BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

IN THE MATTER OF:	)	
	)	R09-9
PROPOSED AMENDMENTS TO	)	(Rulemaking – Land)
TIERED APPROACH TO CORRECTIVE	)	
ACTION OBJECTIVES	)	
(35 Ill. Adm. Code 742)	)	
	)	

NOTICE

PLEASE TAKE NOTICE that on February 24, 2009, I filed the Testimony of Raymond T. Reott on recycled paper with the Office of the Clerk of the Illinois Pollution Control Board and a copy of which was mailed to the participants on the Service List.

Respectfully submitted,

By: _____
Raymond T. Reott

Raymond T. Reott
Becky J. Schanz
Reott Law Offices, LLC (#43415)
35 East Wacker Drive, Suite 650
Chicago, Illinois 60601
(312) 332-7544

Date: February 24, 2009

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

IN THE MATTER:	)	
	)	R09-9
PROPOSED AMENDMENTS TO	)	(Rulemaking-Land)
TIERED APPROACH TO CORRECTIVE	)	
ACTION OBJECTIVES	)	
(35 Ill. Adm. Code 742)	)	
	)	

TESTIMONY OF RAYMOND T. REOTT

I, Raymond T. Reott, being first duly sworn, submit the following testimony in the above rulemaking.

Background

I have been an environmental lawyer in Illinois for close to 30 years. I graduated from the University of Chicago Law School cum laude in 1980 where I also served on the law review. I thereafter clerked for Judge Richard Cudahy of the United States Court of Appeals for the Seventh Circuit. I then joined Jenner & Block where I was made a partner in 1987. I was a partner at Jenner & Block until 2002 when I left to found my own firm.

My practice is national in scope and includes advising clients about cleanup related issues across the country. As a result, I am familiar with the programs in place in several other states as well as the Illinois programs that use the Tiered Approach to Corrective Action Objectives ("TACO") regulations that are the subject of this rulemaking.

With regard to those rules, I was an active participant in the original TACO rulemaking. I was one of two witnesses to testify in opposition to the Illinois EPA's original 1994 TACO proposal which the Board rejected. I also testified two additional times in the TACO rulemaking before the Board ultimately adopted the TACO rules with the improvements added by the Illinois EPA in its second and third proposals.

At the time of their adoption, the Illinois TACO regulations represented the most advanced thinking on this topic being employed in any of the 50 states. Since that time, Illinois has reaped the benefit of having a cleanup system focused on the real risk to people present on a property as opposed to more theoretical concerns. The TACO rules have worked well because they are a model of predictability, flexibility, and can be applied in a timely fashion to get a rational evaluation of the actual risk posed by contamination found on a given piece of property.

This success obviously did not occur by accident. The General Assembly had directed the Illinois EPA and the Board to develop a risk-based cleanup objective system based upon the risks posed by contaminated sites to human health. (415 ILCS 5/58 (1)) (See also Procedural History, p.1, April 17, 1997 Opinion & Order of the Board, IPCB

Rulemaking R97-12(A); August 6, 2008 Statement of Reasons, p.1, IPCB Rulemaking R09-9).

The present TACO system has a fairly conservative set of Tier 1 values for contaminants of concern. The system also allows for various adjustments to those conservative values by excluding pathways where engineered barriers and institutional controls render a particular pathway unlikely to pose a risk to human health or by recalculation of the cleanup standards using more site specific data. In addition, although costly, responsible parties can use more site specific data to develop alternative Tier 2 or Tier 3 remedial objectives.

As in 1994, however, in this rulemaking, the Illinois EPA has proposed changes to the Tier 1 values that are so conservative that the changes will greatly increase the costs experienced by property owners, municipalities, and others across Illinois.

Overly conservative Tier 1 values have an impact far beyond the number of sites processed by the Illinois EPA that used those values. For every site that participates in an agency supervised cleanup process, there are literally tens if not hundreds of sites that are evaluated and remediated based upon those Tier 1 numbers without any agency involvement. The TACO system works well in particular because it is so predictable that private parties can apply it in a transactional context without requiring agency oversight. Thus, while Illinois has issued over 2,600 NFR letters since 1996 based upon the TACO values, far more sites have been remediated and evaluated based upon those numbers without any agency involvement.

