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## Requiring Environmental Information Disclosure on the Deed: Shining the Light on Residential Transactions

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# REQUIRING ENVIRONMENTAL INFORMATION DISCLOSURE ON THE DEED: SHINING THE LIGHT ON RESIDENTIAL TRANSACTIONS

by RUSSELL JAMES III

The environmental problems occurring in the non-industrial arena have now been well-documented. Although not as prevalent in the news as an industrial chemical spill or nuclear power plant safety violation, many of the environmental problems in residential areas can pose just as much of a risk to unsuspecting owners and purchasers. The four most common non-industrial environmental problems are lead contamination, radon, underground storage tanks, and asbestos.

The significant dangers from these non-industrial hazards are exacerbated by a widespread lack of information in connection with property transactions and ownership. This lack of information can be hazardous to a number of groups, including unsuspecting neighbors, purchasers, and owners. Additionally, the lack of a central, easily accessible information source for non-industrial properties can cause environmental research to be expensive and duplicative.

This comment looks at the problems of the current environmental hazards common to non-industrial properties in Part I(a). Part

I(b) reviews the current government response to these problems and the accessibility of environmental information. Part II(a) examines a potential solution - mandatory reporting and centralizing basic non-industrial information in the chain of title on the property deed. Finally, Part II(b) discusses some of the results of implementing such a system.

## I. THE NATURE OF THE PROBLEM

A) The extent of non-industrial environmental problems.

### 1. Lead Paint and Lead Contaminated Water

The problems involving lead contaminants have been well-documented. They are perhaps the most compelling of any residential environmental problem. The Center for Disease Control (CDC) bluntly states that "lead poisoning is the No. 1 environmental problem facing America's children."<sup>1</sup> CDC estimates that over 4 million children suffer from lead poisoning.<sup>2</sup> The problems of lead in drinking water and contamination from lead paint are by no means limited to children. Even the Environmental Protection

Agency (EPA) headquarters was found to have nineteen drinking water sources containing excessive amounts of lead.<sup>3</sup> Although at first the problem was considered to be limited to certain regions of the country, more recent studies have uncovered lead poisoning among both rural and urban groups in many different regions.<sup>4</sup>

What is disturbing to some is that lead poisoning predominantly affects those who live in the oldest housing. Both lead paint and lead plumbing are more prevalent in older houses.<sup>5</sup> As a consequence, low-income groups, including some minorities, are more likely to suffer the effects of lead poisoning. A 1980 study indicated that 12.2 percent of all black children and 2 percent of white children showed "elevated" blood lead levels.<sup>6</sup> Since that study, more recent findings indicate that much lower levels of lead cause serious damage.<sup>7</sup> These lower levels are found in an alarmingly high percentage of the population. Almost one half of all black children had blood lead levels exceeding the minimum level now known to cause neurological and intellectual impairment.<sup>8</sup> Fully 20 percent of all white children had blood lead levels above this amount.<sup>9</sup>

The effects of elevated lead levels in the human body are serious. A number of studies have documented side effects including "reduced I.Q., kidney damage, impaired reproductive function, hyperactivity, anemia, delayed neurological and physical development and elevations in blood pressure."<sup>10</sup> Even minor levels of lead have been linked to lower I.Q. and difficulties with speech, comprehension, and attention.<sup>11</sup> Lead has been shown to result in lower class standing or a failure to graduate from high school, reading

<sup>1</sup> Kenneth M. Reiss, *Federal Regulation of Lead in Drinking Water*, 11 VA. ENVTL. L.J. 285, 286 (1991/1992) (citing Philip J. Hiltz, *White House Shuns Key Role on Lead Exposure*, N.Y. TIMES, Aug. 24, 1991, § 1, at 14).

<sup>2</sup> Philip J. Hiltz, *Lower Lead Limits are Made Official*, N.Y. TIMES, Oct. 8, 1991, at 3C.

<sup>3</sup> *Elevated Lead Contaminant Levels Found in Drinking Water Coolers, Faucets at EPA*, 19 Env't Rep. (BNA) No. 35, at 1774 (Dec. 30, 1988); Twenty-one percent of the coolers and taps in a survey of twelve Capitol Hill buildings were also found to contain excessive amounts of lead. Michael Weisskopf, *Lead Levels Found High in Water on Hill*, WASH. POST, Jul. 25, 1991, at A15.

<sup>4</sup> Mahaffey, Annet, Roberts, & Murphy, *National Estimates of Blood Lead Levels: United States, 1976-1980*, 307 NEW ENG. J. MED. 573, 577 (1982); Wesolowski, Penton, Graul, Lew, Rinaldi, & Magnus, *Lead in the Blood of California Children*, 127 WEST. J. MED. 271 (1977) (minority blood lead levels in Los Angeles).

<sup>5</sup> Lin-Fu, *Lead Poisoning and Undue Lead Exposure in Children: History and Current Status*, LOW LEVEL LEAD EXPOSURE: THE CLINICAL IMPLICATIONS OF CURRENT RESEARCH 10 (1980).

<sup>6</sup> Mahaffey, *supra* note 4, at 573, 576.

<sup>7</sup> CENTERS FOR DISEASE CONTROL, PREVENTING LEAD POISONING IN YOUNG CHILDREN: A STATEMENT BY THE CENTERS FOR DISEASE CONTROL 10 (1985) [hereinafter CDC].

<sup>8</sup> Mahaffey, *supra* note 4, at 576 (table 2).

<sup>9</sup> *Id.*

<sup>10</sup> E.P.A. *Drinking Water Regulations*, 56 Fed. Reg. 26,460, 26,468 (1991).

<sup>11</sup> *Health Effects of Lead Exposure: Hearing Before the Subcomm. on Toxic Substances, Environmental Oversight, Research and Development of the Senate Comm. on Environmental and Public Works*, 101st Cong., 2d Sess. 115 (1990) (citing Herbert L. Needleman, *Deficits in Psychological and Classroom Performance of Children with Elevated Dentine Lead Levels*, 300 NEW ENG. J. MED. 689 (1990)).

disabilities, reduced hand-eye coordination, and motor skills.<sup>12</sup>

The more common sources of lead poisoning lend themselves well to a real estate based approach to combatting the problem. Lead in drinking water originates from two primary sources. Comfortingly, the source water itself is rarely contaminated with lead before being introduced into the distribution system.<sup>13</sup> However, the regional or municipal distribution system may contain lead contaminants.<sup>14</sup> While distribution systems are subject to numerous EPA regulations, these regulations have not abated the problems completely.<sup>15</sup> Much less regulated, and hence a possibly more devastating problem, are the residences themselves. The residential water piping system may itself be the source of lead contamination. Lead can enter the water through pipes, fixtures, lead solder connecting pipes, or lead derivative alloys like bronze found in faucets.<sup>16</sup> As a combined result from all of these sources, a 1986 EPA study estimated that 42 million Americans have drinking water containing unsafe levels of lead.<sup>17</sup> From lead contamination in drinking water alone, the EPA estimates that each year 29,000 children

require medical treatment, 241,000 children lose 1 to 5 I.Q. points, and 130,000 adult men are afflicted with hypertension.<sup>18</sup>

Even with the dramatic impact of lead in drinking water, it is not the most damaging source of exposure to lead.<sup>19</sup> In fact, according to the EPA estimates, drinking water accounts for only 20% of the average child's exposure to lead contaminants.<sup>20</sup>

Lead-based paint reigns as the most important source of lead contamination among children.<sup>21</sup> Although originally thought to be exclusively a danger via children eating paint chips, modern evidence shows that children need not eat paint chips to absorb the lead.<sup>22</sup> In fact, the lead paint on a house need not even be peeling or in a visually bad condition to create "dangerous levels" of lead in dust.<sup>23</sup> Fortunately, the allowable lead content levels in paint have been reduced through regulation.<sup>24</sup> Yet, this offers no cure for half of all housing units in this country that were built and painted before 1960.<sup>25</sup> Subsequent layers of paint will not cure the problem as lead can bleed through the newer layers.<sup>26</sup> Thus, the more stringent paint regulations do nothing to help the 57 million American units that

already have lead-based paint.<sup>27</sup>

## 2. Radon

In recent years the public has become increasingly aware of the threat posed by radon gas. Radon is a pervasive, naturally-occurring gas resulting from the breakdown of uranium in the earth.<sup>28</sup> The gas is not limited to areas associated with uranium deposits.<sup>29</sup> Indeed, radon can be found in homes almost anywhere in the country.<sup>30</sup> Radon is particularly dangerous in residences.<sup>31</sup> The closed conditions of a household prevent the rapid binding and diffusion of radon that occurs when the gas is released into the open air.<sup>32</sup> The health risk results then, not from the gas itself, but from the by-products of radon decay. These progeny, called "radon daughters," are radioactive metals with relatively long half-lives.<sup>33</sup> If these offspring do not bind with other airborne substances, as occurs when radon is released into open air, they may be inhaled and lodge in the lungs.<sup>34</sup> These lodged particles cause tissue damage and often cancer.<sup>35</sup> This results from the alpha particles emitted by the radon progeny.<sup>36</sup> When alpha particles come into contact with cancer-

<sup>12</sup> Needleman, Schell, Bellinger, Leviton, & Allred, *The Long-Term Effects of Exposure to Low Doses of Lead in Childhood: An 11-Year Follow-up Report*, 322 *New Eng. J. Med.* 83, 86 (1990).

