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TOXIC INDOOR AIR: COMMERCIAL REAL ESTATE TRANSACTIONS MAY BE HAZARDOUS TO YOUR (FISCAL) HEALTH

I. INTRODUCTION

Individuals and legislators are demanding cleaner environments, as society becomes increasingly aware of the multitude of environmental and human illnesses and injuries caused by chemical degradation of the land, air, and water. Legislation, as evidenced by recent legislation, recognizes that strict financial responsibility is a powerful incentive for users of commercial real property and their lenders to make dutiful and thorough inspections of their sites for hazardous substances to avoid endangering occupants and becoming involved in costly litigation. The federal government has begun to take an active role in funding cleanup efforts and allocating financial responsibility on a no-fault basis in the area of toxic waste. Additionally, a litigious citizenry has evolved which is more likely to take legal action to recover for exposure to health-threatening contaminants, reimbursement of remediation costs, loss of property value, or to rescind contracts which pass to them the burden of dealing with the contamination.


2. See CERCLA and SARA, supra note 1.


5. See infra notes 88-98, 168-72 and accompanying text.

6. See infra notes 99-100 and accompanying text.

7. See infra note 101 and accompanying text.
In commercial real estate, discovery of environmental liabilities can be financially devastating. Decreased property values, inability to lease or sell, tort claims by injured persons, response costs (including cleanup, mitigation, and containment), and legal fees can bankrupt an otherwise fiscally sound building owner. The broker of the sale or lease of an environmentally impaired property becomes susceptible to suit. Further, the abandonment of these diseased buildings by those unable to afford remediation leaves a lender with problem properties through bankruptcy or foreclosure.

While congressional efforts to preserve the health of the earth and its inhabitants mark a governmental awareness of the general problem of pollution, the fact that dangerous environmental conditions exist within the confines of buildings, where most people spend ninety percent of their lives, has been virtually ignored by the statutes. Indoor air contamination is widely recognized as a serious threat to public health. As information becomes publicly available and lawsuits become more prevalent, parties involved in real estate transactions must become cognizant of the ramifications of various environmental statutes and common law torts which can be extended to address the issue of indoor air pollution.

The potpourri of congressional and judicial actions, which now regulate or may be extended to regulate the quality of indoor air in the commercial setting, directly and indirectly affect the parties to a real estate transaction. The uneven application of existing environmental statutes to the problem of indoor air contamination necessitates more focused regulation to protect inhabitants of commercial buildings and to establish definite standards to which a building owner must conform and upon which a purchaser may rely in making financial and management decisions. Awareness, coupled with affirmative action, would reduce the possibility of owners, brokers, and lenders becoming entangled in litigation stemming from indoor air pollution.

8. See infra notes 68-87 and accompanying text.
9. See infra note 179.
10. See supra note 1.
12. The federal government has spent approximately six dollars per person per year on outdoor air quality research, yet only six cents per person per year has been spent researching pollution of indoor air. Indoor Air Pollution: The Complete Resource Guide, Spec. Rep. (BNA), at I-12 (1988) [hereinafter BNA Spec. Rep.].
13. Id. at I-7.
II. TYPES OF INDOOR AIR CONTAMINANTS

Indoor air pollution assumes many guises and produces a range of health effects, from merely annoying to life threatening. Of particular concern are the known carcinogens: radon, asbestos, and formaldehyde. In addition, many other chemicals, organisms, and concentrations of elements are recognized as unhealthy to the respiratory system. Biological contaminants, such as disease-causing viruses and bacteria, can breed and be distributed through the air. The structural problem known as the “tight or sick building” is another cause of atmospheric putrefication.

A. Radon and “Radon Daughters”

Radon is an odorless radioactive gas released in the decay of uranium and radium, solid radioactive substances. Radon further decays to produce what are known as “progeny” or “radon daughters.” This emission attaches itself to particles in the air and poses a serious threat to health when inhaled.

Uranium and radium exist in most rock and soil in varying concentrations. In some regions of the country, high incidents of naturally occurring radioactive rock formations have been found. Thus, those

15. See infra notes 21-30 and accompanying text.
16. See infra notes 39-51 and accompanying text.
17. See infra notes 31-38 and accompanying text.
19. See infra notes 52-57 and accompanying text.
20. See infra notes 58-64 and accompanying text.
22. Radon is an inert gas. After inhalation of radon-laden particles of dust, the breaking down process emits alpha particles at high speeds within the lungs, causing damage. Samet, Marbury & Spengler, Health Effects and Sources of Indoor Air Pollution, Part II, 137 AM. REV. RESPIRATORY DISEASES 221, 232 (1988).
23. Id.
buildings constructed on sites with high levels of these elements may encounter seepage of the decay products into the indoor atmosphere through cracks in walls, floors, or through the building’s water supply, if the water flows through such rock or soil.\textsuperscript{25} Building materials in the form of brick or concrete may also contain radon-releasing material.\textsuperscript{26} Additionally, the dumping of uranium waste products\textsuperscript{27} has caused alarmingly high readings of radon in certain regions of the country.

The Environmental Protection Agency (EPA) ranks radon emission as the greatest environmental cause of lung cancer.\textsuperscript{28} No other health effects have been discovered. Prolonged exposure to radon in the smallest concentrations (i.e., in quantities within EPA guidelines)\textsuperscript{29} increases the risk of contracting lung cancer one to five percent—the equivalent of smoking approximately one-half pack of cigarettes per day.\textsuperscript{30} Because no safe or “zero risk” level can be established, the presence of any amount of radon in a building is a potential health threat.

B. Formaldehyde

Formaldehyde is a “colorless volatile gas with a characteristic odor... highly soluble in water and thus irritating to the mucous membranes of the eyes and upper respiratory tract.”\textsuperscript{31} It is commonly discovered in

\textsuperscript{25} Kass & Gerrard, \textit{supra} note 24, at 2, col. 2. One study rejects the presumption that inhabitants of upper stories of a high-rise building are not exposed to radon in the same concentrations as those on lower floors. Kirsch, \textit{supra} note 21, at 346 n.44.

\textsuperscript{26} Kass & Gerrard, \textit{supra} note 24, at 2, col. 2.

\textsuperscript{27} The builders in the town of Grand Junction, Colorado made extensive use of free uranium mill tailings, from a uranium processing plant located there, as landfill in constructing public and private buildings. See Robles v. EPA, 484 F.2d 843 (4th Cir. 1973). \textit{See also} Brafford v. Susquehanna Corp., 586 F. Supp. 14 (D. Colo. 1984), where plaintiffs were exposed to high levels of radiation emitted from the tailings nestled around the foundation of their home.

\textsuperscript{28} An EPA estimate places radon as the suspected cause of up to 20,000 lung cancer deaths per year. \textit{Senate Approves Radon Control Bill; Combines Several Members' Approaches}, 18 Env't Rep. (BNA) No.12, at 822 (July 17, 1987). The National Research Council of the National Academy of Sciences estimates the number of lung cancer deaths caused by radon exposure at 13,000. BNA Spec. Rep., \textit{supra} note 12, at I-11.

\textsuperscript{29} Presently EPA guidelines permit levels of four pico Curies per liter (pCi/l). Diamond, \textit{supra} note 14, at 82. No level of exposure has been determined which can be proven to impose no risk to health. Kass & Gerrard, \textit{supra} note 24, at 2, col. 4.

\textsuperscript{30} Diamond, \textit{supra} note 14, at 82. Initial public awareness that these invisible radioactive particles existed in the indoor atmosphere of certain buildings arose when a worker in a nuclear power plant began setting off radiation alarms on his way into the plant. An investigation revealed that the worker's house was radon-infested as a result of the natural radon content of the subsurface, and his exposure placed him at the same level of risk of developing lung cancer as one who smoked “hundreds of packs of cigarettes per day.” Kass & Gerrard, \textit{supra} note 24, at 2, col. 2.

\textsuperscript{31} Samet, Marbury & Spengler, \textit{supra} note 22, at 223.
the commercial office building setting\textsuperscript{32} and in buildings in which urea formaldehyde foam insulation (UFFI) is present.\textsuperscript{33} It is also a product of combustion.\textsuperscript{34} The move toward energy efficiency during the oil crisis of the 1970's exacerbated the problem of formaldehyde contamination in two ways. First, buildings were constructed to reduce the loss of heat and cooling in ventilation. Any formaldehyde that might have been dispersed and diluted through the ventilation process is now trapped and concentrated. Secondly, the effort to achieve energy savings spurred the greater use of insulation, including UFFI.\textsuperscript{35}

Because individual sensitivities to formaldehyde vary, the range of illnesses connected with various exposures is wide. Some studies have demonstrated "a positive association between nasal cancer and potential formaldehyde exposure."\textsuperscript{36} Other studies implicate formaldehyde absorption in incidents of lung cancer.\textsuperscript{37} Additional adverse effects include neurophysiologic reactions, eye and throat irritation, headache and drowsiness, and a suspected causal connection to asthma.\textsuperscript{38}

C. Asbestos

Of major concern to owners and lessors of commercial real estate\textsuperscript{39} is asbestos.\textsuperscript{40} Its discovery triggers a multitude of potential civil

\textsuperscript{32} Formaldehyde is prevalent in office supplies and building materials. Sherman, \textit{The Com-

\textsuperscript{33} Samet, Marbury & Spengler, \textit{supra} note 22, at 223. UFFI, if not properly cured, may release formaldehyde in large quantities and over an extended period of time. \textit{Id.}

\textsuperscript{34} Kirsch, \textit{supra} note 21, at 353.