For this reason, overly conservative Tier 1 values that do not reflect actual risk to people (as directed by the General Assembly) create costs which cannot be addressed simply by having parties resort to Tier 2 or Tier 3 analysis. There are additional costs simply to do the Tier 2 or Tier 3 analysis. More importantly, however, the ambiguities in the agency's proposal for how to do that analysis in a soil gas/indoor inhalation context will make it unfortunately necessary that more and more sites enroll in state programs to develop a reliable analysis of the actual risk posed by contamination at the site.

Impact of the Proposed Tier 1 Standards

I have prepared a series of charts that are attached that help illustrate the significant impact of the proposed indoor inhalation standards. Although the Illinois proposal focuses on 59 volatile chemicals, those chemicals include the most commonly encountered chemicals which pose significant cleanup issues at sites in Illinois. These are the chemicals present in leaking from underground storage tanks at gas stations (benzene, ethylbenzene, toluene, xylene and MTBE), and the types of chlorinated solvents found at many industrial sites, as well as typical dry cleaner remediation sites. Finally, the agency's proposal would change the standards for mercury and naphthalene which are found at a variety of different types of sites.

In the present TACO regulations, if all of the pathways are appropriately invoked for the site, the soil cleanup standards for most of the common contaminants are usually determined by the soil migration to groundwater component. Generally, these values are the lowest of the various pathways and will drive soil cleanup decisions for the site.

For most of the Illinois population, however, and all of its large urban areas, the relevant communities have long ago adopted ordinances approved by Illinois EPA that prohibit the use of groundwater for drinking water purposes. Thus, in Cook County, Springfield, Peoria, Rockford, Champaign, Urbana, Naperville, Aurora, and other urban areas across the state, the migration to groundwater pathway does not need to be considered because of the use of an approved local municipal ordinance as an institutional control. In these circumstances, the appropriate cleanup standard for most sites for soils are substantially different. While it is difficult to generalize, the soil cleanup standards are controlled by the lowest of either the ingestion or outdoor inhalation pathway that would be appropriate for the site given the location of the contamination. In these large urban settings, where many contamination problems are found, the Illinois EPA's proposal will create a roughly ten fold increase in the severity of the residential cleanup standards.

As you can see from the attached exhibits, the soil cleanup standards for benzene currently are 12mg/kg for ingestion and 0.8 mg/kg for outdoor inhalation. Under the proposal, the new residential soil standard for benzene for indoor inhalation is 0.069 mg/kg, a 12 fold increase in severity. In addition, industrial or commercial soil standards also increase although generally by lower amounts. For example, the current standards for toluene are 160,000 mg/kg for ingestion and 580 mg/kg for outdoor inhalation. The proposed standards require 240 mg/kg as the soil objective. Because the Illinois EPA's proposal relates to the class of compounds that are volatile in nature, the impact will be felt by leaking underground storage tanks sites, dry cleaners, industrial solvent users, and any sites with naphthalene or mercury as problem contaminants.

For these communities with groundwater ordinances, there are an even more significant difference in the groundwater standards. At these sites, the current groundwater standards (for problems contained on the site) have little practical effect. Under the proposed regulations, all of these sites will have to meet new groundwater standards even if a local ordinance prohibits use of the groundwater.

For communities which do not have a groundwater ordinance, there are some contaminants where the proposed change in standards will still be significant. For example, the soil value for xylene will go from 200 mg/kg to 63 mg/kg. The value for carbon tetrachloride will go from .071 mg/kg to .021 mg/kg. While less significant than the changes in values for communities with an existing groundwater ordinance, even in the remainder of Illinois, the proposed soil standards will require additional investigation at additional sites.

