further reduces concentrations before the 16 contamination reaches a receptor point. This 17 reduction is expressed as a dilution attenuation 18 factor. The lowest possible DAF is one, meaning a 19 situation where there is no dilution or attenuation of 20 a contaminant. That is where the concentration in a 21 receptor well is equal to the soil leachate 22 concentration. 23 Here's my second point. It gets shorter. The

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USEPA SSL guidance addresses only one of the dilution

24

1 attenuation processes, contaminate dilution in

2	groundwater, while Part 742 does allow for degradation
3	through this RBCA equation that we've been discussing
4	earlier. The mixing zone equation is derived from a
5	water balance relationship to calculate a
6	site-specific dilution factor.
7	Now in regards to this, that's in regards to the
8	big "I". Now, the Im-l, the mass limit soil level for
9	migration to groundwater approach represents the level
10	of contamination in the subsurface that is still
11	protective when the entire volume of contamination
12	leaches over the 30-year exposure duration and the
13	level of contamination at the receptor does not exceed
14	the health based limit.
15	More site-specific information is utilized in this
16	mass limit model. In other words, when you use the
17	mass limit model you know more about your site than
18	when you're using the other model.
19	And consequently a less restrictive infiltration
20	rate is used. So this big "I" is used for the

21 infinite source assumption model, while the Im-l is 22 used for when the source area and depth volume of the 23 source are known or can be reliably estimated. That 24 ends my quote.

1 MR. RIESER: Thank you. And at the Hearing Officer and Board members direction I'm not going to 2 3 follow up on this. I'll reserve the right to do so in 4 the future. 5 Going on to 10, in Appendix C, Table C, is it 6 accurate that the Domenico model does not include 7 constituent retardation? 8 MR. LISS: It's true. 9 MR. RIESER: Should not retardation be 10 included either in the definition of groundwater 11 velocity U = Ki/OtR where R is retardation 12 factor = 1 + Kdps/Ot, or included directly in R15 and 13 R26? 14 MR. LISS: First of all I can't find a 15 citation that references that configuration that you 16 put in here for that term. I found two that are 17 similar, but they're not the same by any means. 18 Should a retardation factor I guess it could be 19 applied, the author of the model itself Domenico says in his paper, which is referenced in Exhibit F to John 20 Sherrill's testimony, that it can be applied to the 21 22 formula. 23 MR. RIESER: Okay. Thank you. And again I'm waiving the follow-up until the following hearing. 24

1 MS. McFAWN: Thank you, Mr. Rieser. MR. RIESER: In 11, in Table C, Equation R11, 2 which identifies the subsurface soil volatilization 3 4 factor, does the Agency agree that ASTM overstates the 5 rate of vapor releases from subgrade soils? 6 MR. SHERRILL: We don't know that to be the 7 case. I guess that would be a question for ASTM, is 8 that correct? 9 MR. HORNSHAW: Well, or somebody to 10 demonstrate. 11 MR. SHERRILL: Or somebody to demonstrate. 12 MR. RIESER: Would the Agency consider 13 amending the definition column for R11 to note "whichever is less between L11 and R4"? 14 15 MR. SHERRILL: I guess the answer would be no 16 at this time, unless we had this information presented 17 to us to make this demonstration. 18 MR. RIESER: Thank you. And based on the 19 direction of the Hearing Officer, that will conclude my questioning. But I reserve the right to ask 20 21 further questions on these, and also there is one 22 other question that we were discussing and cut off 23 discussion right before the break, that I'm reserving further questions on. 24

1	MS. McFAWN: And that's correct. Did the
2	Agency find that answer during the break by any
3	chance? it had to do with footnotes.
4	MR. RIESER: I'm sorry, there were two other
5	questions right before the break where the Agency was
6	and I'm willing to wait for the next hearing to get
7	final answers on both of those.
8	MS. ROBINSON: We can answer the footnote
9	question.
10	MS. McFAWN: Please do.
11	MR. HORNSHAW: Going back to Appendix B,
12	Table F I think it is, the chemicals listed under
13	Class I that do not have footnotes were chemicals that
14	were derived using Subpart F of 620. Specifically
15	those are chemicals that are Class C carcinogens and
16	USEPA's Health Based Limit is one in a million risk
17	value. And since the legislation only identifies A
18	and B carcinogens as those which must be treated as
19	carcinogens, we recalculated the Class I groundwater
20	objective using the procedures of Subpart F and the
21	noncancer end point.
22	And for those chemicals listed under Class II that
23	do not have a footnote, those values were derived as I
24	discussed in my testimony using Agency policy on the

1 equivalent of a Class II health advisory using the estimation of treatment or removal, removability from 2 3 Class II groundwater using methylene chloride and 4 ethyl benzene as cutoff chemicals as I discussed in my 5 testimony. 6 MR. RIESER: Thank you. 7 MS. ROBINSON: Could you just state for the 8 record what the other question is that we're going to 9 do in January? I don't know that I heard it. 10 MR. RIESER: It was number eight. 11 MS. ROBINSON: Just for follow-up purposes? 12 MR. RIESER: Yes. 13 MS. ROBINSON: Okay. 14 MS. McFAWN: We agreed earlier that the 15 Agency would look at that and see if it had anything 16 further to add. 17 MR. RIESER: Yes. 18 MS. McFAWN: If not you're free to offer 19 testimony. 20 MR. RIESER: Yes. 21 HEARING OFFICER DESHARNAIS: Thank you, Mr. 22 Rieser. That brings us to the initial ending of the 23 prefiled questions and the end of this hearing. I 24 would note that a second hearing is scheduled to begin

1 January 15th. It will be held at 201 Municipal Center West, Seventh and Monroe Street, Council Chambers, 2 3 third floor here in Springfield. 4 This will be to address testimony from other 5 interested parties and questions directed to those 6 witnesses. We will actually begin with any remaining 7 follow-up to these questions from the Agency that we 8 were discussing here today. 9 Prefiled testimony for the second set of hearings 10 must be filed with the Board on or before December 11 23rd, 1996. And prefiled questions for those 12 testifying must be filed on or before January 6th, 13 1997. When prefiling please contact the Board to 14 obtain the current copy of the service list. 15 MS. McFAWN: I would just note that when we 16 resume these hearings in January I would hope that the 17 questions that the Agency has would be fairly brief at 18 the outset because we will be anxious to have those 19 who have prefiled testimony be at the hearings and avail -- allow us to have enough time for them to give 20 21 their testimony and have questions posed to them. 22 So for the most part we would then at the 23 conclusion of the prefiled testimony and the questions 24 to those participants, that's when we will return if

1 we need to further questions of the Agency. That's

how I see January really shaping up. Thank you for your time today. I know the conditions here were rather warm, it was a rather long day and hopefully at the Municipal Center it will be a nicer atmosphere. HEARING OFFICER DESHARNAIS: Does the Agency have anything further at this time? MS. ROBINSON: Not at this time. HEARING OFFICER DESHARNAIS: This hearing is adjourned. Thank you. (Which were all the proceedings held on the hearing of this cause on the date.) 14

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