\textsuperscript{35} It is estimated that 200,000 homes in the United States are insulated with UFFI. Samet, Marbury & Spengler, \textit{supra} note 22, at 223. Its use in building and remodeling was banned by the United States Consumer Product Safety Commission in 1982. 16 C.F.R. § 1304.1 (1982). Although the ban was overturned by the Fifth Circuit, UFFI has not been easily reintroduced into the market. BNA Spec. Rep., \textit{supra} note 12, at I-34. \textit{See also infra} note 91.

\textsuperscript{36} Samet, Marbury & Spengler, \textit{supra} note 22, at 225.

\textsuperscript{37} Samet, Marbury & Spengler, \textit{supra} note 22, at 226.

\textsuperscript{38} Samet, Marbury & Spengler, \textit{supra} note 22, at 224-27; Kirsch, \textit{supra} note 21, at 354.

\textsuperscript{39} One broker states that "just mentioning the 'A' word makes his clients writhe." Richman, \textit{Why Throw Money at Asbestos?}, FORTUNE, June 6, 1988, at 155, 166.

\textsuperscript{40} Asbestos is actually the collective name for a class of minerals known for their heat-resis-
tant and durable properties, which made asbestos extremely useful in the building industry as an inexpensive, durable form of insulation. It is these same characteristics that make asbestos especially health threatening, since once in the body, an asbestos fiber does not deteriorate but lingers and irritates. EPA, \textit{ASSEsOS FACT BOOK} 2 (3d rev. May, 1986). The group of minerals for which most concern is justified is "asbestiform varieties of serpentine (chrysotile), reibekite (crocidolite), cum-
mingtonite-grunerite, anthophyllite, and actinolite-tremolite." 40 C.F.R. § 61.141 (1988). While asbestos is a subset of the general category of indoor pollutants known as particulates, only asbestos
liabilities and statutory compliance steps. Only friable asbestos is considered a health hazard. In a commercial building, asbestos fibers are likely to be freed from materials "sprayed or trowelled onto ceilings, rafters, beams, and other structural building parts for fireproofing, insulation, sound deadening, or decoration, or used as pipe and boiler insulation." Renovation, repair, and natural or manual disruption disturb more solid forms of asbestos, causing its dust to be suspended in the air and inhaled into the lungs where it can remain for years.

Asbestos has a proven history of ill-effects. Entrance into the body occurs through the skin, inhalation, and ingestion. Once in the body, the fibers may migrate through the blood or lymphatic systems. Inhalation can cause cancer of the cell lining in the lungs (mesothelioma) or the heart cavity (asbestosis) or cause plaque formation on the lung which impairs breathing capacity. Cancer of the digestive tract has also been linked to asbestos exposure. Because the fibers remain in the body, exposure need not be prolonged to induce adverse effects.

is discussed herein. Pollens and dust, while troublesome, are not as likely to arise in litigation as undisclosed latent defects in real estate.

42. Friable asbestos is defined as "any material containing more than 1 percent asbestos by weight that hand pressure can crumble, pulverize, or reduce to powder when dry." 40 C.F.R. § 61.141 (1988). In that condition, fibers may be suspended in the air and subsequently lodge in the lungs.
43. EPA, supra note 40, at 4. A national survey of government buildings, private non-residential buildings, and residential apartments conducted by the EPA revealed that 20% contained friable asbestos. Id. at 4-5.
44. Kirsch, supra note 21, at 355 (roofing and flooring materials, ceiling tiles, pipes, papers, filters, and gaskets).
45. Kirsch, supra note 21, at 355. (It is this durability that makes asbestos both an effective building material and a grave health threat.).
46. Kirsch, supra note 21, at 356-357.
47. Kirsch, supra note 21, at 357.
48. Kirsch, supra note 21, at 357.
50. EPA, supra note 40, at 3.
51. Kirsch, supra note 21, at 357 n.148. Richman condemns the EPA and Congress for overreacting to what he sees as an exaggerated estimation of the danger to public health. Richman, supra note 39, at 170. An EPA study released in February 1988, places that fatality rate at 25 deaths per year, which the author considers "ludicrously low" to be commensurate with the cost expended in private efforts to decontaminate buildings in order to achieve an elusive "zero risk" level. Id. at 158, 162. It is regrettable that owners of asbestos-laden commercial buildings face uninsurability, removal costs, a 15% greater vacancy rate and 10-15% lower rental income than "clean" buildings. Id. at 162. But those figures reflect the gamble that employers, lessees, and insurers must be willing to take with a potential life-threatening substance. Incomplete knowledge should not be skewed toward a finding of safety. The EPA and Congress should be commended for their diligent efforts to prevent potential adverse health effects in this area of the expansive pollution problem.
D. Microbiological Pollutants

Exposure to airborne biological agents can result in disease and aggravation of respiratory illnesses. In commercial buildings, air conditioning and humidifying systems and areas where water is allowed to collect or seep are the primary sources of microbiological pollutants. Agents which cause Legionnaires’ disease have been isolated from apparatus used in the cooling systems of many buildings. Additionally, allergens may be present in the air that can induce or exacerbate asthma and related pulmonary ailments in sensitive individuals.

E. The “Sick Building” Syndrome

The increased use of chemically-based building materials and furnishings, combined with energy-efficient architectural designs, has created a condition known as the “tight or sick building.” When indoor air is recycled without being mingled and replenished with fresh outdoor air, the concentration of contaminants which do not ordinarily cause adverse health effects in small doses increases to an unhealthy or uncomfortable level. These include excess levels of carbon dioxide from human respiration and chemicals contained in tobacco smoke, glues, solvents, cleaning agents, drapes, carpet, combustion by-products, pesticides, office supplies, and printing or duplicating processes.

52. These include viruses, bacteria, actinomycetes, fungal spores, algae, amoebae, anthropod fragments, and human and animal dander. Samet, Marbury & Spengler, supra note 22, at 221.
53. Samet, Marbury & Spengler, supra note 22, at 221.
54. Samet, Marbury & Spengler, supra note 22, at 222 (illness due to acute bacterial infection by Legionella pneumophila).
55. Disinfecting any collection of water in towers or condensers of a building’s cooling system is advisable to prevent the bacteria from dispersing through the ductwork and becoming airborne. Samet, Marbury & Spengler, supra note 22, at 222.
56. Samet, Marbury & Spengler, supra note 22, at 221 (molds, dusts, and fungal spores).
57. Samet, Marbury & Spengler, supra note 22, at 221.
58. See Diamond, supra note 14, at 78-80. See generally Sherman, supra note 32; Ness, Environmental Hazards in Real Estate, Com. Inv. Real Estate J., July-Aug. 1988, at 18. When greater than 20% of the occupants complain of building-related illness, including eye, nose, and throat irritation, skin dryness, nosebleeds, rashes, headaches, coughing, wheezing, nausea, and dizziness, and one specific chemical or organic source is not determined, a building is characterized as “sick.” Am. Soc. of Heating, Refrigerating & Air Conditioning Engineers, Indoor Air Quality Position Paper 9, (1987) [hereinafter ASHRAE], reprinted in IAQ Hearings, supra note 11, at 103.
59. In some instances, concentrations of certain substances are not detrimental to health, but result in annoying “stuffy air,” which has been linked to lower worker productivity and higher absenteeism. IAQ Hearings, supra note 11, at 87 (statement of ASHRAE). A general complaint by contact lens wearers portends a sick building, since deprivation of oxygen to the cornea will induce pain. BNA Spec. Rep., supra note 12, at I-10.
60. Ness, supra note 58, at 19.
The American Society of Heating, Refrigerating, and Air Conditioning Engineers (ASHRAE) recommends that for each person in an office building, five cubic feet per minute (CFM) of outdoor air should be mixed with indoor air to combat staling of the indoor atmosphere with carbon dioxide from breathing. Many buildings conform to this minimum standard. The requirement is raised to twenty CFM where smoking is permitted. However, neither of these standards contemplates the need for fresh air to dilute chemical releases from the building materials, furnishings, or simple office procedures or manufacturing processes. These contaminants, then, continue to collect in the indoor air without relief, resulting in a melee of potentially health-threatening chemicals.

III. COMMON LAW CAUSES OF ACTION

While current statutory authority does not directly regulate the quality of indoor air, many common law causes of action effectively regulate by the threat of suit. The problem of indoor air pollution may arise in various situations affecting all parties during and following a real estate transaction. Common law causes of action provide remedies to parties injured personally or financially, directly or indirectly, by air pollution or any other latent defect in a premises. Possible causes of action include breach of contract; breach of expressed or implied warranty, fitness for purpose or habitability; breach of quiet enjoyment by constructive eviction; strict liability in tort; fraud or misrepresentation; negligence; and nuisance. Indoor air pollution may also be a basis upon which a lessee may defend a breach of contract action after vacating a contaminated premises.