Of course, if there was a real risk to be addressed, it would be appropriate for the Board to tighten the cleanup standards by whatever degree was necessary. The Board should be mindful, however, that its direction in this area from the General Assembly is to set up a

cleanup standard system that reflects actual risk to human health, not theoretical risk. (415 ILCS 5/58 (1)).

Lack of Model Calibration

The agency's proposal lacks any attempt to correlate the proposed model with the actual conditions found at Illinois sites. I have not reviewed everything that the agency has cited in its testimony but I have not found any example yet of any attempt to correlate the predicted values using the proposed model to actual site conditions in actual buildings in Illinois.

To the contrary, I believe that there is substantial critical analysis available, including from USEPA, demonstrating that the proposed model should not be used in many of the contexts for which the agency is submitting its use to the Board. The proposed model is several orders of magnitude more conservative than the actual field data at numerous site studies around the country because of synergistic effects in the model assumptions. (USEPA, Sept. 2005, J. Weaver and F. Tillman, Uncertainty and the Johnson-Ettinger Model for Vapor Intrusion Calculations, p.31; USEPA, Sept. 2005, F. Tillman and J. Weaver, Review of Recent Research on Vapor Intrusion, pp. 17-23 (Comparing actual field data compared to model predictions at several sites)). Further, the USEPA states that the Johnson and Ettinger model only should be used where "site conditions match the model assumptions using reasonable, site-specific, or regulator-approved input." (USEPA, March 2008, "Brownfield's Technology Primer: Vapor Intrusion Consideration for Redevelopment") (In Illinois EPA's previously submitted reports). The USEPA specifically has stated that the model proposed here should not be used for underground storage tank sites. (Uncertainty at p.1; User Guide for Evaluating Subsurface Vapor Intrusion into Buildings (USEPA 2004) at p. 67 ("EPA is not recommending that the J & E model be used for sites contaminated with petroleum products if the products were derived from Underground Storage Tanks.")).

Consequently, I urge the Board to proceed cautiously with the Illinois EPA's proposal. The proposal requires far more support in the record before the Board and consideration before it or anything similar is adopted. The Board is faced with a significant change to the Illinois cleanup program without an adequate assessment of the likely cost of that adjustment, its potential impact, or the actual ability of the proposed model to predict real world conditions in Illinois.

How to Improve the Proposed Model

The Johnson and Ettinger model could be improved by making it more representative of expected conditions in Illinois. The Illinois EPA already has adjusted the model by altering the temperature value in the model to reflect Illinois. The agency should at least provide the Board with an alternative version of the resulting Tier 1 table that reflects more representative Illinois conditions. In the testimony submitted so far, the agency acknowledges that it has chosen sand as a default geologic strata between the source of

contamination and the building. (Nov. 14, 2008 Pre-Filed Testimony of Gary King, p.9, IPCB Rulemaking R09-9).

Sand is not a typical Illinois soil type. According to the soil bulletin, it represents less than 10% of Illinois soils. (Soils of Illinois, University of Illinois, Bulletin 778 (1984)). We have a state soil, the drummer soil, the most extensive soil in Illinois, that is highly organic and far less permeable than sand. The agency's witnesses already have acknowledged that the carbon content of the soil is a variable on which the model is highly sensitive. (Nov. 14, 2008 Pre-Filed Testimony of Gary King, p.14, IPCB Rulemaking R09-9). Even a modest adjustment to reflect more typical soil types in Illinois would significantly change the proposed Tier 1 cleanup standards. At a minimum, the Illinois EPA should attempt to educate the Board further about what the Tier 1 table would look like in the event that the Board made such a change. Perhaps the state geologist or state soil scientist should be called to testify to help provide the Board with a basis for picking a representative soil type for the purposes of the Tier 1 TACO calculations.

The model makes similarly conservative assumptions about soil porosity and soil water content. The values chosen are not reflective of typical Illinois soils and would appear at first glance to significantly drive the model towards overly conservative conclusions for Tier 1 values.

