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STATE OF ILLINOIS.	) )	SS.	MAR 3 0 2009
COUNTY OF C O O K	)		STATE OF ILLINOIS Pollution Control Board

ILLINOIS POLLUTION CONTROL BOARD February 17, 2009

IN THE MATTER OF:	)	
	)	
PROPOSED AMENDMENTS TO	)	R09-9
TIERED APPROACH TO	)	
CORRECTIVE ACTION OBJECTIVES	)	(Rulemaking-Land)
(35 ILL. ADM. CODE 742)	)	-

TRANSCRIPT OF PROCEEDINGS held in the above-entitled cause before Hearing Officer Richard McGill, called by the Illinois Pollution Control Board, pursuant to notice, taken before Rebecca Graziano, CSR, within and for the County of Cook and State of Illinois, at the Thompson Center, 100 West Randolph, Room 9-040, Chicago, Illinois, on the 17th Day of March, A.D., 2009, commencing at 2:10 p.m.

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1	APPEARANCES
2	
3	ILLINOIS POLLUTION CONTROL BOARD:
4	Mr. Richard R. McGill Ms. Alisa Liu Mr. Anand Rao
5	Mr. Thomas Johnson Dr. G. Tanner Girard
6	Mr. Gary Blankenship
7	<u>-</u>
8	ILLINOIS ENVIRONMENTAL PROTECTION AGENCY:
9	Ms. Kimberly A. Geving Ms. Heather N. Nifong, M.A., M.P.H. Ms. Joyce Munie, P.E.
10	Ms. Tracey E. Hurley, M.P.H. Mr. Thomas C. Hornshaw, Ph. D.
11	Mr. Hernando A. Albarracin Mr. Gary P. King
12	Mr. Andrew Frierdich
13	TEST AMERICA:
14	Mr. Will Elcoate
15	
16	ILLINOIS ENVIRONMENTAL REGULATORY GROUP:
	Mr. Alec M. Davis
17	
18	THE RISK ASSESSMENT AND MANAGEMENT GROUP:
19	Mr. Atul Salhotra
20	
21	ECOSYSTEM ENVIRONMENTAL CHEMISTRY LAB:
22	Ms. Kristin Potter
23	ALSO PRESENT:
24	Mr. Harvey Pokorny
	Mr. James Olsta

- MR. MCGILL: Welcome back. I hope
- everybody got to go outside. Just for the record,
- 3 are there any additional questions for Raymond
- 4 Reott? Seeing none, we are he going to move on to
- our next witness, Mr. Pokorny. If you could step up
- front here, we'd appreciate it. Mr. Harvey Pokorny
- 7 has some pre-filed testimony. So why don't we go
- 8 ahead and swear in the witness, please.
- 9 (Witness sworn.)
- MR. MCGILL: Why don't we go ahead and
- take care of the paperwork of your pre-filing, and
- then if you want to write an additional summary or
- additional testimony, we can proceed with that.
- 14 THE WITNESS: Okay. Well, at this
- time, I propose that my pre-filed testimony be
- entered as written.
- MR. MCGILL: Okay. So we have a
- motion to enter, as if read, the pre-filed testimony
- of Harvey Pokorny. Any objection? Seeing none,
- that is so entered. Any objection to designating
- that pre-filed testimony as a hearing exhibit?
- Seeing none, that'll be hearing Exhibit 27.
- 23 Mr. Pokorny?
- MR. POKORNY: Well, my testimony, kind

- of, stands on its own. But after hearing, you know,
- 2 many comments and going around about the vapor
- intrusion risk-based health objectives, it just
- 4 seems -- this is my opinion as a professional. I've
- been in the business for 20 years. I've been a
- 6 geologist for 30 years, and as part of being in the
- business for 20 years, the environmental business, I
- 8 do a lot of property due diligence, and I see this
- 9 as a potential stumbling block for property
- transactions in general. Because when I wrote this
- letter, I was more or less addressing preexisting
- buildings on a site that maybe had attained an
- NFR -- and maybe they didn't -- that have some kind
- of contamination.
- This -- the testimony was written
- with the object that subsurface investigation has
- already been performed. So assuming there's some
- contamination on the site or near the site, I did
- not see a way for the property owner to have any
- kind of rebuttable presumption that he could walk
- away from this and say, "Hey, you know, I've got an
- NFR letter, or, you know, I've got site soils that
- meet TACO objectives, and without doing additional
- subsurface investigation at great time and expense,

- and then having to compare those numbers --
- 2 present-day numbers to real time conditions.
- 3 And I understand where IEPA is
- 4 coming from, but the one thing that, kind of, begs
- 5 the question to me, looking at the whole regulation,
- is just because other states -- let's -- ten years
- 7 ago, IEPA chose not to do vapor intrusion risk-based
- 8 objectives, because enough data didn't exist. Well,
- 9 we still do not have a way -- I mean, the
- 10 regulation's predicated on the fact that you have an
- indoor care quality number that has been exceeded.
- 12 If it hasn't been exceeded, then there's no issue.
- But we don't know what the indoor
- 14 care quality numbers are. Part of the problem is
- because A, nobody is obviously able to get them on a
- regular basis to mean anything. I mean, Doctor
- 17 Sohocha (phonetic) talks about false positives, and
- then now we're talking about false negatives. If
- 19 you can't get a number, how can you establish an
- objective for the indoor air quality? It seems to
- 21 me like the science itself may still be in a state
- of flux. And if you can't arrive at a real number
- for indoor air quality, how can you designate a
- 24 pathway to that effect?

