



Relocation Appraisals and Inspections Resource Guide

Prepared for:
Greater Washington Employee Relocation Council
June 16, 2010

Presenters:

Carlo Iannandrea | Director, Account Management | US Inspect, LLC

703.293.1451 | clannand@USInspect.com

Carlo joined US Inspect in 1989. Having performed field inspections in NY, NJ, CT and PA, he joined the headquarters team in 1996 as Senior Technical Advisor. This position entailed research of construction and inspection issues and assisting relocation clients with policy development and training. Currently he holds the position of Director of Account Management and is in charge of managing a portfolio of relocation clients.

Brian Lynch, CRP | Director, Account Management | US Inspect, LLC

703.293.1460 | blynch@usinspect.com

Brian has worked at U.S. Inspect for eight years serving in a variety of positions. An eight year relocation industry veteran and Certified Relocation Professional, Mr. Lynch has extensive experience in dealing with a myriad of relocation inspection related issues. As Director of Account Management, Brian's primary responsibilities are to ensure client service teams are properly staffed, service levels are met consistently and training needs are addressed. Brian currently oversees the inspection relationships for about ½ of USI's relocation business. Prior to joining U.S. Inspect Brian was honorably discharged from the United States Marine Corps as a Sergeant (Non-Commissioned Officer). Brian has a Bachelor of Arts Degree in Business Management from East Carolina University.

James D. Donnelly, SRA | Real Estate Appraiser | J. Lee Donnelly & Son, Inc.

301-951-5500 | szilvia@jleedonnelly.com

James D. Donnelly, SRA is President of Washington DC's oldest real estate appraisal firm, J Lee Donnelly and Son, Inc. The firm was founded in 1920 and named after his grandfather, J Lee Donnelly. The company specializes in the appraisal of commercial and residential properties throughout the DC metropolitan area. Specialties include complex assignments for litigation, tax appeals, lending, divorce, estate, relocation and individuals who "just need to know" the value of real estate. Mr. Donnelly completed his first appraisal assignment, while in high school, in 1971 and has been appraising since his Graduation from The University of Dayton in 1976. He earned the professional designation SRA from the Appraisal Institute in 1986. Mr. Donnelly attained the highest respects in the field of appraisal during a case identified as "Simmons v IRS." Mr. Donnelly represented the taxpayer in a "Historic Preservation Easement" case heard in United States Tax Court. The ruling was in favor of the taxpayer. As a result, Mr. Donnelly, is a nationally recognized real estate appraiser.

Ghadeer Hasan, CRP, GMS | Vice President, Quality | Dwellworks, LLC

703.448.1902 | ghadeer.hasan@dwellworks.com

Ghadeer has more than 10 years of experience in relocation management and provides procedural expertise and leadership for all quality functions related to the company's service activities. Previously, she was the General Manager and Director of Operations for Full Circle International Relocations responsible for all aspects of destination services through the design of business practices and processes, innovative customer service and solutions, and team management focused on individual growth. Ghadeer is a graduate of George Mason University is a frequent contributor to industry programs and publications on relocation support services.

Table of Contents

Topic 1: Current Market Trends	4
Topic 2: Origination of an Inspection	7
Topic 3: Summary Responsibility Grid	8
Topic 4: Detail Appraiser Responsibilities	10
Topic 5: Mortgage and Relocation Appraisal Differences	13
Topic 6: Defect Categories and Appraiser Responsibility	14
Topic 7: Material Defects Impact on Appraised Value	15
Topic 8: Detailed Inspector Responsibilities	16
Topic 9: Inspection Results and Required Disclosures	19
Topic 10: Summary of Inspection Types	20
Topic 11: Mold	35
Topic 12: Exterior Insulation and Finishing Systems (EIFS)	37
Topic 13: Chinese Drywall	40
Topic 14: Recommended Best Practices	43

Topic 1: Current Market Trends & Issues

It is a Buyers Market

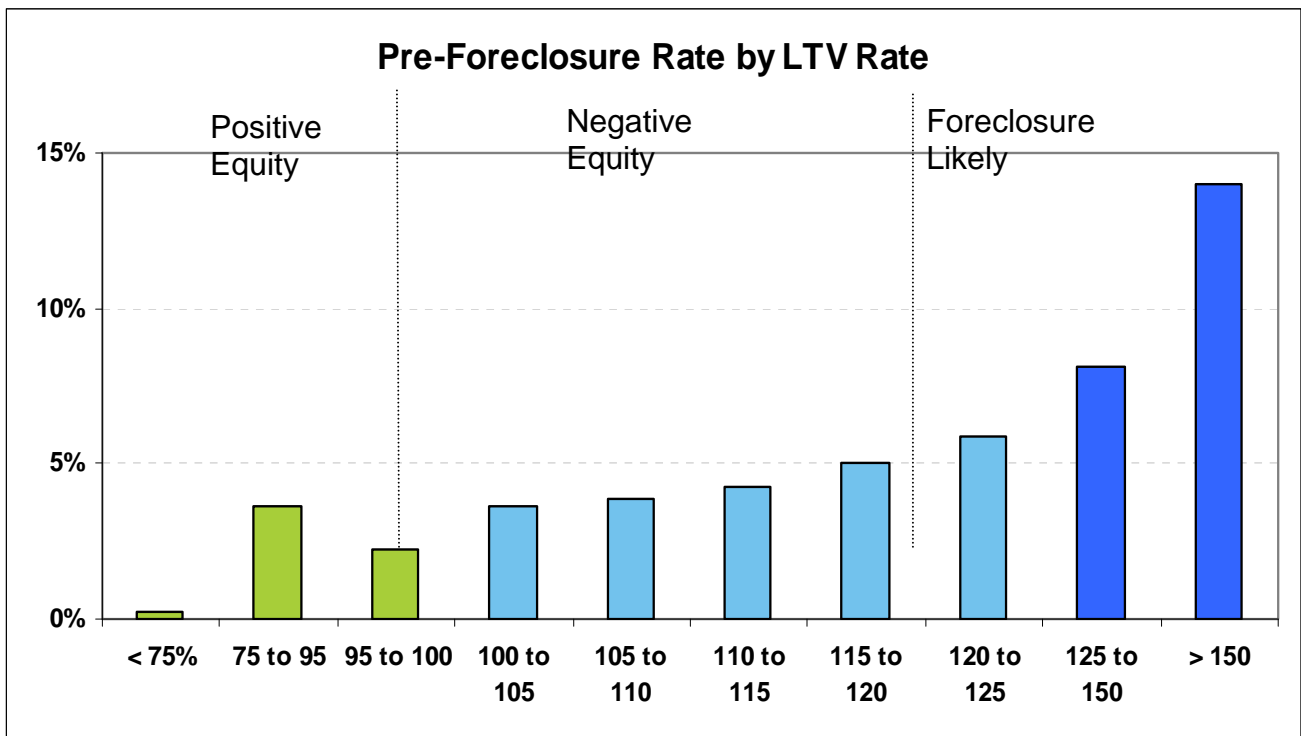
- Less buyers in general
 - Lower consumer confidence of future economic conditions
 - Cannot sell their current home or unwilling to put on market at today's current prices
- Buyers can be and are very selective
- Causing a reduction in home values
- Seller concessions becoming the norm
- Requires a property to be in mint condition to effectively compete

