Mitigating Factors in Appraisal & Valuation of Contaminated Real Property

by Allan E. Gluck, Donald C. Nanney, & Wayne C. Lusvardi

Environmental issues have become a key concern in real property transactions. One particularly difficult issue is the question of how contaminated or formerly contaminated properties should be valued for sale, lease, or financing transactions, as well as to determine loss or damage in litigation cases. The following seemingly simple equation has emerged for valuation of contaminated properties:

$$I = U - C - S$$

Where:
"I" = impaired value
"U" = unimpaired value
"C" = remediation cost
"S" = stigma

This equation has been refined in the literature to break down the cost ("C") factor into three sub-factors, including: 1). the cost to implement an applicable remediation plan; 2). the cost of any applicable use restrictions; and 3). impaired financing costs. Thus, the equation can include more elements, but only as a variation on a theme.

Stigma ("S") can be defined as the incremental loss in value beyond the cost factor due to market perceptions arising from uncertainty and fear associated with the actual or potential presence of contamination.

Unimpaired value ("U") is determined as if there were no contamination, utilizing any of the customary valuation methods: 1). the comparable sales approach (based on recent sales of like properties, with adjustments relevant to the property being appraised); 2). income

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approach (based on capitalization of income or discounted cash flow); or 3). replacement or reproduction cost.

This equation only refers to the negative or aggravating factors to be deducted from unimpaired value. As a result, mitigating factors that may offset the negatives are often overlooked. Mitigating factors should be considered when using the basic or refined formulas mentioned above, to derive net values.

Both aggravating and mitigating factors generally concern technical and legal aspects of environmental risks and solutions, which likely fall beyond the expertise of an appraiser alone. Thus, it may be necessary to assemble a multi-disciplinary team of environmental consultants, legal counsel, and other relevant professionals to generate the information and analysis necessary to assist an appraiser in placing a value on various aggravating and mitigating factors. The Appraisal Standards Board has approved the use of multi-disciplinary teams for the valuation of contaminated real property, expressly recognizing that appraisers may rely on the professional work of others, as long as each professional acts within the scope of his or her expertise and acknowledges the contributions of the others.[1]

LIMITING COSTS TO FUTURE OWNERS

A basic premise of value is that it represents the value to a future owner. Contamination affects market value primarily due to environmental liability and costs that may be incurred by future owners. If a future owner may incur little or no cost or loss, there may be little or no reduction in market value.

Cleanup prior to sale.

In many cases, owners clean up sites before sale, as is the general policy of the major oil companies in selling service station sites. This reduces the uncertainty of cleanup costs, hence mitigating or eliminating possible discounts.

Cost recovery from responsible parties.

The market value impact of contamination may be limited by the identification of liable parties, especially those with deep pockets, who may bear remediation costs so that future owners will not be affected or may recover such costs. To illustrate, there may be little or no impact on the value of a property due to contamination from formerly leaking underground storage tanks at a gasoline service station where the responsible parties include a major oil company, but there may be greater impact where the responsible parties are defunct or have limited financial resources.

Environmental laws impose liability on a number of parties. For example, the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), 42 U.S.C. §§ 9601 *et seq.*, generally imposes strict liability on present and past owners and operators of contaminated property, as well as on the generators and transporters responsible for the disposal of hazardous waste, subject to limited defenses. It is therefore appropriate to consider the potential for cost recovery from responsible parties.

According to some commentators, "[g]enerally, anticipated recoveries are not considered in the property value estimate."[2] This may be the case when an appraiser acts alone, without the expertise necessary to estimate cost recoveries, or where estimation would be purely speculative, in which case the appraisal opinion is subject to an important limitation and may *not* reflect economic reality. If possible, cost recovery should be considered in order to enhance the validity of the appraisal.

The cost recovery factor may be considered by a multi-disciplinary team including environmental consultants and counsel who can identify potentially responsible parties and advise as to the extent of their potential liability under applicable legal remedies. The availability of such responsible parties and their ability to bear their liability should also be considered.