In related rulemakings, the Board already has recognized the appropriateness of using Illinois specific geologic information to guide cleanup decisions. In the old Part 732 rules related to UST cleanups, the Board specifically endorsed a system where the appropriate cleanup process was driven in large part by the classification of the soils in the now famous Berg map for Illinois. The Berg map illustrated the likelihood of aquifer contamination at various sites across Illinois based upon local soil types. Some portions of the state were in categories requiring less significant cleanup simply because the soil at the sites had typical Illinois high carbon content. For other parts of the state with sandy soils or fracture geology, the risks were perceived to be greater and the Board adopted rules requiring the parties to address the contaminants. A similar approach could be taken here which coordinates the risk of indoor inhalation issues with the actual underlying geology of that portion of Illinois.

The agency's model, as proposed, does not include any adjustment for the depth between the building and the source of contamination. This counter-intuitive decision overlooks the position that this Board already has taken in the TACO rules. In the outdoor inhalation context, the Board already has adopted regulations which provide that contamination more than ten feet below the surface essentially need not be considered if the surficial soils meet the TACO standards. 35 Ill. Adm. Code 742 §1105(c)(3)(C)(iii). As long as the property owner maintains the clean surficial soils above the source of contamination, the property owner may exclude the outdoor inhalation pathway from consideration. 35 Ill. Adm. Code 742 §1105(c)(3)(C)(iii). Why then should the Board adopt a model in which the distance between the source of contamination and the surface

is irrelevant for an indoor inhalation pathway when it already has taken a different position in the TACO rules for the outdoor inhalation pathway?

The Illinois EPA's proposal also is significantly influenced by the agency's assumptions about the size of the typical residential and industrial buildings that might be affected by any indoor inhalation pathway issues. The agency has offered no basis for its assessment of the typical size of a residential structure in Illinois or a typical commercial structure. The sizes chosen, about 1089 square feet (33 ft. x 33 ft. x 8 ft) for residential structure and about 4356 square feet (66 ft. x 66 ft. x 10 ft.) for industrial structures, do not seem to be representative sizes.

For example, the US Census Bureau found the median square footage for housing units in the Chicago Metropolitan area to be 2017 square feet. (American Housing Survey for the Chicago Metropolitan Area in 2003, Table 1-3, www.census.gov/prod/2004pubs/h170-03-22.pdf). Further, this did not include cooperatives or condominiums, which would inevitably increase this number. One of the pre-filed questions states that industrial users tend to have buildings that are 250,000 square feet (500ft x 500ft x 25ft). (Illinois EPA's Responses to Pre-Filed Questions, p.3-4, January 13, 2009, IPCB Rulemaking R09-9). Based on this testimony, the current typical building size for industrial buildings is drastically too small.

How to Establish Compliance

The Illinois EPA has offered a variety of reasons for why the testing for indoor quality is problematic. There are numerous reasons why indoor testing may detect contaminants which have indoor sources unrelated to the subsurface contamination. The agency has acknowledged, however, that indoor testing under representative conditions which finds an absence of the contaminants at levels of concern should be relied upon. (Transcript of Proceedings held on January 27, 2009, pp. 96-96, IPCB Rulemaking R09-9). Indeed, given the overly conservative nature of the model, many property owners will need quickly to test indoor air quality to avoid a variety of tort type claims once they exceed the Tier 1 standards. Negative indoor air tests under representative conditions should be a presently conservative absolute defense to the indoor inhalation pathway as it provides actual data showing the absence of any risk which ought always to trump a theoretical concern driven by a model unproven in Illinois.

Adverse Effect on Building Cost and Energy Efficiency

Overly conservative Tier 1 values also could cause environmental harm. Many of the proposed Building Control Technologies (Illinois EPA's Proposed Amendments, 35 Ill. Adm.Code §§742.1200, 742.1205, 742.1210) will undermine efforts to reduce energy usage. Every building that adds a Building Control Technology will cost more and be less energy efficient, a result that should be avoided unless the Building Control Technology addresses a real risk, not just a projected but overly conservative assessment of risk.