61. Ness, supra note 58, at 18.
62. Ness, supra note 58, at 18. A recent proposal raises minimum ventilation rates to 15 CFM per person with no distinction between smoking and non-smoking areas. IAQA Hearings, supra note 11, at 91 (statement of ASHRAE).
63. Ness, supra note 58, at 18-19.
64. See supra note 58 for specific health effects.
65. See infra notes 111-133 and accompanying text. But see infra note 113 regarding regulation of air quality in the workplace.
67. Possible defenses include: breach of contract, failure of consideration, frustration of purpose, and constructive eviction. In addition, a counterclaim may be asserted for damages resulting from breach of the lease agreement, breach of the covenant of quiet enjoyment, constructive eviction, and negligence.
A. Liability of the Broker or Seller

1. Bases of Liability: Misrepresentation and Non-Disclosure

A real estate broker may be liable to a purchaser for intentional or negligent misrepresentation or non-disclosure of a physical defect, condition, or characteristic of the property. Regardless of whether the broker represents the seller or buyer, an affirmative fiduciary or statutory duty is placed upon the broker to disclose any material fact which would bear on the purchaser's decision to complete the transaction. Purchasers depend on a listing broker to know the subject of the sale.

68. Throughout section III A of this comment, "purchaser" is used to indicate purchasers and lessees.

69. The generally recognized elements of fraudulent misrepresentation are:

(1) That a representation was made; (2) concerning a presently existing material fact; (3) which was false; (4) which the representor either (a) knew to be false, or (b) made recklessly, knowing he had insufficient knowledge upon which to base such representation; (5) for the purpose of inducing the other party to act upon it; (6) that the other party, acting reasonably and in ignorance of its falsity; (7) did in fact rely upon it; (8) and was thereby induced to act; (9) to his injury and damage.


70. Non-disclosure is actionable when a duty to disclose a material fact exists. A duty is imposed in the following situations:

(1) where a fiduciary relationship between the parties to a transaction exists; (2) where information later becomes known to one party that would correct a prior representation made to the other; (3) where one party to a business transaction learns that a previous misrepresentation made for another purpose is about to induce action by the other; (4) where one party learns that additional information must be disclosed to prevent a partial disclosure from becoming misleading to the other party; and (5) where one party knows that the other party to a transaction is about to act under a mistaken assumption of the facts and would reasonably expect the first party to disclose facts to correct such assumption. RESTATEMENT (SECOND) OF TORTS § 551 (1977).

71. See Neff v. Bud Lewis Co., 89 N.M. 145, 148, 548 P.2d 107, 110 (1976), where the defendant broker represented the purchaser, and the court concluded that "utmost good faith" toward the client was required of a broker. In situations where the broker represents the seller, the duty owed the seller is fiduciary, as that required between principal and agent. However, most states impose a statutory duty on the seller's broker to conduct honest, truthful, and competent transactions and to take reasonable steps to avoid misleading the purchaser. See Hagar v. Mobley, 638 P.2d 127, 137-38 (Wyo. 1981); Tennant v. Lawton, 26 Wash. App. 701, 706, 615 P.2d 1305, 1309 (1980); Dugan v. Jones, 615 P.2d 1239, 1248 (Utah 1980).

72. A duty to disclose is especially pressing in circumstances where one party to a transaction has "superior knowledge" of facts that are not available or reasonably discoverable to the other. Jones v. Arnold, 221 S.W.2d 187, 193 (Mo. 1949).

73. See Neff, 89 N.M. at 148, 548 P.2d at 110.

74. A listing broker may theoretically misrepresent the condition of the building to a purchaser by implying that it is adequate or suitable to meet the needs of the prospective purchaser. Failing a diligent investigation, even without actual knowledge of a defect, conscious ignorance or reckless indifference may expose the broker to liability for fraudulent conduct. See Byrn v. Walker, 267 S.E.2d 601 (S.C. 1980); Spargapani v. Wright, 110 A.2d 82 (D.C. 1954). If a party might reasonably expect such a disclosure or reasonably expect the broker to examine for such a defect, the failure to do so constitutes reckless non-disclosure or concealment. Lock v. Schreppler, 426 A.2d
and expect revelation of potential liabilities or defects. Reliance upon professional skill and ethics imposes the duty to inspect on both the listing broker and the purchaser's agent before making an affirmative representation of soundness or fitness. In addition, a broker acting as the agent of a seller may be found liable for the vendor's failure to disclose any condition which involves an unreasonable risk to occupants.

An honest broker can easily avoid committing the tort of fraudulent misrepresentation by making all the necessary disclosures of defects of which the broker or the seller has actual knowledge. The broker is most


75. Reliance by the purchaser must be justifiable. RESTATEMENT (SECOND) OF TORTS § 537 (1977). Generally, the purchaser is entitled to rely upon a broker's representation concerning defects not reasonably discoverable unless constructive knowledge or reason to inquire about a certain defect can be shown. Nei v. Burley, 388 Mass. 307, 310-11, 446 N.E.2d 674, 677 (1983). See also Shane v. Hoffmann, 227 Pa. Super. 176, 182, 324 A.2d 532, 536 (1974) ("[C]ommon prudence or diligence could not have ascertained the truth. . . . "). Purchasers of property, for example, in the well-publicized radon-prone regions of Pennsylvania may now be expected to inquire about levels of the gas, unless it could be shown that the purchaser had no knowledge of the susceptibility of the area to such contamination.


77. In resolving a negligent non-disclosure issue, a California court held that the listing broker has an affirmative duty to a prospective purchaser to inspect subject property for all defects "reasonably discoverable" and disclose them to the purchaser. Easton v. Strassburger, 152 Cal. App. 3d 90, 100, 199 Cal. Rptr. 383, 388 (1984). The clear policy advanced by the court "protect[s] the buyer from the unethical broker. . . . If a broker were [not] required to disclose . . . defects . . . that are reasonably discoverable, he would be shielded by his ignorance of that which he holds himself out to know." Id. The court took judicial notice of the Code of Ethics promulgated by the National Association of Realtors (hereinafter NAR) and cited an example illustrating that a broker is under an ethical duty to "conduct a reasonable investigation of [the] listed property." Id. at 101-02 n.5, 199 Cal. Rptr. at 389-90 n.5. Article 9 of the NAR CODE OF ETHICS (1974) states: "The Realtor® shall avoid exaggeration, misrepresentation or concealment of pertinent facts. He has an affirmative obligation to discover adverse factors that a reasonably competent and diligent investigation would disclose." Id. (emphasis added).

The Easton court limited its holding by confining the obligation of diligent inspection to residential sales, stating that homebuyers are more likely to be unrepresented and more inexperienced than purchasers of commercial real estate. Id. at 102 n.8, 199 Cal. Rptr. at 390 n.8. The policy reason used by the court to support its ruling—that a broker should not be able to remain conveniently ignorant of defects—is no less compelling in a commercial sale, since the potential of greater financial rewards in commercial transactions may be more likely to tempt a non-disclosure to consummate a sale or lease. Furthermore, the NAR Code of Ethics does not distinguish between residential and commercial sales in its requirement of diligent inspection by the broker. See NAR CODE OF ETHICS, supra. But see Provost v. Miller, 144 Vt. 67, 473 A.2d 1162 (1984), where the court held that "[r]eal estate brokers . . . are . . . not structural engineers. . . . They have no duty to verify . . . representations made by a seller unless they are aware of facts that 'tend to indicate that such representation[s are] false.'" Id. at 69-70, 473 A.2d at 1164 (quoting Lyons v. Christ Episcopal Church, 71 Ill. App. 3d 257, 259-60, 389 N.E.2d 623, 625 (1979)).

78. RESTATEMENT (SECOND) OF TORTS § 282 comment c (1965).
vulnerable, especially when invisible indoor air is at issue, to a cause of action in negligence, where a duty to know all pertinent characteristics of a listed property is imposed. A breach occurs by the failure to exercise the care of a reasonable, prudent, professional realtor. If that breach of this obligation will foreseeably harm the purchaser, the broker will be held liable. Further, the specter of strict liability for misrepresentation made innocently, with care and in good faith, looms menacingly in the area of real estate transactions and toxic torts.

