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13TH ANNUAL CONDEMNATION APPRAISAL SYMPOSIUM

Wednesday, May 25, 2016

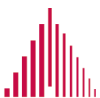
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Environmental Clean Up Costs in Condemnation Actions

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The Problem

- ▶ The lawyer's duty.
 - A lawyer is an advocate. A lawyer is to zealously advocate for his or her client within the bounds of the law. See *American Bar Association, Model Rules of Professional Conduct: Preamble and Scope*.
 - In a condemnation case, a lawyer argues for **just compensation** which may or may not be the same as **fair market value**.
- ▶ The appraiser's duty.
 - An appraiser is obligated to value property in a manner that is impartial, objective and independent. See *The Appraisal Foundation Appraisal Standards Board, Uniform Standards of Professional Appraisal Practice ("USPAP"), Ethics Rule*.
 - USPAP makes it clear that an Appraiser may **not** be an advocate for a client. However, once the appraisal is complete, the appraiser may defend the appraisal and advocate for the opinion.

The Appraiser's Opinion of Value is Independent of the "Purpose of the Appraisal"

An appraiser must not allow the intended use of the appraisal or the client's objective to result in bias.

USPAP Standards Rule 1-2 Comment

Market value is market value, regardless of the "purpose" of the appraisal.

Assumptions and Hypotheticals in Litigation

Remember that a lawyer is an advocate.

A lawyer's job is to either support or refute the overall opinion.

One way to do that is to discuss the assumptions and hypotheticals.

The theme: "Garbage in, Garbage out."

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Assumptions and Hypotheticals

Extraordinary Assumption

An extraordinary assumption may be used in an assignment only if:

- It is required to develop credible opinions and conclusions;
- The appraiser has a *reasonable* basis for the extraordinary assumption;
- Use of the extraordinary assumption results in a **credible analysis**; and
- The appraiser complies with the disclosure requirements set forth in USPAP for extraordinary assumptions.

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Hypothetical Condition

A hypothetical condition may be used in an assignment only if:

- Use of the hypothetical condition is clearly required for legal purposes, for purposes of reasonable analysis, or for purposes of comparison;
- Use of the hypothetical condition results in a **credible analysis**; and
- The appraiser complies with the disclosure requirements set forth in USPAP for hypothetical conditions.

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Typical Appraisal Limiting Conditions

"The appraiser is not aware of the presence of soil contamination on the subject property unless otherwise noted in this appraisal report. The effect upon market value, due to contamination was not considered in this appraisal, unless otherwise noted."

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What if this is the “subject property?”



In Describing the Scope of the Work, The Appraiser Cannot be Misleading.

An appraiser cannot make extraordinary assumptions or adopt hypothetical conditions that are unreasonable or biased. USPAP, at its core, requires that an appraisal not be misleading. Both definitions require *credibility*.

Examples:

The appraiser cannot assume the highest and best use of the property is to drill for oil by simply stating, as an extraordinary assumption, that there is oil under the subject property.

However, in the Bakken basin in North Dakota, armed with geological reports on neighboring property, the appraiser could possibly make the same assumption.

The appraiser must require support for assumptions. The lawyer should be prepared to provide objective support if requesting the extraordinary assumption.

Further Resources (Attached)

USPAP Advisory Opinion 9 (AO-9)

Appraisal Institute® Guide Note 6 –
Consideration of Hazardous
Substances in the Appraisal
Process.

It is *unconstitutional* to offset environmental clean up costs from just compensation?

Both the United States Constitution and the Wisconsin Constitution require Just Compensation. "Just Compensation" is typically described as "Fair Market Value." However, the two concepts are not synonymous.

Because just compensation was "inserted for the protection of the citizen, it ought to have liberal interpretation, so as to effectuate its general purpose." *Citing Adams v. Chicago, Burlington & N.R.R.*, 39 N.W. 629 (1888).

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Just compensation replaces money for property.

The United States Constitution requires that when the government condemns *property*, it must put a property owner "in as good a position pecuniarily as if his property had not been taken." *Olson v. United States*, 292 U.S. 246, 255 (1934).

The federal and state constitutions generally do not prohibit the taking of private property for public use but rather "place[] a condition on the exercise of that power." *Lutheran Church of Glendale v. Cnty. of Los Angeles*, Cal., 482 U.S. 304, 314 (1987)). Namely, the government must justly compensate the property owner for the taking. See *id.* at 537.

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Competing Jurisdictions

Inclusion

260 North 12 Street, LLC v. State of Wisconsin Dept. of Trans., 808 N.W.2d 372 (Wis. 2011);

Redev. Agency of Pomona v. Thrifty Oil Co., 5 Cal.Rptr.2d 687 (Cal.Ct.App.1992);

Ne. Conn. Econ. Alliance, Inc. v. ATC P'ship, 776 A.2d 1068, 1080 (Conn.2001);

City of Olathe v. Stott, 861 P.2d 1287 (Kan.1993);

Silver Creek Drain Dist. v. Extrusions Div., Inc., 663 N.W.2d 436 (Mich.2003);

Dep't of Transp. v. Hughes, 986 P.2d 700 (Or.Ct.App.1999); *Tennessee v. Brandon*, 898 S.W.2d 224 (Tenn.Ct.App.1994);

Finkelstein v. Dep't of Transp., 656 So.2d 921, 922 (Fla.1995)

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Exclusion

Moorhead Econ. Dev. Auth. v. Anda, 789 N.W.2d 860 (Minn. 2010);

Dep't of Transp. v. Parr, 633 N.E.2d 19 (Ill.App.Ct.1994);

Aladdin, Inc. v. Black Hawk Cnty., 562 N.W.2d 608 (Iowa 1997);

Hous. Auth. of New Brunswick v. Suydam Investors, LLC, 826 A.2d 673 (N.J.2003);

City of New York v. Mobil Oil Corp., 12 A.D.3d 77 (N.Y.App.Div.2004).

Competing Policies

Policies Favoring Exclusion:

Fairness to the property owner who did not ask to be condemned.

Risk of double-liability for the property owner.

Owner is not always the "responsible party."

There are clean-up resources that an owner may be able to take advantage of in the marketplace.

Admitting this evidence is not "just."

Comparable sales are "hard to find."

Policies Favoring Inclusion:

Marketplace would consider contamination.

Government should not pay more than the marketplace.

Concern over a "fictional property value."

No different than valuing damaged property such as property with a defective roof.

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Is this really a highest and best use issue?

In reality, the value of property (even contaminated property) depends on its highest and best use.

Gas stations are almost always contaminated and always trade. The marketplace simply understands this and accounts for it.

Contamination under a surface parking lot may or may not be considered in the marketplace. Is the property going to be developed or will it continue as a surface parking lot?

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Should the Law Dictate Appraisal Methodology?

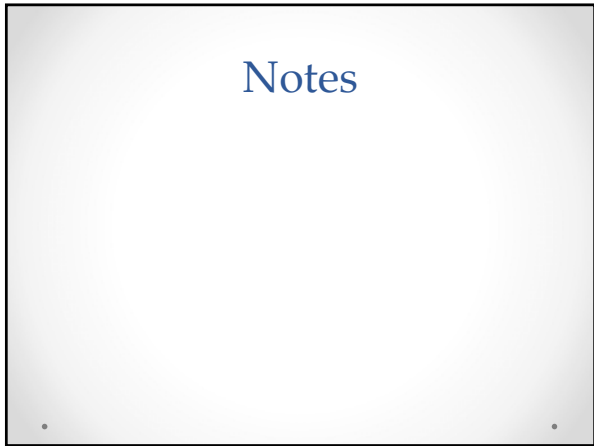
In *CSX Trans., Inc. v. Georgia State Bd.*, 552 U.S.9 (2007). The Petitioner challenged the tax assessment and argued, in part, that the State appraiser's methodologies were flawed. The State asserted that the railroad was powerless to challenge the methods employed by the State's appraiser and could only challenge the application of the methods. Both the District Court and a divided Court of Appeals for the Eleventh Circuit agreed. The United States Supreme Court reversed. According to the United States Supreme Court:

Given the extent to which the chosen methods can affect the determination of value, preventing courts from scrutinizing state valuation methodologies would render § 11501 a largely empty command. It would force district courts to accept as "true" the market value estimated by the State, one of the parties to the litigation. States, in turn, would be free to employ appraisal techniques that routinely overestimate the market worth of railroad assets. By then levying taxes based on those overestimates, States could implement the very discriminatory taxation Congress sought to eradicate. On Georgia's reading of the statute, courts would be powerless to stop them, and the Act would ultimately guarantee railroads nothing more than mathematically accurate discriminatory taxation. We do not find this interpretation compelling. Instead, we agree with Judge Fay in dissent below: "Since the objective of any methodology is a determination of *true market value*, a railroad should be allowed to challenge the method[s] used [by the State] in an attempt to prove that the result ... was not the *true market value* of its property." 472 F.3d, at 1294.

The United States Supreme Court also noted that the methods of valuation employed by an appraiser are selected by the choice of an appraiser and not the dictate of any statute or regulation. *Id.*

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Guide Note 6

Consideration of Hazardous Substances in the Appraisal Process



Introduction

The consideration of environmental conditions along with social, economic, and governmental conditions is fundamental to the appraisal of real property. Although appraisal literature has recognized environmental conditions can affect property value, the focus has been on the consideration of climatic conditions, topography and soil, the surrounding neighborhood, accessibility, and proximity to points of attraction. These

more general environmental conditions might be apparent to a member of the general public who is not specifically trained as an expert in observing these forces. There is, however, a growing need to give special consideration to the specific impacts of hazardous substances on the valuation of real property. Consistent with accepted guidance on this topic and as incorporated herein, "hazardous substances"

GUIDE NOTE 6

Introduction (continued)

would be considered “environmental contamination” when their concentrations exceed appropriate regulatory standards. (See Definitions below).

