ADVISORY OPINION 9 (AO-9)

This communication by the Appraisal Standards Board (ASB) does not establish new standards or interpret existing standards. Advisory Opinions are issued to illustrate the applicability of appraisal standards in specific situations and to offer advice from the ASB for the resolution of appraisal issues and problems.

SUBJECT: The Appraisal of Real Property That May Be Impacted by Environmental Contamination

APPLICATION: Real Property

THE ISSUE:

Appraisals of contaminated properties, or properties suspected of being contaminated, are sometimes developed using either a hypothetical condition or an extraordinary assumption that the property is free of the contamination. While this is acceptable practice under certain conditions and for certain intended uses, there are assignments that require an appraisal of the "as-is" condition of the property, with full consideration of the effects of environmental contamination. In these assignments, the appraiser is asked to analyze the effects of known environmental contamination on the value of the subject property.

How does an appraiser comply with USPAP when appraising properties that may be impacted by environmental contamination?

ADVICE FROM THE ASB ON THE ISSUE:

Relevant USPAP & Advisory References

- DEFINITIONS, specifically the definitions of

  Extraordinary Assumption: *an assumption, directly related to a specific assignment, as of the effective date of the assignment results, which, if found to be false, could alter the appraiser's opinions or conclusions.*

  Comment: *Extraordinary assumptions presume as fact otherwise uncertain information about physical, legal, or economic characteristics of the subject property; or about conditions external to the property, such as market conditions or trends; or about the integrity of data used in an analysis.*

  Hypothetical Condition: *a condition, directly related to a specific assignment, which is contrary to what is known by the appraiser to exist on the effective date of the assignment results, but is used for the purpose of analysis. .*

  Comment: *Hypothetical conditions are contrary to known facts about physical, legal, or economic characteristics of the subject property; or about conditions external to the property, such as market conditions or trends; or about the integrity of data used in an analysis.*

- ETHICS RULE, particularly
  Conduct: *An appraiser must perform assignments with impartiality, objectivity, and independence, and without accommodation of personal interests …. An appraiser must not communicate assignment results* with the intent to mislead or to defraud.
- COMPETENCY RULE**,** *An appraiser must: (1) be competent to perform the assignment; (2) acquire the necessary competency to perform the assignment; or (3) decline or withdraw from the assignment.*

- Standards Rule 1-1(a): *In developing a real property appraisal, an appraiser must: (a) be aware of, understand, and correctly employ those recognized methods and techniques that are necessary to produce a credible appraisal;*
- Standards Rule 1-2(e): *In developing a real property appraisal, an appraiser must: (e) identify the characteristics of the property that are relevant to the type and definition of value and intended use of the appraisal.…*
- Standards Rule 1-2(f) and (g): *In developing a real property appraisal, an appraiser must: (f) identify any extraordinary assumptions necessary in the assignment; and (g) identify any hypothetical conditions necessary in the assignment.*
- Standards Rule 1-3(b): *When necessary for credible assignment results in developing a market value opinion, an appraiser must: (b) develop an opinion of the highest and best use of the real estate*.
- Standards Rule 1-4: *In developing a real property appraisal, an appraiser must collect, verify, and analyze all information necessary for credible assignment results.*

Competency and Related Issues

Consistent with Standards Rule 1-1(a): in the appraisal of a property as impacted by environmental contamination, an appraiser must *be aware of, understand, and correctly employ those recognized methods and techniques necessary to produce a credible appraisal*. Accordingly, an appraiser must have the requisite knowledge about appropriate methods, and be able to assemble the required information. An appraiser who lacks knowledge and experience in analyzing the impact of environmental contamination on the value of real property must take the steps necessary to complete the assignment competently, as required by the COMPETENCY RULE. However, an appraiser need not be an expert on the scientific aspects of environmental contamination, and in most situations the appraiser will utilize scientific and other technical data prepared by others, such as environmental engineers. In these situations, the appraiser should utilize an extraordinary assumption [see Standards Rule 1-2(f)] regarding the information obtained from other experts that is used in the appraisal. Examples of such information include items (1) to (10) under the header titled "Relevant Property Characteristics" later in this Advisory Opinion. This is especially important in situations where there is conflicting information about such information.