A realtor is charged with the ethical responsibility to remain informed of environmental legislation affecting real estate and to discover conditions which have an effect on the value or safety of the property. The plethora of information disseminated to the public and real estate community concerning asbestos, radon, and chemical and organic

80. The standard of care of a professional realtor can be adopted by a court from statutory licensing requirements. *Hagar*, 638 P.2d at 136-37. Honesty, ethics, and competence are normally required of realtors in state licensing statutes. See, e.g., *Fla. Stat. Ann.* § 475.17 (West 1981); *Utah Code Ann.* §§ 61-2-6(1), 61-2-11 (1986); *Wyo. Stat.* § 33-28-107 (1987). Presumably an ethical violation, such as failing to keep informed of matters affecting real estate or failing to "discover adverse factors" that reasonably competent realtors would disclose, would subject a broker to discipline under these statutes. These violations are some evidence of lack of care. See also *Easton*, 152 Cal. App. 3d at 98, 199 Cal. Rptr. at 387; *Dugan*, 615 P.2d at 1248.
81. Misrepresentations made negligently need not be the sole cause of the purchaser's harm, but must materially contribute to the set of representations on which the decision to act was made. Lengyel v. Lint, 167 W.Va. 272, 276-77, 280 S.E.2d 66, 69 (1981) (citing *Horton v. Tyree*, 104 W.Va. 238, 242, 139 S.E. 737, 738 (1927)).
82. Section 552C of the Restatement (Second) of Torts states that One who, in a sale, rental or exchange transaction with another, makes a misrepresentation of a material fact for the purpose of inducing the other to act or to refrain from acting in reliance upon it, is subject to liability to the other for pecuniary loss caused to him by his justifiable reliance upon the misrepresentation, even though it is not made fraudulently or negligently.
83. "A Realtor should keep himself informed on matters affecting real estate in his community, the state and nation so that he may be able to contribute responsibly to public thinking on such matters." NAR Code of Ethics art. 1 (1974). "[T]he Realtor should endeavor always to be informed regarding laws, proposed legislation, governmental regulations, public policies, and current market conditions." Id. art. 2.
84. These ethical rules set out the minimum standard of special knowledge and ability expected of a professional realtor and therefore may be some evidence of the standard of care expected of a real estate broker. *Easton*, 152 Cal. App. 3d at 101-02, 199 Cal. Rptr. at 389-90.
85. Ralph Holmen, general counsel for the NAR, stated that information regarding indoor environmental problems has not yet been disseminated by the Association through a systematic formal national program. An informational package is being developed at the time of this writing to
threats to health places brokers on notice that although latent and invisible, indoor air contamination is a potential source of liability in every building listed for sale or lease. The National Association of Realtors (NAR) advises its agents to alert buyers to the possibility of radon in radon-prone regions. Some local boards have also advised realtors to determine whether UFFI is present in listed property.

2. Extension of Liability to the Seller

In Roberts v. Estate of Barbagallo, a purchaser sought rescission of the sale and/or reimbursement of removal costs after UFFI was discovered in the walls of the purchased duplex. The seller, broker, and sales agent, each of whom failed to investigate and disclose the presence of UFFI prior to the sale, were named as defendants. The court rejected an analogy to the non-disclosure of termite infestation because the plaintiff failed to prove that UFFI created an unreasonable risk of harm. Nevertheless, a seller and its agent are responsible for intentionally failing to disclose material information to the same extent as if there had been an affirmative statement that the condition did not exist. The existence of UFFI was found to be a material fact. The court further recognized that the agent knew that the presence of UFFI was material

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86. See Comment, Clearing the Air on Radon Testing: The Duty of Real Estate Brokers to Protect Prospective Homebuyers, 15 FORDHAM URBAN L.J. 767, 791 & n.190 (1987).
87. Interview, supra note 85.
89. Roberts, 531 A.2d at 1128.
90. Those cases are based upon the vendor's or agent's concealment or non-disclosure of a condition which creates an unreasonable risk of injury to persons on the land. Id. at 1130.
91. At the time of the sale, a ban on future use of UFFI had been issued by the United States Consumer Product Safety Commission. Id. at 1127-28. This, in itself, was not sufficient evidence of a hazardous condition for three reasons: (1) no evidence was offered by the plaintiff that the concentration of formaldehyde in the duplex (one-tenth part per million of formaldehyde fumes) posed a health risk; (2) no evidence was offered to show that the formaldehyde detected emanated from the UFFI; and (3) the ban on UFFI had been invalidated by the Fifth Circuit Court of Appeals on the grounds that the Consumer Product Safety Commission failed to prove that UFFI posed an unreasonable risk of injury. Id. at 1127 n.1, 1130. See also Gulf South Insulation v. United States Consumer Prod. Safety Comm'n, 701 F.2d 1137 (5th Cir. 1983). But see supra notes 31-38 and accompanying text.
92. The court cites the RESTATEMENT (SECOND) OF TORTS: LIABILITY FOR FRAUDULENT CONCEALMENT § 550 (1977) to support this proposition. Roberts, 531 A.2d at 1130.
93. Roberts, 531 A.2d at 1131.
to the transaction. By not notifying the purchaser that either (1) UFFI was present; (2) UFFI was not present; or (3) it was not known whether UFFI was present, as was recommended by the agent's professional board, the agent prevented the purchaser from making her own inspection, as she had no reason to expect such a problem.

Although it was the selling agent, not the broker, who intentionally kept information of the possibility of UFFI from the purchaser, the court found that the broker was the party duty-bound to promulgate policies which conform to legal standards of necessary disclosure. The court also found that this broker had a policy of non-disclosure.

The tort of the agent was imputed to the seller. Even though the seller had no reason to suspect UFFI, he should not have benefitted from the misdeeds of the agent at the expense of an innocent purchaser. Therefore, the seller who reaped the harvest of the agent's persuasive, but tortious, abilities was required to share in the liability even though disclosure was innocently withheld by the seller.

3. Remedies

A purchaser harmed by a broker's or seller’s misrepresentation or non-disclosure may choose to rescind the sale and deed or sue for damages. In Roberts, the purchaser was granted rescission and awarded costs in an amount which placed her in a pre-purchase position. Punitive damages were denied since the buyer's choice of the equitable remedy of rescission precluded any damage award.

A broker and seller may also be liable for a purchaser's personal

94. The federal ban in force at the time of sale, the County Health Department advisory, and the local Realtor's Board recommendation that an agent ascertain the presence or confirm the absence of UFFI in property subject to a transaction put the agent on notice. Id.
95. Id. The court, based on the facts of the case, decided this purchaser was a conscientious person who would have made such an investigation had she been aware of the possibility of a dangerous air pollution problem. Id.
96. Id.
97. Id.
98. The trial court absolved the seller, but the appellate court concluded that, as a matter of law, the seller must be held liable to third parties for an agent's fraud. Id. at 1131-32. See also Shane v. Hoffmann, 227 Pa. Super. 176, 183-84, 324 A.2d 532, 537 (1974).
99. Roberts, 531 A.2d at 1132.
100. Id. at 1133.
101. Id. The remedies of rescission and damages are mutually exclusive since damages in general are based on the presumption of injury resulting from the sale. Rescission "undoes" the sale, leaving no event to inflict damage. Id. at 1133. Therefore, punitive damages are not appropriate when rescission is granted. See also Dugan v. Jones, 615 P.2d 1239, 1247 (Utah 1980).
injuries\textsuperscript{102} or those of the purchaser's employees\textsuperscript{103} and reasonable and foreseeable injury to the purchaser's business.\textsuperscript{104} Further, punitive damages may be recovered by plaintiffs who rely upon intentional misrepresentations.\textsuperscript{105} Thus, in a commercial real estate transaction, a broker must be especially cautious. The knowledge of potential indoor environmental hazards is imputed to the reasonable, skillful, professional realtor, who has a duty to inspect for these hazards and reveal them to the vendor and the purchaser in order to avoid liability.

B. Liability of the Owner/Purchaser/Lessor

Purchasers of commercial real estate are, as a group, considered more sophisticated investors than are homebuyers and, therefore, less entitled to protection by laws concerning the transaction.\textsuperscript{106} Consequently, a purchaser must assemble greater knowledge of the condition of the prospective purchase prior to closing to avoid an imprudent acquisition. Diminished value and potential judgments must be factored into the cost of an asset found to be contaminated by substances which might subject a property owner to suit or statutory violations. A purchaser who intends to lease a prospective purchase must consider that noxious fumes and air quality may be grounds for constructive eviction\textsuperscript{107} claims, breach of

\textsuperscript{102} Restatement (Second) of Torts § 557A (1977) (Liability arises from reliance upon fraudulent misrepresentation or non-disclosure).

\textsuperscript{103} Workers' compensation is not an exclusive remedy if another party negligently and proximately caused the injury. See Solomons, Hazardous Wastes and Workers' Compensation: Some Evolving Concerns, 21 Tort & Ins. L.J. 90, 102-03 (1985).

\textsuperscript{104} Lowrey v. Dingmann, 251 Minn. 124, 86 N.W.2d 499 (1957) (Lost profits and other economic damages stemming from misrepresentation are recoverable).

\textsuperscript{105} See generally Annotation, Recovery of Punitive Damages in Action by Purchasers of Real Property Charging Fraud or Misrepresentation, 19 A.L.R. 4th 801 (1983).


\textsuperscript{107} Constructive eviction is defined as "[a]ny disturbance of the tenant's possession by the landlord whereby the premises are rendered unfit or unsuitable for occupancy in whole or in substantial part for the purposes for which they were leased . . . if the tenant so elects . . . [to] surrender[ ] his possession." Black's Law Dictionary 284 (5th ed. 1979).

In modern residential landlord-tenant law, the common law doctrine of constructive eviction is often abandoned in favor of allowing claims of breach of warranty of habitability. The warranty of habitability is statutorily implied into every residential lease in those states that adopt a form of the Uniform Residential Landlord Tenant Act or have a judicially created implied warranty. The idea that a lease is a contract protects low-income tenants who cannot afford to vacate as required by the doctrine of constructive eviction. See generally Knight, Constructive Eviction—An Illusive Tenant Remedy?, 29 How. L. J. 13 (1986).