Emerging Trends

- Foreclosure and REO competition at all-time highs
- Shadow Inventory of future foreclosure not yet listed for sale
- Unemployment at 25 year highs
- Expiration of tax credits leading to near term fears
- Rising interest rates are expected
- Price increases are being experienced in pockets
- Housing downturn now localized rather than systemic

Negative Equity Inhibits Mobility

- **11.3 Million U.S Mortgages (24%)** were in negative equity positions as of Q4 2009
- Aggregate dollar value of negative equity stands at \$801 billion
- Negative equity continues to be concentrated in five states: Nevada, Arizona, Florida, Michigan and California
 - Borrowers tend to default once negative equity exceeds 25% percent of market value
 - A positive sign is that roughly half of all borrowers have at least 25% equity in their homes. Borrowers most likely to have positive equity are those that purchased pre-housing boom with a conventional fixed-rate mortgage



Topic 1: Current Market Trends & Issues (continued)

Increase in Out of Spread Appraisals and Third Appraisals

- Close to 60% of files come in out of spread
- Approximately 20% of files require a 3rd appraisal
- Variances are above historical level

Inspections are More Important

- Buyer's market due to high level of inventory / foreclosures
- Buyer's have greater leverage and are asking for more concessions
- Homes that sit idle longer tend to develop more problems (water penetration, mold, plumbing leaks, termite infestations, etc.)
- Inspections can reveal important problems that can be dealt with prior to discovery by interested buyers
- Proactive approach can avoid lost sales due to difficult negotiations and last minute surprises
- Property can be better positioned against competing listings

Material / Operability Defects vs. Cosmetic and Maintenance Issues

- Material / operability
 - Scope limited to ERC Inspection Guidelines - structural condition, operability of systems and safety of installed components
 - Systems operated using typical homeowner controls (thermostats, switches, control panels)
 - Defect must meet definition as – compromised / not performing its intended function, not responding to normal controls, damaged or broken, poses a safety concern for users / occupants
- Cosmetic and maintenance
 - Excluded from the scope or ERC Inspection Guidelines
 - Interior – wall and floor coverings (drywall, carpeting, paint, interior molding / trim)
 - Exterior – paint, caulk, landscape features

Risk of Using the 10 Year+ Inspection Guideline

- Homes not always built according to best construction practice
- Installed systems can fail prematurely due to poor manufacturing, improper installation or lack of proper maintenance
- Not all items covered under typical builder warranties

Stucco Cladding

There are a number of variations to what are referred to as stucco claddings, the most common of which are:

- Conventional cement stucco - applied in multiple coats
- Exterior Insulation and Finish Systems (EIFS) – foam insulation-based system with thin, polymer / cement coating
- Hybrid – Systems that are not defined by traditional or written manufacturers' installation requirements. These typically incorporate mixed methodologies and components from various systems without established guidelines

Chinese Drywall

- Material imported since 2003 that has created great controversy in the housing industry
- Off-gasses compounds that accelerate the corrosion of the metal components of the home such as; copper piping, electrical wiring, air conditioning coils, metal fixtures, etc.
- Difficult to identify if no visible signs are evident
- Can prove extremely expensive to remediate
- A growing problem that continues to be investigated and tracked by the U.S. EPA, Consumer Product Safety Commission, state and local building authorities, homeowner's associations, litigators, etc.

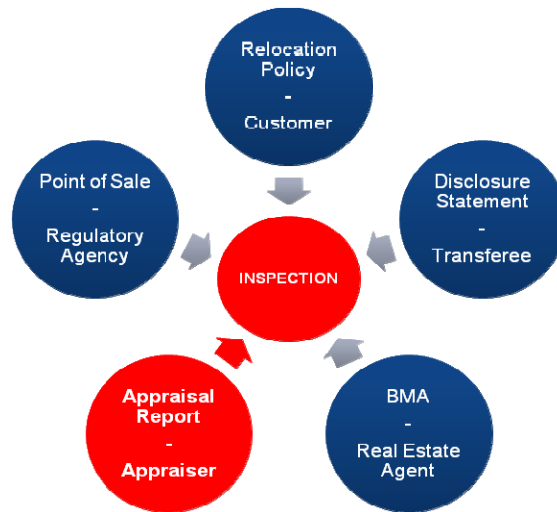
Mold

Mold is an indoor air quality concern that gained media attention several years ago due to a number of publicized lawsuits and subsequent judgments in the millions of dollars

- Mold is naturally occurring and is caused by moisture's impact on cellulose material
- Survives by breaking down and consuming the cellulose material
- Can impact the health of the occupants
- Moisture source must be corrected to stop growth
- Remediation is recommended by professionals specializing in indoor air quality concerns

Topic 2: Origination of an Inspection

Inspections are triggered by client policy, defects disclosed by the transferee, defects identified by the Real Estate Agent and/or Appraiser, and by local point of sale requirements to transfer title:



1. Customer: GSA Policy Definition

- Pest/Termite required on all Homes
- General Home inspection required on all Homes over 10 years old

2. Transferee: Disclosure Statement

- Property owner must reveal structural and environmental aspects of a property that might impact the property's value
- Many states have mandated property disclosure forms
- ERC had developed the "ERC Homeowner Disclosure Statement"

3. Real Estate Agent: BMA

- Documents required or mandatory point of sale inspections
- Provides a list of recommended inspections

4. Appraiser: Appraisal Report

- Documents required or mandatory point of sale inspections
- Provides a list of recommended inspections

5. Regulatory: Mandatory Point of Sale

- Required or customary by state or local codes, laws or common practice for the transfer of title

Topic 3: Appraiser & Inspector Functions

The following grid describes the specific roles for the Appraiser and the Inspector and shows how they vary:

Appraiser	Role	Inspector
<ul style="list-style-type: none"> To develop Anticipated Sales Price or Fair Market Value based on established ERC appraisal guidelines 	Key Function	<ul style="list-style-type: none"> To inspect and assess the home's structure and systems and report their condition based on established ERC inspection guidelines
<ul style="list-style-type: none"> Must be licensed by State and carry Errors and Omissions insurance 	Qualifications	<ul style="list-style-type: none"> Must be qualified and, depending on State, may need to be licensed, bonded and insured
<ul style="list-style-type: none"> To ensure the value is supported To ensure the home is marketable To be certain the house meets minimum FHA property standards and qualifies for lending 	Purpose	<ul style="list-style-type: none"> To evaluate the physical condition: structure, safety, and mechanical systems To identify items that need to be repaired or replaced To estimate the remaining useful life of the major systems, equipment, and structure
<ul style="list-style-type: none"> To visually inspect areas that are accessible To observe condition of property and its amenities To note deferred maintenance observed and determine impact on the property's value and/or marketability 	On-Site	<ul style="list-style-type: none"> To provide a detailed report on the condition of the structural components, exterior, roofing, plumbing, electrical, heating, ventilation, air conditioning and interiors
<ul style="list-style-type: none"> Relocation Management Company or Lender 	Report Recipient	<ul style="list-style-type: none"> Relocation Management Company or Home Buyer
<ul style="list-style-type: none"> Visual inspection of interior and exterior of the subject property Collecting, verifying and analyzing pertinent data Considering market trends Developing an opinion of Anticipated Sales Price 	Scope	<ul style="list-style-type: none"> Visual inspection of structural components, major systems and safety concerns Estimates useful / remaining life of components Reports defective items in accordance with ERC inspection guidelines and client policies Recommends repair or further inspection by specialist Provides ballpark cost to cure

Topic 3: Appraiser & Inspector Functions (continued)

Examples of the difference between Appraiser responsibilities and Inspector responsibilities:

Appraiser	Example	Inspector
<ul style="list-style-type: none"> • Visually inspects for adequate slope/drainage away from structure(s), potential encroachments and adverse external influences such as traffic noise, high-tension lines, etc. 	<p>Lots and Grounds</p>	<ul style="list-style-type: none"> • Inspects for: <ul style="list-style-type: none"> ○ Walks and trip hazards, patios, decks & balconies, porches, retaining walls ○ Surface water control – grading, swales, window wells, exterior drains
<ul style="list-style-type: none"> • Visual inspects (from ground) for curling or missing shingles, flashing, moss, etc. 	<p>Roof</p>	<ul style="list-style-type: none"> • Walks roof (if feasible based on design and height) • Identifies material type • Provides estimated life – remaining life • Inspects for deterioration or damage to roof covering, flashings for roof penetrations and junctions • Includes inspection of attic for evidence of water penetration, adequate roof structure / support, ventilation, presence of possible mold • Provides ballpark cost to cure
<ul style="list-style-type: none"> • Visually inspects floors and floor coverings for excessive wear, damage, exposed sub-floor, etc. • Reports any observed sloping or softening of floors. • Visually inspects walls and wall coverings for holes, staining or other damage. • Visually inspects ceilings for holes, staining or other damage. 	<p>Floors, Walls and Finish Materials</p>	<ul style="list-style-type: none"> • Not in the scope of the ERC Property Assessment
<ul style="list-style-type: none"> • Identifies type (forced hot air, hot water, etc.) and approximate age 	<p>Heating</p>	<ul style="list-style-type: none"> • Operates system using typical homeowner controls • Inspects for proper, safe installation • Estimates age / typical design life • Notes presence or absence of heat source in all livable spaces • May recommend further evaluation by heating specialist if not able to conclusively determine condition (some heat exchangers are sealed and not visible)

Topic 4: Detailed Appraiser Responsibilities

1. Describes the Property and Improvements

- Legal description and parcel number
- Type, age, construction style, materials used, quality of construction
- Room count and calculated gross living area
- Interior
- Foundation and basement
- Car storage
- Personal property
- Special features and amenities (e.g., deck, fireplace, security system, built-ins, patio, pool, spa, etc.)
- Describe and rate any improvements made to the property affecting marketability (exterior, quality of construction, condition, interior appeal/décor, functional utility)
- Site – zoning classification, flood hazard, rating of site appeal, positive and negative characteristics
- Utilities
- Tax and HOA information
- Sales and listing history

2. Defines and Describes the Neighborhood

- Neighborhood type (urban, suburban, rural)
 - Composition and percentage built up
 - Development rate
 - Present land use
 - Predominant price and range
 - Predominant age and range
 - Predominant occupancy
 - Positive and negative neighborhood characteristics
 - Rating of the overall neighborhood appeal
-

Topic 4: Detailed Appraiser Responsibilities (continued)

3. Determines Market Trends and Current Market Conditions

- Financing conditions
- New construction and REO/Foreclosure competition
- Historic price trend
- Current supply and demand
- Forecasted price trend
- Mortgage interest rates
- Normal marketing time
- Specific competing properties
- Competitive listing range for subject property
- Sales Comparison Analysis:
 - Detail three recent sales and cross compare against the subject (proximity, listing history, days on market, concessions, appeal of neighborhood, site, condition, room count, functional utility, features, etc.)
 - Market Change adjustment
 - Forecasting
- Market data analysis

4. Determines the Marketability of the Property

- Internal adverse influences
 - Foundation settlement
 - Water penetration
 - Evidence of damage or wear to roof
 - Functional utility
 - Easements and encroachments
 - Condition of interior including floor and wall-coverings, built-ins, etc.
- External adverse influences
 - Location of property (proximity to power lines, on a busy street, near commercial, EPA superfund site, etc)
 - Financing issues
 - Renter ratio (condominiums)
- Assess competition
 - New construction
 - REO/Foreclosure

5. Documents and Recommends Inspections Based on Evidence of Adverse Conditions (e.g., dampness, termites, settlement, etc.)