Insurance recovery.

The costs of remediation may be covered by liability or property damage insurance. While current forms of commercial general liability insurance policies may contain "absolute" pollution exclusions, coverage may be available under older policies that were in effect when contamination occurred. Furthermore, at some cost, it is possible to purchase insurance specifically addressing environmental risk (*e.g.*, pollution liability coverage, first party property damage insurance without a pollution exclusion, and coverage for costs associated with contamination not discovered during a site assessment by qualified environmental consultants). Stop loss/cost cap insurance may mitigate the risk associated with cost overruns in a remediation program. Costs associated with a leaking petroleum underground storage tank may be covered from a state fund for the cleanup of such sites. Thus, the availability of past or present

insurance coverage or similar funding sources should be considered as a mitigating factor, and the advice of qualified insurance professionals and legal counsel may be helpful.

Cleanup by the government without recovery.

Due to a perceived threat to public health, a governmental agency may clean up a site at the cost of the public even though there may be no viable responsible parties. For example, remediation of the Ralph Gray Trucking Site in Westminster, California, was undertaken by the U.S. Environmental Protection Agency at a cost of millions of dollars with apparently little prospect for significant cost recovery. The site was used for the disposal of petroleum waste, with the parties known to be responsible for the contamination either no longer in existence or with little resources. The site is occupied largely by a residential tract with the residents benefited by the homeowner's exemption. Thus, the cost of remediation should not be a charge against the value of the homes in that area. To the contrary, not only was the Ralph Gray Trucking Site remediated at no cost to the residents, many homes and yards were renovated at taxpayer cost, a probable windfall to the residents enhancing the appeal and value of the neighborhood as a whole.

Environmental liens.

A governmental agency may seek to recover cleanup costs by imposing a lien against the real property. However, such a lien is a regular priority lien under both CERCLA and the California analogue. Thus, the environmental lien may be wiped out through foreclosure by a senior lienholder, with only partial or no net proceeds remaining for junior lienholders. Several other states, including Connecticut, Louisiana, Maine, Massachusetts, Michigan, New Hampshire, New Jersey, and Wisconsin, have adopted various "superlien" laws pursuant to which an environmental lien may be given priority as of a time earlier than its actual recordation, with the potential for "priming" otherwise earlier recorded liens. This may alter the valuation analysis in such a state.

Thus, property may be cleaned up entirely at taxpayers' expense without a viable responsible party or lienable equity in the property. Where governmental cost recovery is frustrated, the value of the cleaned up property could be restored without discount for cleanup cost. In any case, the imposition of an environmental lien would affect the amount of the landowner's equity, not necessarily the value of the cleaned up property itself.

Both aggravating and mitigating factors generally concern technical and legal aspects of environmental risks and solutions, which likely fall beyond the expertise of an appraiser alone. Thus, it may be necessary to assemble a multi-disciplinary team of environmental consultants, legal counsel, and other relevant professionals to generate the information and analysis necessary to assist an appraiser in placing a value on various aggravating and mitigating factors.

Environmental risk allocation by private agreement.

The potential costs of remediation may be tempered by private agreements, such as through indemnification by the seller or other responsible parties, or by new insurance products as mentioned above. Contaminated properties that may be seemingly unmarketable for sale or lease, or which would otherwise incur a significant discount, can be made viable by such private agreements. Some entrepreneurs have developed alliances with insurance companies and developers to assume environmental risks associated with the acquisition and redevelopment of contaminated property. The value of the property should be restored to the extent that environmental risk has been shifted to such parties, particularly insurers or other creditworthy parties, and away from the property itself.

Environmental cleanup not required or unlikely.

