

ENVIRONMENTAL HAZARDS AND REAL ESTATE

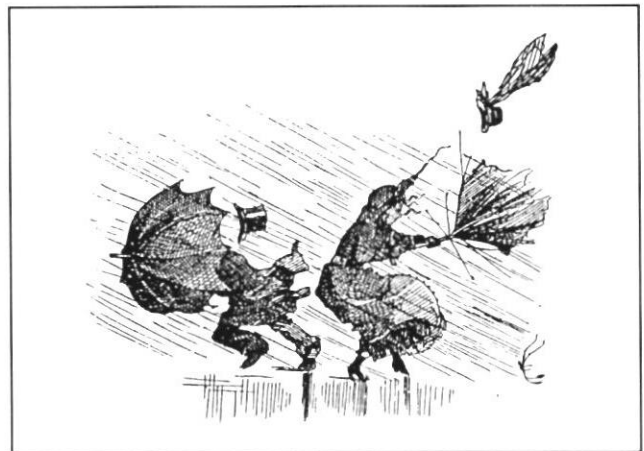
Underwriting investment risk in an increasingly stringent regulatory environment.

by John McMahan, CRE

Real estate investors and developers increasingly are confronted with having to assess the impact of environmental hazards on existing and prospective projects. This assessment usually is more than a technical evaluation, and it frequently involves balancing complex environmental, legal, political and business considerations. The process is complicated by ever-changing legislative and judicial standards where compliance in one year may not mean compliance in another.

Frustrated by the need to engage in such complicated assessments, many choose to remove themselves from the playing field simply by not getting involved with properties that are associated with environmental hazards. While this strategy may be wise in the case of investments in older buildings that contain asbestos, it severely restricts market opportunities when it is applied to more common environmental problems. Many fine buildings, often relatively new, have been built on land that had been contaminated in one form or another. To exclude these properties is to unreasonably restrict exposure to what otherwise may be good market opportunities.

A more realistic approach is to systematically determine the additional risks posed by environmental hazards and then judge whether the projected yield from the investment is commensurate with the additional risk. This article reviews the types of environmental risks the real



estate investor is likely to encounter, as well as legislative efforts to define or control the problem and establish liability. It then outlines a step-by-step program for determining when a property has an environmental problem and how to assess and underwrite the risks involved.

Environmental Hazards Primarily Affecting Buildings

Asbestos

Certainly the most extensively reported environmental hazard in existing buildings is asbestos. This once-acclaimed miracle fiber was used extensively after World War II in a variety of building applications including roofs, ceiling and floor tiles and for insulating and fire-proofing purposes. However, in the mid-1970s, the federal government banned its use following disclosure that inhalation of asbestos fibers could lead to cancer and other lung diseases.

According to the Environmental Protection Agency (EPA), approximately 20 percent of all public and commercial buildings in America contain asbestos in some form. Not all these buildings pose immediate danger; only 10

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percent to 20 percent have friable asbestos, meaning the asbestos crumbles easily and its fibers get into the air. Dormant asbestos can become friable, however, if it is disturbed by something as simple as a janitor's broom puncturing a ceiling tile.

PCBs

Polychlorinated biphenyls (PCBs) constitute a family of synthetic organic compounds that are nonflammable and can conduct heat without conducting electricity. As such, they have been widely used in insulating electrical capacitors and transformers in and around buildings. When discharged into air or water, the chemicals released tend to build up in the bodies of animals and humans and, over time, may cause cancer or birth defects.

The federal government banned the production of PCBs in the late 1970s. A few years later, scientists developed a system for reducing the chemicals to harmless salts. Public utility companies have been systematically removing PCBs from electrical equipment in most areas, although some electrical equipment containing PCBs still is in use.

Radon

Radon, a byproduct of decaying uranium, exists in nature and normally percolates through the soil into the atmosphere. When trapped under a building, however, radon can enter the foundation and structural elements and become concentrated in amounts that may be harmful. A colorless, odorless gas, decaying radon releases particles that, when inhaled over time, may lead to lung cancer. A recent study indicated that radon may be present in concentrated doses in as many as 4 million to 8 million homes in the United States.