The purpose of this Guide Note is to provide guidance in the application of the Uniform Standards of Professional Appraisal Practice (USPAP) to the appraisal of real property affected by or potentially affected by environmental contamination and, in particular, to the consideration of environmental contamination in the appraisal process. It is not the purpose of this Guide Note to provide technical instructions or explanations concerning the detection or measurement of the effect of hazardous substances.

Competency

The Competency Rule of the Uniform Standards of Professional Appraisal Practice, for example¹, requires the appraiser to either:

- a) properly identify the problem to be addressed and have the knowledge and experience necessary to complete the assignment competently; or
- b) disclose the appraiser’s lack of knowledge or experience to the client before accepting the assignment, take all steps necessary or appropriate to complete the assignment competently, and describe the lack of knowledge and/or experience and the steps taken to complete the assignment competently in the report; or
- c) decline or withdraw from the assignment.

The Competency Rule is of particular importance in the appraisal of real property that may be affected by hazardous substances. Most appraisers do not have the knowledge or experience required to detect the presence of hazardous substances or to measure the quantities of such material. The appraiser, like the buyers and sellers in the open market, typically relies on the advice of others in matters that require special expertise.

There is nothing to prevent a professional appraiser from becoming an expert in other fields but the real estate appraiser is neither required, nor expected, to be an expert in the special field of the detection and measurement of hazardous substances. This Guide Note therefore addresses the problem of hazardous substances from the viewpoint of the appraiser who is not qualified to detect or measure the quantities and concentrations of hazardous substances. If an appraiser is qualified to detect or measure hazardous substances, a different set of standards would apply.

In appraisal assignments in which the appraised value is to take into account the effects on value of hazardous substances, most appraisers require the professional assistance of others. In appraisal assignments in which the appraised value does not take into account the possible effects on value of known hazardous substances (i.e. the unimpaired value, see below), the appraiser would not require the professional assistance of others.

The appraiser may accept an assignment involving the consideration of hazardous substances without having the required knowledge and experience in this special field, provided the appraiser discloses such lack of knowledge and experience to the client prior to acceptance of the assignment, arranges to complete the assignment competently and describes the lack of knowledge or experience and the steps taken to competently complete the assignment in the report. This may require association with others who possess the required knowledge and experience or reliance on professional reports prepared by others who are reasonably believed to have the necessary knowledge and experience. If the appraiser draws conclusions based upon the advice or findings of others, the appraiser must have a reasonable basis for believing that the advice or findings are made by persons who are competent. (See Guide Note 4: Reliance on Reports Prepared by Others and the USPAP Comment to SR 2-3.)

¹As well as the Code of Professional Ethics of the Appraisal Institute and the International Valuation Standards (IVS).

Scope of Work

The SCOPE OF WORK RULE requires that, in any assignment, the appraiser establish the appropriate scope of work necessary to complete that assignment. Part of the scope of work decision includes how, and to what extent, the appraisal problem will address known or suspected hazardous materials that may impact the property.

The Comment to the Scope of Work Acceptability section of that Rule states:

The scope of work is acceptable when it meets or exceeds:

- the expectations of parties who are regularly intended users for similar assignments; and
- what an appraiser's peers' actions would be in performing the same or a similar assignment.

...An appraiser must be prepared to support the decision to exclude any investigation, information, method or technique that would appear relevant to the client, another intended user, or the appraiser's peers.

The Scope of Work Acceptability section includes two more major provisions:

- An appraiser must not allow assignment conditions to limit the scope of work to such a degree that the assignment results are not credible in the context of the intended use.
- An appraiser must not allow the intended use of an assignment or a client's objectives to cause the assignment results to be biased.

The disclosure obligations of the SCOPE OF WORK RULE and SR 2-2(a), (b) and (c)(vii) require that the scope of work performed be disclosed in the appraisal report.

Depending on the intended use, the appraisal may be prepared so that the value opinion reflects no known or suspected environmental contamination that may impact the property, or it may be prepared so that the value opinion does reflect known contamination. In either case, the appraiser must take special precautions in the development and reporting process to ensure that the results of the assignment are credible and that the report is not misleading.

Extraordinary Assumptions and Hypothetical Conditions

In assignments involving contaminated properties or properties that may be adversely impacted by environmental contamination (contaminated property assignment), the appraisal will likely be premised on one or more Extraordinary Assumptions and/or Hypothetical Conditions. Typically in these types of assignments, Extraordinary Assumptions are used when relying on the work of others, such as environmental engineers or other technical specialists, while Hypothetical Conditions are used when the appraiser estimates the value of a property known to be contaminated in an unimpaired or uncontaminated condition.

USPAP provides the following definition for "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.

In addition, it may be appropriate to premise the appraisal on an extraordinary assumption in the event there is suspected but not confirmed contamination. An environmental assessment by a qualified environmental professional would be required for such conclusions or determinations.

Standards Rule 1-2(f) requires that in developing an opinion of value the appraiser identify "any extraordinary assumptions necessary in the assignment." The Comment states:

An extraordinary assumption may be used in an assignment only if:

- it is required to properly develop credible opinions and conclusions;
- the appraiser has a reasonable basis for the extraordinary assumption;
- use of the assumption results in a credible analysis; and
- the appraiser complies with the disclosure requirements set forth in USPAP for extraordinary assumptions.

Standards Rules 2-2(a), (b) and (c)(x) require the appraiser to clearly and conspicuously state in the appraisal report all extraordinary assumptions upon which the value opinion is premised. These reporting Standards Rules also require a clear and conspicuous statement that the use of these extraordinary assumptions might have affected the assignment results.

Standards Rule 2-1 requires the report to “clearly and accurately disclose all ... extraordinary assumptions ... used in the assignment.”

USPAP provides the following definition for “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 the analysis.

Standards Rule 1-2(g) requires that in developing an opinion of value the appraiser identify “any hypothetical conditions necessary in the assignment.” The Comment states:

A hypothetical condition may be used in an assignment only if:

- use of the hypothetical condition is clearly required for legal purposes, for purposes of reasonable analysis, or for purposes of comparison;
- use of the hypothetical condition results in a credible analysis; and
- the appraiser complies with the disclosure requirements set forth in USPAP for hypothetical conditions.

Standards Rules 2-2(a),(b) and (c)(x) require the appraiser to clearly and conspicuously state in the appraisal report all hypothetical conditions upon which the value opinion is premised and to state that their use might have affected the assignment results. Standards Rule 2-1 requires the report to “clearly and accurately disclose all ... extraordinary assumptions ... used in the assignment.”

Standards Rule 2-1 (c) requires the report to “clearly and accurately disclose all ... hypothetical conditions ... used in the assignment.” SR 2-2 (a), (b) and (c)(x) requires the appraiser to “clearly and conspicuously” state all extraordinary assumptions and hypothetical conditions and that their use might have an effect on assignment results. These Standards Rules do not require that the appraiser quantify the impact on value, such as by both valuing the property subject to the hypothetical condition and valuing it not subject to the hypothetical condition.

An example of the disclosure of such a hypothetical condition is:

It is reported that groundwater contamination is present beneath the subject property. In accordance with the client's instructions and consistent with the intended use of this appraisal report, the value opinion is based on the hypothetical condition that the subject property is not impacted by groundwater contamination. The appraiser cautions against the use of this appraisal report for any use other than the intended use stated herein.

When such disclosure is required it may be placed anywhere in the appraisal report (provided that is clear and conspicuous) including but not limited to the letter of transmittal, scope of work disclosure, or general comments section, depending on the type and length of report prepared. In an oral report, the appraiser should present the same information, if possible.

Definitions²

Over the past few years, a common and generally accepted set of definitions related to the appraisal of properties that may be impacted by contamination have emerged. These are as follows:

CONTAMINATED PROPERTY VALUATION - SPECIALIZED TERMS AND DEFINITIONS

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, above).

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.

CONTAMINATED PROPERTY VALUATION - SPECIALIZED TERMS AND DEFINITIONS

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.

²Sources: *The Appraisal of Real Estate, 13th Edition*, *The Dictionary of Real Estate Appraisal, 5th Edition*, both published by the Appraisal Institute; USPAP Advisory Opinion 9: The Appraisal of Real Property That May Be Impacted by Environmental Contamination, by the Appraisal Standards Board.

Basis for Proper Valuation

The specialized terms and definitions are an important part of the valuation framework for appraising properties that may be impacted by environmental contamination. This framework begins with the following formulae or equations:

$$\text{Impaired Value} = \text{Unimpaired Value} - \text{Cost Effects (Remediation and Related Costs)} - \text{Use Effects (Effects on Site Usability)} - \text{Risk Effects (Environmental Risk/Stigma)}$$

$$\text{Property Value Diminution} = \text{Cost Effects (Remediation and Related Costs)} + \text{Use Effects (Effects on Site Usability)} + \text{Risk Effects (Environmental Risk/Stigma)}$$

$$\text{Impaired Value} = \text{Unimpaired Value} - \text{Property Value Diminution}$$

These equations set forth the relationships between the key elements of the valuation framework, and highlight the steps to be taken by the appraiser in such assignments. Three general steps are typically taken. The first involves the estimation of the unimpaired value, as defined above. This estimate is usually undertaken with a Hypothetical Condition that the property is being appraised as if uncontaminated (See section on Hypothetical Conditions, above). The second general step involves the estimation of property value diminution. Property value diminution can have three forms: cost effects, use effects and risk effects. The third step involves the estimation of the impaired value of the subject property. This value can usually be derived by deducting an estimate of diminution from the unimpaired value. These estimates must be appropriate and well supported by market data typically involving actual transactions by market participants. As noted in The Dictionary of Real Estate Appraisal, Fifth Edition, "market participants" are "individuals actively engaged in transactions." Further, the International Valuation Standards (IVS) advise that market participation should be in the relevant market or market segment matching the characteristics and influences reflecting the subject and/or subject properties.³ Thus, non-market participants and related non-market and non-transactional data would not establish an appropriate basis for estimating property value diminution.