Existing NFR Letters

Finally, there is the whole question of the impact of the proposed rulemaking on the sites which already have obtained NFR letters from Illinois. The TACO program is a mature program operating in largely the same manner for more than a decade. At present, Illinois EPA has issued over 2,600 NFR letters, many of which are in the City of Chicago where the proposed change in standards will have the greatest effect. While the agency maintains that it will not be its practice to reopen those letters in the absence of new information, its response does not explain whether new soil gas data or the evaluation of old data in light of the new standards will itself trigger the reopening of old NFR letters.

More importantly, however, even if the agency does not reopen the NFR letters on its own, the parties in commercial transactions will often do so. Especially in the current lending climate, lenders likely will insist that property buyers supply new NFR letters addressing the indoor inhalation pathway if there is any chance that the pathway poses an additional risk to the lender's collateral. In this way, as properties change hands, they will all be reevaluated and all of the NFR letters involved for those sites will essentially be reopened through new testing, new analysis, and new submissions to Illinois EPA seeking additional NFR letters.

All of this will come at a significant and likely unnecessary cost, driven in the first instance by the overly conservative Tier 1 values. Realistic values would limit the number of sites that would need to be reopened and allow the public and the Illinois EPA to focus their attention on the sites that truly matter.

Conclusion

Indoor inhalation of contaminants from underlining soil and groundwater contamination can be a serious problem. We are all familiar with the travails of the residents of Hartford, Illinois who have lived for years with the effects of gasoline vapors in their homes. This serious problem is atypical, however, and can be readily dealt with by the existing regulatory mechanisms. It does not take a new set of overly rigorous indoor inhalation standards to enable the agency to drive those types of sites towards appropriate risk-based remediation. Here, the Board should adopt only regulations shown to be based on actual risk to human health, consistent with the General Assembly's mandate.

Raymond T. Reott

Raymond T. Reott

SUBSCRIBED AND SWORN TO
Before me this 24th day of
February, 2009.

Patricia K Schellhase
NOTARY PUBLIC

OFFICIAL SEAL
PATRICIA K SCHELLHASE
NOTARY PUBLIC - STATE OF ILLINOIS
MY COMMISSION EXPIRES 09/25/10

Comparison of Existing and Proposed TACO Standards (02/19/09)
For Industrial/Commercial Property in Communities With an Approved
Groundwater Use Institutional Control Ordinance

Existing TACO Objectives*			Illinois EPA Proposed Objectives in R9-09 for Indoor Inhalation****		Existing TACO Objectives*
Chemical	**Ingestion (Soil) (mg/kg) ****	**Outdoor Inhalation (Soil) (mg/kg) ****	**Soil (mg/kg)**	**GW (mg/l)**	**Class I GW (mg/l) *****
Benzene	100	1.5	0.51	2.4	0.005
Ethylbenzene	200,000	350	130	170	0.7
MTBE	20,000	8,400	6,300	51,000	0.07
Toluene	160,000	580	240	530	1.0
Xylenes (Total)	410,000	280	100	110	10.0
Carbon Tetrachloride	44	0.68	0.15	0.27	0.005
Chloroform	180	0.58	0.2	1	0.07
Trans-1,2-dichloroethylene	41,000	230	63	280	0.1
Methylene Chloride	760	25	10	80	0.005
Tetrachloroethylene	11	3.8	1.7	1.4	0.005
1,1 DCA	410,000	1,700	670	3,800	1.4
1,1 DCE	100,000	450	77	260	0.007
1,1,1 TCA	1,000,000	1,300	560	1,300	0.2
TCE	440	6.3	1.9	6	0.005
Vinyl Chloride	8	1.1	0.15	0.64	0.002
Naphthalene	41,000	140	34	31	0.14
Mercury	610	3.1	0.45	0.06	0.002

Footnotes

* The existing objectives assume the adoption of the changes proposed in R9-09 based on updated toxicity data and similar adjustments.