In *SDC/Pullman Partners v. Tolo Inc.* (1997) 60 Cal. App. 4th 37, a landlord sought to require a tenant to remediate toxic materials that were present in the soil at trace levels, not high enough to pose a real increased risk of heath problems or to trigger any cleanup order by regulators. The court ruled that the tenant was not obligated to clean up trace or *de minimis* amounts of toxic materials to avoid purely speculative rather than real environmental liability.

The nature and extent of the contamination, the applicable regulatory standards, and the extent of any cleanup obligation should be considered in the valuation process. Where contaminant levels are low or *de minimis*, such that remedial action is not

required or is not likely to be required, there should be no remedial cost to present or future owners, and therefore no charge to property value under the cost ("C") factor. Without cost, the remaining factor is market stigma (discussed below).

Time value of money.

To the extent that remediation costs ("C") will be incurred over a long period of time into the future, it would be inappropriate to deduct the full amount up front in an appraisal. The projected costs should be discounted to present value.

THE UNCERTAINTY AND LIFE CYCLE OF REMEDIATION COSTS AND STIGMA

The costs of remediation are often uncertain. Significant variables include the scope of contamination, the alternative remedial strategies, and the degree of regulatory enforcement. These variables, and associated stigma, may have different impact over time.

Valuation model v. life cycle.

The valuation model summarized above operates at only one point in time, whereas the impact of contamination actually changes over time, as to both remedial action cost and stigma factors. Typically, the life cycle of environmental risks, and its costs and discounts, begins with a phase where there is significant fear—possibly irrational— arising from uncertain knowledge of the scope of the problem. When little is known, speculation is rampant, and the emotional impact (stigma) may be greatest at this point in time.

The level of uncertainty frequently changes over time, however, as studies proceed, the contamination is better characterized, the history of the property is ascertained, potentially liable parties are identified, and remedial strategies are developed and effectuated. The unknown becomes known, costs are better defined and fear subsides or becomes contained and focused. (Of course, if it is found that the contamination is more extensive than anticipated, the impact may continue.) The parties often come together to find solutions, including appropriate remedial action, which can allay concerns and reduce the emotional component associated with the impact of the contamination.

Accordingly, the effect of the presence of contamination on value may be reduced over time simply due to changing perceptions as the facts and costs associated with the property are clarified. The outcome may be the redevelopment of the site, in which case the past presence of the contamination may no longer be a factor. For example, when a shopping center is built over a contaminated or formerly contaminated site, the presence of any residual contamination encased beneath the structures might not influence the rents being paid by the tenants, and hence the value of the property may no longer be affected by the presence of the contamination (*i.e.*, if unimpaired value of such an income producing property is based on the income approach, and if the net income stream is not affected by present or former contamination at the site, the calculation of value could be unaffected).

Remediation technology.

There may be alternative environmental engineering solutions to a given contamination problem, with widely divergent costs. New and more cost-effective cleanup techniques are being developed continually, and as the technology improves, remedial costs could be reduced. The timing requirements for remedial action may also have a significant impact on costs, whether the timing is transaction-driven or imposed by regulators. In general, expedited remedial action usually increases costs greatly. Unless immediate action is required for business reasons or to abate an imminent health hazard, it is usually possible to design more cost-effective remedial measures, spreading out and marginalizing the cost over time. Thus, a wise choice among available remediation options may significantly reduce costs and, concomitantly, mitigate the impact on property value. Of course, the technical advice of qualified environmental consultants is critical to this mitigating factor.

Enforcement and cleanup standards.

Regulatory standards vary between governmental agencies. Where more than one agency has jurisdiction, remedial action methods and costs may depend on which agency becomes the "lead agency." Moreover, applicable standards may differ based upon the circumstances. Of particular significance is the potential impact of the contamination on groundwater, especially groundwater that is a source of drinking water. The risks and costs of two otherwise identical sites may be vastly different if the contamination of one affects sources of drinking water but the other does not. Similarly, concern may vary depending upon the natural background level of the contaminant. Accurate estimation of remedial cost should involve the assistance of qualified professionals to assess the risk of exposure to human health or the environment and the remedial standards to be applied by the lead

regulatory agency as a result. Remedial costs can be controlled, and hence the impact on property value mitigated by the application of reasonable risk assessment and cleanup standards.