Cost Effects

There are several considerations in analyzing the three effects comprising property value diminution. Cost effects involve deductions for costs to remediate a contaminated property by reducing concentrations of contamination to below appropriate regulatory standards. Accordingly, prerequisites for such a deduction would be: (1) that the property was contaminated, with concentrations of hazardous materials above appropriate regulatory standards; (2) that the costs were necessary for remediation of the property; and (3) that the costs would be borne by a prospective purchaser of the property rather than by a third party such as the current owner or the owner of adjacent property or some other third party responsible for the remediation. The market may not recognize any and all potential costs but only those costs necessary to achieve regulatory compliance and reduce concentrations of hazardous materials to below the appropriate regulatory standard. Regulatory standards are those established by the appropriate state, local or federal authority. The appraiser should rely on those entities to establish this threshold. Other thresholds and cleanup objectives desired by landowners or others would not establish an appropriate basis for a market based cost effects deduction.

Use Effects

Use effects involve limitations on the utility of a site due to contamination and its remediation. In some situations, these effects may result in a limitation on the highest and best use of a property and this potential effect should be analyzed by the appraiser. For example, at the conclusion of some approved remedial action plans, especially those utilizing risk-based standards, subsurface contamination may remain in place so long as certain conditions are met. These conditions, which may have a deed recordation, could limit site utility or the use of the site for alternative future uses. However, the appraiser should be aware that not all site use limitations will have an effect on market value and it is the market and its reaction, as borne out in actual market data, to these limitations that should be the primary focus of the appraiser's work in estimating use effects.

³ IVS § 19

Risk Effects

Lastly, risk effects can result from uncertainties concerning the contamination and its remediation and other factors (see Definitions). If the uncertainties and perceptions of the market result in reductions in property value (property value diminution) then the appraiser might conclude that the subject property suffers from environmental stigma. Environmental stigma for the appraisal profession is the product of uncertainty and adverse perceptions of the market but is always measured on the basis of actual market data and transactions that reflect these perceptions. The appraiser is cautioned that not all uncertainty and increased concern and perceptions in the market may reduce property values, and that any analysis of risk effects and stigma must be based on actual data from the relevant market or submarket and should not be assumed to occur without such evidence. Further, the appraiser should employ relevant and generally accepted methods and techniques to analyze the relevant and reliable market data in order to develop an opinion concerning the existence and extent of any risk and stigma that may exist before applying such a deduction to the subject property or properties. Lastly, important considerations in the estimation of risk effects are the subject property's stage in the remediation lifecycle (before, during or after cleanup) and the whether the subject and any sales comparables are source, non-source, adjacent or proximate sites as these factors can and do influence the extent to which a property will suffer from environmental risk and stigma.

Summary of Standard Practices

1. Disclose to the client the appraiser's lack of knowledge and experience with respect to the detection and measurement of hazardous substances (Competency Rule).
2. Take the necessary steps to complete the assignment competently such as personal study by the appraiser, association with another appraiser who has the required knowledge and experience, or obtaining the professional assistance of others who possess the required knowledge and experience (Competency Rule).
3. Identify as an extraordinary assumption reliance on any third party reports or obtained expert association that may have contributed to the valuation beyond the appraiser's own competence.
4. Identify in the appraisal process and state in the report if the appraisal is based on an extraordinary assumption or hypothetical condition that the property is appraised as if unaffected by hazardous substances (SR 1-2(f)and/or (g), SR 2-1(c), and SR 2-2(a)(x), 2-2(b)(x), and 2-2(c)(x)).
5. Identify in the appraisal process the environmental condition of the subject property and surrounding properties, and the existence of documented instances of environmental contamination that may affect the value of the property. (SR 1-2(e)(i)).
6. Identify the scope of work necessary to complete the assignment, including the manner and degree to which the existence of environmental contamination will be addressed (SCOPE OF WORK RULE).
7. Consistent with the SCOPE OF WORK RULE, develop an opinion of unimpaired value of the subject property using an appropriate Hypothetical Condition clearly disclosed in the report.
8. Where and if appropriate, apply the estimates of cost, use and risk effects (property value diminution) to estimate the value of the subject property in its impaired condition.

(Please Note: The purpose of this Guide Note to the Standards of Professional Appraisal Practice is to provide Members, Candidates, Practicing Affiliates and Affiliates with guidance as to how the requirements of the Standards may apply in specific situations.)

ADVISORY OPINION 9

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. In all cases, the appraiser must perform competently when completing 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;

ADVISORY OPINION 9

- 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) and (b)(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 and 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

ADVISORY OPINION 9

170 should include consideration of any increased operating costs due to property remediation. The appraiser should
171 also be aware that the market might not recognize all estimated costs as having an effect on value. *Use effects*
172 reflect impacts on the utility of the site as a result of the contamination. If the contamination and/or its cleanup
173 rendered a portion of the site unusable, or limited the future highest and best use of the property, then there
174 could be a use effect on value. *Risk effects* are typically estimated by the appraiser and often represent the most
175 challenging part of the appraisal assignment. These effects are derived from the market's perception of
176 increased environmental risk and uncertainty. The analysis of the effects of increased environmental risk and
177 uncertainty on property value (environmental stigma) must be based on market data, rather than unsupported
178 opinion or judgment.

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

Environmental Issues in Property Valuation

2016 Condemnation Symposium

May 25, 2016

Larry Nicholson, MAI

I. Introduction

- WDNR BRRTS on the Web (pages 1-13)
- Environmental Site Assessments (page 14)
- Impaired Value vs. Unimpaired Value (pages 14-15)
- Comparable Impaired Sales (page 16)
- Guidance on Soil Performance Standard, WDNR Publication PUB-RR-528 (pages 17-27)
- The Appraisal of Real Property That May Be Impacted by Environmental Contamination, Advisory Opinion 9, USPAP 2016-2107 (pages 28-32)

II. WDNR BRRTS on the Web (BOTW)

- BRRTS = Bureau of Remediation and Redevelopment Tracking System
- Address search vs. RR Sites search
 - Address Search: <http://dnr.wi.gov/botw/SetUpBasicSearchForm.do>
 - Need to have exact address match for property
 - Should always conduct address range search
 - Search by street name without prefixes of N, S, E, W
 - RR Sites Search: <http://dnrmaps.wi.gov/sl/?Viewer=RR%20Sites>
 - RR Sites Map provides information about contaminated properties and other activities related to the investigation and cleanup of contaminated soil or groundwater in Wisconsin
 - Better than the address search

Environmental Issues in Property Valuation

Example: BRRTS Address Search

BRRTS on the Web

The Bureau for Remediation and Redevelopment Tracking System (BRRTS) on the Web is a searchable database containing information on the investigation and cleanup of potential and confirmed contamination to soil and groundwater in the state of Wisconsin.

[BOTW Home](#) > Basic Search

Basic Search

Advanced Search

[HELP](#)

Activity Name Address [Region](#)

Municipality County Status

Activity Type Jurisdiction

Activity Number Facility ID PECFA Number

BRRTS data comes from various sources, both internal and external to DNR. There may be omissions and errors in the data and delays in updating new information. Please see the [disclaimers page](#) for more information.