Environmental Hazards Primarily Affecting Land

Radioactive Waste

Major environmental problems have been created as utilities have sought to dispose of radioactive waste from nuclear power plants. Radioactive waste disposal sites have contaminated not only the surrounding soil but often the underground water supply as well. In some cases, the soil from these sites has been used as landfill, which has spread radioactive contamination to other areas. The Department of Energy (DOE) estimates that as much as \$70 billion may be required to clean up sites contaminated by radioactive waste and that the effort may take as long as 20 years.

Properties also have been contaminated by radioactive waste from the operations of industrial firms that produce nuclear fuel rods and other radioactive products as well as from nuclear plant accidents, such as Three Mile Island.

Underground Storage Tanks

Much of the land in America sits on top of honeycombs of underground tanks that store diesel fuel, waste oil, and

gasoline for fueling trucks and automobiles and other chemicals for agricultural, nursery, and dry-cleaning operations. Chemicals leaked from these tanks into waterways or underground water tables usually pose formidable health hazards because they are among the most toxic and carcinogenic materials known to man.

Unlike radioactive disposal sites, the location of underground storage tanks is not always known, and it may not be discovered even after extensive test-boring. Although the federal government requires registration of all new placements of underground storage tanks, it cannot account for all existing tanks, many of which remain unknown until a site is excavated or leakage problems are discovered.

Industrial Operations

Over the years many industries have routinely used hazardous products in their operations and dumped the residue into underground disposal sites or nearby waterways. This dumping has been done by older industrial operations, such as the Hooker Electrochemical Company which dumped hazardous byproducts of its manufacturing into the Love Canal near Niagara Falls, as well as clean high-technology firms concentrated in areas such as the Silicon Valley and Orange County in California.

Underground contamination often takes years to detect. Problems at Love Canal, as an example, took almost 40 years to surface, and then only after a period of heavy rains and snow.

Underground disposal sites may be contaminated by a wide range of potentially toxic materials. Many of the 300 materials identified by the EPA as toxic are used by a diversified range of industries.

Federal Regulation

Responding to the public health problems created by environmental hazards, the U.S. Congress has passed some very tough, but often confusing, laws that may severely restrict the development and/or transferability of property. The real estate investor should be aware of several major federal laws.

Resource Conservation And Recovery Act (RCRA)

Originally passed in 1976, this legislation has been modified over the years to provide a means of regulating hazardous substances from production through transportation, use and ultimate disposal (cradle to grave regulation). The legislation has established permitting and reporting requirements, through which persons and firms that utilize hazardous materials must fully account for every stage of the process or face stiff civil and/or criminal sanctions.

A special section under RCRA established the Underground Storage Tank (UST) program, which undertakes to develop an inventory of the underground tanks that store oil, petroleum and other hazardous substances and

prescribes standards for the operation of existing storage tank sites and for the construction of new tanks.

Comprehensive Environmental Response, Compensation And Liability Act (CERCLA)

Because RCRA dealt only with present and future uses of hazardous substances and did not apply to the clean up of preexisting environmental hazards, Congress passed CERCLA in 1980. Congress then extended, clarified this legislation and provided additional funding for cleanup by passing the Superfund Amendments and Reauthorization Act of 1986 (SARA).

Together, these laws work toward the removal of hazardous wastes by authorizing the EPA to react immediately to an actual or potential release of a hazardous substance in accordance with a national contingency plan. A superfund of up to \$8.5 billion pays for removing and disposing of hazardous materials, and the fund is replenished by judgments against these parties who are responsible for both cleanup costs and damages.

State Legislation

Many states also have enacted legislation regarding environmental hazards. Usually state laws supplement federal legislation; but in some cases, however, state laws have increased the level of regulation that affects the development or sale of property.

Superlien

Several states, including Arkansas, Connecticut, Maryland, Massachusetts, New Hampshire, New Jersey, Oregon and Tennessee, have created superliens to recover state funds that have been used to clean up environmental hazards. These liens take precedence over all other liens, and, due to the high cost of remedial action, may severely reduce or eliminate the value of other lien positions.

Environmental Cleanup Responsibility Act (ECRA)

New Jersey and Connecticut have enacted legislation that requires hazardous materials to be cleaned up prior to the transfer of title to a property. Because it requires a negative declaration on the part of the seller, this legislation generally has been more effective than the superlien.