Topic 4: Detailed Appraiser Responsibilities (continued)

6. Recommends Repairs/Improvements to Enhance Marketability

- If repairs or improvements are recommended, they are listed with an estimated cost to cure
 - The market, not cost, is the basis for adjustment in the Sales Comparison Analysis
-

7. Identifies Mandatory Inspections to Transfer Title

- Generally required by local laws and customs
-

8. Considers Transferee Provided information

- Disclosure statement
 - Brag sheet
-

9. Determine Anticipated Sales Price in “As In” Condition

The **Anticipated Sales Price** (originally most Probable Sales Price) is the price at which a property is anticipated to sell in a competitive and open market, assuming an arm’s length transaction. The ERC decided on the following core components in developing this definition of value:

1. The analysis reflects the subject property “**as is**” and is based on its **present use as a residential dwelling**. For new construction not completed as of the date of the appraisal, the ASP should be based on the assumption improvements will be completed in a workmanlike manner.
 2. Both buyer and seller are typically **motivated**; both parties are **well-informed** or well-advised and acting in what they consider their **best interests**.
 3. Payment is made in **cash** or its equivalent.
 4. A **reasonable marketing period**, not to exceed **120 days** and commencing on the date of appraisal, is allowed for exposure in the open market. The analysis assumes an **adequate effort to market** the subject property.
 5. **Forecasting** is applied to reflect the **anticipated trend of market conditions** and prices during the subject property’s prospective marketing period.
 6. Sales comparison approach (not the cost or income approaches)
 7. Competing properties and pending sales (as well as closed sales)
-

10. Provides Documentation, Exhibits and Addenda

- Front, rear, street and interior photos of subject
 - Photos depicting any adverse conditions and inspection concerns
 - Photos of factors within view from the subject that significantly affect marketability either favorable or unfavorable
 - Sketch of structure including dimensions and location of rooms
 - Gross living area calculations
 - Map showing the location of the subject property, competing properties and comparable sales
-

Topic 5: Mortgage and Relocation Appraisal Differences

There is a clear distinction between an appraisal prepared for mortgage purposes and an appraisal utilized for relocation; the following table defines these main differences:

	MORTGAGE APPRAISAL	RELOCATION APPRAISAL
Reporting Format	<i>Uniform Residential Appraisal Report</i> Comprehensive analysis	<i>ERC Summary Appraisal Report</i> Expanded analysis of market trends
Intended Use	Facilitate mortgage lending	Facilitate corporate relocation
Purpose	Develop an opinion of market value	Develop an opinion of anticipated sales price
Value Definition	Market Value Exposure time precedes date of appraisal	Anticipated Sales Price Marketing time occurs after date of appraisal
Marketing period	Normal (without limit)	Reasonable (not to exceed 120 days)
Financing considerations	Cash equivalency, no adjustments for normal seller costs	Cash equivalency, adjustments for sales and financing concessions
Type of analysis	Retrospective analysis: no forecasting	Prospective analysis: forecasting
Decision Making	Long term (up to 30 years) Lower risk	Short term (up to 120 days) Higher risk
Items for Consideration	Identifies: condition, design, and appeal	Emphasizes: condition, design, appeal, interior décor, repairs and improvements
Comparables	Requires closed sales	Requires closed sales and competing properties and considers pending sales
Photographs	Subject's front, rear, and street scene; comparable sales	Front, rear, street scene, and interior views of the subject property; any adverse conditions and inspection concerns; factors within view from the subject property that significantly affect marketability either favorably or unfavorably; comparable sales; competitive listings

Topic 6: Defect Categories and Appraiser Responsibility

The following table provides examples of property defects and the Appraiser's likelihood and responsibility in uncovering them. Obvious defects should be identified and reported by an Appraiser:

	OBVIOUS	SUSPECTED	HIDDEN
	Items an appraiser would obviously identify during the course of an inspection	Items an appraiser may identify during the course of an inspection; Appraiser is not required to go onto the roof, in attics, crawl space, or inspect the plumbing or electrical	Items an appraiser will not identify; A qualified home inspector would identify these items based on expertise and inspector requirements
Roof	Hole in roof	Curling and/or missing shingles	Condensation in attic
Foundation	Large vertical cracks in foundation walls; Bowed flooring; Standing water in basement	Masonry veneers separating from house; Springy flooring; Water stains on foundation block	Separation between basement floor and foundation walls; Separation of sub-floor from joists; Wall bulging
Electrical	Electrical panel cover missing; Flickering lights; Missing GFCIs	Corrosion in electrical panel; Non-functioning electrical switches; Federal Pacific panel box	Aluminum wiring, ungrounded outlets; Circuit-overloading; Improper grounding
Heating	Heavy rusting or corrosion of furnace exterior	Ambient temperature of home	Cracked heat exchanger
Plumbing	Actively leaking pipes	Water damage under sinks	Undesirable water supply lines (galvanized/polybutylene pipes)
Driveway	Heaving cracks in driveway	Deterioration of driveway surface	Minor shifting of concrete slab

Topic 7: Appraised Value – Impact of Material Defects

Observable Material Defects

Per ERC Guidelines, the appraiser views the subject property from the **standpoint of the prospective buyer**. Appraisers must consider all features or conditions that, in the mind of the **typical buyer**, would add to or detract from the value of the property being appraised. While more sophisticated than the typical buyer, appraisers are **not required** to have any specialized training in detecting defects.

Appraisers are directed to value the subject property in **“as is” condition**. “As is” condition is the simply the state in which the subject is found during the physical inspection of the property. Unlike a home inspector, appraisers do not conduct tests to identify potential problems, but merely rely on their senses to identify **readily observable** problems as they examine the property.

For example, when inspecting the 2nd floor of a two-story home the appraiser may see evidence of water penetration. The appraiser then notes this in the appraisal and calls for a roof inspection. In the appraisal, the appraiser will make a **condition adjustment** reflecting the market reaction to the defect. The adjustment has two components: the **cost to cure** the defect and any additional dollar amount by which the defect will **impact marketability**.

Impact on Value of Curing Material Defects

When a material defect is identified, frequently the transferee chooses to complete the repair. Confusion arises when the value of the home does not increase by the full amount of the adjustment made by the appraiser or even by the transferee’s out of pocket cost to make the repair. While individual cases vary, this situation is not difficult to understand when viewing the situation, as the appraiser does, from the perspective of the prospective buyer.

The typical buyer has certain expectations about the home they are purchasing. One of the primary expectations is **habitability**. Given suitable alternatives, a typical buyer will not purchase a home that is not suitable to occupy. Therefore when a material defect is detected, the buyer does not offer to pay more if the defect is cured because it was the buyer’s expectation that the home was suitable to occupy unless the homeowner discloses the problem or the defect is obvious and cannot be overlooked.

For example:

Let’s assume that an appraiser inspects a home and finds that the roof ridge line is badly bowed, shingles are curled and missing. The appraiser also notes some dampness and staining in several areas on the second floor ceilings. The appraiser recommends a roof inspection that is completed and confirms the appraiser’s assessment. Because there is an obvious defect that will adversely impact marketability of the home, the appraiser, makes a \$7,000 negative adjustment and values the home at \$193,000.

The transferee replaces the roof at a cost of \$10,000. The appraiser re-evaluates the home, removes the negative \$7,000 adjustment and increases the value to \$200,000.