- Now, TACO, for ten years, has
- worked very successfully between consultants and
- 3 IEPA and Landowner to form a, more or less,
- 4 convenient way -- not convenient, but, you know,
- 5 doing your science and your due diligence to say,
- 6 "Hey, there's no real risk here remaining." We've
- 7 taken care of that. Now, a lot of it may be on the
- 8 conservative side, but the process, as a whole,
- 9 works.
- And this seems to me like -- just
- 11 hypothetically, put yourself in a situation where
- 12 you're a building owner and you've got an NFR. You
- go to sell the building, and you've got contaminants
- under that building that, say, succeed TACO tier
- one. They didn't exceed it before, but they exceed
- it now, okay? You've got to go in and you've got to
- prove to the buyer that you're going to be in
- compliance with the new regulations. It's
- unwritten. Even if we don't reopen the NFR letter
- or we let it be, there's going to be a question on
- the buyer, and especially in this market. If they
- see anything that can go wrong, they'll walk.
- They'll go to the next property that has no problem.
- And here you've paid a lot of

- 1 expense and money to get an NFR letter, and now, all
- of a sudden, it's good. It's valid, but you're
- begging the question to the next buyer who's got a
- 4 geological consultant -- an environmental consultant
- like me, who's going to say, "Hey, you know, we've
- got to do one more test," so saith ASTM, you know,
- 7 and quoting on back.
- The problem is -- and I do mention
- 9 it in my filing -- that, you know, if you put a tier
- three package in here, you -- let me see. How do I
- 11 put it? Submission of an IAQ package is a tier
- three not listed as an option within 35 IAC 742935.
- By the way, it's still not listed as an option as a
- tier three, even in the tier three options. And
- that -- I think that, kind of -- if you go look at
- 35 IAC 742935 for tier three, I believe that
- submission of IAQ data is not even mentioned.
- MR. MCGILL: That's IA -- just the
- 19 record, what's that acronym, you said?
- MR. POKORNY: Tier three.
- MR. MCGILL: IAQ?
- MR. POKORNY: Inner air quality.
- MR. MCGILL: Thank you.
- MR. POKORNY: I'm sorry. I'm

- mixing -- that's essentially what you're getting by
- 2 VOC sampling within the building. You're going into
- 3 the realm of indoor air quality and sick building
- 4 syndrome, which is typically not done unless some
- 5 kind of health risk is reported within the building.
- So all of a sudden, we're going
- from the Bureau of Land to the Bureau of Air, but
- 8 it's not even the Bureau of Air because it's
- 9 essentially unregulated, and you get into the
- quality -- or into the realm of indoor air quality.
- 11 And it just seems to me that without getting IAQ
- data, at least that you can compare something to
- tier one, you're leaving everybody wide open.
- Now, if we can already compute
- tier ones from a table, why do you have to go
- through the exercise? Why don't we just publish it
- as tier one and use that as a standard? Because how
- can you back calculate a remedial objective that's
- 19 supposed to be based on a health standard without
- 20 having a health standard? That's -- that's what I'm
- looking for, and I just don't see it in the
- literature. And just because other states have done
- it and have jumped on the bandwagon -- I say
- bandwagon because it just seems to me like, "Okay,

- state A does it, so state B does it, state C does
- 2 it."
- And maybe I'm overreacting, but I
- 4 just -- this is my opinion, and it's the way I see
- it, and I just have a problem, without having an
- 6 indoor air quality, to have an indoor air vapor
- 7 pathway that's not predicated on an indoor air
- 8 number. And that's essentially really what I'm
- 9 trying to say here with my testimony.
- MR. MCGILL: Thank you. Any questions
- 11 for Mr. Pokorny? I know the Board has a couple
- questions. If you -- again, just state your name,
- please.
- MR. HORNSHAW: Tom Hornshaw with the
- 15 Illinois EPA. I guess I have a couple of comments.
- I thought I heard you say we don't have indoor air
- standards. You can calculate those, of course, but
- we also have EPA's reference concentrations and unit
- 19 risk factors for cancer on our website, which you
- 20 could use for screening values also.
- The second comment I would make is
- that beyond all the discussion that we've already
- had about how you could have false positives and
- false negatives, it's just my overall concern that

- if you have a table -- a tier one table of indoor
- air quality standards, that there is a potential for
- misuse. Mr. Reott said there's a lot of
- 4 transactions that the Agency never sees because they
- 5 use the tier one tables. I can see a potential for
- abuse by somebody taking one sample, you got a
- negative result, convincing the buyer that there's
- 8 no problem here, and the buyer comes out later and
- <sup>9</sup> finds there is a problem.
- So that would be just an overall
- 11 concern I would have personally about having a tier
- one lookup table for indoor air.
- MR. MCGILL: Okay. Just for the
- 14 record, all the Agency witnesses have been sworn in,
- so that was really just testimony and not so much a
- question. Any additional questions for Mr. Pokorny
- or related testimony? Dr. Salhotra?
- MR. SALHOTRA: I have a question.
- 19 This is Atul Salhotra. You're saying this would
- 20 allow the user remedial applicant to use empirical
- indoor air quality survey results. What do you mean
- by empirical indoor air quality survey results?
- MR. POKORNY: I mean, if you get a
- survey that indicates you're below a certain

- objective, a tier one objective, those numbers.
- MR. SALHOTRA: So site-specific indoor
- 3 air management?
- 4 MR. POKORNY: Yes.
- MR. SALHOTRA: Okay. Thank you.
- 6 MR. RAO: Mr., Pokorny, in your
- 7 pre-filed testimony, you refer to regulations of
- 8 other states, specifically Minnesota and California.
- 9 Are you familiar with the requirements of those
- 10 state regulations?
- MR. POKORNY: I am, more or less. I
- mean, I went through and I did a quick survey just
- to see who has indoor air quality results to base
- it -- to base their -- not to say they're based on
- that, but you can go to those states, do an indoor
- air quality -- or obtain a VOC sample from the
- interior of a building, and compare that to a set of
- numbers, whether they're ranges or whether they're
- 19 numbers.
- MR. RAO: Have you -- have you seen
- there being any more cleanup in any of those states
- where you actually use those tables?
- MR. POKORNY: No, I have not.
- MR. RAO: Okay. So --

- MR. POKORNY: I have not.
- MR. RAO: Okay. But now, you can't
- 3 speak for first-hand experience as to how those
- 4 rules work for you to terms of cleaning up your
- 5 sites?
- 6 MR. POKORNY: No. I've not done air
- 7 cleanup, per se. I have not -- the regulations were
- 8 only promulgated, like, for example, Minnesota was
- 9 2008. California, we've done work regarding indoor
- 10 air quality, but not directly with VOCs that I know
- 11 of.
- MR. RAO: And the way you see this,
- and what you're recommending here in terms of adding
- indoor air as part of tier one, do you still see
- that mediation involves gathering information and
- this would be just one part of the --
- MR. POKORNY: It's one part of it. As
- 18 I mentioned, everything quoted in here is basically
- 19 predetermined by the contaminants that exist on your
- site as previously defined.
- MR. RAO: So there's not, like,
- somebody going and taking a measurement and saying
- this pathway's eliminated?
- MR. POKORNY: Well, you can eliminate