Right To Know Laws

Several states require that employees of firms utilizing hazardous chemicals be notified of any potential health hazard, provisions for safe handling of chemicals, and possible antidotes if the chemicals are misused. The definition of hazardous chemicals is relatively broad and it incorporates many chemicals used in property management, such as commercial cleaning solvents, pesticides, etc. Employee right to know laws are being supplemented in some states with community right to know laws which carry much broader notification requirements. California, as an example, passed Proposition 65 in 1986 which requires businesses to notify users of their products of any

chemical known to the state to cause cancer or reproductive toxicity. Over 200 chemicals, including sulfites contained in wine, are currently on the state's list of hazardous substances.

Other State Legislation

Many states have laws that closely parallel federal regulations regarding underground storage tanks, and compliance with these state laws often will satisfy federal requirements. Some states have laws that require the removal of paint or plaster containing lead from a residential unit if a child is present. The control of asbestos, radon and ureaformaldehyde foam insulation also is covered by legislation in several states.

Establishing Liability

As a result of sweeping federal and state legislation and a few key court cases, the liability associated with environmental hazards is coming into clearer focus. The tendency has been to throw a relatively broad net, catching as many potentially guilty parties as possible, and then sorting out degrees of liability, either directly or by legal action among the parties.

To the greatest extent possible, liability is attached to the responsible party who may be (1) the person or firm that generated the hazardous substance; (2) someone who transported the hazardous substance to a disposal site; or (3) an "owner or operator" of the property. The last category is particularly broad and includes not only the person who owned the property when the hazard was created but also the person who currently owns or operates the property, lessors or sublessees, secured creditors, corporate officers, shareholders, partners, joint venturers and successors in interest.

Liability is strictly defined under CERCLA, and it has very few defenses. Liability is joint and several, meaning that the government can bring action against any and all parties for the cost of the cleanup and the parties can allocate the damages (if any) through private action. Liability is also retroactive and in perpetuity.

But what of the real estate investor who has had nothing to do with the creation of the environmental hazard or may not even know of its existence? In SARA, Congress established the concept of the innocent purchaser—i.e., a party who (1) did not create or contribute to the environmental hazard and who (2) had no knowledge of the hazard after conducting a rigorous investigation into the past ownership and uses of the property. According to SARA, innocent purchasers are not liable. Interim owners of property who did not create the environmental hazard and sell before cleanup is required also may escape liability. These owners must prove that they did not contribute to the environmental hazard during the period of their ownership and that they had no knowledge of the environmental hazard at the time they transferred the property.

For sellers, disclosure is a critical element in any defense. Under both statutory and common law, sellers have a firm

obligation to disclose any site contamination of which they should reasonably be aware. Also, under common law, a seller is liable for a nuisance that existed during his ownership even after the property has been sold.

It should be noted that legal defenses must be proved in court and established defenses, such as the innocent purchaser, do not prevent a person or firm from being drawn into costly litigation which can tie up the development or transfer of a property for months or years. An investor thus has a strong incentive to resolve issues involving environmental hazards before a property is purchased, in order to stay out of the chain of title and thereby reduce the chances of incurring future liability.

Due Diligence

If investors should resolve environmental issues before acquiring a property, then the due diligence process must be as rigorous as possible. This objective is constrained in the real world, however, by the time pressures of the diligence process and the costs of environmental testing. The best approach, therefore, is to undertake the environmental review process in a phased program, completing the simplest tasks first and then moving on to more time-consuming (and expensive) procedures only if there is evidence of environmental problems.

Environmental Audit

The purpose of an environmental audit is to, within a reasonable time and expense framework, detect problems that require further investigation. An environmental audit consists of a review of existing documents and interviews with knowledgeable individuals. It is usually undertaken by a qualified engineer but not necessarily a specialist in environmental hazards.

In the case of properties that are not known to have environmental hazards, an environmental audit involves a review of the chain of title to the property, looking for past uses that might have generated toxic wastes such as gas stations, nurseries, dairy farms, dry cleaning operations, etc. Historical aerial photographs are helpful in this regard. If a property was in agricultural use at one time, the audit should identify where the farm residence was located since underground storage tanks usually will be nearby.

Interviews with current or past tenants help shed light on past operations that might have produced environmental hazards. Discussions with local environmental enforcement agencies and planning departments assist in determining whether government officials have had any environmental concerns about the site or have received reports of past violations. A check with state agencies can flag any underground storage tanks that have been picked up on the UST inventory.