Question: Why did the appraiser not raise the value of the home to \$203,000? Because the appraiser is comparing the subject to comparable sales and adjusting for differences between the subject property and the comparables. The comparables in this example all have functional roofs with more than 5 years of remaining economic life. While the typical buyer is willing to pay something more for a home with a new roof, they are not willing to pay the complete cost of the new roof, when they could purchase other homes with functioning roofs.

Topic 8: Inspector Role & Responsibilities

1. Inspect Major Components

- Roof
 - Type and condition of the roof covering, sheathing and structural components
 - Penetrations and flashings
 - Evidence of water penetration
- Heating & Air Conditioning
 - Type of system and fuel type
 - Condition of components
 - Operability
 - Proper exhaust
 - Safety of installed components
- Electrical
 - Service size and adequacy
 - Condition of service distribution panel and internal components
 - Branch circuits, wire conductors, GFCI's (ground fault circuit interrupter)
 - Presence of smoke detectors
- Plumbing
 - Water source type (public vs. private)
 - Sewage service type (public vs. private)
 - Condition of water distribution piping, drain and vent piping
 - Adequacy of water pressure
 - Bathroom components (toilets, tub / shower, sinks, exhaust fans)
 - Water heater – condition, safety of installed components
- Structural
 - Type and condition of foundation
 - Condition of structural components (beams, bearing walls, joists & trusses, piers & posts, floor slab)
 - Inspects and reports on the condition of the structural components and evidence of structural distress or failure
 - Recommends repair option and provides ballpark cost
 - A separate design solution is often required in order to perform proper repairs
 - Contractors use the design solution to bid specific scope of work and provide estimate

2. Provide Further Evaluations and Specialty Inspections

- Further evaluations are recommended when home inspector cannot definitively determine the cause or extent of a problem
 - Performed by qualified specialists in the subject area – structural engineers, electricians, plumbers, HVAC technicians, roofers, indoor air quality / environmental specialists
 - Have the ability to dismantle components, conduct specialized testing, and recommend specific repairs
 - Provides estimated cost to cure
-

Topic 8: Inspector Role & Responsibilities (continued)

3. Difference between General Home and Specialty Inspections

- Home inspectors are *generalists* who will flag structural, safety and inoperable systems
- Specialty inspectors are licensed contractors who specialize in a particular field; electricians, plumbers, heating and air conditioning technicians, roofers, etc.
- They can perform more invasive, in-depth inspections
- As licensed professionals, they are able to comment on code issues if necessary
- Supersedes the opinion of the home inspector

In some cases the General Home Inspector will not be able to determine the nature of a potential problem without invasive procedures that are outside the scope of a Relocation Property Assessment. In these cases it is necessary to defer to an individual better equipped and qualified to conduct an in-depth inspection. "Specialty" inspections are performed by licensed contractors in specific fields: electricians, plumbers, heating and air conditioning technicians, roofers, etc. These individuals are licensed in their specific field to install components, diagnose problems and make repairs. Because they are licensed, specialty inspectors will, as appropriate, comment on code issues as part of their assessment. Due to their specific knowledge and background, the specialty contractor's opinion supersedes that of the home inspection.

4. State Required Inspections and Forms

Some states require specific forms and inspection procedures. In these cases US Inspect complies with all requirements and submits reports on the state mandated forms. These include but are not limited:

- Massachusetts Title V septic inspections
- Missouri septic
- Minnesota septic
- California wood destroying insects and organisms reports
- Texas Real Estate Commission home inspection reports (as opposed to the ERC Property Assessment)
- New Jersey well inspections
- Connecticut well inspections
- Arkansas termite
- Alaska well and septic
- Florida wood destroying organism inspections

Only 11 states do not require seller disclosure:

- Alaska
- Idaho
- Kansas
- Louisiana
- Mississippi
- Missouri (some counties)
- Montana
- New Mexico
- North Dakota
- Texas
- Wyoming

Topic 8: Inspector Role & Responsibilities (continued)

5. Commentary Regarding Code Specific Inspections

ERC Guidelines designate defects based on three categories: structure, unsafe and hazardous conditions, and inoperative systems and appliances. Codes which govern construction are primarily intended to ensure that buildings are built with minimum safety standards to protect occupants. It is important to understand that, although there are thousands of written codes, each state, county and municipal jurisdiction can choose which codes to adopt and enforce. This makes it difficult, if not impossible, to expect home inspectors to interpret whether specific codes apply to particular homes. As such, home inspectors, who are considered generalists, are discouraged from commenting on code and are instead expected to determine solely if a condition poses a safety concern, regardless of local regulations. A comprehensive code inspection of any given property would require multiple individuals specializing in each system, hours of research, time on-site and would cost a minimum of \$2,500 with total fees dependent on each individual's hourly rates, etc.

Topic 9: Inspection Results and Required Disclosures

During the course of a home inspection it is not uncommon to discover issues that could affect the health and safety of the occupants or impact the integrity of the structure and its systems. **Homeowner disclosure laws** vary by state but many require that the homeowner **alert prospective buyers** to the presence of any known defects.

Inspections present a unique challenge since the inspection results provide the homeowner with knowledge of a problem they may not have been aware of. By law the problem must be disclosed, potentially impacting the **marketability** and value of the home. On the other hand, taking the property into inventory without knowledge of such a potentially expensive problem will likely result in discovery by a prospective buyer's inspector.

Example:

An appraiser inspects a home in a residential subdivision as part of a relocation appraisal assignment. During the inspection of the exterior of subject property and the main floors of the home, the appraiser finds that the home is in excellent condition.

However, during the course of inspecting the basement the appraiser notices a vertical crack approximately 1/16 inch wide running vertically through the foundation block. S/he inspects the rest of the foundation carefully and finds no evidence of bowing walls, shifting block or water penetration in the basement. However, since the crack is completely through the block, the appraiser calls for a structural inspection.

Possible outcomes if:

Inspection is NOT completed	Inspection is completed
<ul style="list-style-type: none"> • Structural problem not discovered • Value adjustment not made • Homeowner receives equity without consideration of as yet to be discovered problem • Homeowner released of responsibility • Property brought into inventory • Buyer's inspection results in discovery of structural problem • Buyer walks or demands repairs or financial concession • Relocation Management Company now bears cost of dealing with the problem • Cost of engineer's design solution • Extended time frame for getting contractors to bid project • Time out of market while repairs are made • Cost of repair / construction • Increased holding costs 	<ul style="list-style-type: none"> • Structural engineer inspects the foundation and determines that the structural integrity of the home has been compromised and that the defect must be cured. • The cost to cure is estimated to be \$25,000. • Value adjustment made • Policy reviewed for homeowner options • Homeowner required to repair or accepts lower buyout • Problem addressed prior to inventory / resale • No surprise repair costs, increased holding costs, repair costs, etc. • Relocation management company protected from downstream liability • Responsibility for problem lies with the proper party; the homeowner

While early discovery and disclosure may complicate the transferring employee's buyout, one could say that the process has worked as intended. The appraiser flags a concern. The issue is confirmed by an engineer and the problem can now be addressed with the properly responsible party; the homeowner. Agencies and relocation management companies should consider the possible options to resolve such issues as part of a comprehensive policy.