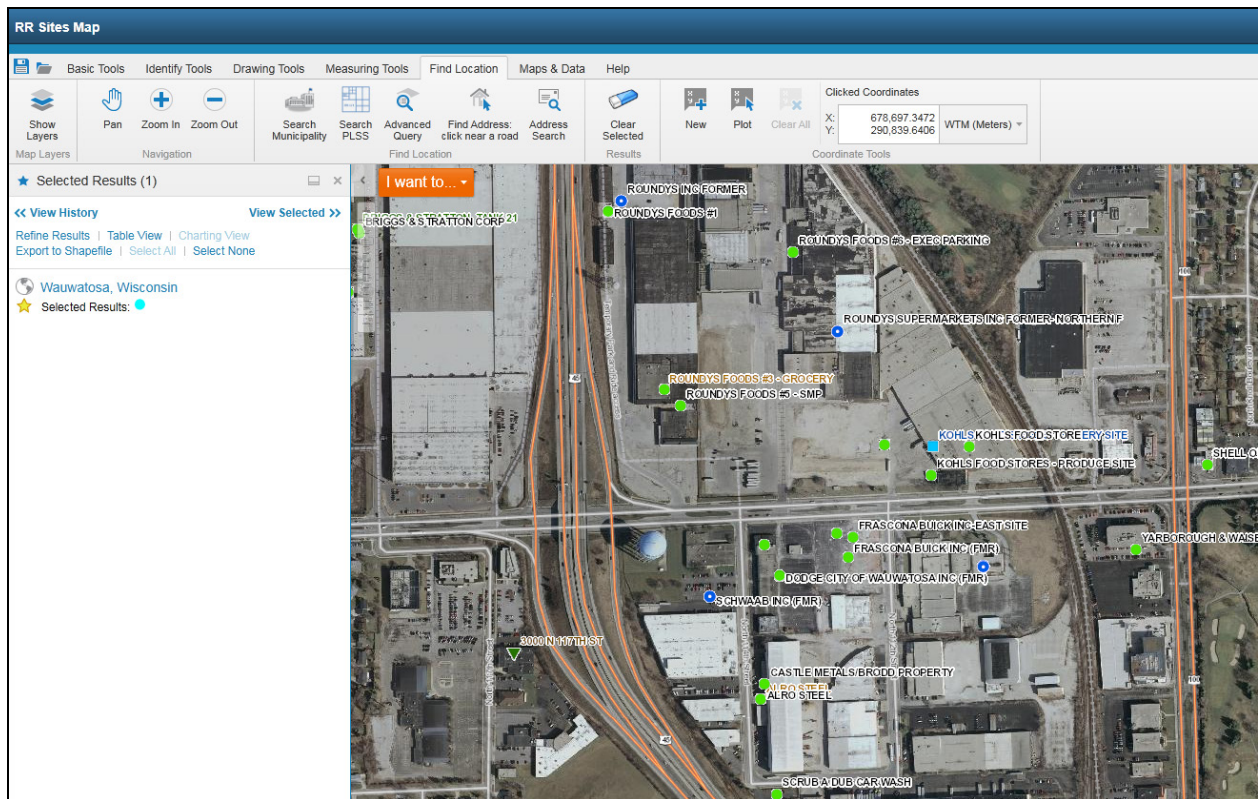


The Official Internet site for the Wisconsin Department of Natural Resources
101 S. Webster Street . PO Box 7921 . Madison, Wisconsin 53707-7921 . 608.266.2621

dnr.wi.gov

Environmental Issues in Property Valuation

Example RR Sites Map Search



Environmental Issues in Property Valuation

- BRRTS Glossary: <http://dnr.wi.gov/topic/Brownfields/Glossary.html>
 - LUST – Leaking Underground Storage Tank
 - A LUST site has contaminated soil and/or groundwater with petroleum, which includes toxic and cancer causing substances. However, given time, petroleum contamination naturally breaks down in the environment (biodegradation). Some LUST sites may emit potentially explosive vapors. LUST activities in BRRTS have an activity number prefix of '03'.
 - ERP – Environmental Repair
 - ERP sites are sites other than LUSTs that have contaminated soil and/or groundwater. Examples include industrial spills (or dumping) that need long term investigation, buried containers of hazardous substances, and closed landfills that have caused contamination. The ERP module includes petroleum contamination from above-ground (but not from underground) storage tanks. ERP activities in BRRTS have an activity number prefix of '02'.
 - Responsible Party
 - The person (legal definition, including companies) that appears to be responsible for cleaning up the contamination
 - The person or business legally obligated to investigate and clean up the environmental contamination (WDNR Publication PUB-Rr-954)
 - Closed
 - Activities where investigation and cleanup of the contamination has been completed and the state has approved all cleanup actions
 - GIS Registry
 - Online “GIS Registry of Closed Remediation Sites” due to residual contamination at the time of case closure approval
 - PECFA - Petroleum Environmental Cleanup Fund Award
 - A program for reimbursement of eligible response action costs associated with petroleum site cleanup

Environmental Issues in Property Valuation

- Information on BRRTS
 - History log of reported contamination
 - Type of Activity - LUST, ERP, Spill
 - Types of contamination
 - Soils
 - Groundwater
 - Open, Closed
 - Closure Letter
 - No Further Action
 - Once a performance standard has been established, no further action with regard to the contaminated soil is necessary as long as the performance standard is maintained
 - Soil Performance Standards, WDNR PUB-RR-528 (pages 17-26)
 - The term “performance standards” refers to the manner in which remedial actions (or in some cases, existing site conditions) prevent exposure to contaminants, or will result in a decrease in contaminant concentrations, or both
 - Performance standards shall be established and maintained so that the residual contamination left in the soil does not pose a threat to public health, safety, or welfare or the environment
 - One example of a soil performance standard is placing a barrier cap, cover or pavement over contaminated soil to limit infiltration or to prevent direct contact. The barrier must be maintained and repaired as long as necessary to protect human health and the environment
 - Another example is demonstrating that natural attenuation of groundwater will contain and remediate the contaminants leached from the soils, the contaminants degrade under existing conditions, and that the contaminate plume is stable or receding
 - Continuing Obligations
 - Closed ERP typical language: Cleanup has been approved at this location but some contamination remains. Due to this remaining residual contamination, one or more continuing obligations are applicable to this location (e.g., an asphalt cap or other barrier covering the contamination). For information specific to the continuing obligations at this location, read the Closure Letter within the GIS Registry Packet in the Documents section below. For general information on managing continuing obligations and residual contamination click [here](#). You must contact DNR before constructing a well. Remaining contamination must be properly handled if disturbed.
 - GIS Registry Packet link
 - Responsible Party
 - WDNR Project Manager

Environmental Issues in Property Valuation

Example BRTS page #1, Closed ERP


Wisconsin Department of Natural Resources
Environmental Cleanup & Brownfields Redevelopment

BRTS on the Web

Click the Location Name below to view the Location Details page for this Activity. Other Activities, if present, may be viewed from that page.

[BOTW Home](#) > [Basic Search](#) > [Search Results](#) > [02-14-560554 Activity Details](#)


02-14-560554 E R WAGNER MFG PROPERTY
ERP - CLOSED



Cleanup has been approved at this location but some contamination remains. Due to this remaining residual contamination, one or more continuing obligations are applicable to this location (e.g., an asphalt cap or other barrier covering the contamination). For information specific to the continuing obligations at this location, read the Closure Letter within the GIS Registry Packet in the Documents section below. For general information on managing continuing obligations and residual contamination click [here](#). **You must contact DNR before constructing a well. Remaining contamination must be properly handled if disturbed.**

Location Name (Click Location Name to View Location Details)		County	WDNR Region
E R WAGNER CASTERS AND WHEELS		DODGE	STH CNTRL
Address		Municipality	
331 RIVERVIEW DR		HUSTISFORD	
Public Land Survey System	Latitude	Google Maps	RR Sites Map
NW 1/4 of the SW 1/4 of Sec 10, T10N, R16E	43.3455155	CLICK TO VIEW	CLICK TO VIEW
Additional Location Description	Longitude	Facility ID	Size (Acres)
NONE	-88.5959765	114007960	5.7
Jurisdiction	PECFA No.	EPA Cerclis ID	Start Date
DNR RR			2013-05-31
			2014-01-31
			2014-01-31

Characteristics




PECFA Tracked?	EPA NPL Site?	Eligible for PECFA Funds?	Above Ground Storage Tank?	Drycleaner?	Co-Contamination?	On GIS Registry? 
No	No	No	No	No	No	Yes

Actions
 Place Cursor Over Action Code to View Description

Date	Code	Name	Comment
2013-05-31	50	GIS Registry Site	*** AUTO POPULATED BY 700 ACTION ENTRY ***
2013-05-31	1	Notification	
2013-05-31	779	Closure Review Fee Received	
2013-05-31	710	Date Soil Registry Fee Paid	
2013-05-31	700	Date Groundwater Registry Fee Received	
2013-06-04	198	Request for Additional Information (Fee-Based or Closure)	Administrative Pause
2013-06-04	79	Closure Review Request Received	
2013-06-10	199	Additional Information Received (Fee-Based or Closure)	Administrative Restart
2013-07-12	198	Request for Additional Information (Fee-Based or Closure)	ADDITIONAL INFORMATION NEEDED FOR CLOSURE REVIEW
2013-10-02	199	Additional Information Received (Fee-Based or Closure)	
2013-11-13	84	Conditional Closure	MWA
2014-01-29	190		

Environmental Issues in Property Valuation

BRRTS page #2, Closed ERP

		Conditional Closure Requirements Met or Documentation Recvd	
2014-01-31	222	Continuing Obligation - Maintain Cap Over Contaminated Area	
2014-01-31	56	Continuing Obligation(s) Required - GIS Registry Site	
2014-01-31	11	Activity Closed	RP LANGUAGE INCLUDED IN FINAL CLOSURE LETTER
2014-01-31	236	Continuing Obligation - Residual GW Contamination	*** AUTO POPULATED AT FINAL CLOSURE DUE TO 700 ACTION ***
2014-01-31	232	Continuing Obligation - Residual Soil Contamination	*** AUTO POPULATED AT FINAL CLOSURE DUE TO 710 ACTION ***
Other Documents and Images Not Linked to Actions Click File Name to Download or Open			
Category	File Name	Size (bytes)	Type
GIS Registry Packets	02-14-560554 GIS Registry Packet	URL	pdf
Impacts			
Type	Comment		
Groundwater Contamination	-		
Soil Contamination	-		
Substances			
Substance	Type	Amount Released	Units
Volatile Organic Compounds	VOC		
Metals	Metals		
Who			
Click name of Project Manager or File Contact to compose email			
Role	Name/Address		
Project Manager	DENISE NETTESHEIM 3911 FISH HATCHERY RD FITCHBURG , WI 53711		
Consultant	ENVIRON INTERNATIONAL CORP 175 N CORPORATE DR STE 160 BROOKFIELD, WI 53045		
Responsible Party	LEW SCHILDKRAUT 4611-4625 N 32ND ST MILWAUKEE, WI 53209		
Quick Response Codes ?			
Scan the QR Code to transfer to your wireless device			
			
	This Page URL	Google Maps	GIS Registry PDF

BRRTS data comes from various sources, both internal and external to DNR. There may be omissions and errors in the data and delays in updating new information. Please see the [disclaimers page](#) for more information.