In many instances, commercial lessees may not rely upon breach of warranty to complain of
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contract claims,\textsuperscript{108} tort liability for personal injuries to lessees or their employees,\textsuperscript{109} and private nuisance suits.\textsuperscript{110}


109. A commercial lessee, as possessor in control of the leased premises, usually contracts to maintain the property in a safe condition, relieving the lessor of liability for defective conditions which injure third parties. W. KEETON, PROSSER AND KEETON \textit{ON THE LAW OF TORTS} \textsect 63 (5th ed. 1984). Nevertheless, a lessor remains liable for personal injuries caused by undisclosed dangerous conditions \textit{known} to lessor and \textit{unknown} to lessee. \textit{Restatement (Second) of Tortes} \textsect 358 (1965) (emphasis added).

Further, the \textit{Restatement (Second) of Tortes} \sect 360 (1965) subjects the lessor to liability "to his lessee and others lawfully upon the land with the consent of the lessee or a sublessee for physical harm caused by a dangerous condition upon that part of the land retained in the lessor's control, if the lessor by the exercise of reasonable care could have discovered the condition and the unreasonable risk involved therein and could have made the condition safe." \textit{Id.} (emphasis added). Application of this section may expose lessors of commercial space such as offices within a high-rise building to liability for injuries caused by contaminants originating from portions of the building in the lessor's control, such as asbestos emanating from insulation in basements, power plants, and heating ducts, or radon and its progeny percolating from the soil below the building, or microorganisms, such as bacteria, grown in cooling plants or ductwork and circulated through the air conditioning systems.

Provisions in a lease allocating to the lessor the obligation to keep the land in good repair subjects the lessor to liability for personal injuries suffered by the lessee or its licensees or invitees if the lessor fails to perform such obligation or performs negligently and consequently makes the land more dangerous. \textit{Restatement (Second) of Tortes} \sects 357, 362 (1965). For example, a lessor, in remodeling and renovating an old building, may be negligently stirring up asbestos and injuring third parties. \textit{See generally} Borders \textit{v.} Roseberry, 216 Kan. 486, 532 P.2d 1366 (1975) for a comprehensive discussion of a landlord's tort liability under the Restatement. \textit{But see} Meyer \textit{v.} Parkin, 350 N.W.2d 435 (Minn. Ct. App. 1984) which absolves a landlord from liability for illness of a tenant caused by inadequate ventilation where landlord had no knowledge or reason to know of the defect.

110. A lessor may be liable for private nuisance if "his conduct is a legal cause of an invasion of another's interest in the private use and enjoyment of land, and the invasion is either (a) intentional and unreasonable, or (b) unintentional and otherwise actionable under the rules controlling liability for negligent or reckless conduct, or for abnormally dangerous conditions or activities." \textit{Restatement (Second) of Tortes} \sect 822 (1977). "An intentional invasion of another's interest in the use and enjoyment of land is unreasonable if the harm resulting from the invasion is severe and greater than the other should be required to bear without compensation." \textit{Id.} \sect 829A. It is the interference which must be unreasonable, not the conduct. PROSSER \& KEETON, supra note 109, at 88.

A lessee whose business is plagued by employees' injuries and sicknesses may claim that a lessor's failure to correct a dangerous condition on the premises substantially interferes with the lessee's enjoyment of the property. A lessor who fails to correct the condition and has knowledge of the
IV. GOVERNMENTAL REGULATION OF INDOOR AIR

A. Current Statutory Authority

In 1981, Laurence Kirsch surveyed government policy concerning indoor air pollution and concluded that "statutory and common law mechanisms . . . are uncertain and inadequate."111 No federal agency112 claims jurisdiction over the regulation of indoor air for safety and welfare purposes.113 Kirsch felt that regulation of indoor air could be incorporated into the Clean Air Act,114 the Toxic Substances Control Act,115 or the Consumer Product Safety Act.116 While governmental awareness of the problem has increased, no legislation, regulation, or policy has yet been enacted.117 Agencies await authority.

1. CERCLA

The judicial softening of the exclusions to the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA)118 brings some indoor air contamination problems into the scope of the statute. The Superfund Amendments and Reauthorization Act of

condition may be strictly liable if the condition is termed "abnormally dangerous" within the scope of the rules of strict liability. RESTATEMENT (SECOND) OF TORTS § 822 b (1977).

111. Kirsch, supra note 21, at 360-61.

112. Kirsch listed five reasons for federal agencies' lack of involvement in regulating the composition of indoor air: (1) more complete research of the extent and health effects of contaminants on which to base regulation is needed; (2) concentration on indoor air may detract from efforts to control outdoor air pollution (fears of shifting funds rather than increasing the funding); (3) regulation would intrude on personal liberties within the home; (4) no public clamor to act was forthcoming; and (5) no statutory authority to act existed at the time. Kirsch, supra note 21, at 361-62. See infra notes 134-45 concerning proposed legislation which would give the EPA authority to create standards and inform the public, as well as oversee the enforcement of maintenance of acceptable air in federal buildings.


117. The EPA has apparently considered Kirsch's suggestions. In its position paper on Indoor Air Quality, the EPA contemplates "issuing regulations under existing Federal regulatory authorities" and referring some problems to other federal agencies. BNA Spec. Rep. supra note 12, at II-118.

118. 42 U.S.C. §§ 9601-9675 (1982 & Supp. IV 1986). Simply stated, the "Superfund" statute imposes strict liability on potentially responsible parties who have, at some point, owned or operated a property ("facility") which contains and releases or threatens to release certain hazardous substances into the environment. Liability extends to cleaning up the substance when notified of a release or reimbursing the "Superfund" which was created to finance immediate remediation.
1986 (SARA)\textsuperscript{119} does in fact provide for radon assessment and mitigation\textsuperscript{120} and added the Radon Gas and Indoor Air Quality Research Act of 1986.\textsuperscript{121} Neither are regulatory in nature, but merely authorize the EPA to study the problem and report to Congress.\textsuperscript{122}

Two recent United States District Court cases have taken the initiative in applying CERCLA to hold parties responsible for the clean-up of indoor air in limited circumstances.\textsuperscript{123} Since one purpose of CERCLA is to insure that environmental threats to the health and safety of citizens are eradicated through governmental intervention when responsible parties are lax,\textsuperscript{124} it should make no difference where the contaminant is found. Given the fact that ninety percent of an average person's day is spent indoors,\textsuperscript{125} the argument for mandating clean-up becomes even more compelling. An amendment to the CERCLA statute which would specifically encompass serious health threats caused by indoor contamination should be considered.

2. EPA Policy

The Environmental Protection Agency (EPA), under the authority of SARA, has developed policy goals which will aid in reducing risks to human health.\textsuperscript{126} These include research, risk and exposure reduction strategies, and, most notably for a building owner, a mitigation policy which may involve issuing regulations under existing federal authority, assisting state and local government involvement through technical

\textsuperscript{119}. \textit{Id.}

\textsuperscript{120}. 42 U.S.C. § 7401 (1982 & Supp. IV 1986). This provision mandates an EPA report stating the radon concentration levels throughout the United States, the establishment of a working standard, the assessment of the threat to human health, development of methods of testing and reducing or eliminating such a threat, and disseminating the results of such research. However, the EPA is expressly limited to research, development, and education and is still not authorized to regulate.


\textsuperscript{122}. Act of Oct. 17, 1986, Pub. L. No. 99-499, § 118(K), 100 Stat. 1659. John Bond, the Executive Director of the National Council for Clean Indoor Air, criticizes the creation of such ineffectual legislation. In testimony before the Subcommittee on Environmental Protection and in reference to the proposed Indoor Air Quality Act of 1987, Bond stated:

\begin{quote}
I believe it is a bureaucratic, burdensome . . . kind of a paper blizzard in the making there. We finally have EPA in a position where they are ready to do something about the issue and . . . we are now asking them to write reports and serve coffee and doughnuts to the rest of the Federal Government. If we have them ready to do something, let's have them do something to improve the public health. Let's not have them conduct meetings and have them write reports.
\end{quote}

IAQA Hearings, \textit{supra} note 11, at 29 (statement of John Bond).

\textsuperscript{123}. \textit{See infra} notes 152, 168 and accompanying text.

\textsuperscript{124}. \textit{See} R. \textsc{Hall}, T. \textsc{Watson}, J. \textsc{Davidson}, D. \textsc{Case} \& N. \textsc{Bryson}, \textsc{Superfund Manual} 1-2 (1985).

\textsuperscript{125}. \textit{See supra} note 11 and accompanying text.

\textsuperscript{126}. BNA Spec. Rep., \textit{supra} note 12, at II-117.
assistance and training, and requesting congressional action.\textsuperscript{127}

3. Asbestos Legislation

The Occupational Safety and Health Act (OSHA), through the National Institute for Occupational Safety and Health, promulgates standards regarding asbestos in the workplace.\textsuperscript{128} These standards regulate for the safety of abatement contractors and employees,\textsuperscript{129} proscribe the levels of airborne asbestos, and control the conduct of renovation, containment, or eradication. As a result, these regulations indirectly affect a building owner who intends to renovate or demolish.

