



## 9.1 GENERAL POLICY ON CONTAMINATION

As per FDM 21-35-1, WisDOT's policy is that all highway improvement projects under its jurisdiction be evaluated to determine if they warrant a hazardous materials investigation. The goal is to locate all contaminated parcels as early as possible in the facility development process to allow time in considering the options if contamination is discovered, to make good decisions about avoiding the contaminated area and to allow time for remediation to take place. The policy is to NOT acquire contaminated property unless just certain conditions, as specified below, are encountered. When facts and circumstances of a particular site suggest an exemption because it is in the best interest of the state, the request for an exemption may be made as detailed below. As a rule, however, these three criteria must be met before WisDOT will consider acquiring contaminated property:

1. Site cannot be avoided.
2. Property cannot be remediated by others within the proposed letting schedule.
3. Project cannot be deferred or project deferment would substantially exceed cost of remediation.

Soil or groundwater, or both, could be impacted by contaminants, and this is typically the result of leaking underground storage tanks or spills. The most common contamination type that our projects encounter is petroleum related, and so that will be the focus of the REPM chapter.

### 9.1.2 Phases of an investigation

Site assessment and remediation includes:

Phase 1 – hazardous materials assessment. A Phase 1 investigation is to determine if particular properties within the project corridor are likely to present environmental issues needing further investigation. This phase uses field observations, interviews and record searches to identify sites that have a high likelihood of contamination. See FDM 21-35-5.

Phase 2 – subsurface investigation. A Phase 2 investigation is to confirm or reject suspected presence of contamination. This type of investigation involves collecting soil and/or water samples on sites identified in the Phase 1 investigation as being likely areas of contamination. If the acquisition is a strip, the investigation will be limited to the acquisition area. A report will be produced summarizing results of the Phase 2 investigation that includes analysis and a recommendation of the applicable regulations and required next steps. The report will identify the nature, type and concentration of the contaminant at the location of the borings. See FDM 21-35-10.

- Phase 2½ – remediation planning for construction of a highway project. The objective of a Phase 2½ assessment is to gather sufficient data to prepare for a material-handling plan of the impacted soil and water that may be encountered during construction. This work is not intended to remediate the site but only to properly manage materials encountered during construction. When necessary, if the owner of the source of contamination is unable to effect remediation in time to avoid delaying highway construction, the region may consider remediation of the area in the immediate right of way, leaving the owner to clean up the source later. This option should be limited to situations where recontamination of the right of way can be prevented and duplication of final cleanup costs with public funding is not excessive. See FDM 21-35-12.

Phase 3 – define full extent of contamination. Phase 3 is to define the nature and extent of the contamination and to develop a remediation plan. A report with a summary report should include a discussion of alternative remedial strategies, the costs associated with each strategy and a recommendation for further action. See FDM 21-35-15.

Phase 4 – remediation. Phase 4 is to remediate the contamination according to applicable rules and regulations and should be limited to a last resort option. The nature and extent of remediation may be different depending on future use. This phase of work should be completed prior to construction, wherever possible, to avoid excessive cost due to delay in construction. See FDM 21-35-20.

- More key FDM references specific to environmental programs, as well the related forms, laws, policies and regulations can be found on WisDOT's environmental site, which includes other links to other very comprehensive page specific to hazardous materials.

### 9.1.3 General Processes and Procedures

It is critical for staff and fee consultants to immediately notify the regional office if they have information or even suspect an adverse hazardous condition that might warrant further investigation and action. Furthermore, Section NR 726.05(2)(b)4, Wis. Admin. Code, requires notification of appropriate units of government when a site closure request is being made with groundwater contamination within a right of way. At the time of this writing, for state trunk, interstate and U.S. highways, all notifications of contamination in highway right of way should be directed to [Shar TeBeest](#) via email under the subject heading of "Notification of contamination within right of way, and attach their Contamination Notice. Other general processes and procedures involve:

- Authority to enter private lands for environmental testing. When new right of way is identified, staff should follow right of entry and operations procedure of FDM 9-10-5. Contact the property owner and request permission to enter their land to assess or test for environmental contamination. Provide the owner with copies of any information we are relying upon to seek access and test for contamination. If a property owner objects to entry upon their land, the region should weigh the consequences of not testing versus the need to take further actions to secure entry. Every effort to reach agreement with the owner should be made. If it is decided that entry to the property is necessary for testing purposes and the owner still objects, the WisDOT Office of General Counsel should be notified to facilitate in obtaining access. Right of entry authority exists under [s. 84.01\(10\), Stats.](#), which allows the department or its authorized representative to enter private lands to conduct site investigations in the same manner to make surveys or inspections.
- Test results notification. Regardless of the type of investigation conducted, the region must provide a copy of any information or reports that we are relying upon to the property owner and to the Wisconsin Department of Natural Resources (DNR).
  - Owner follow-up - If data suggests that further environmental investigation or remediation is required, the property owner should be contacted as soon as possible to share information and to assist them in the regulatory process. If the contamination finding is new, advise the property owner that the DNR will likely issue a Responsible Party letter requiring further action.
  - Bureau of Technical Service-Real Estate (BTS-RE) - A statement addressing the findings of at least the Phase I preliminary inspection should be included in the appraisal submitted. If contamination is present, it needs to be clearly noted in the appraisal and the region will need to discuss the nature of the contamination and any preliminary remedial alternatives. If no significant evidence of hazardous material or waste

contamination is found, the appraisal should include a simple statement indicating that no issues were found.

- Local Public Agencies (LPA) projects and connecting highways - WisDOT does not acquire real property in our name on connecting highways or for LPA projects. WisDOT can, however, act as an agent or an advisor to local agencies when requested by a local unit of government. WisDOT is under different remediation requirements than LPAs (reference [Chapter 292 Wis. Stats.](#)). Any assistance to LPAs must be thoroughly researched to ensure compliance requirements with Wisconsin Department of Safety & Professional Services and the Department of Natural Resources (DNR).
- Acquisition of a PECFA-eligible petroleum contaminated site. As addressed earlier in this chapter, the only time WisDOT will consider acquisition of a petroleum contaminated site where remedial action is required, is when the region has determined that: 1) site cannot be avoided; 2) property cannot be remediated by others within the proposed letting schedule; and, 3) project cannot be deferred or project deferment would substantially exceed cost of remediation. When a petroleum-contaminated parcel cannot be avoided and the project cannot be deferred to allow remediation by the owner within the project time frame, the regions may proceed to acquire the contaminated property by highway easement provided all of the following has been met:
  1. Site has been approved by Department of Safety & Professional Services as [PECFA](#) eligible and owner has met all deductibles or has furnished letters of credit to be applied to such deductibles.
  2. Owner of contaminated site has contracted with a bona fide environmental consultant and has furnished a performance bond consistent with approved site remediation plan.
  3. DNR has approved a site remediation plan or has notified responsible party in writing to proceed.
  4. Time for remediation, as approved by DNR, is within scheduled project let date.
  5. Region has determined that project related remediation costs are within an acceptable range to not jeopardize the financial integrity of the project; and, can demonstrate range is acceptable through cost estimates upon request.

Once the region has complied with all of above, they can prepare the highway easement or award. Because of the closure requirements, the highway easements are not to be converted to fee Interest.

### 9.1.3.1 Special Circumstances

Underground storage tanks - WisDOT/Environment Services (ES), under the Bureau of Technical Services (BTS) must be notified when underground fuel storage tanks are known to exist or have been located on a parcel. ES will then arrange for an environmental site assessment for each parcel. A private consultant will remove any tanks discovered during the environmental site assessment before razing activities begin. If tanks are discovered on the site during razing that were not removed as part of, or in the absence of an environmental assessment, the demolition contractor should immediately cease razing operations on the site and notify WisDOT. ES will contract with a certified contractor to remove the tanks. Home heating fuel tanks on a parcel should also be included for removal in the razing contract. Tanks must be pulled by a certified tank removal expert to be in compliance with Wisconsin ILHR 10 Flammable & Combustible Liquid Storage System, which is renumbered to [Chapter SPS 310](#).