Environmental Issues in Property Valuation

GIS Registry Packet

State of Wisconsin
Department of Natural Resources
P.O. Box 7921, Madison, WI 53707-7921

GIS REGISTRY (Cover Sheet)

Form 4400-280 (R 6/13)

Source Property Information

BRTS #: 02-14-560554

CLOSURE DATE: 01/31/2014

ACTIVITY NAME: E R WAGNER MFG PROPERTY

FID #: 114007960

PROPERTY ADDRESS: 331 RIVERVIEW DR

DATCP #: NA

MUNICIPALITY: HUSTISFORD

PECFA #: NA

PARCEL ID #: 136-1016-0941-069

*WTM COORDINATES:

WTM COORDINATES REPRESENT:

X: 633797 Y: 320142

** Coordinates are in
WTM83, NAD83 (1991)*

☒ Approximate Center Of Contaminant Source

☐ Approximate Source Parcel Center

Please check as appropriate: (BRTS Action Code)

CONTINUING OBLIGATIONS

Contaminated Media for Residual Contamination:

☒ Groundwater Contamination > ES (236)

☐ Contamination in ROW

☐ Off-Source Contamination

*(note: for list of off-source properties
see "Impacted Off-Source Property Information,
Form 4400-246")*

☒ Soil Contamination > *RCL or **SSRCL (232)

☐ Contamination in ROW

☐ Off-Source Contamination

*(note: for list of off-source properties
see "Impacted Off-Source Property Information,
Form 4400-246")*

Site Specific Obligations:

☐ Soil: maintain industrial zoning (220)

*(note: soil contamination concentrations
between non-industrial and industrial levels)*

☐ Structural Impediment (224)

☐ Site Specific Condition (228)

☒ Cover or Barrier (222)

☐ Direct Contact

☒ Soil to GW Pathway

☐ Vapor Mitigation (226)

☐ Maintain Liability Exemption (230)

*(note: local government unit or economic
development corporation was directed to
take a response action)*

Monitoring Wells:

Are all monitoring wells properly abandoned per NR 141? (234)

☒ Yes ☐ No ☐ N/A

** Residual Contaminant Level*

***Site Specific Residual Contaminant Level*

Environmental Issues in Property Valuation

DNR Closure Letter (page 1), GIS Registry Packet

State of Wisconsin
DEPARTMENT OF NATURAL RESOURCES
3911 Fish Hatchery Road
Fitchburg WI 53711-5397

Scott Walker, Governor
Cathy Stepp, Secretary
Telephone 608-266-2621
Toll Free 1-888-936-7463
TTY Access via relay - 711



January 31, 2014

Lew Schildkraut
E.R. Wagner Manufacturing Company
4611 N. 32nd Street
Milwaukee, WI 53209

KEEP THIS DOCUMENT WITH YOUR PROPERTY RECORDS

SUBJECT: **Final Case Closure with Continuing Obligations**
E.R. Wagner Manufacturing Property, 331 Riverview Drive, Hustisford, Wisconsin
DNR BRRTS Activity # 02-14-560554

Dear Mr. Schildkraut:

The Department of Natural Resources (DNR) considers the E.R. Wagner Manufacturing Property site closed, with continuing obligations. No further investigation or remediation is required at this time. However, you, future property owners, and occupants of the property must comply with the continuing obligations as explained in the conditions of closure in this letter. Please read over this letter closely to ensure that you comply with all conditions and other on-going requirements. Provide this letter and any attachments listed at the end of this letter to anyone who purchases, rents or leases this property from you.

This final closure decision is based on the correspondence and data provided, and is issued under chs. NR 726 and 727, Wis. Adm. Code. The South Central Region (SCR) Closure Committee reviewed the request for closure on November 11, 2013. The Closure Committee reviews environmental remediation cases for compliance with state laws and standards to maintain consistency in the closure of these cases. A conditional closure letter was issued by the DNR on November 13, 2013, and documentation that the conditions in that letter were met was received on January 7, 2014 and January 29, 2014.

Historically the property had various uses including canning operations and metal plating operations. The current use is for manufacturing and assembly of wheel castors. In July 2102, a Phase II assessment was conducted and contamination was identified. In August 2012, four monitoring wells were installed and groundwater sampling was conducted. The continuing obligations are meant to address the residual contamination. The conditions of closure and continuing obligations required were based on the property being used for non-industrial purposes. However, the property is currently being used for commercial/industrial purposes.

However, please be aware that you/your company failed to immediately report a discharge of a hazardous substance when you became aware of the discharge in the summer of 2012. The DNR was not notified until May 31, 2013 when you submitted a release notification and a closure request.

Section 292.11(2)(a), Wisconsin State Statutes, states:

A person who possesses or controls a hazardous substance or who causes the discharge of a hazardous substance shall notify the department immediately of any discharge...

dnr.wi.gov
wisconsin.gov

Naturally **WISCONSIN**



Environmental Issues in Property Valuation

DNR Closure Letter (page 2), GIS Registry Packet

Lew Schildkraut
January 31, 2014
DNR BRRTS # 02-14-560554
Page 2 of 5

Based on the information that has been submitted to the DNR regarding this site, we believe you are responsible for investigating and restoring the environment at the above-described site under Section 292.11, Wisconsin Statutes, known as the hazardous substances spills law.

Legal Responsibilities:

Your legal responsibilities are defined both in statute and in administrative codes. The hazardous substances spill law, Section 292.11 (3) Wisconsin Statutes, states:

- **RESPONSIBILITY.** A person who possesses or controls a hazardous substance which is discharged or who causes the discharge of a hazardous substance shall take the actions necessary to restore the environment to the extent practicable and minimize the harmful effects from the discharge to the air, lands, or waters of the state.

Wisconsin Administrative Code chapters NR 700 through NR 749 establish requirements for emergency and interim actions, public information, site investigations, design and operation of remedial action systems, and case closure. Wisconsin Administrative Code chapter NR 140 establishes groundwater standards for contaminants that reach groundwater.

This letter serves to notify you of your responsibility for the hazardous substance discharge and also that you have met closure requirements which include continuing obligations.

Continuing Obligations

The continuing obligations for this site are summarized below. Further details on actions required are found in the section Closure Conditions.

- Groundwater contamination is present above ch. NR 140, Wis. Adm. Code enforcement standards.
- Residual soil contamination exists that must be properly managed should it be excavated or removed.
- Pavement must be maintained over contaminated soil and the DNR must approve any changes to this barrier.

The DNR fact sheet, "Continuing Obligations for Environmental Protection", RR-819, helps to explain a property owner's responsibility for continuing obligations on their property. The fact sheet may be obtained at <http://dnr.wi.gov/files/PDF/pubs/rr/RR819.pdf>.

GIS Registry

This site will be included on the Bureau for Remediation and Redevelopment Tracking System (BRRTS on the Web) at <http://dnr.wi.gov/topic/Brownfields/clean.html>, to provide public notice of residual contamination and of any continuing obligations. The site can also be viewed on the Remediation and Redevelopment Sites Map (RRSM), a map view, under the Geographic Information System (GIS) Registry layer, at the same web address.

DNR approval prior to well construction or reconstruction is required for all sites shown on the GIS Registry, in accordance with s. NR 812.09 (4) (w), Wis. Adm. Code. This requirement applies to private drinking water wells and high capacity wells. To obtain approval, complete and submit Form 3300-254 to the DNR Drinking and Groundwater program's regional water supply specialist. This form can be obtained on-line at <http://dnr.wi.gov/topic/wells/documents/3300254.pdf>.

Environmental Issues in Property Valuation

Identification of Contaminated Soil Areas, GIS Registry Packet



Environmental Issues in Property Valuation

Example BRRTS page #1, [Open ERP](#)

Wisconsin Department of Natural Resources

Environmental Cleanup & Brownfields Redevelopment

BRRTS on the Web

Click the Location Name below to view the Location Details page for this Activity. Other Activities, if present, may be viewed from that page.

[< Basic Search](#)

02-41-560857 STROH DIE CASTING CO INC, FORMER

[OPEN ERP](#)

Location Name (Click Location Name to View Location Details)		County	WDNR Region
STROH DIE CASTING CO INC		MILWAUKEE	SOUTHEAST
Address		Municipality	
11123 W BURLEIGH ST		MILWAUKEE	
Public Land Survey System	Latitude	Google Maps	RR Sites Map
NE 1/4 of the NE 1/4 of Sec 18, T07N, R21E	43.0738888	CLICK TO VIEW	CLICK TO VIEW
Additional Location Description		Longitude	Facility ID
		-88.0512717	241051580
		Size (Acres)	
		UNKNOWN	
Jurisdiction	PECFA No.	EPA Cerclis ID	Start Date
DNR RR			2013-08-15
		End Date	Last Action
			2016-01-26

Characteristics

PECFA Tracked?	EPA NPL Site?	Eligible for PECFA Funds?	Above Ground Storage Tank?	Drycleaner?	Co-Contamination?	On GIS Registry?
No	No	No	No	No	Yes	No