- the pathway, but you still haven't eliminated the
- soil and groundwater portion. So you really have to
- do the testing any way. And if those numbers, you
- 4 know, on testing -- obviously, as Dr. King alluded
- 5 to, if they're below that number, then there's no --
- 6 then you don't have to deal with the pathway anyway
- if they're below the tier one. But if they're
- 8 above -- if they're, like, below everything else but
- 9 they're above the tier one favor intrusion pathway,
- then you're going to have to deal with it.
- MR. RAO: Okay. Thank you.
- MR. MCGILL: Any further questions?
- 13 Seeing none, Mr. Pokorny, thank you for sticking
- 14 around and participating today.
- MR. POKORNY: You're welcome.
- MR. MCGILL: We appreciate it. Thank
- you. At this point, I'd ask Mr. James Olsta to step
- up front. Just have a seat there, sir. If you
- could go ahead and swear in the witness, please.
- 20 (Witness sworn.)
- MR. MCGILL: Just a little background
- 22 here, the pre-filed testimony of Set Co and
- Geokinetics was timely filed, but none of the
- witnesses identified in that document were able to

- 1 attend today. However, Mr. James Olsta of Set Co is
- here and is willing, under oath, to adopt that
- 3 pre-filed testimony as his own and answer questions.
- 4 So just initially, for the record,
- <sup>5</sup> if you could identify yourself. Just give a brief
- 6 description of your qualifications.
- 7 MR. OLSTA: Yes. My name is James
- 8 Olsta. I'm the technical manager for Set Co. We're
- 9 headquartered in Hoffman Estates, Illinois. I'm a
- registered PE in the state of Illinois. I've got a
- bachelor's in civil engineering and a master's in
- environmental engineering from the University of
- 13 Illinois at Urbana-Champaign -- go Illini. So I'm
- 14 also on the executive --
- MR. MCGILL: Strike that from the
- 16 record, please.
- MR. JOHNSON: Michigan quy.
- MR. OLSTA: I'm also an executive
- board member of ASTMD 35 on geo synthetics.
- MR. MCGILL: And would you just
- 21 briefly describe the two companies and the
- relationships between Set Co and Geokinetics?
- 23 MR. OLSTA: Yes. Set Co is an
- environmental product company. We do now represent

- liquid boot, which is a vapor intrusion membrane
- product. And our relation with Geokinetics, they're
- a consulting firm in southern California. We've
- 4 dealt with them. They've done some diffusion
- testing and other testing on the liquid boot product
- 6 for us.
- 7 MR. MCGILL: Thank you. And
- 8 Mr. Olsta, do you adopt as your own the pre-filed
- 9 testimony of Set Co and Geokinetics that was filed
- on February 24, 2009?
- MR. OLSTA: Yes.
- MR. MCGILL: Thank you. And will you,
- under oath, attempt to answer any questions posed to
- 14 you regarding that testimony?
- MR. OLSTA: Yes.
- MR. MCGILL: Thank you. At this
- point, is there any objection to entering, as if
- read, the Set Co Geokinetics pre-filed testimony as
- that of James Olsta? Seeing none, that is so
- 20 entered.
- Is there any objection to
- designating as a hearing exhibit what is now the
- pre-filed testimony of Mr. Olsta? Seeing none, that
- will be hearing Exhibit 28.

- 1 Mr. Reott's pre-filed questions
- 2 included questions for Set Co and Geokinetics. The
- pre-filed responses were due on March 12th, but we
- 4 just received them late yesterday. The pre-filed
- 5 responses from Set Co and Geokinetics restate the
- questions of Mr. Reott, and even with those
- questions included they're about two pages long.
- 8 Attached to the responses is a supporting
- 9 Geokinetics document entitled Vapor Mitigation
- 10 Strategies, Alternatives, and Technical
- 11 Considerations, along with related tables and
- figures, and I've shared copies of the responses and
- attachments with a number of the participants here
- 14 today.
- Given the late arrival of those
- pre-filed responses, and to aid in everyone's
- understanding, Mr. Olsta has agreed -- well, let me
- just ask, are you prepared to read those two pages
- of responses into the record?
- MR. OLSTA: Yes.
- MR. MCGILL: And if you -- again, just
- for coherency, if you could state the question first
- followed by each response.
- MR. OLSTA: All right.

- MR. MCGILL: If you could go ahead and
- do that now. Thank you.
- MR. OLSTA: All right. This is the
- 4 response to the pre-filed questions by Michael
- 5 Reott, dated March 4th, 2009. This letter's been
- 6 prepared to address the questions that were directed
- 7 to Geokinetics in the above-referenced submittal.
- For ease of reference, each question is repeated
- 9 below followed by our response.
- Question number 12, what is the
- relative cost of using a 60 mil vapor barrier at
- typical sites, compared to the 6 and 10 mil barriers
- referenced in the proposed rule and your testimony?
- 14 Answer number 12, the installed
- cost of a 60 mil spray applied or HDPE vapor barrier
- is typically on the order of \$1.50 to \$2.25 per
- square foot. The installed cost of a 6 to 10 mil
- 18 LDPE vapor barrier with overlapped or taped seams is
- typically on the order of \$.30 to \$.50 per square
- foot. The lower unit costs are more typical of
- larger installations. Examples, warehouses,
- commercial buildings, multifamily structures, et
- cetera. While the higher unit costs would be more
- typical of a single-family residence and small

- 1 retail commercial buildings.
- Question number 13, what is
- 3 Geokinetics' experience with testing indoor air
- 4 quality for contaminants for vapors from sub-slab
- 5 soil and/or groundwater contamination? Would a
- 6 system of interior air quality standards, as
- 7 suggested by Versar (phonetic) in its February 24th,
- 8 2009, comment letter be workable in Illinois?
- Response number 13, measurement of
- the VOC levels and interior air spaces can provide a
- direct indication of potential exposure risks.
- 12 Actual levels for many contaminants and indoor air
- have been published by the USEPA and other
- 14 regulatory agencies based upon incremental
- carcinogenic risk of whatever standardized exposure
- and somewhat standardized exposure assumptions.
- This approach is useful in
- addressing the question: Does an unacceptable
- 19 exposure risk exist? However, indoor air sampling
- 20 and analysis can only identify an existing problem.
- It can not anticipate one in advance. It is often
- necessary to evaluate site conditions for a proposed
- building and determine in mitigative measures are
- required. Problems identified after the completion