<sup>13</sup> EPA estimates show fewer than one percent of public water systems with source water containing lead levels of more than 5 parts per billion. 56 *Fed. Reg.* 26,460, 26,463 (1991).

<sup>14</sup> See 56 *Fed. Reg.* 26,463-66.

<sup>15</sup> *Id.* at 26,466, 26,471.

<sup>16</sup> CDC, *supra* note 7 at 10.

<sup>17</sup> *Id.* at 1-2, 9-10.

<sup>18</sup> *Lead-Based Paint Poisoning Prevention Act, Hearing Before the Subcomm. on Housing and Community Development of the House Comm. on Banking, Finance and Urban Affairs*, 100th Congress, 2d Sess. 41, 84 (1988) [hereinafter 1988 Hearing] (statement of David L. Echols, Executive Director of the Housing Authority of the City of New Haven on behalf of the National Association of Housing and Redevelopment Officials).

<sup>19</sup> CDC *supra* note 7 at 5; Terri Shaw, *Is There Lead in Your Water?* WASH. POST., Jun. 27, 1991, Home, at 8.

<sup>20</sup> *Lead Contamination: Hearing Before the Subcomm. on Health and the Environment of the House Comm. on Energy and Commerce*, 100th Cong., 2d Sess. 9, 18 (1988).

<sup>21</sup> *Id.*

<sup>22</sup> Chamey, *Lead Poisoning in Children: The Case Against Household Lead Dust*, LEAD ABSORPTION IN CHILDREN: MANAGEMENT, CLINICAL, AND ENVIRONMENTAL ASPECTS (J.J. Chisolm, Jr. and D.M. O'Hara eds. 1982).

<sup>23</sup> *Id.*

<sup>24</sup> See 1988 Hearing, *supra* note 18 at 91-93.

<sup>25</sup> Gilligan & Ford, *Investor Response to Lead-Based Paint Abatement Laws: Legal and Economic Considerations*, 12 *COLUM. J. ENVT. L.* 243, 250.

<sup>26</sup> Martha Mahoney, *Four Million Children at Risk: Lead Paint Poisoning Victims and the Law*, 9 *STAN. ENVT. L.J.* 46, 52.

<sup>27</sup> Michael Weisskopf, *Strategy on Lead Turns Out Not to Be Blitzkrieg*, WASH. POST., Oct. 25, 1991, at A25.

<sup>28</sup> Hanson, *Radon Tagged as Cancer Hazard by Most Studies, Researchers*, 67 *CHEM. & ENG. NEWS* 7-13 (1989).

<sup>29</sup> Shelley Bookspan, *Radon: The Risks of Natural Gas* 19 *REAL ESTATE L.J.* 363 (Spring 1991).

<sup>30</sup> *Id.*

<sup>31</sup> Harley & Harley, *Potential Lung Cancer Risk from Indoor Radon Exposure*, 40 *CA-A CANCER J. FOR CLINICIANS* 265-273 (1990).

<sup>32</sup> Hart, Mettler, & Harley, *Radon: Is It a Problem?*, 172 *RADIOLOGY* 593-599 (1989).

<sup>33</sup> Bookspan, *supra* note 29, at 364.

<sup>34</sup> *Id.*

<sup>35</sup> *Id.*

<sup>36</sup> Kevin L. Sheperd and Kevin A. Gaynor, *Radon: A Growing Menace in Real Estate Transactions*, *PROB. AND PROP.* 6, 7 (May/June 1989).

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sensitive cells, the risk of cancer is approximately 100 times that associated with other forms of radiation.<sup>37</sup>

The primary documented health risk from radon gas is lung cancer.<sup>38</sup> The EPA estimates that residential radon exposure can be blamed for as many as 20,000 lung cancer deaths every year.<sup>39</sup> This makes radon the second leading cause of cancer, behind only cigarette smoking.<sup>40</sup> When combined with smoking, radon poses an even greater risk. Smokers are 10 times more likely to die from lung cancer resulting from the combined exposure than non-exposure.<sup>41</sup> Additionally, radon is suspected of causing stomach cancer.<sup>42</sup>

In one EPA test, twenty-six percent of the homes tested were found to have radon levels above the EPA guideline level of 4 pico Curies per liter (pCi/l).<sup>43</sup> To measure radon levels, scientists use pico Curies, equal to one-trillionth of a Curie. The unit used to measure radon levels in air and water is pico Curies per liter. This represents the number of radon decompositions made per second for each liter of air.

Another method for measuring radon levels, working levels (WL), was used to develop standards for miners. This measure is based on the amount of alpha-ray energy in the air. Alpha rays are the decay products

of radon.<sup>44</sup> The 4 pCi/l level is the health risk equivalent of smoking one-half of a pack of cigarettes per day.<sup>45</sup> With a lifetime of exposure at the 4 pCi/l level, the EPA estimates that one to five percent of exposed people will develop lung cancer from the radon.<sup>46</sup> At 20 pCi/l, between six and twenty-one percent will develop lung cancer.<sup>47</sup> In uranium rich areas, residential pCi/l levels have been documented at 2,700 pCi/l.<sup>48</sup> The daily radon levels in some residences is comparable to the radiation levels found in the homes surrounding the Three Mile Island nuclear power plant immediately after the accident.<sup>49</sup>

### 3. Underground Storage Tanks

The EPA has estimated that there are 1.4 million underground storage tanks (USTs) in current use in the United States.<sup>50</sup> The significance of USTs is greater still considering that this 1.4 million figure *excludes* all residential and non-commercial farm tanks with a capacity under 1,100 gallons.<sup>51</sup> Although no study has been done detailing problems with these excluded tanks, the figures drawn exclusively from the larger, commercial USTs demonstrate the great magnitude of the leaking UST crisis. Extrapolating commercial UST statistics may fail to predict the residential problem per-

fectly since residential storage tanks are more likely to hold heating oil than gasoline.<sup>52</sup> Nevertheless, non-commercial farm tanks commonly do contain gasoline or diesel fuel.

A 1984 study found that 75,000 to 100,000 tanks were currently leaking and 350,000 might well develop leaks in the next five years.<sup>53</sup> A 1986 EPA survey indicated that 130,000 to 260,000 motor fuel tanks were currently leaking.<sup>54</sup> Thirty-five percent of all tanks tested in this survey failed a tank tightness test.<sup>55</sup> This leaking results from the original tank construction. Approximately eighty percent of all USTs are constructed of bare, unprotected steel.<sup>56</sup> This construction only allows the tank a 15 to 20 year life span before corrosion and leaking occur. The EPA estimates that there are at least one million bare steel tanks that have been in the ground longer than 16 years.<sup>57</sup>

What makes these leaking tanks so environmentally devastating is their contents. 65 percent of all reported leaks on file with state regulatory agencies come from retail gasoline stations.<sup>58</sup> The EPA has found that just one gallon of gasoline leaked into an underground aquifer could contaminate the water supply for a city of 50,000.<sup>59</sup> In our country today, 75 percent of cities rely on groundwater, at least in part, for their drinking water.<sup>60</sup>

<sup>37</sup> *Id.*

<sup>38</sup> Crawford, *On Air Pollution, Environmental Tobacco Smoke, Radon, and Lung Cancer*, 38 INT. J. AIR POLLUTION CONTROL & WASTE MGMT., 1386-1391 (1988).

<sup>39</sup> 12 Office of Air and Radiation & U.S. Dept of Health and Human Services, U.S. E.P.A., *A Citizen's Guide to Radon: What It Is and What To Do About It* (Report No. OPA-86-004, Aug. 1986).