Actions

Place Cursor Over Action Code to View Description

Date	Code	Name	Comment
2013-08-15	28	Phase I Environmental Site Assessment Rpt Received	
2013-08-15	1	Notification	
2013-08-15	29	Phase II Environmental Site Assessment Rpt Received	AUTOPOPULATED FROM 28 ENTRY
2013-08-21	2	RP Letter Sent	
2013-08-30	99	Miscellaneous	NOTIFICATION OF PCB CONTAMINATION TO US EPA
2014-02-18	98	Technical Assistance Provided	
2014-03-03	97	Request for Technical Assistance Received with Fee	REC'D CK# 707584 \$700.00
2014-03-11	98	Technical Assistance Provided	
2014-03-13	97	Request for Technical Assistance Received with Fee	MEETING HELD ON 03/11/14 G. MICHAEL
2014-04-01	39	Remedial Action Options Report Received (w/out Fee)	RAOR REC'D
2014-04-07	143	Remedial Action Options Report Received with Fee	REC'D CK# 708517 \$1,050.00
2014-04-23	98	Technical Assistance Provided	
2014-06-02	40	Remedial Action Options Report Approved	
2014-06-05	63	Inject/Infiltrate Request with Fee	REC'D CK# 709393 \$700.00

Environmental Issues in Property Valuation

BRRTS page #2, Closed ERP

2014-07-11	64	Inject/Infiltrate Approved	
2014-09-26	195	Semi-Annual/PECFA Cost Reporting Requirement Met	Period: 1/1/2014 - 6/30/2014
Click 195 Action Name above to view the NR700 report			
2015-07-31	195	Semi-Annual/PECFA Cost Reporting Requirement Met	Period: 1/1/2015 - 6/30/2015
Click 195 Action Name above to view the NR700 report			
2016-01-26	195	Semi-Annual/PECFA Cost Reporting Requirement Met	Period: 7/1/2015 - 12/31/2015
Click 195 Action Name above to view the NR700 report			
Impacts			
Type		Comment	
Co-contamination		*** AUTO-POPULATED ***	
Substances			
Substance	Type	Amount Released	Units
Petroleum - Unknown Type	Petroleum		
Volatile Organic Compounds	VOC		
Metals	Metals		
Mineral Oil	Mineral Oil		
Polynuclear Aromatic Hydrocarbons	Petroleum		
Polychlorinated Biphenyl	PCB		
Who			
Role	Name/Address		
Project Manager	GREG MICHAEL 141 NW BARSTOW WAUKESHA, WI 53188		
Responsible Party	MEIJER STORES LIMITED PARTNERSHIP 2929 WALKER AVE. NW GRAND RAPIDS, MI 49544		

BRRTS data comes from various sources, both internal and external to DNR. There may be omissions and errors in the data and delays in updating new information. Please see the [disclaimers page](#) for more information.

Environmental Issues in Property Valuation

III. Environmental Site Assessments

- Phase I
 - Uncovers evidence of possible contamination and past or present violations of environmental regulations
 - Site visit
 - Examination of aerial photographs
 - Study of governmental records
 - Reviewing nearby properties
- Phase II
 - Confirmation of Phase I findings
 - Invasive sampling of soil and groundwater testing for contaminations
- Phase III
 - Further invasive sampling to quantify contamination
 - Develop a remediation or mitigation plan including a timetable and cost estimates

IV. Impaired vs. Unimpaired Values

- Environmental Risk
 - The additional or incremental risk of investing in, financing, buying, 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. (The Appraisal of Real Estate, 14th Edition, page 213)
- 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. (Advisory Opinion 9, 2014-2015). Source: Appraisal Institute, The Dictionary of Real Estate Appraisal, 6th edition (Chicago: Appraisal Institute, 2015)
- Unimpaired Value
 - The market value of a contaminated property developed under the hypothetical condition that the property is not contaminated. (Advisory Opinion 9, 2014-2015). Source: Appraisal Institute, The Dictionary of Real Estate Appraisal, 6th edition (Chicago: Appraisal Institute, 2015)
 - Requires a hypothetical condition
- Impaired Value = Unimpaired Value less:
 - - Cost effects
 - - Use effects
 - - Risk effects

Environmental Issues in Property Valuation

- Cost effects
 - Remediation and related costs
 - Deduct remediation costs
 - Costs not estimated by the appraiser; estimates by environmental specialists
 - Careful – requires an extraordinary assumption
- Use effects
 - Effects on site usability; limitations on or change of the H&BU of the property
 - Impacts on the utility of the site as a result of the contamination
- Risk effects = Environmental Stigma
 - Market perception of increased risk and uncertainty causes impact on value
 - “An adverse effect on property value produced by the market's perception of increased environmental risk due to contamination” (The Appraisal of Real Estate, 14th Edition, page 213)
 - Stigma = perception is reality
 - Despite eliminating the problem in its cooling towers and ventilation system, and changing its name, the Bellevue Stratford hotel in Philadelphia retains a stigma because of its being the origin of Legionnaire's disease. The stigma persists despite several name and ownership changes.
 - An environmental stigma results from perceptions of uncertainty and risk. It may be relatively easy to quantify the cost to remedy a simple contamination problem, such as a leaking underground storage tank. However, as the complexity of the contamination increases the level of uncertainty and perceived risk rises.
 - Stigmatized property is a term used in the real estate business which describes possible detrimental features of a property or home, all the result of unfortunate occurrences. These can include murder, suicide or a belief that a house may be haunted.
 - Quantifying Stigma
 - Rent for a stigmatized property could be less than for the same property unstigmatized
 - Occupancy could be lower as a result of such stigma
 - Higher operating expenses for such items as marketing to maintain rent and occupancy levels
 - Higher capitalization rates for environmental uncertainty
 - Lenders - lower LTV ratio or higher interest rate to offset perceived risk
 - Lack of marketability or longer marketing time
 - Oftentimes no stigma exists
 - managing contamination in place with a cap or other barrier is often acceptable and there is no discount for stigma
 - common for industrial and commercial properties when the risk does not significantly concern the buyer
 - market acceptance changes over time

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V. Comparable Impaired Sales

- Is there such a thing?
 - Contamination levels are not equal among properties
- Considerations for comparables
 - Types of contamination (not a yes or no answer)
 - soils, water, asbestos
 - Quantity of contamination
 - Remediation plan
 - Remove, cap, encapsulate
 - Remediation cost subsidies?
 - City TIF, State, PECFA, Superfund Site, other?
 - Petroleum Environmental Cleanup Fund Award (PECFA)
 - The PECFA program was created in response to enactment of federal regulations requiring release prevention from underground storage tanks and cleanup of existing contamination from those tanks. PECFA is a reimbursement program returning a portion of incurred remedial cleanup costs to owners of eligible petroleum product systems including home heating oil systems. Program funding is generated from a portion of a \$0.02/gallon petroleum inspection fee.
 - Superfund is the federal government's program to clean up the nation's uncontrolled hazardous waste sites
 - Superfund is the name given to the environmental program established to address abandoned hazardous waste sites. It is also the name of the fund established by the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended (CERCLA statute, CERCLA overview). This law was enacted in the wake of the discovery of toxic waste dumps such as Love Canal and Times Beach in the 1970s. It allows the EPA to clean up such sites and to compel responsible parties to perform cleanups or reimburse the government for EPA-lead cleanups

VI. Guidance on Soil Performance Standards (pages 17-27)

- WDNR Publication PUB-RR-528

VII. Advisory Opinion 9, USPAP (pages 28-32)

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

Guidance on Soil Performance Standards

PUB-RR-528

January 2014



Wisconsin Department of Natural Resources
P.O. Box 7921, Madison, WI 53707
dnr.wi.gov, search "brownfield"



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PURPOSE

This document discusses the use of soil performance standards and the application of soil performance standards to closure of contaminated sites. Soil performance standards offer an alternative to utilizing numerical soil cleanup standards for contaminated properties.

This guidance is not intended to be used as the sole reference for soil performance standards. Rather, it is intended to be used along with promulgated rules and published guidance. The material presented is based on available technical data along with the knowledge and experience of the authors and the peer reviewers.

DISCLAIMER

This document is intended solely as guidance, and does not contain any mandatory requirements except where requirements found in statute or administrative rule are referenced. This guidance does not establish or affect legal rights or obligations, and is not finally determinative of any of the issues addressed. This guidance does not create any rights enforceable by any party in litigation with the State of Wisconsin or the Department of Natural Resources. Any regulatory decisions made by the Department of Natural Resources in any matter addressed by this guidance will be made by applying the governing statutes and administrative rules to the relevant facts.

This guidance is based on requirements found in chs. NR 140, 720, 722, 724, and 726, Wis. Adm. Code; the Hazardous Substance Spill Law, s. 292.11, Wis. Stats., the Environmental Repair Statute, s. 292.31, Wis. Stats., and the Groundwater Law, s. 160.23 and 160.25, Wis. Stats.

OTHER RELEVANT GUIDANCES

This guidance will be more complete when used in conjunction with the guidance documents listed below. These guidance documents contain examples of and requirements for applying soil performance standards.

Guidance for Cover Systems for Soil Performance Standard Remedies
Publication RR-709
dnr.wi.gov/files/PDF/pubs/rr/RR709.pdf

Case Closure and the Requirements for Managing Continuing Obligations, Publication RR-606
dnr.wi.gov/files/PDF/pubs/rr/RR606.pdf

Impacted Property Notification Information, Form 4400-246,
dnr.wi.gov/files/PDF/forms/4400/4400-246.pdf

Guidance On Natural Attenuation For Petroleum Releases, Publication RR-614
dnr.wi.gov/files/PDF/pubs/rr/RR614.pdf

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Understanding Chlorinated Hydrocarbon Behavior in Groundwater: Investigation Assessment and Limitations of Monitored Natural Attenuation, Publication RR-699
dnr.wi.gov/files/PDF/pubs/rr/RR699.pdf

Soil Residual Contaminant Level Determinations Using the U.S. EPA Regional Screening Level Web Calculator, Publication RR-890
dnr.wi.gov/files/PDF/pubs/rr/RR890.pdf

Interim Guidance on Use of Leaching Tests for Unsaturated Contaminated Soils to Determine Groundwater Contamination Potential, Publication RR-523-97
dnr.wi.gov/files/PDF/pubs/rr/RR523.pdf

This list will be expanded as additional guidance documents are developed.