The EPA has taken steps to protect federal workers not covered by the OSHA regulations through an Asbestos Worker Protection Rule.\textsuperscript{130} The Asbestos Ban and Phase Down Rule, proposed by the EPA, would limit future uses of asbestos in buildings.\textsuperscript{131} Asbestos is also regulated as a hazardous substance under the Clean Air Act\textsuperscript{132} and CERCLA.\textsuperscript{133}

B. Pending Legislation

Presently, Congress is considering a bill\textsuperscript{134} that seeks to create an Indoor Air Panel of the EPA Science Advisory Board\textsuperscript{135} and a National Indoor Air Quality Council\textsuperscript{136} to coordinate activities by the various federal and state administrative offices concerned with indoor air pollution. The act would expand the CERCLA research provision's authority and mandate publication of all known indoor contaminants\textsuperscript{137} and their health effects at various levels of concentration.\textsuperscript{138} Regional training centers in institutions of higher learning\textsuperscript{139} would be created to provide instruction in diagnosing, analyzing, and abating radon risks. These

\textsuperscript{127} Id. at II-117-18. A mitigation strategy has not yet been adopted.
\textsuperscript{129} 29 C.F.R. § 1926.58 (1987).
\textsuperscript{130} BNA Spec. Rep., \textit{supra} note 12, at II-119.
\textsuperscript{131} Id.
\textsuperscript{132} 42 U.S.C. § 7412 (1982).
\textsuperscript{134} S. 1629, 100th Cong., 2d Sess. (1988). The Senate subcommittee had passed the measure.
\textsuperscript{135} S. 1629, \textit{supra} note 134, § 11(a).
\textsuperscript{136} S. 1629, \textit{supra} note 134, § 10.
\textsuperscript{137} S. 1629, \textit{supra} note 134, § 6(a). \textit{See also} \textit{SENATE COMM. ON ENVIRONMENT AND PUBLIC WORKS, 100TH CONG., 1ST SESS., AIR POLLUTANTS SUBJECT TO PROVISIONS OF § 112 OF THE CLEAN AIR ACT (Comm. Print 1987)} for a list of 224 such pollutants. This list fulfills the minimum requirements of S. 1629 § 6(a)(3).
\textsuperscript{138} S. 1629, \textit{supra} note 134, § 6(b)(D) (Contaminant Health Advisories) includes the determination of levels of "zero risk"—no effect on health.
\textsuperscript{139} S. 1629, \textit{supra} note 134, §§ 5, 14(a) & (b).
proposals indicate at least a congressional recognition\textsuperscript{140} of the indoor air problem.

Real property owners would be indirectly affected by the bill’s Federal Building Response Plan (Plan)\textsuperscript{141} and grants to states\textsuperscript{142} for the development of response programs. The Plan has been endorsed as a “model landlord” approach\textsuperscript{143} where federal buildings which must comply with standards of indoor air quality will influence private building and remodeling standards. The state, given the power to regulate private property when the health and safety of its citizens are endangered,\textsuperscript{144} may accept the financial incentive\textsuperscript{145} to develop regulatory policies mandating clean-up.

A state “response program” could presumably resemble the CERCLA model—a “cleanup or else” approach. Such a development would force private building owners to make a comprehensive assessment of

\begin{footnotesize}
\begin{enumerate}
\item A National Indoor Air Quality Response Plan is proposed which would authorize the development of suggested response actions similar to those authorized in the Clean Air Act; Toxic Substances Control Act; Federal Insecticide, Fungicide, and Rodenticide Act; Safe Drinking Water Act; authorities of the Consumer Product Safety Commission; and by the Occupational Safety and Health Administration [hereinafter OSHA]. S. 1629, supra note 134, § 7(b). The “nonregulatory” plan includes programs designed to alleviate harmful exposure, develop “model building codes, including ventilation rates,” and provide incentives to researchers to develop new technology to eradicate or minimize pollution. Id. § 7(c).
\item S. 1629, supra note 134, § 8. The Plan mandates the clean-up of indoor air in federal buildings.
\item S. 1629, supra note 134, § 9(b). Grants to states of up to $250,000.00 per year would be available for three years. Id. § 9(c)(3).
\item John Bond recognizes the value of imposing strict indoor air quality standards on the federal government as a consumer and landlord. In his statement to the subcommittee, Mr. Bond made the point that a mass consumer like the federal government is able to create a market for low-toxic consumer goods, such as carpet, and stimulate carpet manufacturers to develop such a product, while individuals cannot wield such power. Implementation of federal building codes would also encourage the development of innovative planning, architectural, use and management techniques which would be readily available for adoption by private building owners or builders. IAQA Hearings, supra note 11, at 29 (statement of John Bond, Executive Director, Nat’l Council for Clean Indoor Air).
\item See U.S. CONST. amend. X.
\item The proposed Act contemplates grants to state agencies to develop response programs which: (a) address listed contaminants; (b) identify existing information, a specific geographic area or class of building; (c) describe and schedule response actions intended to alleviate or eliminate the hazard or exposure; (d) identify the particular agency or organization responsible for carrying out the response actions; (e) show other sources of funding; and (f) assess the results. S. 1629, supra note 134, § 9(b)(2) (emphasis added).

Presumably, the state could require clean-up of toxic environments or even perform the remediation and sue the responsible parties for the costs by instituting CERCLA-like legislation. With the federal government taking the initiative in researching, educating, developing building codes, and providing technical assistance, a state’s duty to safeguard public health from these known risks becomes more compelling, especially where carcinogens are at issue. Several states have “superfund” or “superlien” statutes in place that could be extended by incorporating new definitions of “hazard” or used as models for new indoor air legislation.
\end{enumerate}
\end{footnotesize}
indoor air liabilities before purchase or sale to allocate the liabilities or require their abatement.

V. JUDICIAL EXTENSION OF CURRENT STATUTORY REGULATION

A. CERCLA

While indoor air is currently regulated by the creative use of common law, some existing environmental statutes are being judicially extended to embrace contamination of the indoor atmosphere. In at least two instances, courts have recently extended the application of CERCLA legislation to recover substantial costs incurred in cleaning up the sources of indoor air contamination. The significance of CERCLA and SARA (the Superfund Amendments and Reauthorization Act) concerning indoor air contamination is twofold:

First, CERLA has set a model for future environmental legislation. The basis of liability can be compared to strict liability in tort, since a property owner or any one in the chain of possession of the property or the hazardous substance is liable for the clean-up of dangerous substances that pose a threat of release into the environment, regardless of fault. The proposed Indoor Air Quality Act would authorize grants

146. See infra notes 152-72 and accompanying text.

147. Strict liability in tort permits recovery to plaintiffs injured by products unreasonably dangerous to a user or consumer, regardless of fault. Restatement (Second) of Torts § 402A (1965). This cause of action evolved from the breach of implied warranty theory to protect consumers from unscrupulous merchants, who relied upon "caveat emptor" and therefore had no incentive to offer safe products. Id. In a real estate transaction, the traditional argument was made that only an estate in land is conveyed and that the physical premises is not subject to warranties as products. Courts now hold that the contract between parties does carry warranties of good faith representation of the premises, with the premises treated more like a "product" than an estate in land.

It is not unreasonable to argue that tort law can bypass the implied warranties in the real estate transaction as it does in a § 402A situation and begin treating the premises as a "product" which may be unreasonably dangerous and therefore attach liability to any vendor. Although not designed to compensate for personal injuries, the CERCLA mechanism resembles a § 402A action on a broad scale by attaching liability to any party, who had control of a property, for recovery of costs to eliminate environmental injuries caused by certain "hazardous substances" which are unreasonably dangerous, as defined by the statutes.


149. 42 U.S.C. § 9607(a)(1) (1982 & Supp. IV 1986). An "innocent landowner" defense was added to the statute in the 1986 amendments to allow landowners to escape liability for cleanup costs who purchased without knowledge (or reason to know) of contamination. Id.
to state programs that "describe and schedule" response actions. Consequently, states may be encouraged to deal with the indoor air threat by adopting statutes which similarly require remediation on a strict liability basis. Second, some courts have already expanded the purview of the CERCLA statute to include the release of contaminants into indoor environments. These opinions do not even discuss the possibility of limitations on the location of the contaminated air.

1. T & E Industries v. Safety Light Corp.

In T & E Industries v. Safety Light Corp., the detection of radon emanating from carnotite ore tailings located on the plaintiff’s facility led the New Jersey Department of Environmental Protection to order the plaintiff to take immediate remedial action. The plaintiff sealed the building’s cracks and sewer drains and increased the ventilation. Subsequently, the plaintiff sought compensation from the corporate successor to United States Radium, the dumper of the tailings, under CERCLA for costs incurred in responding to the radon threat. For perhaps the first time, the United States District Court of New Jersey recognized the contamination of indoor air as triggering CERCLA liability.

§ 9601(35)(A)(i). To assert such a defense, the landowner must have made an inquiry into the activities and uses of the previous possessors of the premises and physically inspected the property for obvious or likely contamination prior to purchase. A court will also take into account whether the purchaser should have been on notice through (1) special knowledge or experience, (2) a purchase price which reflects a latent liability, (3) commonly known or ascertainable information about a property, (4) obvious or likely signs of contamination, and (5) whether an inspection would have revealed such contamination. Id. § 9601(35)(B).