<sup>40</sup> Office of Public Affairs, U.S. E.P.A., *Envtl. News, EPA Finds Radon Problem in 10 State Survey 3-4* (Aug. 4, 1987).

<sup>41</sup> "Air Pollution: Radon Cancer Risk Greater Than Thought. Especially Smokers, NAS Study Says", 18 ENVTL. REP. (BNA) 1997 (Jan. 8, 1988).

<sup>42</sup> Land and Water Resources Center, University of Maine, *Radon in Water and Air, Natural Resource Highlights* (Feb. 1983, rev. June 1986).

<sup>43</sup> OFFICE OF AIR AND RADIATION, U.S. ENVT'L PROTECTION AGENCY, *SURVEY RESULTS AND RECOMMENDATIONS 6* (1989); "There are two different units that can be used to measure radon levels. First, there are pico Curies per liter (pCi/l). The Curie is the common measurement for radioactivity and measures the decomposition of radioactive particles." THE COMMONWEALTH OF MASSACHUSETTS SPECIAL LEGISLATIVE COMMISSION OF INDOOR AIR POLLUTION, *INDOOR AIR POLLUTION IN MASSACHUSETTS 45* (1989).

<sup>44</sup> Jeanne Prussman, *The Radon Riddle: Landlord Liability for a Natural Hazard*, 18 ENVTL. AFF. 715.

<sup>45</sup> *Id.*

<sup>46</sup> Hart, Mettler & Harley, *supra* note 32, at 593-599.

<sup>47</sup> *Id.*

<sup>48</sup> Nazaroff & Teichman, *Indoor Radon*, 24 ENVTL. SCI. & TECH. 774-782 (1990); Silver, *Cancer Risk from Domestic Radon*, LANCET 3 (Jan. 14, 1989).

<sup>49</sup> Cross & Murray, *Liability for Toxic Radon Gas in Residential Homes Sales*, 66 N.C. L. REV. 687, 688 (1988).

<sup>50</sup> 52 Fed. Reg. 12,662, 12,664, 12,686 (1987).

<sup>51</sup> *Id.*

<sup>52</sup> Heating oil, while containing many of the toxic substances of gasoline, does not include all of the environmentally harmful components found in gasoline.

<sup>53</sup> H.R. REP. NO. 1133, 98th Cong., 2d Sess. 128, reprinted in 1984 U.S.C.C.A.N. 5649, 5699.

<sup>54</sup> M. ITALIANO, *LIABILITY FOR UNDERGROUND STORAGE TANKS* at 3 (1987).

<sup>55</sup> *Id.*

<sup>56</sup> 52 Fed. Reg. at 12,664.

<sup>57</sup> Brieger, *Lust and the Common Law: A Marriage of Necessity*, 13 B.C. ENVTL. AFF. L. REV. 521, 527 (1986) (citing CONSERVATION LAW FOUNDATION OF NEW ENGLAND, INC., *UNDERGROUND PETROLEUM STORAGE TANKS: LOCAL REGULATION OF A GROUNDWATER HAZARD 35* (1985)).

<sup>58</sup> ITALIANO, *supra* note 54, at 3 (citing ENVIRONMENTAL PROTECTION AGENCY, *STATE INCIDENCE REPORT - SUMMARY OF STATE REPORTS ON RELEASES FROM UNDERGROUND STORAGE TANKS*).

<sup>59</sup> *Id.*

<sup>60</sup> V. PYE, *GROUNDWATER CONTAMINATION IN THE UNITED STATES* at 1 (1983).

Gasoline leaks may cause health damage beyond water contamination. Before seeping into the groundwater, leaking gasoline will flow downhill through the soil and the water table. With certain geological patterns the gasoline will form an "elliptical plume" before entering the groundwater. This plume, as well as other formations of gasoline-contaminated groundwater will give off vapors. These vapors can accumulate in residences and other buildings, subjecting the inhabitants to damaging levels of inhaled toxins.<sup>61</sup> The vapor concentration can become so high that any open flame will spark an explosion.<sup>62</sup>

The physical harms from gasoline are legion. A New Jersey Department of Health study linked gasoline exposure with dizziness, headaches, allergies, irregular heartbeats, seizures, birth defects, eye, lung, and kidney damage, and cancer.<sup>63</sup> Gasoline itself contains a number of toxic substances, each individually rated as high-priority toxins for clean-up purposes by the EPA.<sup>64</sup> The gasoline components benzene, toluene, xylene, and lead were all listed in the 100 highest priority toxic substances for the Superfund clean-up.<sup>65</sup>

#### 4. Asbestos

The health damage done by asbestos has become a national tragedy. The areas of

commercial and industrial asbestos have become one of the most regulated and litigious areas in modern environmental law. Still, the expanse of asbestos use in residential areas is so diffused that it has escaped much governmental regulation. One study has predicted that the death toll from asbestos-related cancers in the sixty years after 1967 will rise to 80,000 victims, although more recent estimates are much more conservative.<sup>66</sup> These problems are not limited to the industrial setting. The EPA currently estimates that approximately 20% of all residential and nonresidential buildings contain some form of friable asbestos and will need renovation.<sup>67</sup>

Although asbestos was banned from residential use in 1978, it is common to find it in older homes.<sup>68</sup> Most commonly, asbestos is found in siding, roofing, acoustic tile, flooring and hot pipe insulation.<sup>69</sup> These products become most dangerous when they are friable — crumbly and easily broken apart.<sup>70</sup> The asbestos fibers are then more likely to break free and enter the body.<sup>71</sup>

Asbestos exposure has been shown to result in a variety of respiratory ailments: asbestos is, lung cancer, and mesothelioma (a rare malignant cancer).<sup>72</sup> Difficulty in detection is compounded by the significant latency period of asbestos-produced diseases, which ranges from fifteen to forty years.<sup>73</sup>

The current volume of litigation in this area is phenomenal. The total number of state and federal court asbestos-related lawsuits is over 100,000.<sup>74</sup>

Besides the health risks, the costs of removing asbestos can be extraordinary. Federal regulation has been extensive and in many respects effective in the industrial and commercial arenas, where the problems were the greatest. These regulations often do not deal with asbestos problems associated with single-family residences.

### • GOVERNMENT RESPONSES AND THE CURRENT ACCESSIBILITY OF ENVIRONMENTAL INFORMATION.

#### 1. The Federal System

Congress has established its intent to attack the lead paint problem as "national policy."<sup>75</sup> Unfortunately, the current federal response has had limited effectiveness. The high cost of remediation has resulted in less than spectacular results. Because private remediation is the only financially feasible solution at the current government funding level, the EPA has attempted to inform the public of the general dangers of lead contamination. Nonetheless, there is no information collection or dissemination source to mandate or record contamination levels in specific homes. Even generic notification in problem areas is limited; the EPA requires

<sup>61</sup> AMERICAN PETROLEUM INSTITUTE, Pub. No. 1628, A GUIDE TO THE ASSESSMENT AND REMEDIATION OF UNDERGROUND PETROLEUM RELEASES (2d ed. 1989); Kearney & Dunham, *Gasoline Vapor Exposures at a High Volume Service Station*, 47 AM. INDUS. HYGIENE J. 535 (1986); Molhave, Bach, & Pederson, *Human Reactions to Low Concentrations of Volatile Organic Compounds*, 12 ENV'T INT'L 176 (1986); Halder, *Gasoline Vapor Exposures*, 47 AM. INDUS. HYGIENE J., 164 (1986); Jury, Russo, Strle, & Abd, *Evaluation of Volatilization of Organic Chemicals Residing Below Soil Surface*, 26 WATER RESOURCES RES. 13 (1990).

<sup>62</sup> John A. Chanin, Comment, *Lust on Your Corner: Strict Liability, Victim Compensation, And Leaking Underground Storage Tanks*, 62 U. COLO. L. REV. 365, 373-374 (1991).

<sup>63</sup> NEW JERSEY DEPARTMENT OF HEALTH, HAZARDOUS SUBSTANCE FACT SHEET FOR GASOLINE (1985).

<sup>64</sup> 52 Fed. Reg. 12,866 (1987). See § 110 of SARA, amending § 104(i) of CERCLA, 42 U.S.C. § 9604 (1988), providing for creation of the list.

<sup>65</sup> *Id.*

<sup>66</sup> William J. Nicholson et al., *Occupational Exposure to Asbestos: Population at Risk and Projected Mortality-1980-2030*, 3 AM. J. INDUS. MED. 259 (1982); contra Herbert Seidman & Irving J. Selikoff, *Decline in Death Rates Among Asbestos Workers 1967-1987 Associated with Diminution of Work Exposure to Asbestos*, 609 ANN. N.Y. ACAD. SCI. 300 (1990); David E. Lilienfeld et al., *Projection of Asbestos-Related Disease in the United States, 1985-2009*, 45 BRIT. J. INDUS. MED. 283 (1988).