Specialized Terms and Definitions

The appraisal of properties that may be impacted by environmental contamination involves specialized terms and definitions that might not be used in an appraisal assignment in which the effect of the property's environmental condition is not analyzed, or when the property is not contaminated. Though it is recognized that there are other valid definitions of these and similar terms, for purposes of this Advisory Opinion, the following definitions apply:

Diminution in Value (Property Value Diminution): The difference between the unimpaired and impaired values of the property being appraised. This difference can be due to the increased risk and/or costs attributable to the property's environmental condition.

Environmental Contamination: Adverse environmental conditions resulting from the release of hazardous substances into the air, surface water, groundwater or soil. Generally, the concentrations of these substances would exceed regulatory limits established by the appropriate federal, state, and/or local agencies.

Environmental Risk: The additional or incremental risk of investing in, financing, buying and/or owning property attributable to its environmental condition. This risk is derived from perceived uncertainties concerning:

1) the nature and extent of the contamination;
2) estimates of future remediation costs and their timing;
3) potential for changes in regulatory requirements;
4) liabilities for cleanup (buyer, seller, third party);
5) potential for off-site impacts; and
6) other environmental risk factors, as may be relevant.

Environmental Stigma: An adverse effect on property value produced by the market's perception of increased environmental risk due to contamination. (See Environmental Risk)

Impaired Value: The market value of the property being appraised with full consideration of the effects of its environmental condition and the presence of environmental contamination on, adjacent to, or proximate to the property. Conceptually, this could be considered the "as-is" value of a contaminated property.

Remediation Cost: The cost to cleanup (or remediate) a contaminated property to the appropriate regulatory standards. These costs can be for the cleanup of on-site contamination as well as mitigation of off-site impacts due to migrating contamination.

Remediation Lifecycle: A cycle consisting of three stages of cleanup of a contaminated site: before remediation or cleanup; during remediation; and after remediation. A contaminated property's remediation lifecycle stage is an important determinant of the risk associated with environmental contamination. Environmental risk can be expected to vary with the remediation lifecycle stage of the property.

Source, Non-source, Adjacent and Proximate Sites: Source sites are the sites on which contamination is, or has been, generated. Non-source sites are sites onto which contamination, generated from a source site, has migrated. An adjacent site is not contaminated, but shares a common property line with a source site. Proximate sites are not contaminated and not adjacent to a source site, but are in close proximity to the source site.

Unimpaired Value: The market value of a contaminated property developed under the hypothetical condition that the property is not contaminated.

Relevant Property Characteristics

The appraisal of a property that includes the effects of environmental contamination on its value usually requires data not typically used in an appraisal of an otherwise similar but uncontaminated property or an appraisal of a potentially impacted property using either a hypothetical condition or an extraordinary assumption that it is uncontaminated or not impacted. The inclusion of these additional relevant property characteristics is consistent with Standards Rule 1-2(e). The relevant property characteristics may include, but are not limited to:

1) whether the contamination discharge was accidental or permitted;
2) the status of the property with respect to regulatory compliance requirements;
3) the remediation lifecycle stage (before, during or after cleanup) of the property as of the appraisal date;
4) the contamination constituents (petroleum hydrocarbons, chlorinated solvents, etc.);
5) the contamination conveyance (air, groundwater, soil, etc.);
6) whether the property is a source, non-source, adjacent or proximate site;
7) the cost and timing of any site remediation plans;
8) liabilities and potential liabilities for site cleanup;
9) potential limitations on the use of the property due to the contamination and its remediation; and
10) potential or actual off-site impacts due to contaminant migration (for source sites).