These guidance documents may be obtained by:

- A. Sending a request to: Public Information Requests, Bureau for Remediation and Redevelopment, Department of Natural Resources, P.O. Box 7921, Madison, WI 53707.
- B. Downloading the files from the internet at dnr.wi.gov/topic/Brownfields/Pubs.html

Questions regarding this guidance should be directed to Theresa Evanson – RR/5, DNR, P.O. Box 7921, Madison, WI 53707, phone number 608-266-0941, email Theresa.Evanson@wisconsin.gov.

This guidance will be updated as needed. Comments and concerns may be sent to “Guidance Revisions”, Gary Edelstein, P.E. - RR/5, DNR, P.O. Box 7921, Madison, WI 53707, phone number 608-267-7563, email Gary.Edelstein@wisconsin.gov.

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1.0 INTRODUCTION

Chapter NR 720, Wis. Adm. Code outlines the requirements for soil performance standards, as follows: "If a responsible party selects this option, performance standards shall be established and maintained so that the residual contaminants left in the soil do not pose a threat to public health, safety, or welfare or the environment".

The term "performance standard" refers to the manner in which remedial actions (or, in some cases, existing site conditions) prevent exposure to contaminants, or will result in a decrease in contaminant concentrations, or both. The remedial action must be implemented and maintained at a site or facility with soil contamination such that the contamination is contained and/or remediated. To be effective as a soil performance standard, the selected remedial action must be maintained until applicable numeric standards are achieved or until the remedial action is replaced by another remedy. In all cases the soil performance standard must be designed, implemented and maintained in order to protect public health, safety, and welfare and the environment. Contaminated soil that has been excavated as part of a response action must be managed in accordance with ch. NR 718, Wis. Adm. Code, which applies to excavated contaminated soil that is not a hazardous waste. If the source and/or the characteristics of the contamination raise questions regarding the regulatory status of the material, refer to the document entitled: "Guidance for Hazardous Waste Remediation", RR-705 to determine if the soil meets the definition of a hazardous waste.

Soil performance standards may be developed during remedy selection under NR 722 and may provide the basis for case closure. One example of a soil performance standard is placing a barrier cap, cover or pavement over contaminated soil to limit infiltration or to prevent direct contact. The barrier must be maintained and repaired for as long as necessary to protect human health and the environment. Another example is demonstrating that natural attenuation of groundwater will contain and remediate the contaminants leached from soils, the contaminants degrade under existing conditions, and that the contaminant plume is stable or receding. In these examples, reduced infiltration or the natural attenuation processes are "performing" to contain and remediate the environmental contaminants. Once a performance standard has been established, no further action with regard to the contaminated soil is necessary as long as the performance standard is maintained. Cover, barrier or cap design and maintenance is discussed in greater detail in "Guidance for Cover Systems for Soil Performance Standard Remedies", RR-709.

Existing conditions can create a "soil performance standard": At many sites, a relatively impermeable seal, such as a parking lot or building, covers contaminated soil. The site investigation may indicate that the soils in their contained state do not present a threat for direct contact or leaching to groundwater. However, the contaminated soil may present a threat to one or both of these pathways if the surface seal were removed. In these instances, the existing surface seal acts as a soil performance standard and, like all soil performance standards, must be maintained after site closure.

2.0 SELECTION OF A REMEDIAL ACTION WITH A SOIL PERFORMANCE STANDARD

Selection of a soil performance standard requires knowledge of administrative code requirements as well as of the migration pathways being protected. At a minimum, establishing a soil performance standard requires evaluation during the remedy selection phase and verification during the implementation phase.

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2.1 ADMINISTRATIVE CODE REQUIREMENTS

Before a remedial action that utilizes a soil performance standard may be selected, it must be demonstrated that:

1. The selected remedy has been evaluated in compliance with ch. NR 722. To comply with ss. NR 722.07(4) and NR 722.09(2), soil performance standards for a proposed remedial action must ensure that there is no threat of adverse impact to groundwater, surface water, indoor air, human health, safety or welfare or to sensitive environments, posed by the residual soil contamination. In other words, the analysis of the alternatives, including the selected alternative must document how all pathways of exposure will be addressed. Where the RP believes that some pathways are not of concern, that rationale should be documented as well.

Any number of considerations may affect the choice of remedial options including volume of contaminated soil, type of contamination, area available for soil treatment, alternative disposal options, and future land use. A Remedial Action Options Report (RAOR) should document the process used to select a soil performance standard. If a RAOR is not prepared for the site, then the closure report should document the process used to determine that the soil performance standard is protective of human health and the environment for all pathways of exposure.

2. The selected remedy will be operated and maintained in compliance with ch. NR 724, where applicable, until applicable standards are achieved.
3. The selected remedy will be implemented and maintained such that there is:
 - a. *Protection of groundwater.* See detailed discussion of this topic under section 2.4.
 - b. *No adverse impact on surface water or sensitive environments.* Discharges to surface water, wetlands, and other sensitive environments may not result in standard exceedances, in accordance with s. NR 722.09(2)(c). A soil performance standard must minimize migration of contaminants, be in compliance with NR 102 to 106, and must be evaluated to determine effectiveness.
 - c. *No adverse impact on human health, safety or welfare.* No adverse impact on human health includes dermal contact, ingestion, or inhalation of soil contaminants. Vapor migration through soils into enclosed spaces, such as basements or occupied structures, are also a potential risk to health or safety. Under some conditions, installation of impermeable surface covers will exacerbate lateral vapor migration in the subsurface. Therefore all contaminant pathways must be evaluated including the potential for secondary impacts when proposing use of a soil performance standard.
 - d. *Field verification.* Documentation is required to demonstrate that the selected remedy performs to the standard established for the site or facility. For example, after installing a barrier cap to protect against contaminant infiltration to groundwater, monitoring must be used to establish that groundwater quality is protected at the present time and to support projections that the barrier will protect groundwater quality in the future.

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2.2 EXPOSURE OR MIGRATION PATHWAYS

When choosing a remedial action for soil cleanup, all exposure or migration pathways must be addressed. While there are several pathways not directly addressed in this guidance (including vapor migration and utility trenches), they need to be evaluated as potential exposure or migration pathways for each site. Where it is determined that a potential pathway for exposure or migration does not exist, the site-specific reasoning for this determination should be included in the remedial action options report and the closure submittal. Each site is unique and the development of a site conceptual model is recommended for determining the potential pathways and evaluating the effectiveness of a soil performance standard.

The most common pathways for soil contamination are direct contact with soil contaminants through inhalation or ingestion and contaminant leaching to groundwater. These pathways are addressed in the following sections.

2.3 PROTECTION FROM DIRECT CONTACT WITH SOIL CONTAMINANTS

A soil performance standard implemented to protect human health from direct contact would typically involve capping the contaminated soil with an appropriate barrier and ensuring that the barrier is maintained until the direct contact threat no longer exists (i.e., residual contaminant levels are met). Appropriate barriers may consist of compacted clay, geomembranes, asphalt or concrete roadways, parking lots, and building foundations. If the contaminants are not likely to leach from the soil (e.g., PCBs), permeable barriers may be acceptable for addressing the direct contact pathway. Permeable barrier design and maintenance is discussed in greater detail in “Guidance for Cover Systems for Soil Performance Standard Remedies”, RR-709.

When a soil cover, cap or engineered structure is used to prevent direct contact with soil contaminants within four feet of the ground surface, conditions requiring inspection and maintenance of the cover, cap or structure will be required. A condition requiring prior written Department approval of any activity that could change or disturb the cover, cap or structure will also be required. For case closure situations, listing of the site on the Department’s database will be required. See Section 3.0 of this guidance for information on closure conditions.

Direct contact with contaminated soils at depth is also possible if subsurface excavation of the contaminated soil occurs. Therefore, even if soils exceeding direct contact limits are not within four feet of the surface, a performance standard to limit direct contact exposure to subsurface contamination needs to be imposed by listing the site on the Department’s database and including a condition in the closure letter that requires proper management of the soil, if excavated.

2.4 PROTECTION OF GROUNDWATER FROM INFILTRATION OF CONTAMINANTS

Chapter NR 140 specifies that “activities affecting groundwater must be regulated to minimize the level of substances to the extent technically and economically feasible, and to maintain compliance with the PAL’s unless compliance with the PAL’s is not technically or economically feasible”. The following section provides direction for those situations where soil contamination has caused groundwater impacts less than the enforcement standards and where soil contamination has resulted in the attainment or exceedance of the enforcement standards.

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1. Soil contamination with groundwater contamination less than NR 140 ES levels.

- a. If soil contaminants have impacted the groundwater quality such that a PAL is exceeded, a soil performance standard must be designed to minimize the level of substances in groundwater and to comply with the PAL, unless compliance with the PAL is not technically or economically feasible. The Department may grant an exemption to compliance with the PAL if the criteria under s. NR 140.28, including compliance with the enforcement standard, are met.

In addition, contaminants that currently have no groundwater standard but may pose a threat to groundwater must also be addressed. Empirical evidence may be necessary to demonstrate that the soil performance standard will protect groundwater from contamination. This could include gathering sufficient groundwater monitoring data to document the soil contaminants are adequately contained.