<sup>67</sup> *Asbestos Removal, Health Hazards and the EPA*. (Council Report) J. AM. MED. ASS'N at 696 (Aug. 7, 1991) (citing, ASBESTOS IN BUILDINGS: A NATIONAL SURVEY OF ASBESTOS-CONTAINING FRIABLE MATERIALS. Washington DC: U.S. Environmental Protection Agency, 1984 EPA publication 560 15-84-006).

<sup>68</sup> Gary Legwood, *Home Sick Home: Make Sure Indoor Pollutants Aren't Making You Sick*, BETTER HOMES AND GARDENS, Feb, 1993, at 68.

<sup>69</sup> *Id.*

<sup>70</sup> *Id.*

<sup>71</sup> *Id.*

<sup>72</sup> Christopher Edley & Paul C. Weiler, *Asbestos: a Multi-Billion-Dollar Crisis*, 30 HARV. J. ON LEGIS. 383, 388.

<sup>73</sup> PAUL BRODEUR, *OUTRAGEOUS MISCONDUCT: THE ASBESTOS INDUSTRY ON TRIAL* 185 (1985); Deborah R. Hensler, *Fashioning a National Resolution of Asbestos Personal Injury Litigation: A Reply to Professor Brickman*, 13 CARDOZO L. REV. 1967, 1973 (1992).

<sup>74</sup> Edley & Weiler, *supra* note 72, at 383.

<sup>75</sup> H.R. REP. NO. 122(i), 100th Cong., 1st Sess. 92-93, reprinted in 1987 U.S.C.C.A.N. 3317, 3408-09 ("The purpose of this amendment is to avert injury and tragedy before they occur.").

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notification only in areas where more than ten percent of samples contain lead levels above 15 parts per billion (ppb).<sup>76</sup> Yet, without any easily accessible permanent recording, there is no guarantee that even this generic notice will reach new home buyers.

The EPA has focused on the bad regional water systems. This approach ignores the threat of bad systems in individual residences. The limited notice provided by the EPA is helpful, but is neither lasting nor specific enough to cause strong remediation results by private owners. The federal government does strongly encourage testing in its program to reduce lead contamination in school drinking water. Yet, even in this area, governed by the Lead Contamination Control Act of 1988 (LCCA), all testing remains completely voluntary.<sup>77</sup>

Likewise, there has been little emphasis in federal law on reporting requirements in the area of radon. However, some pressure has been generated by the Federal National Mortgage Association (FNMA). FNMA requires lenders participating in the delegated underwriting and servicing program to perform an environmental assessment of property prior to commitment by FNMA. This assessment will result in rejection of the property if it has "high radon levels (i.e., above 4 pCi/l) that can be corrected only through large capital improvements and/or extensive ongoing maintenance programs that are beyond the financial or technical capability of the borrower."<sup>78</sup> Some commentators have predicted that within a decade all homes with federally-backed mort-

gages will be required to demonstrate radon levels below 4 pCi/l.<sup>79</sup> Such a program of disclosure has yet to materialize.

The federal government's efforts in this area resulted in the Indoor Radon Abatement Act (P.L. 100-551) in October of 1988. Although the act has ambitious radon reduction goals, no mandatory reporting requirements are included.<sup>80</sup>

For Underground Storage Tanks, the federal regulations have the avowed goal of informing the public with each confirmed release. However, these regulations only compel notification of releases that require a corrective action plan.<sup>81</sup> This requirement is the same for all federally-approved state programs as well. Unfortunately, with many confirmed contamination releases the site assessment is not done and a remedial action plan is not developed.<sup>82</sup> State agencies may also be restrained from notifying the public because of potential liability if the State is unable to correct the leak due to a lack of funds in the State's clean-up program.<sup>83</sup> As a result, many members of the public who are directly affected may go without notice of the danger.<sup>84</sup>

While no general transfer laws mandating disclosure have been enacted, the federal government is at least required to follow complete disclosure for its own transactions.<sup>85</sup> CERCLA § 120(h) requires all federal government real estate contracts to contain notice of a site's environmental condition if it has been exposed to hazardous substances.

Congress also has taken a number of

proactive steps to clean up and regulate the problems. Aside from the dispute over how effective these regulations are, there are certain categories of underground storage tanks that are left totally untouched by the federal regulations. Unfortunately, these areas are those most likely to cause environmental damage at the residential and non-commercial level.

The main body of federal law governing USTs is the Resource Conservation and Recovery Act (RCRA), specifically subchapter IX.<sup>86</sup> This act specifically excludes non-commercial farm or residential motor fuel tanks with a capacity not greater than 1,100 gallons.<sup>87</sup> One only need be aware of the environmental harm done by a single gallon of gasoline leaked into an aquifer to realize the potential impact of these "de minimis" tanks. Significantly, other residential related USTs are excluded, such as consumer heating oil tanks and septic tanks.<sup>88</sup> Additionally, any tanks under 110 gallons in capacity, those containing only a small percentage of regulated substances, and those used as emergency backup tanks are completely excluded by the EPA's de minimis rules.<sup>89</sup>

Federal regulation in the area of asbestos has resulted in asbestos abatement and removal in a number of selected buildings. Most states have substantially complied with the mandated removal of asbestos from public and private schools.<sup>90</sup> Mandating similar removal programs for all public and commercial buildings would require renovations at 730,000 sites costing \$100 to \$150 billion.<sup>91</sup> The high cost of enlarging asbestos

<sup>76</sup> Kenneth Reiss, *Federal Regulation of Lead in Drinking Water*, 11 VA. ENVTL. L.J. 285, 296 (1991/1992).

<sup>77</sup> See 42 U.S.C. § 300j-23 (1988).

<sup>78</sup> Sheperd & Gaynor, *supra* note 36, at 8.

<sup>79</sup> *Id.*

<sup>80</sup> *Id.*

<sup>81</sup> 53 Fed. Reg. 37,206 (1988) (codified at 40 C.F.R. § 260.67).

<sup>82</sup> Candace C. Gauthier, *The Enforcement of Federal Underground Storage Tank Regulations*, 20 ENVTL. L. 261, 283 (1990).

<sup>83</sup> *Id.* at 284.

<sup>84</sup> *Id.*

<sup>85</sup> J.L. Motiuk et al, *Update on Environmental Transfer Laws: New Jersey and the Nation*, 779 PLI/Corp 109, 116; 42 U.S.C. §9620(h) (1988 & Supp. V 1993).

<sup>86</sup> Resource Conservation and Recovery Act (RCRA), 42 U.S.C. §§ 6901-6992k (1988 & Supp. V 1993).

<sup>87</sup> 42 U.S.C. § 6991(1)(A).

<sup>88</sup> 42 U.S.C. § 6991(1)(B), (1)(C), (1)(G).

<sup>89</sup> 53 Fed. Reg. 37,108 (1988) (codified at 40 C.F.R. § 280).

<sup>90</sup> *Asbestos Removal, Health Hazards and the EPA*, J. OF THE AM. MED. ASS'N Aug. 7, 1991, at 696 ("40 states have currently achieved over 90 percent compliance with the new standards."); *Schools Complying with AHERA*, 11 CHEMICALS-IN-PROGRESS BULLETIN 8 (1990) ("nearly 94% of the nation's public school districts and private schools have complied with the initial requirement. . .").

<sup>91</sup> *Id.*

removal programs to residential and all commercial buildings has prevented the government from widely expanding these regulations.<sup>92</sup>

## 2. State Systems

With certain notable exceptions, the bulk of state regulation requiring testing and disclosure of environmental problems affects only industrial properties. Residential problems are commonly without regulation or disclosure requirements.

With one of the strongest environmental based transfer laws of any state, New Jersey has developed a broad regulatory scheme.<sup>93</sup> The New Jersey transfer law requires notice to both government agencies and potential purchasers of environmental concerns before a transfer may occur.<sup>94</sup> Violations can lead to substantial penalties including voiding of the sale or monetary damages to the purchaser.<sup>95</sup> Yet, these provisions apply only to transfers of "industrial establishments."<sup>96</sup> Voiding the sale is a powerful enforcement tool. So far, New Jersey is the only state to implement such a harsh remedy.<sup>97</sup>

Connecticut requires a transferor of any facility generating more than 100 kilo-

grams of hazardous waste per month to file a certification of "no discharged hazardous waste."<sup>98</sup> This certification must be filed within 15 days after the transfer. Penalties for false information range up to \$100,000. Failure to file renders the transferor strictly liable for all cleanup costs and purchaser damages.<sup>99</sup> Again, these Connecticut statutes do not affect typical residential transactions, yet they provide a good prototype for possible residential-based programs.