Topic 10: Summary of Inspection Types

The following table lists the various Specialty inspection types available:

Asbestos Bulk Sample	Relo Property Assessment (RPA)
Asbestos Re-Inspection	Relo Home Partial
Chimney Special	Relo Property Re-Assessment
Chinese Drywall Inspection	Roof (SPEC) Re-Inspection
Comp Board Inspection	Roof (RHI)
Comp Board Re-Inspection	Roof Special
Electrical (SPEC) Re-Inspection	Seawall Special
Electrical Special	Septic Dye (Client Directed)
Geotechnical	SeptiCheck
Hurricane Inspection	Siding Condition
HVAC (SPEC) Re-Inspection	Siding ID
HVAC Special	Structural
Hot-Tub (SPEC) Re-Inspection	Structural Partial
Hot-Tub Special	Structural Re-Inspection
Hot-Tub/Spa	Synthetic Stucco Full (EIFSEVAL)
Lead Paint	Termite
Major Components Inspection	Termite Re-Inspection
Mold	Termite Update
Mold Re-Inspect	UST Soil
Other Special	UST Tightness
Plumbing (SPEC)Re-Inspection	Water Penetration
Plumbing Special	Well Flow
Pool (SPEC) Re-Inspection	Well Inspection - Re-Inspection - NJ Only
Pool (RHI)	Well Potability
Pool Special	Well Re-Inspection
Radon	Well Special
Radon RTP (Radon Warranty)	Well Test - NJ Only
Radon Water	

Topic 10: Summary of Inspection Types (continued)

Asbestos Bulk Sample

To determine the actual Asbestos content within possible asbestos containing material (PACM), an Asbestos Bulk Sample should be ordered. Performed by a qualified professional asbestos consultant, an Asbestos Bulk Inspection involves a visual evaluation of the property to identify all readily accessible friable and non-friable PACM on the interior of the house. Once identified, the consultant will take bulk samples of all friable material. Samples of friable material are then sent to a qualified lab technician to determine if the suspect material is an Asbestos Containing Material (ACM).

The test is performed via Polarized Light Microscopy (PLM) and looks for ACM with a content of 1% asbestos or greater. (Non-friable materials are normally not sampled due to the procedure being destructive to the material). Based on visual evidence of the current condition (the probability for asbestos fiber release) of the ACM, the consultant will render an opinion as to the course of action to be taken and provide cost estimates for any remediation.

Asbestos Re-Inspection

An Asbestos Re-Inspection is an evaluation by a qualified professional asbestos consultant to determine the current airborne asbestos fiber levels. Filters are used to collect airborne fibers, which are then analyzed by a qualified lab technician utilizing Transmission Electron Microscopy (TEM), which is one of the best means of determining the presence of airborne asbestos fibers. Test results indicate the actual hazards of current asbestos airborne fibers. Based on the results, the consultant will render an opinion as to the course of action to be taken and provide cost estimates for any remediation. Future air activity, such as moving storage in the basement, may stir up dust and possible undetected asbestos fibers. In cases where proper remediation has not been completed, U.S. Inspect will recommend to contact a licensed abatement contractor.

Chimney Special

The scope of U.S. Inspect's Chimney Special evaluation is limited to a visual inspection of the chimney system. A specialist, who is a local licensed chimney contractor, performs this inspection. The chimney specialist sweeps the chimney at the time of the inspection. The specialist will comment on any defects found and will make a professional recommendation on how to correct the defects. This inspection is performed according to local guidelines and regulations.

Chinese Drywall Inspection

The inspector will inspect the house for visible evidence of the possible presence of Chinese drywall. Evidence includes; Sulfur smell, Blackened / corroded piping (plumbing, air conditioning coils), blackened / corroded electrical wiring, visible identification markings on drywall (if accessible). This evaluation is strictly visual in nature and is intended to discover any of the known effects of the off-gassing of compounds in imported Chinese drywall. Invasive or destructive measures, such as cutting and removing drywall is beyond the scope of this evaluation. US Inspect will report the presence of the aforementioned evidence and its location and will provide photos. Client can then determine next steps based on their internal policy.

Comp Board Inspection

Composition Board Siding has been known to deteriorate prematurely as a result of improper installation and lack of proper maintenance. Several manufacturers have been singled out in class action lawsuits, which elevated composition board siding to a red flag item in the real estate industry. We offer composition board siding inspections to assess the condition of the siding, determining if the siding has deteriorated due to improper installation practices and if there is damage to the siding.

Topic 10: Summary of Inspection Types (continued)

Comp Board Re-Inspection

This is a follow-up inspection normally used to determine if all the defects noted on the initial [Composition Board Inspection](#) have been properly repaired. This inspection will also be ordered if a portion of the property was inaccessible to the inspector or contractor during the initial inspection. U.S. Inspect will re-inspect all items that the original report identified as defective unless the client specifies otherwise. When placing the inspection order, any items other than the previously defective items need to be noted to ensure they are included in the re-inspection.

To maintain report consistency whenever possible, the inspector or contractor that performed the initial inspection will also perform the follow-up inspection. Client must provide all documentation of repairs to U.S. Inspect. Repairs that are concealed (i.e. not visible without utilizing invasive procedures) cannot be re-inspected (sheathing, etc.).

Electrical (SPEC) Re-Inspection

This is a follow-up inspection normally used to determine if all the defects noted on the initial [Electrical Special](#) inspection have been properly repaired. This inspection will also be ordered if a portion of the electrical system was inaccessible to the inspector or contractor during the initial inspection. U.S. Inspect will re-inspect all items that the original report identified as defective unless the client specifies otherwise. When placing the inspection order, any items other than the previously defective items need to be noted to ensure they are included in the re-inspection.

To maintain report consistency whenever possible, the inspector or contractor that performed the initial inspection will also perform the follow-up inspection. Client must provide all documentation of repairs to U.S. Inspect. Repairs that are concealed (i.e. not visible without utilizing invasive procedures) cannot be re-inspected (wiring in the walls, etc.).

Electrical Special

The scope of U.S. Inspect's Electrical Special evaluation is limited to a visual inspection of the electrical system and/or an electrical service load calculation to determine if the size of the service and the panels are adequate to meet the needs of the dwelling. A specialist, who is a local licensed electrician, performs this inspection.