** The existing soil standards are from Section 742. Appendix B, Table B as modified by the Illinois EPA R9-09 Proposal.

*** The existing groundwater standards are from Section 742. Appendix B, Table E as modified by the Illinois EPA R9-09 Proposal.

**** The Illinois EPA's proposed Indoor Inhalation standards are from Section 742. Appendix B, Table G.

Comparison of Existing and Proposed TACO Standards (02/19/09)
For Industrial/Commercial Property in Communities without an Approved
Groundwater Use Institutional Control Ordinance

Existing TACO Objectives*				Illinois EPA Proposed Objectives in R9-09 for Indoor Inhalation****		Existing TACO Objectives*
Chemical	**Ingestion (Soil) (mg/kg) ****	**Outdoor Inhalation (Soil) (mg/kg) ****	**Migration to Class I GW (mg/kg) (Soil) ****	**Soil (mg/kg)**	**GW (mg/l)**	**Class I GW (mg/l) *****
Benzene	100	1.5	0.032	0.51	2.4	0.005
Ethylbenzene	200,000	350	12	130	170	0.7
MTBE	20,000	8,400	0.31	6,300	51,000	0.07
Toluene	160,000	580	11	240	530	1.0
Xylenes (Total)	410,000	280	200	100	110	10.0
Carbon Tetrachloride	44	0.68	0.071	0.15	0.27	0.005
Chloroform	180	0.58	0.44	0.2	1	0.07
trans-1,2-dichloroethylene	41,000	230	0.67	63	280	0.1
Methylene Chloride	760	25	0.023	10	80	0.005
Tetrachloroethylene	11	3.8	0.15	1.7	1.4	0.005
1,1 DCA	410,000	1,700	8	670	3,800	1.4
1,1 DCE	100,000	450	0.055	77	260	0.007
1,1,1 TCA	1,000,000	1,300	2	560	1,300	0.2
TCE	440	6.3	0.044	1.9	6	0.005
Vinyl Chloride	8	1.1	0.013	0.15	0.64	0.002
Naphthalene	41,000	140	3.4	34	31	0.14
Mercury	610	3.1	0.002	0.45	0.06	0.002

Footnotes

* The existing objectives assume the adoption of the changes proposed in R9-09 based on updated toxicity data and similar adjustments.

** The existing soil standards are from Section 742. Appendix B, Table B as modified by the Illinois EPA R9-09 Proposal.

*** The existing groundwater standards are from Section 742. Appendix B, Table E as modified by the Illinois EPA R9-09 Proposal.

**** The Illinois EPA's proposed Indoor Inhalation standards are from Section 742. Appendix B, Table G.

Comparison of Existing and Proposed TACO Standards (02/19/09)
For Residential Property in Communities With an Approved
Groundwater Use Institutional Control Ordinance

Existing TACO Objectives*			Illinois EPA Proposed Objectives in R9-09 for Indoor Inhalation****		Existing TACO Objectives*
Chemical	**Ingestion (Soil) (mg/kg) ****	**Outdoor Inhalation (Soil) (mg/kg) ****	**Soil (mg/kg)**	**GW (mg/l)**	**Class I GW (mg/l) *****
Benzene	12	0.8	0.069	0.36	0.005
Ethylbenzene	7,800	350	130	170	0.7
MTBE	780	8,400	2,900	24,000	0.07
Toluene	6,300	580	240	530	1.0
Xylenes (Total)	16,000	280	63	80	10.0
Carbon Tetrachloride	4.9	0.36	0.021	0.041	0.005
Chloroform	21	0.31	0.028	0.15	0.07
trans-1,2-dichloroethylene	1600	140	10	50	0.1
Methylene Chloride	85	13	1.4	11	0.005
Tetrachloroethylene	1.2	2	0.24	0.21	0.005
1,1 DCA	16,000	1,300	110	660	1.4
1,1 DCE	3,900	280	13	49	0.007
1,1,1 TCA	160,000	1,300	560	1,300	0.2
TCE	49	3.3	0.26	0.89	0.005
Vinyl Chloride	0.43	0.28	0.011	0.05	0.002
Naphthalene	1,600	89	34	31	0.14
Mercury	24	3.1	0.45	0.06	0.002

Footnotes

* The existing objectives assume the adoption of the changes proposed in R9-09 based on updated toxicity data and similar adjustments.