- of construction are typically more difficult to
- 2 address.
- 3 Comment number 14, has Geokinetics
- 4 ever compared its indoor air monitoring quality data
- to the predicted values from the Johnson and
- 6 Ettinger model?
- Response number 14, yes. Where we
- 8 have comparative data, the standard J & E model
- 9 typically predicts higher VOC and/or methane gas
- levels than were actually meshed in the indoor air.
- 11 This appears to be attributable to the assumptions
- 12 and simplifications utilized in the model that are
- generally of a conservative nature.
- 14 Comment number 15, does
- 15 Geokinetics have any experience with the costs of
- the various building control technologies referenced
- in the proposed rule?
- 18 Response number 15, yes. We have
- installed each type of system referenced in
- Section 742.1210 of the draft guidelines. The cost
- of sub-slab and submembrane depressurization systems
- 22 can vary significantly depending upon the site
- 23 conditions and building characteristics. The
- installation cost for sub-slab depressurization

- 1 systems are often lower than those for submembrane
- 2 systems, although long term operating and
- maintenance costs are typically significantly
- 4 higher. As a result, the net present value cost for
- 5 both systems are often comparable, and typically
- frange from approximately \$1.50 to \$3.50 per square
- 7 foot of slab on grade area.
- 8 The discussion of vapor mitigation
- 9 alternatives and technical consideration is attached
- 10 for your reference. We hope this information is
- 11 helpful to you. Please do not hesitate to contact
- any of the undersigned or myself if you have any
- 13 questions or comments.
- MR. MCGILL: Thank you. Are there any
- questions for Mr. Olsta? Mr. King.
- MR. KING: I wanted to talk about
- the -- we're talking about testimony as well as a
- 18 question?
- MR. MCGILL: Sure. Go ahead.
- MR. KING: Mr. Olsta, one of the
- things that we were, kind of, curious about relative
- to the discussion on submembrane depressurization,
- the comment was made that 6 mil was too thin, and
- you're recommending 60 mil. We were concerned about

- the feasibility of installing a 60 mil liner,
- basically, in a crawl space, and we talked at break
- about that. I was wondering if you could comment on
- 4 that.
- 5 MR. OLSTA: Yes. I did ask this
- 6 question to our people in California, which have
- done the most projects, and they have indicated that
- 8 had they have done some installations of the 60 mil
- 9 spray applied membrane in existing buildings and
- 10 crawl spaces. So I can request from them some case
- 11 study references, details to provide to you, to the
- 12 Agency, and to the Board.
- MR. KING: That would be -- I think
- that would be very useful for us to, kind of, think
- through this as part of the rules.
- MR. MCGILL: Thank you.
- MR. RAO: Mr. Olsta, just as a
- 18 follow-up to Mr. King's question, is there any
- thickness in between 6 and 60 mil?
- 20 MR. OLSTA: There are various
- thicknesses for the geo synthetics and the spray
- 22 applied. They would have obviously different
- properties. Typically the -- particularly the
- diffusion and puncture resistance would be related

- to the thickness. So any decrease from 60 mils
- would typically result in an increase in diffusion
- 3 and less puncture resistance during construction.
- 4 MR. RAO: In the pre-filed testimony,
- 5 I think -- you know, it's not your testimony, but
- 6 you had indicated that Geokinetics had significant
- 7 expedience and you mentioned thousands of sites that
- 8 they have handled, and I was wondering if you have
- 9 any information in a database as to, you know, what
- 10 kind of issues you dealt with in terms of, you know,
- were they all related to this membrane, the
- thickness of 6 mils, or were there different
- thicknesses that were evaluated of as a part of this
- 14 experience?
- MR. OLSTA: I can try to get some more
- details from Geokinetics on the breakdown for those
- 17 numbers.
- MR. RAO: Okay. That would be
- 19 helpful.
- MR. MCGILL: Ms. Geving?
- MS. GEVING: For purposes of
- 22 illustration for the Board, we can enter this into
- the record as an exhibit, if you have no objection.
- It's not from your company, but it is a 60 mil

- 1 sample.
- MR. OLSTA: Yeah. That would be --
- this is a high-density polyethylene membrane.
- 4 MS. GEVING: Do you have any objection
- to entering this into the record for the Board's
- 6 purposes?
- 7 MR. OLSTA: No. Just -- there's also
- 8 spray applied membranes, which are a little
- <sup>9</sup> different consistency.
- MS. GEVING: But about the same
- 11 thickness?
- MR. MCGILL: Okay. You don't have a
- 6 mil on you, do you?
- MS. GEVING: No. Sorry. We apologize
- 15 for the coffee stains.
- MR. JOHNSON: It's tenth the thickness
- of that.
- MR. MCGILL: Roughly. Okay. So this
- is an example -- there's been a motion -- an Agency
- motion to enter as a hearing exhibit an example of a
- 21 60 mil thick membrane. Any objection? Okay.
- Seeing none, that will be hearing Exhibit 29.
- 23 And Mr. Olsta, is what is now
- hearing Exhibit 29, is this -- your company's or

- 1 Geokinetics' product, you've mentioned a sprayed on
- version. Is that actually something -- is it, like,
- a liquid? Could you just explain the different
- 4 products maybe?
- 5 MR. OLSTA: Yes.
- 6 MR. MCGILL: Is it a sheet versus a
- 7 spray on?
- 8 MR. OLSTA: Right. The sample there
- 9 is a high-density polyethylene geo membrane, and
- what you would need to do with penetrations is you
- have to have a preformed boot over penetrations, and
- then you have to weld the boot to the membrane. So
- it's a little complicated, whereas there's a latex
- 14 asphalt spray applied membrane, which you can spray
- around a protrusion, spray it on to a geo textile,
- and thus you have better contact on penetrations.
- MR. MCGILL: And the penetrations
- you're talking about are irregularities?
- MR. OLSTA: Pipes through the slab.
- MR. MCGILL: Okay. Thank you. Ms.
- 21 Geving?
- MS. GEVING: How do you assure that it
- has the same consistency all the way across of being
- six versus 16 versus 60? If you're spraying

- something on, how do you make sure it's all the same
- 2 thickness?
- MR. OLSTA: Well, there is also a base
- 4 geo textile, which helps to give an indication of
- 5 the thickness.
- 6 MS. GEVING: So do you do periodic
- 7 measurements after it's sprayed on once it's dry?
- 8 MR. OLSTA: I would have to check with
- 9 the -- it would be a -- I could check with
- 10 Geokinetics on that. They would typically do
- 11 construction quality assurance with respect to that.
- 12 So I can check with them.
- MS. GEVING: It would be really
- 14 helpful if they could maybe put that in a public
- 15 comment at the end.
- MR. OLSTA: Yes.
- MR. RAO: I have one more. Mr. Olsta,
- are you familiar with any USEPA guidance or any
- other, like, ASTM guidance that recommends what
- thickness you should be using for the submembrane
- 21 system?
- 22 MR. OLSTA: No. I don't know offhand
- 23 what EPA --
- MR. RAO: Are you familiar with any