Electrical Special (Continued)

If a load calculation reveals that the size of the service is inadequate, the electrician will provide a cost estimate for a service or a panel upgrade. This inspection is performed according to the NEC (National Electrical Code) and local guidelines and regulations. The electrician indicates and comments on any defects found. The Electrician makes professional recommendations on how to correct the defects and gives a cost estimate. U.S. Inspect recommends that a licensed electrician perform all electrical repairs.

Geotechnical

The scope of U.S. Inspect's Geotechnical evaluation is limited to the assessment of the stability of the soil beneath a structure and determines whether the structure is being adversely affected by the soil conditions. This evaluation will provide the client with a report on the past structural performance of the property in relation to soil conditions. Generally, there are two components to this evaluation: the visual portion and the soil-sampling portion. Depending on the findings of the visual evaluation, the soil boring samples may not be required.

An outline of possible solutions and a cost estimate based on the findings will be provided. This outline is not intended to be a design solution and the cost estimate is only meant to assist the client in understanding the level of concern for the problems found. It is recommended to consult a local contractor for all repair requirements.

Topic 10: Summary of Inspection Types (continued)

Hurricane Inspection

This inspection was developed to determine the condition of select dwelling components prone to damage by severe weather activity. The scope is limited; specifically to assess if physical, structural or other damage has occurred as the result of a hurricane. The report is limited to damage and/or conditions only related to, or caused by, a hurricane. The property systems are not operated unless specifically instructed upon order placement.

HVAC (SPEC) Re-Inspection

This is a follow-up inspection normally used to determine if all the defects noted on the initial [HVAC Special](#) inspection have been properly repaired. This inspection will also be ordered if a portion of the Heating or Air Conditioning system was inaccessible to the inspector or contractor during the initial inspection. U.S. Inspect will re-inspect all items that the original report identified as defective unless the client specifies otherwise. When placing the inspection order, any items other than the previously defective items need to be noted to insure they are included in the re-inspection.

To maintain report consistency whenever possible, the inspector or contractor that performed the initial inspection will also perform the follow-up inspection. Client must provide all documentation of repairs to U.S. Inspect. Repairs that are concealed (i.e. not visible without utilizing invasive procedures) cannot be re-inspected (heat exchanger, duct work behind walls, boxed in flues, etc.).

HVAC Special

This inspection entails a visual evaluation of the HVAC system(s) by a qualified contractor. The contractor will evaluate the overall condition of the system(s) and/or the individual components. This inspection type is often used to more extensively examine the condition of the heat exchanger component of a heating system when evidence points to a potential problem. Minor repairs may be made to the system when necessary to determine the condition of the system. Based on the visual evaluation, the inspector will recommend corrective actions and cost estimates when repairs are required. This inspection is performed according to local guidelines and regulations.

Hot-Tub (SPEC) Re-Inspection

This is a follow-up inspection normally used to determine if all the defects noted on the initial [Hot-Tub Inspection](#) or [Hot-Tub Special](#) have been properly repaired. This inspection will also be ordered if a portion of the Hot Tub, Jacuzzi or Spa system was inaccessible to the inspector or contractor during the initial inspection. U.S. Inspect will re-inspect all items that the original report identified as defective unless the client specifies otherwise. When placing the inspection order, any items other than the previously defective items need to be noted to insure they are included in the re-inspection.

To maintain report consistency whenever possible, the inspector or contractor that performed the initial inspection will also perform the follow-up inspection. Client must provide all documentation of repairs to U.S. Inspect. Repairs that are concealed (i.e. not visible without utilizing invasive procedures) cannot be re-inspected (electrical wires, water pipes under slab, etc.).

Topic 10: Summary of Inspection Types (continued)

Hot-Tub Special

The Jacuzzi Special entails a qualified contractor performing a visual evaluation and (if possible) operation of a hot tub, Jacuzzi or spa. Information in the report will include an evaluation of an overall condition and operability of the system and/or the evaluations of the individual components if requested. Components evaluated may include the pump, filter, liner, jets, heater, deck, and/or apron. This evaluation is limited to readily accessible and visible components (above the water line components). Moderate invasive action will be taken if required. Based on the visual evaluation and performance of the system at the time of the inspection, the inspector will recommend corrective actions and cost estimates when repairs are required. This inspection is performed according to local guidelines and regulations.

Hot-Tub Inspection (RHI)

A visual inspection of the hot tub, spa or Jacuzzi by a general home inspector is involved with a Jacuzzi tub inspection. Information in the report will include an evaluation of the overall operability of the system based upon the definitions and standards set forth in the ERC Guide. Components evaluated may include the pump, filter, liner, jets, heater, deck, and/or apron. This inspection is limited to readily accessible and visible components (above the water line components). Based on the visual inspection and performance of the system at the time of the inspection, the inspector will recommend corrective actions and cost estimates when repairs are required.

Lead Paint Inspection (ordered as an Other Special)

The scope of U.S. Inspect's Lead Paint Survey is limited to the detection of lead content in all regulated, accessible areas of a residential property. This evaluation is intended to determine whether the property meets federal and state regulations for lead paint. U.S. Inspect will adhere to the strictest guidelines allowed by federal and state regulations. Our lead paint testing is non-destructive; utilizing x-ray fluorescence (XRF) testing.

Each accessible space of the property at the time of the evaluation (identified as a room or by its functional purpose such as a hallway, the basement, the exterior, etc.) is tested and reported separately by an accredited professional. For regulatory purposes, the U.S. Federal Government and many states have adopted a maximum acceptable level of 1.0 mg/cm² of lead content in any regulated surface (however, certain surfaces in the home, such as ceilings, may not be covered by code regulations if the potential safety concern is minimal). In instances where the XRF investigation identifies lead-containing surfaces, U.S. Inspect will typically recommend to contact a licensed lead paint abatement contractor.

Major Components Inspection

The scope of U.S. Inspect's Major Components Inspection is limited to a visual inspection of a residence by a general home inspector who evaluates the house based on its "as is" condition as of the date it is inspected. The inspection is performed in accordance with the Employee Relocation Council (ERC) guidelines.

Reporting is similar to a [Relo Property Assessment](#), however is limited to major safety concerns and apparent defects or damage causing distress affecting or likely to affect the intended function of the major system or component. We consider the following as major systems in a dwelling: the house structure and roof system, garage structure and roof system, electrical system, HVAC system, and plumbing system. This report is limited to these areas and does not include minor damage (unless directly affecting the integrity of a major system), lesser safety concerns, aesthetic issues, municipality regulations, code restrictions or violations (unless coincidentally covered by the aforesaid scope), lender guidelines, marketability or desirability factors that could affect the property transaction in the future.