Illinois requires a disclosure statement containing specified environmental information to be provided to both the purchaser and any associated lender.<sup>100</sup> This disclosure must be made not less than 30 days prior to the transfer.<sup>101</sup> The purchaser or lender may avoid the transfer if new information is revealed in the disclosure, but only before the closing.<sup>102</sup> Again, these statutes only apply to certain categories of industrial property.<sup>103</sup> Indiana has a similar forced disclosure system.<sup>104</sup>

Pennsylvania has an industrial transfer law which contains many thoughtful elements.<sup>105</sup> The statute requires that there be in the property description section of a deed an acknowledgment including service area, size, and location of disposed waste and a

complete description of its contents.<sup>106</sup> Additionally, the state EPA is obligated to require the Recorder of Deeds to record any order pursuant to the Pennsylvania Hazardous Sites Act in a manner that will insure disclosure with a typical title search.<sup>107</sup>

Even though the bulk of state environmental transfer laws are limited to industrial properties, some states have gone further. Limited residential transfer disclosure requirements have become law in a few jurisdictions. In the area of lead poisoning, Massachusetts has developed an exemplary program of remediation and notification. In any transfer of property, the seller is required to provide a state-created notification form along with additional remediation information.<sup>108</sup> Additionally, the potential buyer has a ten day period in which to perform an inspection.<sup>109</sup> This provides complete notification protection for the new owner, who will likely be subject to the state's stringent requirements for de-leading the residence.

The most comprehensive radon disclosure laws are found in Florida.<sup>110</sup> The 1988 Florida law requires the inclusion of radon notification clauses on real estate documents.<sup>111</sup> This notification is required for both sellers and renters.<sup>112</sup> The radon clauses

<sup>92</sup> See Janet Raloff, *EPA Finds Widespread Asbestos Hazard*, Sci. NEWS, March 5, 1988, at 150 ("... EPA plans no new regulations for dealing with the problem within the next three years. The reason, explains EPA Assistant Administrator John A. Moore, is that there are barely sufficient resources now — in terms of money and trained professionals — for dealing with asbestos in schools."); *Dialoguers Agree to Disagree*, ASBESTOS ISSUES Aug. 1990, at 6.

<sup>93</sup> New Jersey Environmental Cleanup Responsibility Act (ECRA), N.J. STAT. ANN. § 13:1D-101, :1K-9(a), :1K-9(b)(2) (West 1993); Motiuk et al, *supra* note 85, at 2.

<sup>94</sup> *Id.*

<sup>95</sup> Motiuk et al, *supra* note 85, at 4.

<sup>96</sup> Motiuk et al, *supra* note 85, at 3; N.J. STAT. ANN. § 13:1k-9a.

<sup>97</sup> Motiuk et al, *supra* note 85, at 4.

<sup>98</sup> Connecticut Transfer Act, CONN. GEN. STAT. ANN. § 22a-454(b) (West 1993).

<sup>99</sup> T & E Indus., Inc. v. Safety Light Corp., 587 A.2d 1249 (N.J. 1991).

<sup>100</sup> Illinois Responsible Transfer Act of 1988, ILL. ANN. STAT. ch. 30, para's 901-907 (Smith-Hurd 1994).

<sup>101</sup> *Id.* at para. 904(a).

<sup>102</sup> *Id.* at para. 904(c).

<sup>103</sup> *Id.*

<sup>104</sup> Indiana Responsible Property Transfer Law, IND. CODE ANN. §§ 13-7-22.5-1 to .5-22 (West 1994).

<sup>105</sup> 35 PA. CONS. STAT. ANN. § 6018.405 (1994).

<sup>106</sup> *Id.*

<sup>107</sup> *Id.* § 6020.512 (1994).

<sup>108</sup> MASS. ANN. LAWS. ch. 111, § 199 (Law. Co-op. 1985 & Supp. 1989).

<sup>109</sup> *Id.* § 197A(b)(1).

<sup>110</sup> FLA. STAT. ANN. § 404.056 West 1994; see also Sheperd and Gaynor, *supra* note 36, at 8.

<sup>111</sup> *Id.*; FLA. STAT. ANN. § 404.056 (7) provides in pertinent part:

**Notification on real estate documents.** — By January 1, 1989, notification shall be provided on at least one document, form, or application executed at the time of, or prior to, contract for sale and purchase of any building or execution of a rental agreement for any building. Such notification shall contain the following language:

"RADON GAS: Radon is a naturally occurring radioactive gas that, when it has accumulated in a building in sufficient quantities, may present health risks to persons who are exposed to it over time. Levels of radon that exceed federal and state guidelines have been found in buildings in Florida. Additionally information regarding radon and radon testing may be obtained from your county public health unit."

<sup>112</sup> *Id.*

# Requiring Environmental Information Disclosure on the Deed

are required to be executed before the lease or sale is completed.<sup>113</sup>

New Jersey requires disclosure of any results obtained from radon testing before sale of the property.<sup>114</sup> However, without a mandatory testing requirement, the mandate could just as easily discourage testing rather than encourage disclosure. A number of other states, including Georgia, New York, Maryland, and Virginia, have established task forces to make recommendations on the radon issue.<sup>115</sup> The Maryland task force suggested the creation of a model radon declaration for real estate transactions.<sup>116</sup> However, these task force suggestions have yet to be given the force of law.<sup>117</sup>

### 3. Private Information Gathering

The individual buyer concerned about environmental problems can try to obtain information from the seller. Several authors have suggested using disclosure statements as an addition to a real estate contract.<sup>118</sup> A well-drafted disclosure statement could include contingency clauses mandating seller liability for any false testing reports.<sup>119</sup> However, this sort of approach is easily defeated by a seller who is unwilling to sign a disclosure statement. Certainly, information-gathering on all the residential environmental problems is not the norm in the industry. Thus, an unwilling seller could expect to have any number of alternative potential buyers who never consider environmental issues in purchasing a residence.

In the area of leaking underground storage tanks, there is some information accessible to the public. Of the tanks that are subject to regulation, any confirmed contamination releases are placed on file with the state environmental protection agency and the EPA.<sup>120</sup> However, obtaining these files, as with obtaining any EPA information, may be time consuming. Indeed, for the neophyte concerned citizen, the complexity of finding documents held in some national headquarters may prove to be an insurmountable burden. For those not able to visit the federal or state agencies directly, the primary method of gaining access to federal agency files is through a Freedom of Information Act (FOIA) request.<sup>121</sup> The responses, although forthcoming, may be slow. Typical FOIA responses from the EPA will take between three weeks to six months.<sup>122</sup>

The environmental audit remains a good bet in most land transactions. With the expansive cost of environmental clean-ups and remediation,<sup>123</sup> the limited investment in discovering environmental problems is well worth it. As one commentator has stated it, "the better choice is to know your liabilities and respond to them, rather than to remain oblivious and run the risk of scorn for making a 'willful blindness' argument."<sup>124</sup> Purchasers of real property, without further assistance from government transfer laws, will have to focus more and more on environmental issues as central to the purchasing process.<sup>125</sup> Unfortunately for buyers, the

cost of the audit often comes before the deal is consummated. This requires an up front expense on a property that the buyer may not even purchase. Thus, a conscientious buyer is at a tactical disadvantage in discovering environmental information.

### 4. Results of the Current Information Systems

#### a) Unwary Neighbors

The lack of information accessibility under the current system can have a direct impact on residents neighboring areas of environmental contamination. This ignorance can cause the most devastating results with underground storage tank contamination. The most common culprit is gasoline leaked into the water supply. Because of the disincentives to public notification, area residents are often unaware of dangerous conditions until after they result in a direct affect on human health.

One of the most dramatic incidents of this type occurred in the town of Fort Collins, Colorado.<sup>126</sup> An area gasoline station reported leaking 2,700 gallons of gasoline in August of 1985.<sup>127</sup> None of the residents were notified.<sup>128</sup> No one in the neighborhood had any idea that the contamination had happened.<sup>129</sup> Four months later in December of 1985, David Losser smelled gasoline fumes in his house.<sup>130</sup> These fumes were confirmed to be gasoline by the county health department and the Lossers were forced to evacuate permanently.<sup>131</sup>

<sup>113</sup> *Id.*

<sup>114</sup> Shepard and Gaynor, *supra* note 36, at 8.