- other state regulations who recommended 60 mils as a
- thickness of this membrane?
- MR. OLSTA: Well, I believe in
- 4 California it's, kind of, somewhat -- I believe the
- 5 city of Los Angles has a 60 mil membrane
- for requirement, particularly in the methane areas that
- 7 are prevalent in southern California.
- 8 MR. RAO: Thank you.
- 9 MR. MCGILL: Any additional questions
- 10 for Mr. Olsta? This last item, any objection to
- entering as a hearing exhibit the pre-filed
- responses along with the attached supporting
- documents that would now be Mr. Olsta's? Seeing
- none, that'll be hearing Exhibit 30.
- Mr. Olsta, did you have any
- additional testimony you'd like to provide today?
- MR. OLSTA: I just had one question
- 18 for the Illinois EPA.
- MR. MCGILL: Sure.
- MR. OLSTA: Just to try to clarify on
- the pre-filed testimony of Gary King that was filed
- 22 before the Illinois Pollution Control Board on
- Page 22, the third paragraph down, it mentioned,
- "Sub-slab depressurization is an active venting

- system that draws contaminated soil gas from beneath
- the building and expels it to the atmosphere.
- 3 Sub-slab depressurization systems can be used for
- 4 existing and new buildings. Submembrane
- 5 depressurization is similar to the sub-slab
- 6 depressurization system, but used for existing
- 7 buildings with crawl spaces."
- 8 So our question is: Is it IEPA's
- 9 intent to limit SMD, sub-slab depressurization
- systems, to existing buildings with crawl spaces?
- MR. KING: No. I mean, it -- it could
- be -- it could be used the way we have this set up.
- 13 It could be used with a -- you could have a new
- construction with a crawl space where a submembrane
- depressurization system could be used as it's laid
- out here. I don't think that's going to be the
- typical kind of construction response.
- I mean, I think it would be -- if
- 19 you're talking about new construction, even if
- there's going to be a crawl space, if a building
- 21 control technology is merited, then it would seem to
- me that it would be much more practical and a more
- cross effective approach would be to follow the
- 24 membrane barrier system requirements that are

- described in C3, as opposed to C2.
- MR. OLSTA: Thank you.
- MR. MCGILL: Anything else?
- 4 MR. OLSTA: That ends my --
- 5 MR. MCGILL: Thank you very much for
- 6 participating this afternoon.
- 7 MR. OLSTA: Thanks, Richard. And I
- 8 root for all Big Ten teams, by the way.
- 9 MR. MCGILL: I'm sorry?
- MR. OLSTA: I root for all Big Ten
- 11 teams.
- MR. MCGILL: Way to go. I know we
- have one other person interested in testifying. Why
- don't we go off the record for a moment.
- 15 (Whereupon, a discussion was had
- off the record.)
- MR. MCGILL: Mr. Will Elcoate, if you
- 18 could come up front, please. Why don't you have a
- 19 seat, sir.
- MR. ELCOATE: Okay. Thank you.
- MR. MCGILL: And we'll have the court
- reporter go ahead and swear you in.
- 23 (Witness sworn.)
- MR. MCGILL: Why don't you go ahead

- and state your name and title and your organization
- <sup>2</sup> for the record.
- MR. ELCOATE: Okay. My name is Will
- 4 Elcoate. I work for Test America. I'm a technical
- 5 product manager for the air program.
- 6 Qualifications, I'm a chemist by training, and I've
- 7 spent over 20 years in the environmental testing
- 8 laboratory business. My responsibilities are really
- 9 focused on vapor intrusion. I've been -- I work
- between operations and the sales and marketing
- 11 people looking at states as they bring in guidance,
- and I really am a technical resource to our whole
- 13 program.
- 14 Currently we work -- we support
- vapor intrusion investigations in pretty much every
- state in the United States, including Alaska and
- Hawaii. So in that -- in that aspect, I've become
- 18 very familiar with all the state guidances and some
- of the challenges and maybe areas that will be
- improved in those guidances.
- So I just would like to make a
- couple of statements based on this morning's
- discussion, and they're about sampling, and make
- some comments -- a couple comments on the draft

- guidance currently that the IEPA has put out.
- Firstly, from a laboratory
- standpoint, we're at the tail end of any -- the
- 4 guidance comes out, rules come out, and then we get
- 5 calls form consultants and they ask us if we can do
- something, and one of the keys is having numerical
- <sup>7</sup> standards. From a laboratory standpoint, we take
- 8 samples in, we analyze them, and we get data. In
- 9 the data are numbers, and the numbers are matched to
- 10 state standards.
- 11 So the first comment the IEPA
- proposed rules is they've put soil gas -- those
- standards or numbers out there. These are
- 14 significantly higher than any other state. Most
- states are in the part per billion range. These are
- in milligrams per cubic meter -- I'm sorry,
- micrograms per cubic meter. Illinois is in
- milligrams for per cubic meter. That creates issues
- 19 for laboratories.
- The methods that are commonly used
- to support them are ambient methods. They were
- designed for, you know, one microgram per cubic
- meter or less detection limits. Now, when you go to
- milligrams per meter, you're now talking about

- 0.0001 milligrams per meter. That's what we're
- seeing. So when you put these very high numbers
- out, then we have some issues in reporting them, and
- 4 the first thing we do is significant dilutions,
- 5 which brings dilution errors into providing data.
- 6 And again, we have numerical standards, so there's
- 7 going to be more uncertainty about what the true
- 8 number is when you start comparing it to a numerical
- 9 standard.
- The other is that consultants,
- when they start adopting these standards, will then
- 12 say, "Can you raise your reporting limits, you know,
- to meet numerical standards?" We can legitimately
- do that. So instead of reporting what we can
- legitimately see, we're going to report what we're
- requested to see. It may still be beneath the
- 17 numerical standard. What that creates for us, then,
- is that when the risk people start looking at those
- numbers, you're going to have less thans, and
- there's a big debate in determining risk on lesser
- 21 numbers.
- So no -- I-think there needs to be
- numbers out there, but no -- I'm just saying that
- it's going to create issues on the tail end with the