Ironically, rather than relieving the purchaser of responsibility for latent liabilities, this amendment burdens the purchaser with a substantial affirmative duty to research the environmental history of a property and burdens the seller with remedial duties if contamination is discovered. Id. § 9607(b)(3). See Berz & Spracker, The Impact of Superfund on Real Estate Transactions, PROB. & PROP., Mar.-Apr. 1988, at 49 for a comprehensive discussion of the practical effects of this aspect of the amendment.

150. See supra notes 134-45 and accompanying text.
153. Radon is a “hazardous substance” under CERCLA and the Clean Air Act.
155. Id.
156. Id. at 700. Radon is only threatening when contained in a restricted airspace such as a building. Concentrations depend upon the adequacy of a building’s ventilation. Additionally, extended periods of exposure increase the likelihood of developing cancer. Therefore, buildings that serve as places of employment where workers are exposed to concentrated levels of radioactive materials for prolonged periods constitute a greater threat to health than natural outdoor occurrences of radon. See generally Kirsch, supra note 21, at 344-47.
After resolving the choice of law\textsuperscript{158} and statute of limitations\textsuperscript{159} issues, the court discussed the power of private litigants to utilize CERCLA legislation to compel reimbursement of clean-up costs from the polluting parties. The court refused to dismiss a claim for injunctive relief,\textsuperscript{160} holding that while CERCLA does not provide a private cause of action to demand that others clean up sites, it does not prohibit injunctive relief to compel compliance with the statutory obligation to reimburse a non-polluting party for performing the clean-up operation.\textsuperscript{161}

CERCLA provides a mechanism for private parties to sue another private entity responsible for the hazards and recover costs incurred in cleaning up those sites within the scope of CERCLA's enforcement powers.\textsuperscript{162} The court in \textit{T & E Industries}, however, refused to categorize T & E's relocation and rebuilding costs as reimbursable remediation costs to be borne by Safety Light. Permanent relocation is only compensable when the President of the United States has determined that relocation is the most cost-effective solution to the danger.\textsuperscript{163} The court also rejected T & E's contention that attorney fees and costs of litigation were recoverable.\textsuperscript{164} It concluded that T & E was entitled to summary declaratory judgment, "holding Safety Light liable for any necessary costs of response incurred by T & E consistent with the National Contingency Plan."\textsuperscript{165}

The opinion is significant for the absence of any discussion regarding limitations on the location of the air pollution. The EPA's restrictive definition of ambient air, "air that is not completely enclosed in a building . . .,"\textsuperscript{166} seems to have been judicially extended to include air enclosed within a "facility." "A facility is broadly defined and includes almost every place a hazardous substance could find its way into."\textsuperscript{167} Apparently, air within a "facility" can be incorporated into the clean-up of the total "facility," resolving the troubling "ambient air" restriction.

\textsuperscript{158} \textit{Id.} at 701-03.  
\textsuperscript{159} \textit{Id.} at 704.  
\textsuperscript{160} \textit{Id.} at 705.  
\textsuperscript{161} \textit{Id.}  
\textsuperscript{162} \textit{Id.} at 705 (citing 42 U.S.C. § 9607(a)(4)(B) (1982 & Supp. IV 1986)).  
\textsuperscript{163} \textit{Id.} at 707 (citing 42 U.S.C. § 9601(24) (1982 & Supp. IV 1986)).  
\textsuperscript{164} \textit{Id.} at 707.  
\textsuperscript{165} \textit{Id.} at 709.  
\textsuperscript{166} See supra note 148.  
2. **Vermont v. Staco, Inc.**

The district court of Vermont also imposed strict liability for clean-up of the source of indoor airborne mercury. The mercury had migrated into homes via the bodies and clothing of employees of a thermometer manufacturer. The court agreed that, under the CERCLA statute, the remediation responsibility was properly placed on the owner and operator of the facility and on the owner of the real estate where the thermometer plant was situated.

The *Vermont* case illustrates the point that the mere ownership of realty where hazardous releases occur triggers CERCLA liability. In this case, the release at issue did not contaminate the owners’ land but contaminated the atmosphere, employees’ homes, and the village’s sewer system. The monitoring of the contamination within the homes and its elimination were held to be reimbursable costs.

3. **Significance of the Extension of CERCLA**

The need for succinctly drafted controls over indoor air is emphasized when convoluted interpretations of existing statutes must be exercised to achieve fair results. Although it is necessary to create sanctions for irresponsible polluters in order to encourage cleaner environments, it is unfair to impose liability on the basis of statutes which do not give fair notice that such conduct is forbidden. The office building purchaser or owner may be less cautious and less knowledgeable concerning the CERCLA mechanism and the safeguards that must be practiced to claim “innocence” under the innocent landowner defense. In order to avoid the

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169. The court determined that this was a “release” covered by the statute. *Id.* at 833-34.

170. *Id.* at 831-35. One commentator was troubled that the court ignored the threshold issue of whether the clean-up mandate was consistent with the national contingency plan required under the statute. The court also unilaterally limited the defenses available. Broad and inexact interpretation of the statute exposes those who believe their business practices are beyond the scope of the statute to Superfund accountability for releases of small amounts of listed substances. Kirsch, *Vermont Gets OK to Apply CERCLA to Indoor Air Suit*, INDOOR POLLUTION L. REP., Jan. 1988, at 1.


173. *See supra* note 149 and accompanying text.
interminable\textsuperscript{174} liability CERCLA creates, a purchaser must acknowledge the trend toward treating the release of a listed chemical\textsuperscript{175} into a building’s atmosphere as an event imposing a duty to report and cleanup.

B. 

\textit{Clean Air Act}

Even when a building is demolished, the owner is responsible for the uncontrolled release of asbestos into the atmosphere if the demolition contractor violates Clean Air Act guidelines.\textsuperscript{176} While not an indoor air problem per se, building owners should know that tearing down the asbestos-laden building does not exonerate them from compliance with federal environmental and safety regulations.\textsuperscript{177}

VI. \textsc{Practical Considerations and Future Implications}

Since no one agency or statutory authority addresses the problem of indoor air pollution with certainty and conviction, parties to a commercial real estate transaction must proceed with caution and awareness. A sophisticated investor must investigate actual conditions of a purchase or expect to take “as is”\textsuperscript{178} and assume responsibility for the correction of dangerous latent conditions to avoid injury, suit, or sanction. Brokers should consider the potential of discovering indoor air defects in conducting precautionary inspections and making disclosures and disclaimers. Lenders, too, are becoming wary of collateralizing loans with commercial buildings without an environmental audit.\textsuperscript{179}

\textsuperscript{174} Once an owner becomes a “responsible party,” the owner’s liability may not be divested by sale, foreclosure, or bankruptcy. See Rodburg, \textit{General Environmental Law Considerations Affecting Business Transactions} in \textit{The Impact of Environmental Regulations on Business Transactions} 99, 120 (PLI 1987).

\textsuperscript{175} See 40 C.F.R. §§ 302.4, 61.01 (1988); \textit{Senate Comm. on Environment and Public Works, 100th Cong., 1st Sess., Air Pollutants Subject to Section 112(b) of the Clean Air Act} (Comm. Print 1987).

\textsuperscript{176} \textit{See United States v. Geppert Bros., Inc.}, 638 F. Supp. 996 (E.D. Pa. 1986). Here, a building owner attempted to avoid liability for the release of asbestos which occurred as a result of a demolition. The owner claimed that the demolition contractor, who was entitled to the proceeds of any salvageable material, was responsible for the violation of the Clean Air Act. \textit{Id.} at 1000. The court held that a building owner could not “contract away” the duty to insure that asbestos was disposed of according to regulatory procedures. \textit{Id.}

\textsuperscript{177} \textit{Id.}


\textsuperscript{179} \textit{See generally Scagnelli & Malloy, Should Lenders Require Environmental Audits?}, 69 J. of \textit{Com. Bank Lending} 14 (July 1987). The purpose of conducting a pre-loan test for environmental liabilities is threefold. First, the financial health represented by the borrower presupposes no extensive mandatory environmental clean-up. The discovery of CERCLA liability, for instance, has
A. Considerations at Time of Purchase

CERCLA's adoption of the "innocent landowner defense" has placed a substantial burden upon the purchaser to exercise more than due diligence in evaluating property for environmental liabilities. An array of articles outline the appropriate inquiries for the discovery of hazardous wastes hidden on or under the land, but a purchaser must also be advised of the conditions of the indoor air which may decrease value, instigate suits, and violate statutes. Berz and Spracker assembled an impressive inspection checklist which advises commercial real estate investors of traditional areas of concern.