<sup>115</sup> *Id.*

<sup>116</sup> *Id.*

<sup>117</sup> *Id.*

<sup>118</sup> *Id.* at 9.

<sup>119</sup> *Id.*

<sup>120</sup> Public Participation, 53 Fed. Reg. 37,206 (1988) (to be codified at 40 C.F.R. § 280.67).

<sup>121</sup> Anthony J. Buonicore, *Using Public Records in Environmental Audits*, 761 PLI/Corp 195 (1992).

<sup>122</sup> *Id.*

<sup>123</sup> See 53 Fed Reg 23,994 (1988) (The average response costs for each National Priority List sites is approximately \$14 million); UST cleanups can range up to \$500,000 and into the millions of dollars. Liability for damages can easily reach into the tens of millions of dollars. See also Chanin, *supra* note 62 at 376; Brieger, *supra* note 57 at 529; Gauthier, *supra* note 82 at 270.

<sup>124</sup> I.L. Motiuk & William C. Behrmdt, III, *The Environmental Audit: Can It Help?*, 459 PLI/Lit. 561, 562 (April/May 1993).

<sup>125</sup> Douglass F. Rohrman & Michael J. Hoffman, *Environmental Audits: Assessing Environmental Liability in Real Estate Transactions*, 77 Ill. B.J. 690, 698 (1989).

<sup>126</sup> Chanin, *supra* note 62, at 374; Ft. COLLINS COLORADOAN, § C, at 1 (May 12, 1988); Ft. COLLINS COLORADOAN, § A, at 1 (April 9, 1990); Ft. COLLINS COLORADOAN, § C, at 1 (June 6, 1990); Ft. COLLINS COLORADOAN, § A, at 1 (June 21, 1990); Ft. COLLINS COLORADOAN, § A, at 1 (Aug. 12, 1990).

<sup>127</sup> Chanin, *supra* note 62, at 375.

<sup>128</sup> *Id.*

<sup>129</sup> *Id.*

<sup>130</sup> *Id.*

<sup>131</sup> *Id.* at 374-375.



Two years later, neither the government nor the oil company had taken any steps to clean up the problem.<sup>132</sup> Investigation pursuant to a class action lawsuit revealed that there had been leaks at the station as early as 1983.<sup>133</sup> The leaks had continued even after the Lossers were forced to abandon their home.<sup>134</sup>

The environmental damage done was nothing short of devastating. An estimated total of 18,000 gallons of gasoline had leaked into the ground from the neighborhood station.<sup>135</sup> A number of monitoring wells were drilled to measure the water quality.<sup>136</sup> One such well detected six to ten inches of free gasoline in the water table.<sup>137</sup> The groundwater and surrounding dirt was actually ignitable.<sup>138</sup> The neighborhood residents were afflicted with numerous physical ailments characteristic of gasoline poisoning.<sup>139</sup> Symptoms included headaches, dizziness, nausea, eye and mucous membrane irritation, and depression.<sup>140</sup>

These types of incidents are not isolated to a specific area or time. Twenty years ago, residents of Canob Park, Rhode Island discovered their water was unsafe for consumption due to gasoline contamination.<sup>141</sup> Some sources of water were so contaminated as to be classified as "ignitable."<sup>142</sup>

Only after the contamination was discovered did the town then begin an investigation which revealed that a local Mobil gasoline station had leaking USTs.<sup>143</sup> A second investigation by the EPA turned up another leaking tank at an area Exxon station.<sup>144</sup>

In 1977, the primary well which serviced the town of Provincetown, Massachusetts was polluted by over 3,000 gallons of gasoline leaked from an area Amoco station during a period of 12 months.<sup>145</sup> The \$1.4 million spent by the town to clean up the well could still not return it to its former usefulness.<sup>146</sup>

Bellevue, Florida experienced a similar occurrence in 1982.<sup>147</sup> Amazingly enough, the problem was not investigated fully until the town mayor noticed an offensive taste in the drinking water.<sup>148</sup> After an extensive scientific investigation, the source of the problem was located some 300 yards from the town well.<sup>149</sup> A Union 76 gasoline station had leaked over 10,000 gallons of gasoline into the groundwater immediately surrounding the well.<sup>150</sup> The leak was immediately above a huge Florida aquifer that itself is a drinking water source for over 5 million residents.<sup>151</sup>

The U.S. House of Representatives investigated a leak in North Babylon, New

York on Long Island.<sup>152</sup> In 1983, a Sunoco gasoline station had leaked 100,000 gallons of gasoline into the ground.<sup>153</sup> The ensuing hearings established that residents were faced with the "typical" problem of water contamination by USTs, a several month time lag between the spill and the time that the residents were notified.<sup>154</sup> Again, only extraordinary occurrences led to the discovery of the problem, and much time elapsed before the information was easily accessible to the neighboring public.

Likewise, parents may be oblivious to the environmental dangers lurking in their children's schools. A mandatory system of reporting at the time of sale would not reach public school buildings. However, a general system of reporting environmental information on the chain of title combined with an obligation to test at sale, or periodically for all public accommodations such as the schools, would open up this information to easy public access. Although no study has been done to identify how many schools contain lead-based paint, it is known that half of all schools were built before 1959 when there were no regulations on lead-based paint.<sup>155</sup> The simple fact that this basic information on schools is unavailable points out the enormous difficulty of discovering the facts with-

<sup>132</sup> *Id.* at 375.

<sup>133</sup> *Id.*

<sup>134</sup> *Id.*

<sup>135</sup> *Id.*

<sup>136</sup> *Id.*

<sup>137</sup> *Id.*

<sup>138</sup> *Id.*

<sup>139</sup> *Id.*

<sup>140</sup> *Id.*

<sup>141</sup> *Id.* at 375-376; Brieger, *supra* note 57, at 527-528.

<sup>142</sup> Chanin, *supra* note 62, at 375-376.

<sup>143</sup> *Id.* at 376.

<sup>144</sup> *Id.*

<sup>145</sup> *Id.*

<sup>146</sup> *Id.*

<sup>147</sup> Chanin, *supra* note 62, at 376.

<sup>148</sup> *Id.*

<sup>149</sup> *Id.*

<sup>150</sup> *Id.*

<sup>151</sup> *Id.*

<sup>152</sup> *Superfund: Hearings on Leaking Underground Gasoline Storage Tanks Before the Subcomm. on Commerce, Transportation, and Tourism of the House Comm. on Energy and Commerce, 99th Cong., 1st Sess. 1007-1011 (1985) (statement of Hon. Thomas J. Downey); Chanin, supra note 62 at 376-77.*

<sup>153</sup> Chanin, *supra* note 62, at 376.

<sup>154</sup> In this case 20 homes were so contaminated that the residents had to be moved into emergency government housing. *Id.* at 376-377.

<sup>155</sup> Gilligan & Ford, *supra* note 25, at 250.

<sup>156</sup> Ann Fisher et al, *Schools Respond to Risk Management Programs For Asbestos, Lead in Drinking Water and Radon*, 4 *Risk* 309, 315 (table 1) (1993).

out any sort of central information repository. This lack of collected information can make it more difficult for policy makers at all levels of government to react adequately to the lead-based paint problem. At the national level, policy makers must rely on EPA estimates; at the local level, the issue may never even arise.

In the area of lead-contaminated water in schools, more awareness has been achieved. However, the results are still displeasing. A study of school districts' response to government information programs on lead showed that only 46% of schools had tested for lead in the school water system.<sup>156</sup> That leaves over half of the school districts with no idea as to whether lead contaminated water is even a concern for their schools. The schools were much less successful in the area of radon testing. The same study of school districts indicated that only 18% of schools had tested for radon.<sup>157</sup>

## b) Unwary Buyers

Liability for environmental problems may be less of a concern for residential properties than it is for industrial properties. This is not to say that the non-commercial arena is free from risk. Especially in the farm context, it is not difficult to imagine potential problems arising from small gasoline storage tanks, agri-chemical storage, or previous unknown contamination or dumping. Federal regulations can impose strict liability on owners for cleanup of contaminated property without regard to fault. Even if the new owner's actions did not contribute to contamination, mere ownership is enough.<sup>158</sup> This may be mitigated by the "innocent purchaser" defense added by the 1986

amendments to CERCLA.<sup>159</sup> Unfortunately, the protection of the innocent purchaser defense is often more illusory than real. Successfully invoking the defense to a Superfund liability threat under CERCLA is rare.<sup>160</sup> An attempt to use this defense, in almost any case, requires the purchaser to have conducted an environmental assessment.<sup>161</sup> Even then, this defense does not protect an owner against state law or RCRA actions.<sup>162</sup>

Furthermore, in many states a corporation or individual can sell property without disclosing that an underground storage tank is on the land.<sup>163</sup> Thus, the purchaser who chooses to forego the expense of an environmental assessment can be left oblivious to numerous problems and potentially liable for clean-up costs.