Move payments for hazardous materials/waste disposal - Move payments can be made under the relocation assistance program when hazardous materials/wastes are

encountered on or in a property if those materials/wastes are classified as personal property of the business, farm or residence being displaced. Examples might include containers of pesticides, herbicides, solvents, etc. located on the property itself or within buildings on the site. Criteria used to determine the extent of allowable move cost payments are:

- If the displaced business, farm or residential owner has an existing liability under State law to move the hazardous material/waste to a safe dumping site, that displacee is generally NOT eligible for reimbursement from WisDOT.
- If hazardous materials/wastes on the property being acquired were not otherwise mandated under law to move to a waste site if there were no project, then relocation of those materials/waste would be eligible for move cost payments for removal, transportation and disposal to the nearest available and allowable disposal site without regard to the 50-mile limitation.

If the property owner vacates the parcel and suspicious hazardous material is left on the site, the structure should be immediately locked with BTS-RE, ES and Risk Management all to be notified immediately for further direction. Note: Many counties and/or municipalities now have “clean sweep” operations allowing owners to take hazardous materials/wastes to a collection site for disposal at no or minimal cost. Owners may be advised to check into those options, but will usually have to prove they live within the area where the clean sweep program is operating. The DNR also maintains online waste disposal facility information at: <http://dnr.wi.gov/topic/landfills/registry.html>.

#### 9.1.4 PECFA Agent Procedures

In some unique and limited instances WisDOT has the authority and can serve as the PECFA agent for an owner of a contaminated parcel. PECFA is the State’s petroleum environmental cleanup fund program, which is directed by the Department of Safety & Professional Services. If/when WisDOT is acting as the PECFA agent, WisDOT is not, however, the responsible party, but rather serves to coordinate the investigation and remediation of the contaminated property for the responsible party. The Petroleum Environmental Clean-up Fund Award (PECFA) was established in and adopted by ss. [101.143](#) and [101.144](#), Stats., and created by [1987 Wis. Act 399](#) and subsequent acts through [1997 Wis. Act 27](#). The Petroleum Environmental Cleanup Fund program is administered under [Chapter SPS 347](#), which defines procedures for filing a eligible remediation claim and specifies the process of determining award amounts. Under SPS 347.10 outlining claim eligibility and pursuant to s [101.143\(4\)](#), Stats., for reimbursement of eligible costs incurred, with prior written approval of the Wisconsin Department of Safety & Professional Services and the owner, operator or the person owning a petroleum product storage system or home oil tank system, this is when WisDOT may act as a PECFA agent when the system is located on property that is or may be affected by a transportation project under its jurisdiction. When WisDOT is acting as the FECFA agent, activities shall be limited to submitting the claim for an award, with the award to be jointly paid to the owner, operator or the person owning the home’s oil tank system and to WisDOT for eligible costs incurred by the department. Furthermore, any WisDOT staff acting in the role of a PECFA agent shall be limited to: a) completing the site investigation to determine the degree and extent of the environmental contamination caused by the discharge from system and preparing the analysis and report; b) conducting bids for commodity services to restore the environment and minimize the harmful effects from discharge; and, c) providing commodity services that have reimbursement maximums that are determined either by the usual and customary cost schedule or by the public bidding process.