- 1 laboratories. It's going to create a lot of
- dialogue within the regulatory community on, you
- know, how do we manage to use numbers that are
- 4 currently out there.
- 5 That's really number one. Number
- two is we're talking about sampling. I think the
- best practices on doing vapor intrusion sampling has
- 8 already been established between different states,
- 9 and there's a lot of information out there
- 10 currently. We were talking about -- this morning
- about taking indoor air samples. It's a very
- clearly documented process, and a number of states
- have that guidance on how to take indoor air
- samples.
- The states that have really taken
- the lead have been New Jersey and New York. And
- typically, to get data, you're going to take
- complete data sets. By that, I mean you take an
- ambient sample as demonstrated as the interchange
- between ambient air and indoor air. You take a
- sub-slab sample and an indoor sample at the same
- time, and then you have a complete data set. So the
- intent is you're going to separate the very
- intrusion impact from, you know, all the consumer --

- all the other activities that could have impacts.
- I heard a gentlemen this morning
- say, "A lot of the products we use contain the same
- 4 chemicals you may be looking for." By taking a
- systematic, scientific approach to sampling, then
- 6 you can look at data sets and compare data. You can
- 7 then do it -- calculate factors and really determine
- 8 if -- you know, most of the compounds that are
- 9 similar between subsurface and indoor, you can look
- at those ratios and determine if there are other
- 11 sources, and that is, of course, after doing a
- pre-building survey to make sure that all the
- potential sources in the building have been
- identified and you've removed them.
- And we see a lot of -- you know,
- particularly in the northeast, where they've been
- going through schools and they've been doing a lot
- of residential sampling. You know, we're looking at
- this as a laboratory, but it's been a very
- successful approach to determining where there are
- impacts and were there aren't.
- So I think the -- you know, the
- best practices have been established. EPA recently
- suggested a sampling protocol. They used the radon

- data from 30 years of data collection, and they're
- 2 suggesting that two sample events, you know,
- separated in the year for a 48-hour period meets the
- 4 risk percentile for determining average indoor air
- 5 concentration. So I think that data is going
- forward. There are data sets that can be used as an
- authoritative basis for, you know, the best
- 8 frequency of sampling.
- 9 MR. MCGILL: And that's USEPA --
- MR. ELCOATE: Yes.
- MR. MCGILL: Can you identify that
- 12 document? Or maybe you could --
- MR. ELCOATE: I can?
- MR. MCGILL: -- provide that.
- MR. ELCOATE: It was presented in
- 16 California, and I have sent that document forward.
- MR. MCGILL: Great. Thank you.
- MR. ELCOATE: Just two other
- 19 comments -- or one other comment. Data quality.
- The -- we are a large organization. We have a lot
- of laboratories. We're all NELAC certified, and in
- the air program, all the -- all the laboratories
- that support air analysis also have a whole
- certification for the air methods where states offer

- certification for those methods. There's very few
- states that have -- one of the measures of quality
- is also performance testing programs, PT programs,
- 4 and it is offered as a performance testing, you
- 5 know, criteria to demonstrate the lab's capability
- 6 to produce quality data.
- 7 So maybe it's a question, and that
- 8 is Illinois, as an NELAC accrediting authority, do
- 9 they intend to bring in certification for air
- methods going forward? The reason being is that
- 11 you're dealing with a risk which may become into
- 12 litigation. So having the best data available in
- supporting, particularly when you go to indoor
- sampling, would make -- actually makes a lot of
- sense to me. Okay. That's all.
- MR. MCGILL: Ms. Geving?
- MS. GEVING: Just for the record,
- would you please tell us what the acronym NELAC
- 19 stands for?
- MR. ELCOATE: It's an acronym.
- 21 National Environmental Laboratory
- 22 Accrediting Counsel -- Accreditation Counsel.
- MR. MCGILL: There was a question in
- there. I don't know if the Agency wanted to respond

- 1 to that.
- MR. KING: We just had an internal
- meeting yesterday with our division of laboratories
- 4 to discuss this very issue. In fact, it prompted
- some calls to Will yesterday. We're intending to
- 6 move forward with NELAC certification for this air
- 7 components.
- MS. POTTER: Do you mean to say
- 9 it's going to --
- MR. MCGILL: I'm sorry. Could you
- just state your name? And if you're --
- MS. POTTER: Kristin Potter.
- MR. MCGILL: I'm sorry?
- MS. POTTER: Kristin Potter.
- MR. MCGILL: Are you with any
- organization?
- MS. POTTER: The Ecosystem
- 18 Environmental Chemistry Lab.
- So are you going to require
- certification for labs doing the testing before the
- state is accredited or accrediting labs within the
- state or other states, for that matter?
- MR. KING: We just had a meeting
- yesterday to try to figure out how to go forward

- with this. So I can't provide anymore details other
- than what I've just talked about, but we're hopeful
- 3 that we're going to be able to go forward and do
- 4 that.
- 5 MR. JOHNSON: I guess I'm spoiled with
- the pre-filed testimony and the pre-filed questions
- and answers. I already know what's going to be said
- 90 percent of the time, but I didn't quite
- 9 understand what you were saying. The first problem
- you elucidated with regard to the numbers proposed
- 11 for soil gas --
- MR. ELCOATE: Yes.
- MR. JOHNSON: -- you say are
- 14 reported -- they're too large?
- MR. ELCOATE: They're very high. The
- ambient methods that are used currently for doing
- analysis of vapors and ambient air were designed to
- ambient air. So the gold standard is T015. The
- 19 average reporting limit is from anywhere from .2 or
- .5 or 1.5 micrograms per cubic meter. The soil gas
- 21 standards are in milligrams per cubic meter, which
- is 1,000 times higher. So if it's one milligram per
- cubic meter, then we would have to, you know, just
- 24 arbitrarily do 1,000 times dilution.