Since the appraiser is usually not an expert on the scientific aspects of contamination, experts from other fields will typically provide this information. Appropriate regulatory authorities should also be consulted to confirm the presence or absence of contamination. The appraiser should consider the use of extraordinary assumptions when this information serves as a basis for an opinion of value. The appraiser should also collect similar data for any comparable sales used in the analysis.

Valuation Issues – As If Unimpaired

In some assignments, the appraiser may be asked to appraise a property known to be contaminated under the *hypothetical condition* that the real estate is free of contamination. In these assignments, an appraiser may appraise interests in real estate that is known to be contaminated under the hypothetical condition that the real estate is free of contamination when:

1) the resulting appraisal report is not misleading,
2) the client has been advised of the limitation, and
3) all the requirements of the ETHICS RULE have been satisfied.

To avoid confusion in the marketplace, the appraiser should disclose available information about the contamination problem, explain the purpose of the hypothetical condition that the real estate is not contaminated, and state that the use of the hypothetical condition might have affected the assignment results in accordance with SR 2-2(a), (b), and (c)(x).

In other situations, the appraiser may be asked to appraise a property believed to be free of contamination or for which the environmental status is uncertain due to the lack of information or conflicting information. For these assignments, the property may be appraised under the *extraordinary assumption* concerning assumed factual information about its environmental condition and status. Indeed, since an appraiser is usually not an expert in detecting contamination, or confirming its absence, extraordinary assumptions regarding environmental condition may be necessary in many assignments.

Valuation Issues - As Impaired

Highest & Best Use Issues: The appraisal of properties that may be impacted by environmental contamination usually involves extensive highest and best use analysis. In accordance with Standards Rules 1-2(e) and 1-3(b), the appraiser must consider relevant factors in developing an opinion of the highest and best use of the property in its impaired condition. The valuation of properties impacted by environmental contamination usually involves the estimate of two values: the unimpaired value and the impaired. As such, two highest and best use analyses are typically required. The first does not consider any limitations on the property due to the environmental contamination. The second does consider any limitations due to the contamination, its remediation, and any legal use restrictions associated with the cleanup of the contamination source. Environmental contamination and its remediation to appropriate regulatory standards may affect the feasibility of site development or redevelopment, use of the site during remediation, use of the site after remediation, marketability of the site, and other economic and physical characteristics of a contaminated property. The appraiser should consider the possibility that site remediation and any remaining limitations on the use of the site following remediation may alter or limit its highest and best use in the impaired condition. In addition, excessive environmental risk and stigma may deter site development or redevelopment and thereby limit the highest and best use until the property's environmental risk is reduced to levels acceptable to the relevant market participants.

Satisfying SR 1-4 Requirements: When the appraiser addresses the diminution in value of a contaminated property and/or its impaired value, the appraiser must recognize that the value of an interest in impacted or contaminated real estate may not be measurable simply by deducting the remediation or compliance cost estimate from the opinion of the value as if unaffected (unimpaired value). Rather, *cost, use* and *risk* effects can potentially impact the value of contaminated property. *Cost effects* primarily represent deductions for costs to remediate a contaminated property. These costs are usually estimated by someone other than the appraiser, and should include consideration of any increased operating costs due to property remediation. The appraiser should also be aware that the market might not recognize all estimated costs as having an effect on value. *Use effects* reflect impacts on the utility of the site as a result of the contamination. If the contamination and/or its cleanup rendered a portion of the site unusable, or limited the future highest and best use of the property, then there could be a use effect on value. *Risk effects* are typically estimated by the appraiser and often represent the most challenging part of the appraisal assignment. These effects are derived from the market's perception of increased environmental risk and uncertainty. The analysis of the effects of increased environmental risk and uncertainty on property value (environmental stigma) must be based on market data, rather than unsupported opinion or judgment.

In general, the unimpaired value of the property being appraised can be estimated using the sales comparison approach [SR 1-4(a)], cost approach [SR 1-4(b)], and income approach [SR 1-4(c)]. Estimating the effects of environmental contamination on real property value usually involves the application of one or more specialized valuation methods. These methods should be consistent with the requirements related to the valuation approaches in USPAP.