- WisDOT criteria for considering PECFA agency. While use of the PECFA agent authority

can help WisDOT meet its goals, the number of agent cases should be limited due to a increased liability for directing remediation and because of the increase in resources required to finance and administer these projects. The following guide is meant to assist regions in determining if/when WisDOT should consider acting as PECFA agent for a property owner:

1. Remediation is necessary for improvement to the state trunk highway system.
  2. Changes in design to avoid contamination must have been considered.
  3. Remediation of the site as PECFA agent will not be undertaken unless design changes are impractical or not economically feasible.
  4. Associated highway project will not meet its scheduled letting unless the department assumes the role of PECFA agent.
  5. Owner/operator net worth as determined by a signed statement of liabilities and assets must be less than \$75,000.
  6. Owner/operator must have been denied remediation loans by at least three private financial institutions.
- Requesting PECFA agency authorization. If the region encounters a situation that falls within the above criteria, they must prepare a written request and submit it to BTS-RE for review and approval. The procedures are:
    1. Owners must make a written request to the region for WisDOT to act as their PECFA agent. As a rule, owners must assume responsibility for payment of all ineligible PECFA costs. Ineligible costs may be deducted from the acquisition payment or billed to the owner after PECFA reimbursement.
    2. Regional office will send a written request to Bureau of Equity and Environmental Services (BEES) explaining how the conditions required for WisDOT to act as PECFA agent have been met or will be met.
    3. Request will be reviewed by the PECFA Agency Approval Committee (PAAC) consisting of the Bureau of Equity and Environmental Services (BEES), Bureau of Technical Services (BTS-RE), Bureau of Project Development (BPD), and the Bureau of State Highway Programs (BSHP). At a minimum, that request must include the property owner's name, related highway project and parcel number, an estimated remediation cost, if available, and rationale/documentation to support each of the above listed criteria. Upon review and approval by PAAC, BEES will send notice of such approval to the region and BTS-RE, BPD and BSHP. Copies will also be sent to the applicable regional Planning section and to BSHP's Program Finance.
    4. Additionally, BEES must request permission from the Department of Safety & Professional Services for WisDOT to act as PECFA agent for the property owner.
    5. After all approvals have been received, the region must secure the Agent Assignment Certification Scope of Work ([Form 6](#)) from the property owner with owner(s) signature(s) (needed if allocated reimbursements are requested). The region should retain a complete copy in the Real Estate files and forward copy to BEES. Any award to an assigned agent will be issued in both the claimant's name and the agent's name. Therefore, the claimant must co-sign an endorsement on a check for an award issued to an agent. Alternatively, the claimant may be asked to sign power of attorney for WisDOT to endorse checks.
  - Project identification and programming requirements (for regional planning).
    1. Regions will identify and establish the applicable PECFA project. The site- specific project ID will be established in the 0637-0X-YY series with X = Region and YY = the unique number assigned to each remediation. The 0637 ID series will only be used for PECFA projects. Note: No direct WisDOT time and travel costs should be charged to a

- 0637 PECFA project. Any associated Real Estate delivery costs should be charged to the 0652-0X-00 non-proratable number.
2. On the FOS Title/Limit/Concept line the words PECFA, the “Specific site/property owner and FOS Project to accept ineligible costs” must be included.
  3. Project program identification is, local highway improvement assistance PECFA Code 2606. This code will not generate improvement proratable distributions.
  4. Project funding will be 100% to local appropriation 276-700. The local billing code for is SA 050. The local billing code for the property owners shares of the project costs will be TD 0X0 with X = the region number.
  5. FIIPS – Estimate screen requirements will include the total project estimate and total engineering costs (they should match) and the contract type = C/E, I/E or M/E. The schedule date is the 25th of the month and anticipated project authorization. Delivery costs are 0%.
  6. FIIPS project authorization process will be used. The basis of PECFA project authorization will be the approval memo from BEES (referenced in step 2 above, under “Procedures for Requesting PECFA Agency Authorization”).
- Contracting with an environmental consultant. When approval for PECFA agency has been granted by BTS-RE, BEES will request approval, select the environmental consultant and prepare a work order as follows:
    1. BEES will select from the approved environmental consultants under contract and prepare a work order for each PECFA project. An environmental consultant is an individual and/or consulting firm having the expertise to perform assessment and remediation as described above in the phases of an investigation.
    2. Scope of services should state that consultant will prepare all PECFA application and reimbursement documents and those copies will be sent to BEES. BEES shall submit reimbursement documents to Wisconsin Department of Safety & Professional Services. For long-term projects, requests for reimbursement shall be submitted once per year.
    3. Object Code 5583 and the standard consultant contract invoice form shall be used for PECFA encumbrances and payments. Invoices must be reviewed and approved for payment by BEES who will, in turn, send them to Bureau of Business Services (BBS)/Expenditure Accounting. Accumulative remediation payments cannot exceed the work order encumbrance without a change order.
    4. Final bill from the consultant must be marked as “final” and is sent to BBS/Expenditure Accounting. When final payment is made to the environmental consultant, BBS/Expenditure Accounting will close contract. The regional FIIPS coordinator will request project be closed after contract is closed.