Political backlash.

As indicated by almost daily coverage in the news media during the 1990s, environmental programs have been under attack at federal and state levels, impelled by the perceived adverse impact of environmental regulation on the nation's economic malaise in the early to mid-1990s. The cost of compliance bites harder during recessionary times, especially when the regulations and their enforcement are seen as unfair by the regulated community. Along with other social programs, agencies charged with enforcing environmental laws and regulations have been affected by budget cuts at all levels of government. This political backlash has reduced the real and perceived power of those agencies. Thus, the impact of contamination on property value may be affected by prevailing political forces and the extent to which the applicable agencies are exercising their enforcement powers rigidly or reasonably.

Judicial backlash.

Similarly, after many years of largely unquestioning deference to environmental regulators, the courts in the 1990s began to make decisions curtailing what some judges perceived as excessive application of regulatory authority.

Response of regulators to the backlash.

Regulators are not insensitive to the backlash, and policies have been modified to make the enforcement of environmental laws more reasonable and consistent among agencies. Many "brownfield" initiatives have been adopted to facilitate the cost-effective resolution of environmental problems and to return contaminated sites to productive use. For instance, California's State Water Resources Control Board has adopted an number of initiatives including, significantly, a December 1995 guidance letter to the Regional Boards supporting cessation of remedial action in some cases and, in general, an enhanced consideration of risk assessment-based closure of low-risk sites contaminated by leaking fuel tanks. This represented a major departure from previous views of the threat of leaking USTs, and was based on the Lawrence Livermore National Laboratory report of October 1995 finding that the environmental impact of leaking USTs is not as severe as previously thought, and that natural bioremediation should be a primary remediation tool in most cases once a fuel leak source has been removed. Although this attitude shift has been controversial in some quarters, it has dramatically reduced remedial costs at UST sites around the state as literally hundreds of sites have been closed. Such initiatives may reflect an attempt by regulators to blunt the general political backlash in hopes of avoiding wholesale legislative reversal of environmental laws.

The costs of remediation are often uncertain. Significant variables include the scope of contamination, the alternative remedial strategies, and the degree of regulatory enforcement. These variables, and associated stigma, may have different impact over time.

In the face of political and judicial backlash, it is no wonder that the attitude of the regulators has changed. A stronger economy has apparently not reversed that change in attitude. Many regulators realize that cooperative efforts can return idle properties to productive use providing jobs and improving the tax base while still preserving public health. The interested parties, including regulators, tend to work in concert for the efficient remediation of a property, reducing costs where possible and serving both public and private objectives. More reasonable enforcement of environmental laws should have a significant effect on the extent and cost of remedial measures, mitigating the charge to property value.

STIGMA

Trend toward risk-assessment.

Part of the political backlash has been against the arbitrary application of stringent cleanup standards developed in the abstract seeking zero risk regardless of cost and utilizing unrealistic assumptions such as lifetime exposure to minute levels of pollutants. Now, the trend is toward risk assessment-based decisions focusing on the actual risk posed by a given situation. This significant change in approach can be expected to have a mitigating impact on perceptions, in many cases ameliorating the uncertainty and fear of health risk and potential regulatory requirements, and, hence, reducing the stigma associated with contaminated or formerly contaminated property.

Stigma diminishes over time or may be noncompensable.

As noted above, customary valuation methods "take a picture" of value as of a given time, whereas the impact of contamination on value actually varies over time. Studies have shown that stigma dissipates, and value eventually returns to, or nearly to, unimpaired value.