Even without rising to the level of a federal violation, a recognized environmental problem can be costly in a number of ways. For instance, the sale or rental value of the residence can plummet.<sup>164</sup> Often, after the water table is contaminated by gasoline, area residences could be neither sold nor rented.<sup>165</sup> Even if it is rentable, the owner may be liable for physical harm done to the tenant from a known environmental problem such as radon gas or lead-contaminated drinking water.<sup>166</sup>

Environmental problems discovered after the purchase may still be remedied. However, curing the problem often comes at a high cost. Replacement of the lead-soldered plumbing in a home, foundation and ventilation work for radon infested houses, and asbestos removal can all run into the tens of thousands of dollars. The cost is most painful when those expenses were unac-

counted for when the buyer originally valued the house. Without compelled disclosure or easy access to this information, the health-conscious buyer will be forced to bear the financial loss.

Yet, the most devastating risk by far is not the financial one. Unlike industrial transactions, the typical purchaser in a residential context is not interested in a property solely for investment purposes. The residential purchaser commonly intends to live on the property. Thus, the unwary buyer becomes an unwary owner. The panoply of potential physical damage can be seen in the effects of all four of the most common residential environmental problems.<sup>167</sup>

Without the knowledge of environmental dangers there is little impetus on the seller or buyer for remediation. It is one thing to hear a statistic on radon, for example. It is quite another to know that you are living in a house with radon levels at a specific and dangerous level. Without disclosure, sellers and purchasers often do not go out of their way to discover environmental problems simply because they don't ever think about it. The resulting damage to health has been well-documented in all four of the major residential contamination areas.

## II. COMMENT

### A) *The Proposal : Requiring Disclosure and Information Centralization*

"American society increasingly relies on programs that inform people how to detect and reduce health risks."<sup>168</sup> In keeping with this spirit of informing the public, it is time to tackle the environmental concerns of the average homeowner. Most Americans remain in the dark about potentially devas-

<sup>157</sup> *Id.*

<sup>158</sup> See e.g., *United States v. Cauffman*, 15 ENV'T L. REP. 20,161 (C.D. Cal. 1984); *Tanglewood Homeowners v. Charles-Thomas, Inc.*, 849 F.2d 1568 (5th Cir. 1988); *United States v. Monsanto Co.*, 858 F.2d 160 (4th Cir. 1988), cert. denied, 490 U.S. 1106 (1989).

<sup>159</sup> 42 U.S.C. § 9601(35)(B).

<sup>160</sup> Rohman & Hoffman, *supra* note 125, at 693.

<sup>161</sup> *Id.* at 694; 42 U.S.C. § 9601(35).

<sup>162</sup> Rohman & Hoffman, *supra* note 125, at 693.

<sup>163</sup> Gauthier, *supra* note 82 at 284.

<sup>164</sup> Chanin, *supra* note 62, at 375.

<sup>165</sup> *Id.*

<sup>166</sup> See *supra* notes 1-27, 28-49 and accompanying text.

<sup>167</sup> See *supra* notes 1-74 and accompanying text.

<sup>168</sup> Fisher et al, *supra* note 156 at 309.

tating problems such as radon and lead contamination. To resolve this problem, one need only look to examples from the industrial context of dealing with environmental issues. The first step to any meaningful solution, whether public or private, must be disclosure.

In the residential context, effective disclosure requires divulging the existence of any of the four major residential environmental problems (lead, radon, USTs, and asbestos). The total extent of a disclosure statement covering these issues should be limited to provide uniformity and simplicity in disclosure. The relevant information on lead, radon, USTs and asbestos could be revealed in a simple questionnaire sheet.

To avoid the problem of unwary buyers, a seller must be required to disclose environmental information to the buyer before the contract for sale of the property is signed. Mandating that the seller fill out a simple disclosure sheet insures that both private parties are aware of these environmental difficulties and can anticipate possible clean-up costs.

To be most effective, it is vital that this disclosure information not remain private. Rational public policy mandates that the general public also be informed of the potential problems. This can be done by requiring the environmental disclosure to be recorded along with the deed or other transfer document. Thus, the same disclosure statement given to the buyer before signing of the real estate contract would be recorded for the general public. For public accommodations not likely to be transferred, such as public schools, disclosure of environmental information should be required on a periodic basis, rather than at sale. In this way the county registrar of deeds can provide easy, local access to environmental information. This disclosure system would be easy to use

for the less sophisticated investigator. Placing environmental information in the chain of title<sup>169</sup> should provide a way for the typical citizen to gather environmental information about any particular residence or neighborhood.

In order to insure accurate information, the seller must be required to test for these environmental problems. The seller's statement of ignorance on the issues is not useful. Testing for any of these common problems is not difficult. Lead contamination of water can be measured analyzing faucet water samples. The existence of USTs, asbestos, or lead paint would be a matter within most sellers' knowledge. Radon tests are commonly available to the consumer. A government disclosure program would need only to mandate standard specifications for each testing procedure to make the data completely comparable.

In a perfect world, everyone would voluntarily choose to comply. In the real world, an effective proposal must enforce this mandatory disclosure. Many methods of enforcing disclosure are already being used by states to enforce similar provisions in the industrial arena. A seller who falsified or failed to disclose information could be held to a strict liability standard for any resulting health damage or remediation costs. Minor criminal penalties for falsification could likewise be an incentive.

Another powerful incentive would be to void a sale where the disclosure law was violated. This harsh method has already been adopted by New Jersey in industrial environmental disclosure enforcement.<sup>170</sup> Voiding of the sale would make any seller think twice before falsifying or failing to disclose information. Even the less drastic method used by some states of allowing voidability within a certain time window would have the desired impact.<sup>171</sup> Real estate

brokerage firms would likely attempt to ensure compliance, otherwise they risk a sale (and commission) being potentially voided.

USTs provide another alternative for enforcement. A statute should provide for UST disclosure and description in the transfer. Disclosure could be enforced through the general property transfer laws by requiring that USTs be specifically disclosed in order to transfer title to the UST portion of the realty. Thus, in the event of failure to disclose, the state law could provide that the UST portion of the realty was never actually transferred. The previous seller could then be held directly liable as the current owner of a leaking UST.

In a related way, the public chain of title should also serve as a limited repository of federal environmental information on any particular property. Keeping the information at the county courthouse instead of Washington, D.C. would make it much more easily accessible to neighbors, buyers, and community leaders. Certainly, this information centralization could not replace the usefulness of an environmental audit in the sales context. Yet, for certain vital information, easy accessibility to the local public would be immensely valuable.

In the UST context, all confirmed contamination releases should be recorded immediately, regardless of any additional action taken. Certain state agency records of imminent neighborhood interest could also be included in the chain of title. The system may even expand to encompass EPA complaints of any sort. The key advantage is that the information is brought to the local level in an easily accessible form. Instead of waiting for the federal bureaucracy to attempt notification, any suspected problems or complaints could be immediately reviewed by those most directly affected.

<sup>169</sup> Putting such information in the chain of title might first be considered a problem for title insurance companies. But, title insurance companies would not normally be required to insure the accuracy of the environmental information as part of a typical title insurance policy. Title insurance policies commonly exclude certain liens, claims or other items from their coverage. It would be no more difficult for title insurance companies to exclude insuring the validity of the environmental claims found in a disclosure statement in the chain of title.

<sup>170</sup> N.J. STAT. ANN. § 13:1k-6 to :1k-13 (West 1993).

<sup>171</sup> IND. CODE § 13-7-22.5-1 to -22.5-22 (1994).

## THE EFFECTIVENESS OF MANDATORY DISCLOSURE AND CENTRALIZATION ON SOLVING INFORMATION PROBLEMS.

### 1. Unwary neighbors

In all considerations of a mandatory disclosure system, it must be emphasized that disclosure is the necessary first step. Disclosure is not always the ultimate solution. Public access to EPA complaints and confirmed contamination releases could shorten the lag time between environmental damage and public awareness. No longer would contaminations continue to damage unsuspecting residents while the information lies hidden in a federal agency. The first line of public notification should not be the mayor tasting chemicals in his drinking water or the homeowner made ill from gasoline fumes. With mandatory, immediate title-based disclosure, the local reporter or the concerned citizen could easily and quickly access information on local environmental problems.