The purchaser might add an indoor air pollution dimension to this checklist and first consider any recent legal developments, including: a) the progress of the proposed Indoor Air Quality Act, or similar legislation and its impact on private property ownership; and b) any recent judicial extensions in the scope of the CERCLA statute. Second, inquiries into the condition and legal status of the subject property are crucial. These inquiries should encompass a) determining whether any state statutes are presently being violated, whether OSHA standards of indoor air quality are met, and whether suits are pending;
b) determining the asbestos history\textsuperscript{187} by scheduling an inspection by a qualified engineer or industrial hygienist, especially if planning to renovate or demolish;\textsuperscript{188} c) inspecting ventilation and air conditioning systems to ensure that a recommended amount of fresh outdoor air\textsuperscript{189} is circulated; d) testing for radon\textsuperscript{190} at various locations in the building on several occasions, especially on lower floors;\textsuperscript{191} e) determining whether any surviving lessees\textsuperscript{192} employ processes which disperse airborne contaminants listed in OSHA\textsuperscript{193} or Clean Air Act regulations;\textsuperscript{194} f) testing air conditioning systems, ducts, and humidifiers for bacteria, viruses, molds, and fungi, inspecting for any collection of fluids which could support breeding of such organisms, and determining whether a disinfectant is employed to prevent breeding; and g) inspecting for UFFI and testing air for formaldehyde concentrations and other health threatening chemicals.\textsuperscript{195}

Third, a purchaser should also request documentation concerning lawsuits stemming from environmental conditions, health code violations, past inspections by health departments or industrial hygienists, previous governmental action and compliance history, fines or judgments, and workers’ compensation claims resulting from environmental conditions. Finally, a seller’s or lessor’s obligation to disclose known defects motivates the buyer or lessee to ask specific and pointed questions.

\textsuperscript{187} Although not yet confirmed, fiberglass insulation is also suspected of causing adverse health effects. “Fiberglass may be the asbestos of the [19]90’s.” BNA Spec. Rep., \textit{supra} note 12, at I-22. Caution would advise ascertaining its presence in addition to asbestos, although until proven hazardous, the discovery would not likely have any present legal ramifications.

\textsuperscript{188} OSHA regulates construction workers’ exposure to asbestos. Building owners should be aware of any increased cost of renovations due to mandatory containment of asbestos and the extra record keeping and medical surveillance involved. OSHA Asbestos Standard, 29 C.F.R. § 1926.58 (1988).

\textsuperscript{189} See \textit{supra} notes 61-63 and accompanying text.

\textsuperscript{190} This is especially important in areas where uranium mill tailings may have been dumped, since CERCLA liability may attach. See \textit{supra} notes 152-57 and accompanying text.

\textsuperscript{191} Radon testing is easily manipulated by the choice of testing area, e.g., upper floors or well-ventilated zones could offer false negative results. Weather and activity also affect the accuracy of the test. Galen, \textit{Lawyers Grapple with Radon Issue}, Nat’l L. J., July 21, 1986, col. 4, at 1, 10, col. 10.


\textsuperscript{193} 29 C.F.R. § 1910.1000 (1988).


\textsuperscript{195} Beginning in 1989, the General Services Administration will be inspecting all federal buildings for asbestos, bacteria, formaldehyde, and ten other pollutants of indoor air and take steps to eradicate the sources. BNA Spec. Rep., \textit{supra} note 12, at I-36. This federally funded program could serve as a model for private testing and abatement, as well as set a standard of conduct for a prudent purchaser or lessee of a commercial office building.
concerning indoor air quality. Obvious or known hazards should be disclosed. In a contract setting, the parties should negotiate: a) the allocation of performance and cost of testing for radon, formaldehyde, carbon monoxide, bacteria, molds and fungi, and other chemical or organic contaminants; b) the level of contamination which justifies the repudiation of the contract by the purchaser; c) the extent of containment, remediation, or mitigation a seller must perform under the contract if testing discloses contamination; and d) liability or indemnification of the seller for post-closing discoveries.

"As is" contracts will normally control to preclude a purchaser from bringing misrepresentation claims against a seller. Consequently, a purchaser must make a greater effort to ascertain air quality and negotiate with the understanding that the seller will be indemnified for any future suits by third parties, including the government, for later-discovered contamination. In other words, the risk is placed on the purchaser in consideration for a lower purchase price. Although liability to the government or to third persons for environmental injuries, clean-up, or mitigation cannot be transferred with the property, the parties may agree to indemnification if an unknown or unknowable liability later embroils the parties in clean-up litigation.

The buyer should obtain all records and the seller's warranty that all sources of indoor air pollution have been disclosed based on a duly diligent inspection of the property. Further, a purchaser for full value should require indemnification for any expenses of litigation or judgments concerning the indoor air which could have been detected and disclosed by the seller. Since indemnification is only as valuable as the indemnifier, such provisions should be inserted only after the vulnerable party is satisfied that no litigation is likely to ensue.

196. One attorney suggests a tripartite radon testing clause which consists of cursory radon testing before closing, establishment of a seller-funded escrow account for future remediation if needed, and a long-term and presumably more accurate post-closing test. Sherman, Radon and Real Estate: Potentially Costly Mixture, N.J.L.J., Nov. 27, 1986, at 1, col. 1, at 24, col. 1.

197. For example, the seller may agree that if contamination is discovered, a duty arises to cure the defect if it can be accomplished for less than $1,000.00. If curing is predicted to be more costly, the seller may cancel, renegotiate the sale price, or create an escrow account to finance the remediation.

198. See Rodburg, supra note 174, at 126.

199. Such an allocation doesn't insulate a seller from CERCLA liability because the transfer of the seller's liability is merely a contractual agreement between the parties. The seller who is jointly and severally liable for clean-up must look to the purchaser to honor the agreement and for indemnity.
B. Limiting Broker Liability

Greater public awareness of indoor air quality may prove to be an exculpating force for brokers involved in commercial sales. A broker, with special knowledge of the possibility of radon, asbestos, or UFFI, may be held liable for failing to investigate and disclose in situations where a purchaser would have no knowledge of such a defect. However, widespread media coverage and governmental involvement have alerted the public to common environmental problems within a building. Common public knowledge may allow a broker to argue that the duty to ascertain the wholesomeness of the air, the composition of building materials, and the composition of the sub-surface of the land is on a reasonable buyer. Certainly a homebuyer may not hold a broker, who has made no representations as to existence of termites, liable for failing to investigate for latent termite damage when the possibility of termite infestation and its dangers are generally known. In such a case, the duty is on the buyer. Widespread recognition of radon and other indoor air pollution problems may similarly excuse a broker who makes no affirmative representations of the air quality from liability.

Local realty associations should be encouraged to revise their form contracts for sale to allocate the duty of radon, asbestos, and UFFI inspection to the buyer or lessee. This places a buyer on notice that a problem may exist. An air quality testing provision, similar to an electrical, mechanical, and plumbing (EMP) inspection, bestows upon the buyer the choice of testing or risk-taking and removes the prospect of innocent or negligent non-disclosure from the broker.

Listing contracts should require disclosure of any knowledge a seller may have of a specific list of potential problem conditions. Listing Agent’s Inspection Reports and the seller’s property disclosure statements should elicit information regarding (1) the presence of asbestos and UFFI insulation on the premises; (2) the performance and results of any radon tests conducted; (3) the performance and results of any other

200. See supra note 75.
201. In parts of the country where radon is already infamous, attorneys are inserting “radon inspection clauses” into real estate contracts for sale in order to protect brokers and to allocate to the parties the duty to test. Galen, supra note 191, at 10.
202. Testing by the broker may be regarded by the buyer as suspect, since the broker is the seller’s agent and recipient of pecuniary benefits. Holmen, Radon—Legal Issues for the Real Estate Agent, PROB. & PROP., May-June 1988, at 51, 54. No matter which party tests, however, interpretation will be troublesome. Standards have yet to be developed which can be used as a basis for rescission or mandating remediation. Parties may choose newly developed federal standards or OSHA standards for air quality or insert arbitrary levels of acceptable pollution into the contract.
air quality testing; (4) third party claims or complaints regarding air quality, pending or litigated in the past, and outcome of such claims, including workers' compensation, nuisance, breach of contract, breach of warranty, and personal injury; (5) the adequacy of ventilation for industrial or office use; and (6) prior or current violations of health codes or OSHA standards. A broker should make a reasonable effort to substantiate the accuracy of the seller's representations and acquire documentation if possible.

Since policy reasons and ethical obligations impose a duty to inspect an offered premises, a broker should stay informed of local environmental concerns, make inquiries, and perform tests required to assure accurate representation of the condition of the property. A broker may represent that no tests for indoor air contaminants have been executed and require the purchaser to hold the broker harmless for any subsequent discovery. Or the broker may conduct the tests, although costs in time and money may be impractical. If tests are done, the broker should refrain from interpreting the results or making conclusory statements about the quality which might be construed as a representation.

VII. CONCLUSION

Now that research has shown that indoor air contamination is a national threat to public health and safety, Congress is finally attempting to promote and refine a comprehensive plan for addressing the problem. Legislation takes time, administrations change, and it is difficult to predict whether any effective environmental legislation may be forthcoming. Commercial real estate business must continue to flow, however, with or without regulation. Parties to real estate transactions cannot avoid the looming issue of toxic indoor air.

While comprehensive federal regulation is often seen as unwarranted interference, three peripheral effects of statutory regulation would actually enhance the real estate market. First, it would establish a certainty which is lacking in the haphazard way environmental law is applied in this area, allowing property owners to avoid litigation by adhering to definite standards. Secondly, regulation would force manufacturers, builders, architects, and designers to create and design products and buildings that mitigate or eliminate sources of indoor air pollution. Finally, contractual allocation of liability between the parties

203. See supra notes 77, 80, 83, and 84.
can be better accomplished where liabilities are defined by standards promulgated and mandated by a governmental authority.

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