Post-cleanup stigma claims appear to be based on the fear that there may be some unknown or residual contamination, or that cleanup standards may become more stringent in the future, leading to additional liability even after sign-off by regulators. Some courts have allowed claims for post-cleanup stigma damages, but other courts have denied or limited such claims. Other cases have considered stigma associated with proximity to contaminated sites or fear of toxic impact from nearby operations. Again, some courts have allowed such claims and other courts have rejected them. Accordingly, it remains controversial whether and under what circumstances post-cleanup or proximity stigma damages are recoverable, and, if recoverable, the extent of the residual damage. Thus, the analysis should include consideration of the law in the applicable jurisdiction. If stigma damages have been rejected as a matter of law, or only narrowly permitted, the application of that factor may be eliminated or mitigated at the time of a property appraisal.

A mechanical application of a stigma discount may be inappropriate. It should be considered in each case whether stigma is a proper factor under the circumstances, and if it is, further consideration should be given to mitigating factors and approaches, and the manner in which the risk and profit opportunity posed by the stigma element has been or is being allocated between the transaction parties.

MARKET FACTORS

Highest and best use.

The impact of the presence of contamination may also depend on the current or changing "highest and best use" of the property.

In circumstances where the contamination is located in a building, and there is already limited utility to the building, the costs to mitigate the contamination may exceed the contributory value of the improvements, in which case a sound economic alternative may be to remove the improvements, which may cost less than other forms of remedial action, mitigating net remediation costs.

In cases where the land is contaminated, the regulatory stance and market response may be affected by the long-term outlook for the use of the property, so that if the contamination is commonly associated with the anticipated use, its impact on value may be nominal.

If the market perceives that a property can be reused without exacerbating or exposing the contamination, or the anticipated use is consistent with past uses, then liability or stigma may be largely a moot issue. In contrast, if a change in use is anticipated, a change where there is less tolerance for the presence of the contamination than the tolerance existing for the current use, then the presence of the contamination may trigger a significant impact on the value of the property.

Sellers' vs. Buyers' Market.

Prevailing economic and market conditions can have a significant impact on the marketability and value of contaminated properties. The 1990s have seen a dramatic swing of the pendulum from the real estate recession to a relatively "hot" economy and real estate market. Many environmentally impacted properties that languished during the recession are now moving in the marketplace. Governmental brownfield initiatives, along with better economic conditions, have helped to stimulate this. In a hot sellers' market, value and price tend to firm up, and buyers tend to be willing to assume more risk with less discount than during gloomy economic times. Thus, the place and time of a transaction in the economic and market cycle is an important factor that may mitigate (or aggravate) the impact of contamination on value and price.

No uniform market price discount.

It is a common misconception that there is a uniform market price discount for contaminated properties. In fact, there are usually few, if any, comparable transactions, as each may represent a unique condition and may reflect a wide geographic range. It may not be possible to draw valid market conclusions from the small sample size. Even if transactions involving comparable property types and environmental conditions are available, the pricing may have been affected by business considerations, such as the need for a particular location, the need to close the second leg of a tax deferred exchange, or private agreements between parties for mitigation of contamination costs. It is

therefore necessary in each case to undertake a careful analysis of the applicable method of determining unimpaired value and the various aggravating and mitigating factors that are relevant to a determination of the impairment to value, with the assistance of qualified professionals, as needed.

LEGAL AND REGULATORY EXEMPTIONS OR DEFENSES

The impact of the presence of contamination may depend, in some circumstances, on limited requirements for investigation or on certain legal limitations and exemptions.

No duty to investigate.

While certain disclosure duties apply under applicable law, there is no general requirement for a seller to undertake an environmental site assessment prior to sale in order to obtain new knowledge. Nevertheless, environmental site assessments by buyers have become a common feature of real property transactions, particularly when required by lenders, and in some contexts, *e.g.*, for a leased property, existing legal principles may impose on a property owner the duty to inspect and be aware of, and to repair or warn of, dangerous conditions. Also, real estate brokers may have a duty to undertake some investigation. In any case, if the transaction parties are not aware of existing contamination, there would be no impact on market value and price at the time of the transaction. Similarly, in many instances there is no requirement for remediation even when contamination is known to be present, again resulting in little or no potential impact on value.