Public disclosure also heightens awareness of more common household environmental dangers such as radon and lead in drinking water. If a person is concerned about area levels of these toxins, it is a short drive to the county courthouse to find out the recorded levels in recently transferred neighboring homes. Anyone interested could quickly accumulate data on the extent of the problem in their own community. The level of community awareness and response could only be expected to rise.

### 2. Unwary buyers

Mandatory disclosure would eliminate much of the unwary buyer problem. Any purchaser would have major environmental information available before completing the purchase. One commentator has noted that for lead contaminated water, "requiring

homes to be tested before they are rented or sold would be a fairly inexpensive way of allowing renters or buyers to know the extent of their drinking-water lead problem."<sup>172</sup>

Mandatory disclosure of surrounding environmental problems provides an excellent incentive for remediation. For the most damaging environmental problems, such as contamination releases from USTs, the financial risk of allowing the problem to continue would force the owner to fix the problem. Professor Candice Gauthier agrees by stating that knowledge of a confirmed contamination release would "force the individual or corporation that owns the property when the release is first noticed to take complete and comprehensive remedial action prior to putting the property on the market."<sup>173</sup> Forced disclosure makes environmental issues more financially significant in selling. Most serious environmental problems would have to be remedied before a reasonable price could be obtained.

Some buyers are dealing with environmental concerns by paying for an environmental audit. The usefulness of an environmental audit is still great. But the reality of the situation is that audits are not being used in typical residential transactions. Professor Gauthier points out the usefulness of a mandatory public disclosure system as an alternative to audits. She explains, "[a] more economical, if not total, solution would be to require state agencies to notify the Register of Deeds of confirmed contaminating releases, so that this information could be placed on the property deed and be available to future buyers."<sup>174</sup> Although a system of public disclosure cannot replace a full environmental audit, disclosing basic facts about the most common environmental problems will inform many potential buyers of hidden

dangers.

## EFFECTS OF MANDATORY DISCLOSURE AND CENTRALIZATION ON THE UNDERLYING ENVIRONMENTAL PROBLEMS

### 1. Lead Contamination

The information-gathering aspects of the proposal should be the opening step in attacking the contamination problems too big to be cured by the EPA. The EPA has focused on entire regional water distribution systems.<sup>175</sup> However, existing household plumbing is not addressed by EPA regulations.<sup>176</sup> Because this is a key source of lead contamination, any real solution must address household-based contamination.<sup>177</sup> Even the system-based strategy has a high level of allowable contamination. A small- to medium-sized water system will avoid regulation even if 10% of its customers have dangerous lead levels in the drinking water.<sup>178</sup> One author points out the most vital result of an information collection system: "[a]lthough such tests alone do not implicitly mandate that specific steps be taken in those homes with high readings, the information alone will generate public awareness of the lead problem and permit individuals to take steps to protect themselves."<sup>179</sup>

After mandatory testing and disclosure informs the owners and neighbors of a lead contamination problem, there are a number of potential solutions. Private citizens may choose not to wait for government help and take their own remediation steps. With modern filtration technology, a private citizen has options less drastic than completely replumbing the home. One simple solution is to install a simple \$40 filter that can remove ninety percent of the lead content in drinking water.<sup>180</sup> The impetus to doing this is provided simply by informing the owner. There

<sup>172</sup> Reiss, *supra* note 1, at 297.

<sup>173</sup> Gauthier, *supra* note 82, at 285.

<sup>174</sup> *Id.*

<sup>175</sup> Reiss, *supra* note 1, at 300.

<sup>176</sup> *Id.* at 296.

<sup>177</sup> "Sources of lead at the household level include (1) lead service lines on the homeowner's property, (2) lead in household plumbing, (3) lead-soldered joints and (4) brass or bronze faucets containing lead." 56 Fed. Reg. 26,463-465 (1991).

<sup>178</sup> Reiss, *supra* note 1, at 297.

<sup>179</sup> *Id.*

<sup>180</sup> See, Engelhard Unveils New Water Filter to Reduce Lead, WALL ST. J., May 22, 1991, at B4.

can be no better education program than to require individual owners and purchasers to be aware of the actual lead levels in their own house. The saved social costs of preventing the effects of lead poisoning by the periodic purchase of water filters are substantial. As one commentator points out, with mandatory testing, "... where federal regulation of public water fails to protect its citizens, private citizens may be able to protect themselves."<sup>181</sup>

## 2. Radon

Once the level of radon gas is determined, the buyer or owner has a number of options to reduce radon levels in the residence. The costs of minimal reduction methods can vary between \$30 and \$2500.<sup>182</sup> Typical remediation costs range between \$500 and \$5,000 with drastic measures involving foundation work and ventilation systems costing \$10,000 or more.<sup>183</sup> However, with the growing demand for radon reduction, procedures are becoming more economical.<sup>184</sup> Growing public awareness of radon is already leading to an interest in pre-purchase testing. This has led to a dramatic increase in radon reduction because, simply put, "homes where high levels of radon are found are not selling until the problem is corrected."<sup>185</sup> The federal government is already providing regulatory assistance in the radon remediation area. The EPA's Radon Contractor Proficiency Program screens abatement companies to provide a list of contractors with minimum levels of government provided training.<sup>186</sup>

But, most promising in the area of radon is that prevention in new homes is a relatively easy matter. For the new home builder faced with the prospect of mandatory radon disclosure, taking the minor steps to reduce radon levels during construction becomes economically desirable.<sup>187</sup> In the long run, this relatively cheap option could eliminate the radon problem in America. But, to make builders choose to solve the problem, it must be economically advantageous to them. Mandatory disclosure is the first step towards that goal.

## 3. USTs

The most devastating problem attacked by mandatory disclosure is the damage done to uninformed neighbors by groundwater gasoline contamination. Nevertheless, public awareness of the problem is the impetus for all types of remedial action. When the oil company's problems become public, the sort of continual and gradual leaking problems found in Fort Collins, Colorado will no longer be allowed. The first step to any concerted neighborhood action against a contamination problem must be public awareness. Localizing environmental information would only speed up the process of public awareness.

Additionally, problems that are currently too small for federal regulatory agencies will now be noticed. The farmer's leaking chemical or gasoline storage tank will be known to neighbors and potential purchasers. The possibility of state and local governmental responses to these "de minimis" issues becomes much more likely as the

extent of the problem is gradually revealed.

## 4. Asbestos

Knowledge of the danger is the best enforcer of remediation. When individuals become aware of threats to their own health from environmental problems in their own house, most are compelled to try to fix the problem. Even in areas where the government cannot be expected to pay for remediation, informing the owners will inevitably lead to private efforts. As environmental content becomes more a part of the sales process, the financial viability of remediation increases greatly. With asbestos, lead paint, or any other contamination, the drop in market value due to disclosure provides a key incentive for remediation.

## CONCLUSION

Although not a comprehensive solution to non-industrial environmental issues, an easily accessible information system based on mandatory disclosure would be a major step towards recognizing and dealing with the more widespread problems. People would be more aware and would at least consider the feasibility of remediating environmental problems. The full disclosure of information leads to a more perfect economic model. Thus, it becomes more self-beneficial to clean up these widespread environmental problems. In this era of budget cutbacks in numerous government programs, new environmental efforts must be aimed at encouraging private solutions. Mandatory reporting and disclosure is a necessary first step for many of these private solutions.

<sup>181</sup> Reiss, *supra* note 1, at 299.

<sup>182</sup> U.S. Envtl. Protection Agency, *Application of Radon Reduction Methods* 29 (Report No. EPA 625/5-88/024, Apr. 1989) at 9-15.

<sup>183</sup> Shepherd and Gaynor, *supra* note 36, at 7.

<sup>184</sup> Radon: *The Problem No One Wants to Face*, 54 CONSUMER REPORTS 623-625 (1989) (top mitigation costs list at \$1500).

<sup>185</sup> Shepherd and Gaynor, *supra* note 36, at 7.

<sup>186</sup> EPA's Radon Contractor Proficiency Program Begins in Fall, TOXICS NEWS 1-2 (Aug. 28, 1989). INDOOR RADON ABATEMENT ACT (IRAA), Pub. L. No. 100-551 (1988); TSCA, 15 U.S.C.A. § 2601-2629 (West 1982 & Supp. 1989).

<sup>187</sup> Bookspan, *supra* note 29, at 369.