All PECFA ineligible costs, which are the responsibility of the owner, may be either deducted from the acquisition payment (where there is no relocation involved) or billed to property owner. PECFA reimbursement checks must be endorsed and signed over to WisDOT by owner before being sent to BBS. Reference PECFA project ID (0637-xx-xx), revenue project ID 0106-11-26 and object code. 9666 should be included with check.

- At the time of this writing, contacts for assistance in PECFA agent projects are:  
BBS - Peg Lafky, 608-266-3663 and Louise Olbrantz, 608-266-0329  
BEES - John Lewis, 608-267-3147 and Shar TeBeest, 608-266-1476

### 9.1.5 Exception Requests for Non-PECFA Eligible

Real Estate policy on exemptions is to treat on a case-by-case basis as follows:

1. Submit a memo to BTS-RE (central office; Madison). The memo should include an overview

of the project, a summary of options analyzed, and a discussion regarding why it is appropriate for this parcel to be exempted from the general policy. Attach pertinent pages of the Environmental Report. Also include copies of the plan sheets covering the area of proposed acquisition.

2. Submittals will be reviewed by an Exception Committee, which at the time of this writing is made up of participants from BEES, BTS-RE, BPD, RSFM and OGC.

Regions shall submit the above at least seven months prior to the planned acquisition to provide for review and administrator approval (three weeks); appraisal review (two - three months); offer (three weeks); owner's appraisal (two months); and, the Jurisdictional Offer (two weeks). If the owner is committed to remediating the site, WisDOT may consider a limited remediation of only the proposed right of way needed for the highway project and may accommodate the remaining cleanup by the owner at a later date. Part of any such approval will be a determination that recontamination can be prevented. If this is to be considered, the region shall include a discussion of how the expenditure of state funds will be accounted for in the acquisition.

Highway easement shall be the instrument used for all acquisitions of contaminated property. The Exemption Committee will review requests. The regional position will be represented by its coordinating representative. A recommendation by the Exemption Committee will be forwarded to the administrator of DTSD for approval. No Offering Price Report is to be approved until the Exemption Committee's recommendation has been approved by the administrator.

### 9.1.6 Guide for Appraisers and Review Appraisers

Environmentally contaminated property must be appraised in the "as is" condition. The appraiser must take into account the affects, if any, that the environmental contamination may have on real property market value. WisDOT and the appraisal industry realize that environmental contamination may impact the market value of a property. Accepted appraisal techniques must be utilized to recognize the effects, if any, of contamination on market value. The Uniform Standards of Professional Appraisal Practice (USPAP) Advisory Opinion – 9 (AO – 9) provides an excellent guide for understanding the issue involved with the process, and much of the following verbiage for this sub-section is taken directly from this opinion. 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." So, how does an appraiser comply with USPAP when appraising properties that may be impacted by environmental contamination? Advice from the Appraisal Standards Board on the issue suggests these relevant USPAP references and characteristic of concern:

- Definitions, specifically uniformity for the key definitions of "extraordinary assumption" and "hypothetical condition"
- Ethics rule
- Competency rule
- Relevant property characteristics
- Valuation issues – as if unimpaired
- Valuation issues – as impaired

Definitions and special associated with the appraisal of properties that may be impacted by environmental contamination include:

- Diminution in value - 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. The unimpaired value establishes the characteristics of similar properties not impacted by the environmental contamination. From these the appraisal can establish a background for capitalization rates, loan to value rates, population samples, etc. that can be used to determine the indicated change in value factors due to the impact of environmental contamination.
- Environmental contamination - adverse environmental conditions resulting from the release of hazardous substances into the air, surface water, groundwater or soil. Generally, the concentrations would exceed the regulatory limits established by appropriate federal, state, and/or local agencies.
- Environmental risks - additional or incremental risk of investing in, financing, buying and/or owning property attributable to its environmental condition. This risk is derived from the perceived uncertainties concerning the nature and extent of the contamination; estimates of future remediation costs and their timing; potential for changes in regulatory requirements; liabilities for cleanup (buyer, seller, third party); potential for off-site impacts; and 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. Stigma is related to risk.
- Impaired value - 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 contaminated property.
- Remediation cost - 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 - market value of a contaminated property developed under the hypothetical condition that the property is not contaminated.

Relevant property characteristics may include:

- Contamination constituents (petroleum hydrocarbons, chlorinated solvents, etc.).
- Contamination conveyance (air, groundwater, soil, etc.).
- Cost and timing of any site remediation plans.
- Liabilities and potential liabilities for site cleanup.
- Potential limitations on use of property due to contamination and its remediation.
- Potential or actual off-site impacts due to contaminant migration (for source site).
- Remediation life-cycle stage (before, during or after cleanup) of property as of appraisal date.
- Responsible party(s), if known.
- Status of the property with respect to regulatory compliance requirements.
- Whether property is a source, non-source, adjacent or proximate site.

- Whether the contamination discharge was accidental or permitted.

The appraiser will frequently use third party reports for much of the above information. When relying on third party reports, the appraiser should consider use of extraordinary assumptions when this information serves as a basis for an opinion of value.

Valuation issues – as if unimpaired - In some assignments, WisDOT will determine the acquisition is not affected by environmental contamination; however, the remainder of the site might well be contaminated. In these situations the appraiser should use a hypothetical condition that the site 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. Resulting report is not misleading.
2. Client has been advised of limitations.
3. All requirements of the ethics rule have been satisfied.

To avoid confusion in the market place, 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 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. 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, unimpaired value and impaired value. 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 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. 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 the interest in impacted or contaminated real estate may not be measurable simply by deducting the remediation or compliance cost estimate from the opinion of the value as if unaffected (unimpaired value). Rather, cost use and risk effects can potentially impact the value of contaminated property. Cost effects primarily represent deductions for costs to remediate a contaminated property. These costs are usually estimated by someone other than the appraiser, and should include consideration of any increased operating costs due to property

remediation. The appraiser should also be aware that the market might not recognize all estimated costs as having an effect on value. Use effects reflect impacts on the utility of the site as a result of the contamination. If the contamination and/or its cleanup rendered a portion of the site unusable, or limited the future highest and best use of the property, then there could be a use effect on value. Risk effects are typically estimated by the appraiser and often represent the most challenging part of the appraisal assignment. These effects are derived from the market's perception of increased environmental risk and uncertainty. The analysis of the effects of increased environmental risk and uncertainty on property value (environmental stigma) must be based on market data, rather than unsupported opinion or judgment. In general, the unimpaired value of the property being appraised can be estimated using the sales comparison approach, cost approach, and the income approach. Estimating the effects of environmental contamination on real property value usually involves the application of one or more specialized valuation methods. These methods should be consistent with the requirements related to the valuation approaches in USPAP. See [USPAP Advisory Opinion – 9](#) for further discussion: Advisory Opinions 2012 – 2013, The Appraisal Foundation.