In the case of properties where there is a higher probability of environmental hazards, such as sites currently or previously used by industries that manufacture or dispose of chemicals or radioactive materials, specific environmental documents may be available. Usually, these

documents are provided by the seller or through the local or state environmental protection agency. If such documents are not available, a review of specific reports, such as state pesticide application permits, inspection reports on oil storage systems, etc., will be necessary. The seller should be required to provide any analytical test results from such activities as test borings, air samples, material samples, etc.

The technical specialists who review other aspects of diligence, such as structural integrity, electrical and mechanical systems, zoning compliance, auditors (financial statements), lawyers (lease analysis), should be asked to keep their eyes open to possible environmental problems.

Environmental Risk Assessment

If the environmental audit encounters no problems and all other aspects of diligence are favorable, the transaction may close. However, if the environmental audit uncovers any potential problems, the investor must decide whether to proceed with additional investigation or terminate the transaction. This decision will be heavily influenced by the nature of the identified environmental problem, the allocation of cost of further investigation between buyer and seller, the additional time required for investigation and the continuing attractiveness of the investment as contrasted with alternative investment opportunities.

If the investor decides to proceed with further investigation, the work should be undertaken by an environmental specialist. In the investigation, the specialist reviews all the material developed in the environmental audit, and undertakes an on-site inspection, which, depending upon the nature of the environmental problem, may include a variety of tests. The tests most commonly utilized include material and air sampling, for asbestos and radon, test borings, for soil and ground water contamination, and equipment inspection for PCBs. These tests may take a few days or, in some cases, weeks.

Based on the results of these tests, the environmental specialist specifies the severity of the problem, the remedial work that will be required and the cost of this work. Generally, several stages of remedial work are recommended, ranging from the least costly to the most costly. Remedial recommendations usually fall into one of three categories:

- No treatment (natural remediation)
- On-site treatment (e.g., encapsulation, vapor extraction)
- Removal of the contaminated material and transport to another site

In developing the cost estimates for remedial work, the costs of ongoing monitoring activities should also be considered.

The environmental specialist's recommendations, along with the test results, are provided in the form of a written report. The investor may, at this point, wish to get a second opinion from another environmental specialist.

At the least, the investor should have the engineering report reviewed by an attorney who specializes in environmental law to be certain that the recommended remedial program will meet legal standards. In most cases, it is wise to anticipate that future legal standards will be tougher than present standards.

After learning of the cost of remedial work, the investor may wish to withdraw from the investment. In making this decision, the investor must weigh (1) the impact the environmental hazard will have on the value of the property and (2) how the impact will be recognized in the purchase transaction.

Impact On Property Value

It is difficult, if not impossible, to ascertain the total economic impact of environmental hazards on a piece of property. The impact may be much greater than the direct costs of the remedial work that is undertaken. One concern is future liability if the remedial work is ineffective or if a change in standards requires additional remedial work. Another is the possibility that a stigma may be attached to the property, even after the remedial work is completed. This stigma may reduce marketability (fewer buyers will be interested) and result in loss of value. The number of investors who have simply refused to invest in properties that have environmental problems already has reduced the market breadth for these properties. Finally, there may be a problem in securing financing, even after the remedial work is completed.

On the positive side, it is possible that the remedial work will restore a property to its full market potential. A good example is the removal of asbestos from a well-located, high-quality office building. Since tenants in most markets have been willing to lease space in buildings after asbestos is removed, the increase in value to the property from the remedial work may be greater than the cost of the work itself. Another example is the removal of contaminated soil prior to the development of a large housing development. Most buyers of houses (if they are aware at all) will be concerned only that the proper remedial treatment has been undertaken.

In attempting to quantify the impact that remedial work will have on value, the best approach is a before and after comparison that looks at the uses of the property after the remedial work is completed and the economic value these uses will create or reduce. Needless to say, a cautious investor will provide contingencies for possible corrections or additions to the remedial work and will utilize an investment hurdle rate that incorporates the additional risks.

Transaction Negotiations

Clearly, the change in value brought on by environmental hazards primarily affects the seller. The question is, how should the transaction be modified to reflect the change in value? There are several possibilities.