- MR. JOHNSON: Okay. I see what you're
- 2 saying.
- MR. ELCOATE: The method calls --
- 4 MR. JOHNSON: You have to report at
- 5 that level and that -- okay.
- 6 MR. ELCOATE: The method calls for 200
- 7 mils. So theoretically, we're going to have to
- 8 take, you know, .2 of a mil of an air sample to meet
- 9 that standard. Some of these standards are 750,000,
- 10 I think I saw for acetone, which is a saturation
- point. So theoretically, I mean just by math, we're
- going to be taking .001 mil of air, potentially, to
- put acetone into the calibration range to report
- that standard in the soil. It's not likely that
- you're going to see 750,000 milligrams per cubic
- meter, but the potential is there.
- MR. MCGILL: And I'm sorry. What's
- the difficulty?
- 19 MR. ELCOATE: It's the actual
- 20 measuring of -- taking a representative sample
- that's being presented and entering it into the
- 22 instrument.
- MR. MCGILL: Okay.
- MR. ELCOATE: The calibration ranges

- of those methods are zero to 20 or zero to 200
- 2 micrograms per cubic meter, which is still three to
- six orders of magnitude lower than some of the
- 4 screening values that are being presented at soil
- 5 gas screening.
- 6 MR. JOHNSON: We're finding out if our
- 7 scientist can explain it to us.
- MR. ELCOATE: Yeah. And I can provide
- 9 some more information on that.
- MR. MCGILL: Yeah. It probably would
- be helpful to elaborate in a public comment.
- MR. ELCOATE: Okay.
- MR. MCGILL: Dr. Salhotra?
- MR. SALHOTRA: Well, I don't
- understand why that is a problem. If -- because if
- you keep doing what you are doing in other states,
- and this is the Illinois standard, and its
- 18 concentration is increasing in this direction and
- 19 you report a value over here, well, obviously,
- there's no problem, according to the Illinois
- standards. Nobody's saying that you have to make
- this as your protection limit.
- MR. ELCOATE: I appreciate that, but
- what happens is consultants request us to raise

- 1 their reporting limits.
- MR. SALHOTRA: Well, then tell them
- 3 that's not correct.
- 4 MR. ELCOATE: The state would need
- 5 to --
- 6 MR. SALHOTRA: But in most cases, and
- being a consultant myself, we say make sure you're
- 8 reporting limits are below the standards.
- 9 MR. ELCOATE: Okay.
- MR. SALHOTRA: I don't think we ever
- require or any agency requires -- and I could be
- wrong. I don't think agencies require that -- to
- make sure your reporting limit is at the standard.
- 14 So as long as your reporting limit is 10 times, 100
- times, 100 times lower, that's great.
- MR. ELCOATE: So within the
- certification program, then it would be requested
- that the laboratories report at their, you know, SOP
- 19 for reporting levels for those methods?
- MR. SALHOTRA: Well, as long as they
- 21 are below the Illinois EPA soil gas standard, you
- 22 are okay.
- MR. ELCOATE: Yeah. It's just if
- that's not requested, we see people requesting

- 1 higher reporting limits than we can actually see.
- MR. SALHOTRA: Well, you know, if
- that's -- then somebody's requesting you something
- 4 that's not correct, and then you need to tell them
- 5 that's not right.
- 6 MR. ELCOATE: We're requesting to meet
- 7 the reporting -- the numerical standards within the
- state, and we can obviously see in this case
- 9 significantly lower than those numerical standards.
- MR. SALHOTRA: That's great. I think
- the question from a consultant's point of view is
- 12 please make sure that your reporting limits are
- below the standard. Because if the standard is
- 14 five, and you say the concentration it less than
- seven, I cannot use that later.
- MR. ELCOATE: Yeah. I understand
- 17 that.
- MR. SALHOTRA: But if they're
- 19 reporting limit is five, and you say the
- 20 concentration is less than four, well, that's great.
- 21 It's less than the standard.
- MR. ELCOATE: Yeah.
- MR. SALHOTRA: So nobody should be
- requesting the detection limits or reporting limits

- 1 at the standard. They should be below them. And as
- long as you can meet those, which you are in other
- 3 states, there's absolutely no problem.
- 4 MR. ELCOATE: I'm just bringing to the
- 5 attention of the group here the difference in that
- for range. In other states, typically we see indoor
- 7 standards. We'll see, you know, soil gas screening
- 8 values may be 10 or 20 times higher than their
- 9 indoor standards. Now here, you're looking at
- one million to almost, in some cases one billion
- times higher than, you know, what would be an indoor
- 12 standard.
- MR. SALHOTRA: I think that point is
- well taken, but that's a separate issue.
- MR. ELCOATE: Yeah.
- MR. SALHOTRA: It cannot be a lab
- issue. It's not a lab issue.
- MR. ELCOATE: It's a -- yeah.
- MR. SALHOTRA: And this morning we
- heard that the numbers seem to be the other way
- 21 around. But it's not a lab issue?
- MR. ELCOATE: No.
- MR. SALHOTRA: Okay.
- MR. ELCOATE: It's a reporting issue

- or a state requirement issue.
- MR. SALHOTRA: Yeah.
- MR. MCGILL: So it sounds like if you
- 4 continued to do your testing pursuant to your
- 5 standard operating procedure and you produced these
- 6 results, whether those results are then compared
- with the Illinois numbers or some other state's
- numbers, you're either going to meet them or not?
- 9 MR. ELCOATE: Yeah.
- MR. MCGILL: Your concern was that
- there would be pressure on laboratories to alter
- your operating procedure?
- MR. ELCOATE: To meet the numerical
- standards. We can do that very easily at, you know,
- even fairly significant dilutions we can still meet
- the standards. But then the contention comes in
- that, you know, if there are numbers still below the
- standard, it then becomes a state issue.
- MR. MCGILL: Did you have any
- additional testimony or questions?
- MR. ELCOATE: No.
- MR. JOHNSON: Just briefly -- and you
- explained about the indoor air samples and taking
- that same sample sub-slab below ground to determine

- what's in there, compare the two, and determine
- what's there from other sources. How many -- you
- 3 said New York and New Jersey both did it that way.
- 4 Are there other states that do it as well?
- MR. ELCOATE: We see it -- the people
- 6 that have been -- the consultants have been in the
- business awhile. Typically when they go indoor,
- 8 they want to take subsurface and ambient samples at
- 9 the same time, just because of the issue of
- 10 potential other sources when you take indoor air
- samples. We are seeing a lot more states go to use
- soil gas prescreening as the key decision whether to
- take indoor samples.
- MR. JOHNSON: Okay. Thanks.
- MR. ELCOATE: Okay.
- MR. MCGILL: Any additional questions
- 17 for Mr. Elcoate? Mr. Reott?
- MR. REOTT: I just wanted to clarify
- one thing. Your problem with the numbers is the
- soil gas numbness, is that right? It's not with the
- soil numbers or the groundwater numbers.
- MR. ELCOATE: No.
- MR. REOTT: Just the soil gas numbers?
- MR. ELCOATE: It's just a -- we have