Condemnation.

Some courts have not allowed the presence of contamination to be taken into consideration when determining the value of property that is being condemned, but other courts have ruled that remediation costs or stigma are admissible with respect to determining value in condemnation proceedings. This may also be affected by applicable statutes. For instance, California law expressly excludes consideration of the presence of hazardous substances in determining the appraised value of property being taken by a school district under the power of eminent domain. Instead of a price discount, Calif. Code of Civil Procedure § 1263.740 contemplates that the property will be cleaned up under the procedure set forth in Section 1263.720, using the full fair market value purchase monies, with any excess costs recoverable under Section 1263.730.

The valuation of contaminated or formerly contaminated property is a complex undertaking, with a variety of aggravating and mitigating factors. Accurate appraisal requires careful investigation and assessment of such factors, with the assistance of qualified environmental consultants and counsel as to technical and legal aspects. Without a multi-disciplinary team, an appraiser acting alone probably will lack the necessary expertise to render anything but an unimpaired value opinion assuming the absence of contamination.

Thus, the extent to which loss of value due to contamination may be considered in condemnation proceedings will depend upon the statutes or case law of the applicable jurisdiction.

Homeowner's exemption.

The U.S. EPA has adopted a policy statement establishing a qualified homeowner's exemption declaring that the average homeowner will not be required to conduct or pay for cleanup when residential property is part of a federal Superfund site. This seemingly discretionary policy is, of course, based on the fact that most homeowners would have the benefit of the third-party defense under CERCLA in any event, and it would be decidedly unpopular were the U.S. EPA to begin pursuing homeowners who happen to reside on top of a contaminated region. Similar homeowners' exemptions have been adopted under the laws of some states.

Defenses to liability.

Current and future owners may have defenses to liability under CERCLA and other environmental laws. Thus, the government may have to pursue other responsible parties, if any, for cost recovery (such as former owners or operators, or those who actually disposed of hazardous waste on someone else's property). Even though contamination may nevertheless have to be dealt with by the owner (*e.g.*, to obtain financing), the availability of defenses to liability will enhance the potential for obtaining recovery from other responsible parties.

Thus, to the extent that defenses are available and remedial costs are not legally recoverable from current or future owners, the potential charge to the real property should be mitigated.

CONCLUSION

It is not enough to deduct mechanically the costs of remediation or regulatory compliance, and any presumed "stigma," in calculating the impact of contamination on the value of real property. The usual valuation model is, at best, simplistic in making short-shrift of relevant mitigating factors (such as those discussed in this manuscript) and may be misleading to the extent that it does not reflect the market devices and legal factors that are frequently present. The valuation of contaminated or formerly contaminated property is a complex undertaking, with a variety of aggravating and mitigating factors. Accurate appraisal requires careful investigation and assessment of such factors, with the assistance of qualified environmental consultants and counsel as to technical and legal aspects. Without a multi-disciplinary team, an appraiser acting alone probably will lack the necessary expertise to render anything but an unimpaired value opinion assuming the absence of contamination. Such an opinion may be of some use, but would not reflect the actual, impaired value of the property, a serious limitation that the appraiser would be obligated to disclose under applicable ethical standards. REI

NOTES

The authors are expressing views and concerns of general academic interest, without any reflection as to how they would view any particular property, situation or case. The views and concerns are those of the authors, not necessarily of their companies or firms.

1. See Appraisal Standards Board Advisory Opinion G-9 "Responsibility of Appraisers Concerning Toxic or Hazardous Substance Contamination," dated December 8, 1992; see also, Appraisal Institute Guide Note 8, "The Consideration of Hazardous Substances in the Appraisal Process," as amended January 28, 1994.
2. Colangelo and Miller, *Environmental Site Assessments and Their Impact on Property Value: The Appraiser's Role*. The Appraisal Institute (1995), at p.50.

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