- b. If there is no threat to groundwater from soil contamination, a soil remedy for the groundwater pathway is not needed. However, the lack of groundwater contamination, by itself, may not be sufficient to establish that there is no threat to the groundwater pathway. For example, factors such as the age of the contaminant release, type of contaminants, geologic setting, depth to groundwater, proximity of monitoring wells to the source of contamination and other related characteristics will affect whether sufficient time has passed for the contaminants to have reached the groundwater.

If groundwater contamination does not exist or exists below ch. NR 140, Wis. Adm. Code, PALs, the following approaches can be used to screen sites to determine if a threat exists to the groundwater pathway:

- i. An analysis that accounts for the factors listed above, or
- ii. Evaluating residual contaminant levels in soil that would be protective of the groundwater pathway using the information available under the Soil RCL tab at: <http://dnr.wi.gov/topic/Brownfields/Professionals.html>.

2. Soil contamination with groundwater contamination above NR 140 ES levels.

Where soil and groundwater contamination exist together, the proposed remedy should explicitly address cleanup actions for both media. Any groundwater remedy (passive or active) that is designed to meet enforcement standards can qualify as a soil performance standard if it can be established that the selected remedy is containing and remediating contaminants leaching from soils.

An impermeable barrier may be an effective remedy to reduce contaminant leaching through soil into groundwater and may help reduce contaminant concentrations in groundwater to below enforcement standards. Design and maintenance of impermeable barriers is discussed in greater detail in "Guidance for Cover Systems for Soil Performance Standard Remedies", RR-709.

Natural attenuation of groundwater contaminants can also serve as the basis for establishing a soil performance standard. Demonstrating that natural attenuation contains and remediates groundwater contaminants may serve as a soil performance standard at a site or facility if:

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- a. It can be documented that naturally occurring processes are containing and reducing the mass and concentration of groundwater contaminants.
- b. Groundwater contaminant concentrations will be reduced below NR 140 ES levels within a reasonable period of time.
- c. Human health and the environment are protected.

If there are conditions that may adversely impact the natural processes being relied on to control the plume, sufficient documentation must be provided at the time closure is requested in order to justify that natural attenuation will continue to occur. An example of this type of situation would be an upgradient contaminant source that potentially affects the concentration of electron acceptors/nutrients entering the site of facility.

When a soil cover, cap or engineered structure is used to protect the groundwater pathway, a continuing obligation for inspection and maintenance of the cover, cap or structure, and a number of prohibited activities, and notification about changes are required at the time of closure. A condition for listing the site on the Department's database is also required. See Section 3.0 for information on closure conditions.

3.0 REQUIREMENTS FOR CASE CLOSURE USING SOIL PERFORMANCE STANDARDS

3.1 VERIFICATION AND MAINTENANCE OF SITES USING A SOIL PERFORMANCE STANDARD AND REQUESTING CASE CLOSURE

When a soil performance standard has been established, the effectiveness and adequacy of the remedial action and long-term maintenance of the remedy must be verified by the responsible party prior to requesting closure. Capping actions to limit direct contact can be easily verified by establishing that the pathway of exposure no longer exists. It is more difficult to verify reduced leaching of soil contaminants to groundwater. If soil to groundwater residual contaminant levels are being relied on, sufficient groundwater monitoring must be performed to document contaminant leaching to groundwater has been adequately addressed. If natural attenuation is proposed as the mechanism containing and remediating a groundwater plume, the natural attenuation processes must be verified in the field before this remedy can qualify as a soil performance standard and case closure requested.

The closure request must identify who will be responsible for long term care and maintenance (if that responsibility rests with someone other than the property owner). Verification of notification of affected parties must be included. Activities that may disturb the barrier or change the condition of the barrier are specifically prohibited without prior written Department approval.

Following closure, all components of the remedy (e.g., a barrier cap, natural attenuation) must be maintained until the applicable standards are met and the pathways of concern no longer present a risk to human health or the environment. Barrier covers will require regular (typically annual) inspections and a maintenance program, including the regular repair and/or replacement of any cracked or deteriorated areas, to ensure the long-term effectiveness of the soil performance standard.

If the soil performance standard is not maintained, under ch. NR 727, the Department can reopen the closed site or facility under either of the following circumstances:

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- a. the conditions in the case closure decision (the continuing obligations) have not been complied with, or
- b. the Department can prove that "contamination on or from the site or facility poses a threat to public health, safety or welfare or the environment".

3.2 CONTINUING OBLIGATIONS

1. *General.* In accordance with the requirements of s. 292.12, Stats., which became effective on June 3, 2006, land use limitations and maintenance requirements (continuing obligations) can be imposed at a site or facility through enforceable conditions in local government exemption approvals, remedial action approvals or closure letters. Specific conditions may include any of the following:

- a. Require maintenance of an engineering control on the site.
- b. Require an investigation of the extent of residual contamination and the performance of any necessary remedial action if a building or other structural impediment is removed that had prevented a complete investigation or remedial action at the site.
- c. Impose limitations or other conditions related to property, in accordance with rules promulgated by the department, to ensure that conditions at the site remain protective of public health, safety, and welfare and the environment, and, as applicable to promote economic development.

2. *Site specific requirements.* The type of site-specific situations that would meet one or more of the conditions mentioned above could include:

- a. Where a site is to be closed based on industrial RCLs.
- b. Where a building or other structural impediment prevents completion of a site investigation or remedial action at the site.
- c. Where some type of soil cover, cap or other engineered structure is used to contain soil contamination based on protection of groundwater.
- d. Where maintenance of a cover or cap is necessary to prevent direct exposure to residual soil contamination.
- e. Where a vapor mitigation system is installed and maintained to prevent the migration of vapors.
- f. Where vapor migration was documented and the specific exposure assumptions utilized were based on the non-residential scenario.
- g. Where remaining soil or groundwater contamination could result in vapor intrusion if future construction activities or changes in occupancy occur.

3. *Deed notices.* The legislature, in enacting s. 292.12, Stats., did not change the Department's ability to place deed notices on property, when necessary. The Department uses deed notices to advise the public that previously applied deed restrictions have been satisfied, or where a person fails to adequately define or remediate contamination, and a deed notice is filed in accordance with ch. NR 728.

4. *Removal of continuing obligations.* Sites closed with continuing obligations (including groundwater use restrictions that were previously required) have the option of later requesting that the listing of the site on the Department's database be modified or removed if the previously imposed requirements have been satisfied.

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More information can be found in the Case Closure and the Requirements for Managing Continuing Obligations, Publication RR-606, dnr.wi.gov/files/PDF/pubs/rr/RR606.pdf.

3.3 DNR DATABASE

When a continuing obligation is necessary in order for the Department to approve a local government exemption, remedial action or case closure request at a site with residual contamination, these sites are included on the Department's database. The Department has detailed guidance on when a site is required to be listed on the database. For a more information, please refer to the guidance document Case Closure and the Requirements for Managing Continuing Obligations, Publication RR-606, dnr.wi.gov/files/PDF/pubs/rr/RR606.pdf, and the web pages related to the database starting at: dnr.wi.gov/topic/Brownfields/clean.html

USPAP 2016-2017, Advisory Opinion 9

ADVISORY OPINION 9

1 ADVISORY OPINION 9 (AO-9)

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

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

6 **APPLICATION: Real Property**

7 **THE ISSUE:**

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

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

16 **ADVICE FROM THE ASB ON THE ISSUE:**

17 **Relevant USPAP & Advisory References**

- 18 • DEFINITIONS, specifically the definitions of

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

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

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

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

- 32 • ETHICS RULE, particularly

33 *Conduct: An appraiser must perform assignments with impartiality, objectivity, and*
34 *independence, and without accommodation of personal interests An appraiser must not*
35 *communicate assignment results with the intent to mislead or to defraud.*

- 36 • COMPETENCY RULE, *An appraiser must: (1) be competent to perform the assignment; (2)*
37 *acquire the necessary competency to perform the assignment; or (3) decline or withdraw from the*
38 *assignment. In all cases, the appraiser must perform competently when completing the*
39 *assignment.*

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

54 **Competency and Related Issues**

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

68 **Specialized Terms and Definitions**

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

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

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

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

- 83 1) the nature and extent of the contamination;

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

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

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

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

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

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

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

107 Relevant Property Characteristics

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

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

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

129 **Valuation Issues – As If Unimpaired**

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

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

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

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

147 **Valuation Issues - As Impaired**

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

164 **Satisfying SR 1-4 Requirements:** When the appraiser addresses the diminution in value of a contaminated
165 property and/or its impaired value, the appraiser must recognize that the value of an interest in impacted or
166 contaminated real estate may not be measurable simply by deducting the remediation or compliance cost
167 estimate from the opinion of the value as if unaffected (unimpaired value). Rather, *cost, use* and *risk* effects can
168 potentially impact the value of contaminated property. *Cost effects* primarily represent deductions for costs to
169 remediate a contaminated property. These costs are usually estimated by someone other than the appraiser, and

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170 should include consideration of any increased operating costs due to property remediation. The appraiser should
171 also be aware that the market might not recognize all estimated costs as having an effect on value. *Use effects*
172 reflect impacts on the utility of the site as a result of the contamination. If the contamination and/or its cleanup
173 rendered a portion of the site unusable, or limited the future highest and best use of the property, then there
174 could be a use effect on value. *Risk effects* are typically estimated by the appraiser and often represent the most
175 challenging part of the appraisal assignment. These effects are derived from the market's perception of
176 increased environmental risk and uncertainty. The analysis of the effects of increased environmental risk and
177 uncertainty on property value (environmental stigma) must be based on market data, rather than unsupported
178 opinion or judgment.

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

[illegible]