Reduction In Purchase Price

A common approach is to simply reduce the purchase price of the property by the cost of the remedial work (highest estimate), plus some amount for the additional risk the buyer is assuming. The problem with the price adjustment approach is that the buyer is forced to undertake the remedial work, and, if the work is not successful, he may be exposed to additional costs and liability. It is also possible that the remedial standards will change before the work is completed, changing the entire pricing calculation.

From the seller's perspective, a price adjustment based on the most expensive remedial recommendation may prove to be a windfall to the buyer if simpler, less costly solutions will be effective. Also, because the seller bears continuing liability (buyers seldom release sellers), he may be well served by assuring himself that the remedial work has been properly undertaken.

A reduction in purchase price may work, particularly in cases for which the extent of liability is well understood such as in the removal of asbestos. In most situations, however, it is best to assign the responsibility for remedial action and to change the property value in ways other than through price reduction.

Holdbacks For Remedial Costs

One alternative is to make a price adjustment that reflects the additional risk factors but holds back (in escrow or in the buyer's hands) the funds allocated to remedial action. This option is somewhat fairer to the seller who benefits from any savings from less costly remedial work. The problem is, what to do if the costs are higher than budgeted or if standards change while the work is proceeding. From the buyer's perspective, the seller should be responsible for additional costs, but this responsibility is often difficult to negotiate. A more realistic approach is to work out a formula for sharing additional costs. This option has the advantage of motivating both buyer and seller to keep remedial activities as efficient as possible. It does, however, hold one disadvantage to the buyer: CERCLA does not recognize agreements to allocate liability, meaning that the buyer will be brought into any legal action that is initiated by the federal government.

Delayed Closing

If the buyer is uneasy about closing before the remedial work is completed, closing may be delayed until the work has been completed at the seller's expense. The tradeoff is that the seller may insist on receiving the full purchase price and offer no concession for additional risk if he is to be responsible for the remedial work.

Indemnification

As with most real estate transactions, the buyer tries to get warranties, releases and indemnification, and the seller tries to avoid them. While indemnification will not help in the case of liability to the government, it may be helpful in adjudicating claims between the parties.

One of the problems with indemnification of environmental hazards is the lengthy time frame. If an indemnification is to be of any value to the buyer, it should cover not only existing environmental problems but those problems that may arise in the future, perhaps over a period of many years. It also should cover changes in the standards imposed by regulatory agencies. Even if the seller agrees to such an open-ended proposition, there is still the question of the seller's financial resources at the time of indemnification. A partial solution is to secure a bond (at the seller's expense) that insures payment of future cleanup costs if they are required by governmental agencies.

The bottom line on indemnification is that buyers should attempt to get it but should not rely on it exclusively. There is no substitute for rigorous diligence and sound underwriting. If these cannot be implemented through fair and reasoned negotiations, it may be better to pass on the transaction than to rely on a seller's indemnification.

Lenders

For the lender, diligence activities are undertaken in a similar fashion. Risk underwriting and negotiations may be somewhat different, however, due to the fact that the owner of the property remains the same. Generally, the loan should not close until the remedial action has been undertaken by the owner.

The lender must be careful to avoid being classified as an active owner and operator of the property and becoming strictly liable for the costs of remedial action under

CERCLA. While the legal distinction between active and passive ownership is evolving, a lending institution that assumes title for the sole purpose of protecting its security interest is not deemed to be an active owner, provided it can prove that it had no knowledge of the environmental hazard at the time it made the loan and at the time of foreclosure. A lending institution that exercises control over a borrower's business operations (such as participating or convertible mortgages), however, may be found to be an active owner and should explore with counsel the possible exposure to liability from the use of these instruments. A lender also should consider the impact of environmental hazards on the value of its collateral even though it may not be directly liable for cleanup costs.

Conclusion

It should be clear from this article that dealing with environmental hazards is a dynamic situation and that all parties must try to anticipate future directions because change is inevitable.

It also should be clear that, while environmental hazards pose underwriting problems, there is no reason to avoid these transactions *per se*. What is required is a rigorous diligence process, a sober assessment of the costs of remedial action versus the anticipated yield from the investment, and a forthright approach to negotiations so problems will be resolved before major funds are committed. While this approach cannot remove all risks, it can substantially reduce the investor's exposure and, in most cases, lead to successful investments.