- no issue with meeting them. We meet them very
- adequately. The issue is about how we're going to
- 3 be asked to report those numbers.
- 4 MR. REOTT: But you don't -- you're
- 5 concerned about the numbers being high, and
- 6 therefore you being under this pressure. This
- 7 exists for the soil gas numbers?
- MR. ELCOATE: Yes.
- 9 MR. REOTT: Okay. But it does not
- exist for the soil or groundwater numbers?
- MR. ELCOATE: Groundwater numbers are
- not an issue, no.
- MR. REOTT: And soil numbers are not
- 14 an issue?
- MR. ELCOATE: No.
- MR. REOTT: Okay.
- MR. MCGILL: Any additional questions
- 18 for this witness? Seeing none, thank you very much.
- MR. ELCOATE: Okay. Thank you.
- MR. MCGILL: Why don't we go off the
- 21 record for a moment.
- 22 (Whereupon, a discussion was had
- off the record.)
- MR. MCGILL: Just for the record, is

- there anyone else who wishes to testify or pose a
- question today? Seeing none, I'll just address a
- 3 couple procedural issues.
- 4 MR. JOHNSON: Gary wanted to --
- 5 MR. MCGILL: Oh, I'm sorry. You're
- 6 right. Two substantive things. Before we go to
- 7 those procedural items, Mr. King indicated he wanted
- 8 to provide some additional testimony, and Ms. Geving
- 9 has an additional exhibit. So Ms. Geving, I'll turn
- 10 it over to you.
- MS. GEVING: Okay. First of all,
- subsequent to the last sample I gave I just for
- illustrative purposes -- not that we are endorsing
- any products -- but I also have a sample of liquid
- boot 60 mil spray on membrane so the Board can see
- what it looks like. Any objections? And the sample
- is actually in this little envelope here, but you
- can have the entire pamphlet.
- MR. MCGILL: Okay. Thank you. Okay.
- 20 Any objection to entering this as a hearing exhibit?
- Seeing none, that will be hearing Exhibit 31.
- 22 And Mr. King, you had some
- 23 additional testimony?
- MR. KING: Yeah. I just wanted to

- 1 comment I could sense that from the questions and
- the statements that there was some discomfort that
- we don't have a tier one table for indoor care, and
- 4 I just wanted to come back to that point, and it's
- 5 kind of -- it's kind of a compliance, sort of,
- 6 notion.
- 7 The way we have set up the
- 8 proposal right now for tier one and tier two is that
- 9 you can demonstrate compliance with soil and
- 10 groundwater. If you're -- if you meet the numbers
- 11 for soil and groundwater, that would be a compliance
- determination, or you could meet the number for soil
- gas. And if you meet the number for soil gas, that
- trumps the soil and groundwater numbers. So if you
- meet the number for soil gas, you don't have to meet
- the number for soil and ground water. So that, kind
- of, alleviates some of the other concerns.
- 18 If you include a table for indoor
- 19 air, what would you then be seeing relative to a
- 20 compliance issue? Are we going to say that that
- indoor air trumps the soil gas number? Well, if
- it's not going to touch it, then what would be the
- point of having it. If it is going to trump it, now
- you've got -- now you've got a -- now you've got a

- table where we've talked about -- there's all sorts
- of uncertainties as to how you gather the
- information that leads to that indoor air number.
- 4 We've talked about false
- 5 positives, false negatives and the problems related
- 6 to those. We're trying to figure out whether
- 7 contamination that's in the soil and groundwater is
- going to be causing contamination to go into a
- 9 building. We're not trying to figure out whether
- contamination inside the building is causing
- problems in the building.
- You know, so that's why we have
- felt that looking at -- looking at the soil and
- groundwater and looking at soil gas, it's going to
- be the best way to do that. And if you -- if you
- want to go into an approach where you've got a tier
- one indoor air table, then it causes -- for us we
- see that it's causing all sorts of problems, as far
- as you make a -- how you're determining your
- 20 compliance issues, what's trumping what in the
- 21 course of things.
- Okay. So that was my comment on
- that. The other thing I just wanted to raise to the
- Board's attention is you probably want to be

- 1 tracking along. With regards to this proceeding,
- there's a House Bill 4021 passed out of the House
- Environment Committee on Wednesday, March 11th. It
- 4 was a unanimous vote. That bill is modifying the
- 5 underlying right to no legislation in the
- 6 Environmental Protection Act, and is modifying it by
- 7 expanding the legislation to account for vapor
- 8 intrusion. That bill does that by adding soil gas
- 9 contamination to the existing soil and groundwater
- 10 contamination terminology.
- So that's just something for, you
- 12 know, to track along as that moves forward in the
- 13 legislature.
- MR. MCGILL: Thank you.
- MR. KING: And that was all I had.
- MR. MCGILL: Thank you. Any
- 17 additional testimony or questions? Seeing none, now
- 18 I will move on to a few last procedural items before
- we adjourn. On February 23rd, 2009, the Agency
- filed a document with the Board entitled ASTMD,
- 21 1946-90 Standard Practice for Analysis of Reformed
- 22 Gas by Gas Chromatography, Reapproved 2006. The
- 23 Agency made a motion for relief from the service and
- full filing requirements. There's been no response

- 1 to that motion. Is there any objection to granting
- the Agency's motion? Seeing none, I grant that
- 3 motion.
- We had a discussion off the
- 5 record, and it was agreed that at this point the
- 6 best course of action would be to perceive with a
- 7 public comment in setting a pre-first notice public
- 8 filing deadline. To that end, anyone may file
- 9 written public comments on this rulemaking with the
- clerk of the Board up to at least 45 days after any
- first notice proposal is published in the Illinois
- 12 register.
- However, to ensure that your
- public comment is considered by the Board in any
- first notice decision, I'm setting a pre-first
- notice public comment filing deadline of May 29,
- 2009. Public comments may be filed with the clerk
- in paper or through the Board's web-based clerk's
- office on line. Please note that all filings with
- the clerk must also be served on a hearing officer
- 21 and all persons on the service list for this
- rulemaking. Copies of the transcript of today's
- hearing should be available on the Board's website
- 24 by March 27th, 2009.

Page 51 Are there any other matters that need to be addressed at this time? Seeing none, I'd like to thank everyone for participating today, and this hearing is adjourned. 

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