** The existing soil standards are from Section 742. Appendix B, Table A as modified by the Illinois EPA R9-09 Proposal.

*** The existing groundwater standards are from Section 742. Appendix B, Table E as modified by the Illinois EPA R9-09 Proposal.

**** The Illinois EPA's proposed Indoor Inhalation standards are from Section 742. Appendix B, Table G.

Comparison of Existing and Proposed TACO Standards (02/03/09)
For Residential Property in Communities without an Approved
Groundwater Use Institutional Control Ordinance

Existing TACO Objectives*				Illinois EPA Proposed Objectives in R9-09 for Indoor Inhalation****		Existing TACO Objectives*
Chemical	**Ingestion (Soil) (mg/kg) ****	**Outdoor Inhalation (Soil) (mg/kg) ****	**Migration to Class I GW (mg/kg) (Soil) ****	**Soil (mg/kg)**	**GW (mg/l)**	**Class I GW (mg/l) *****
Benzene	12	0.8	0.032	0.069	0.36	0.005
Ethylbenzene	7,800	350	12	130	170	0.7
MTBE	780	8,400	0.31	2,900	24,000	0.07
Toluene	6,300	580	11	240	530	1.0
Xylenes (Total)	16,000	280	200	63	80	10.0
Carbon Tetrachloride	4.9	0.36	0.071	0.021	0.041	0.005
Chloroform	21	0.31	0.44	0.028	0.15	0.07
trans-1,2-dichloroethylene	1600	140	0.67	10	50	0.1
Methylene Chloride	85	13	0.023	1.4	11	0.005
Tetrachloroethylene	1.2	2	0.15	0.24	0.21	0.005
1,1 DCA	16,000	1,300	8	110	660	1.4
1,1 DCE	3,900	280	0.055	13	49	0.007
1,1,1 TCA	160,000	1,300	2	560	1,300	0.2
TCE	49	3.3	0.044	0.26	0.89	0.005
Vinyl Chloride	0.43	0.28	0.013	0.011	0.05	0.002
Naphthalene	1,600	89	3.4	34	31	0.14
Mercury	24	3.1	0.002	0.45	0.06	0.002

Footnotes

* The existing objectives assume the adoption of the changes proposed in R9-09 based on updated toxicity data and similar adjustments.

** The existing soil standards are from Section 742. Appendix B, Table A as modified by the Illinois EPA R9-09 Proposal.

*** The existing groundwater standards are from Section 742. Appendix B, Table E as modified by the Illinois EPA R9-09 Proposal.

**** The Illinois EPA's proposed Indoor Inhalation standards are from Section 742. Appendix B, Table G.

Certificate of Service

I, Raymond T. Reott, certify that I served the participants on the attached service list with a copy of the Testimony of Raymond T. Reott by US mail on February 24, 2009:

Raymond T. Reott

Party Name	Role	City & State	Phone/Fax
Illinois Environmental Protection Agency Interested Party Kimberly A. Geving, Assistant Counsel Annet Godiksen, Legal Counsel	1021 North Grand Avenue East P.O. Box 19276	Springfield IL 62794-9276	217/782-5544 217/782-9807
IEPA Petitioner Kimberly A.Geving, Assistant Counsel	1021 North Grand Avenue East P.O. Box 19276	Springfield IL 62794-9276	217/782-5544 217/782-9807
Hodge Dwyer Zeman Complainant Katherine D. Hodge Monica T. Rios	3150 Roland Avenue Post Office Box 5776	Springfield IL 62705-5776	217/523-4900 217/523-4948
EPI Interested Party Bob Mankowski	16650 South Canal	South Holland IL 60473	
Chemical Industry Council of Illinois Interested Party Lisa Frede	1400 East Touhy Avenue Suite 100	DesPlaines IL 60019-3338	
Bellande & Sargis Law Group, LLP Interested Party Mark Robert Sargis	19 South LaSalle Street Suite 1203	Chicago IL 60603	312/853-8701 312/853-8702
Hanson Engineers, Inc. Interested Party Tracy Lundein	1525 South Sixth Street	Springfield IL 62703-2886	217/788-2450 217/788-2503
Conestoga-Rovers & Associates Interested Party Douglas G. Soutter	8615 West Bryn Mawr Avenue	Chicago IL 60631	773/380-9933 773/380-6421
Office of the Attorney General Interested Party Matthew J. Dunn, Division Chief	Environmental Bureau 69 W. Washington, 18th Floor	Chicago IL 60602	312/814-0660 312/814-2347
Navy Facilities and Engineering Command Interested Party Mark Schultz, Regional Environmental Coordinator	201 Decatur Avenue Building 1A	Great Lakes IL 60088-2801	847/688-2600 847/688-2319
Illinois Pollution Control Board Interested Party Dorothy M. Gunn, Clerk of the Board	100 W. Randolph St. Suite 11-500	Chicago IL 60601	312/814-3620 312/814-3669

Richard McGill, Hearing Officer			
Commonwealth Edison Interested Party Diane H. Richardson	10 South Dearborn Street 35FNW	Chicago IL 60603	
Clayton Group Services Interested Party Monte Nienkerk	3140 Finley Road	Downers Grove IL 60515	
Weaver Boos & Gordon Interested Party Elizabeth Steinhour	2021 Timberbrook Lane	Springfield IL 62702	
Andrews Environmental Engineering Interested Party Kenneth W. Liss	3300 Ginger Creek Drive	Springfield IL 62711	
Graef Anhalt Schloemer & Associates, Inc. Interested Party Dr. Douglas C. Hambley, P.E., P.G.	8501 West Higgins Road Suite 280	Chicago IL 60631-2801	
Missman Stanley & Associates Interested Party John W. Hochwarter Jeffrey Larson	333 East State Street	Rockford IL 61110-0827	
Trivedi Associates, Inc. Interested Party Chetan Trivedi	2055 Steeplebrook Court	Naperville IL 60565	
Illinois Department of Natural Resources Interested Party Stan Yonkauski William Richardson, Chief Legal Counsel	One Natural Resources Way	Springfield IL 62702-1271	217/782-1809 217/524-9640
Suburban Laboratories, Inc. Interested Party Jarrett Thomas, V.P.	4140 Litt Drive	Hillside IL 60162	708-544-3260
Illinois Department of Transportation Interested Party Steven Gobelman	2300 S. Dirksen Parkway Room 302	Springfield IL 62764	
McGuire Woods LLP Interested Party David Rieser	77 W. Wacker Suite 4100	Chicago IL 60601	312/849-8100
Reott Law Offices, LLC Interested Party Raymond T. Reott Jorge T. Mihalopoulos	35 East Wacker Drive Suite 650	Chicago IL 60601	312/332-7544
Environmental Management & Technologies, Inc. Interested Party Craig Gocker, President	2012 W. College Avenue Suite 208	Normal IL 61761	309/454-1717
IL Environmental Regulatory Group Interested Party	215 East Adams Street	Springfield IL 62701	217/522-5512 217/522-

			5518
Alec M. Davis			
Chicago Department of Law Interested Party	30 N. LaSalle Street Suite 900	Chicago IL 60602	312/742-3990 312/744-6798
Charles A. King, Assistant Corporation Counsel			
SRAC Interested Party	2510 Brooks Drive	Decatur IL 62521	
Harry Walton			
Burns & McDonnell Engineering Company, Inc. Interested Party	210 South Clark Street, Suite 2235 The Clark Adams Building	Chicago IL 60603	6306751625
Lawrence L. Fieber, Principal			

Total number of participants: 34