Topic 10: Summary of Inspection Types (continued)

Mold Screening

The main objective of the mold inspection is to conduct a survey to assess the indoor air quality based on fungal contaminants, to determine the presence of fungal contamination within the building, and determine if any toxigenic mold is present. The survey consists of a walk through of the property, to determine whether any visible mold contaminants are present.

If the inspector should locate visible mold, a sample of the mold is taken via tape lifting; a technique utilized throughout the mold inspection industry. The tape sample is later analyzed at a laboratory to determine the mold "count" or how many and what type of spores are present.

The inspector utilizes Air-O-Cell cassettes placed inside the home to measure the amount of mold present in the air. The locations of the air sample tests are based on the floor plan of the structure, the locations of observed mold contaminants, and conducive conditions. An air sample is also taken at the exterior. Results of the air test are based on the type and quantity of mold present in the interior air vs. the type and quantities of mold in the outside air.

Mold Re-Inspect

A mold re-inspect has the same scope as a [Mold](#) inspection. To maintain report consistency whenever possible, the inspector or contractor that performed the initial inspection will also perform the follow-up inspection. The inspector is not limited to the items called out on the original inspection; this will be a complete mold inspection.

Other Special

This inspection is a flexible inspection type that can be used to evaluate concerns that do not fall within the scope of our other inspections. Examples of previous Other Special inspection requests include [Lead Paint](#), Specific County Regulation Inspections, and required POS Requirements.

This inspection type can also be utilized to request an inspector to visit a property to clarify or to confirm customer service issues. For example, an EE may be unable to locate damaged siding called out in a [Comp Board Inspection](#). If the necessary details communicated between the CSC, Transferee, and U.S. Inspect are unable to resolve the concern, the CSC can order an Other Special, requesting that our inspector re-visit the property to clarify the inspection results with the homeowner.

Another example: this inspection type can be used to confirm an inspection result if a dispute arises regarding the accuracy of a problem. Last, this inspection can be utilized to request specialized inspections; those that are required to resolve an unusual situation. In this situation, the scope would be determined by U.S. Inspect and the relocation client.

Plumbing (SPEC)Re-Inspection

This is a follow-up inspection normally used to determine if all the defects noted on the initial [Plumbing Special](#) inspection have been properly repaired. This inspection will also be ordered if a portion of the plumbing system was inaccessible to the inspector or contractor during the initial inspection. U.S. Inspect will re-inspect all items that the original report identified as defective unless the client specifies otherwise. When placing the inspection order, any items other than the previously defective items need to be noted to insure they are included in the re-inspection.

To maintain report consistency whenever possible, the inspector or contractor that performed the initial inspection will also perform the follow-up inspection. Client must provide all documentation of repairs to U.S. Inspect. Repairs that are concealed (i.e. not visible without utilizing invasive procedures) cannot be re-inspected (water or drain lines behind walls, water pipes under slab, etc).

Topic 10: Summary of Inspection Types (continued)

Plumbing Special

This inspection entails an evaluation of the visible plumbing by a qualified contractor. This inspection can be specifically ordered to evaluate specific plumbing concerns, such as polybutylene piping and ABS drain piping. We normally receive these orders with specific instructions that identify the areas of concern, but this inspection type can be utilized to have a specialist perform a full evaluation of the visible plumbing. Based on the visual evaluation, the inspector will recommend corrective actions and cost estimates when repairs are required. This inspection is performed according to local guidelines and regulations.

Pool Re-Inspection

This is a follow-up inspection used to determine if all the defects noted in the initial [Pool \(RHI\)](#) or [Pool Special](#) inspection have been properly repaired. This inspection can also be ordered if a portion of the pool system was inaccessible or shut down at the time of the original inspection. U.S. Inspect will re-inspect all items that the original report identified as defective unless the client specifies otherwise. When placing the inspection order, any items other than the previously defective items need to be noted to insure they are included in the re-inspection.

To maintain report consistency whenever possible, the inspector or contractor that performed the initial inspection will also perform the follow-up inspection. Client must provide all documentation of repairs to U.S. Inspect. Repairs that are concealed (i.e. not visible without utilizing invasive procedures) cannot be re-inspected (i.e. water pipes under slab, etc.).

Pool (RHI)

A pool (RHI) entails a visual inspection and overall assessment of the swimming pool condition based upon the definitions and standards set forth in the ERC Inspection Guidelines. The inspection also includes assessment of the operability of the filtration, electrical and plumbing system by a general home inspector. This inspection is limited to readily accessible and visible components (above the water line). Based on the visual inspection and performance of the system at the time of the inspection, the inspector will recommend corrective actions and cost estimates when repairs are required.

Pool Special

The scope of U.S. Inspect's Pool Special involves a qualified contractor's evaluation of the overall condition and operability of the system and/or the evaluations of the individual components if requested. Components evaluated may include the pump, filter, liner, jets, heater, deck, and/or apron. This evaluation is limited to readily accessible and visible components. Moderate invasive action will be taken if required. Based on the visual evaluation and performance of the system at the time of the evaluation, the contractor will recommend corrective actions and cost estimates when repairs are required. This inspection is performed according to local guidelines and regulations.

Radon

A U.S. Inspection Radon evaluation utilizes a technician certified by the National Environmental Health Association (NEHA), National Radon Safety Board (NRSB), or the relevant state government if application. The technician will place a continuous radon monitor in the home for a minimum of 48 hours to determine the indoor airborne radon levels. The data is then electronically transmitted to our headquarters office where trained quality assurance personnel review the data and generate the end report.

Topic 10: Summary of Inspection Types (continued)

Radon RTP (Radon Warranty)

The U.S. Inspect Radon Warranty Plan is a program featuring the Ultra-Track™ long-term testing device. When the warranty is initialized, the homeowner is provided with two Ultra-Track™ radon testing devices. Once the testing term is complete, the homeowner mails the radon test devices to U.S. Inspect's Gemini Research lab for evaluation. If the radon levels are above the EPA action level of 4.0 pCi/L, the cost of reducing the radon concentration to below the EPA action level is covered under the warranty.

*Note: The Radon Warranty Plan is to be used only for clients that have chosen to utilize the plan. For these clients, all properties going through the Home Sale Process must order the Radon Warranty Plan.

Radon Water

The scope of U.S. Inspect's Radon Water Analysis involves a general home inspector taking a water sample at an untreated source of potable water. The inspector allows the water to run for 10 minutes and then collects the sample. The sample is shipped via overnight delivery to a certified laboratory, where the water sample is analyzed for the presence of radon.

Relo Property Assessment (RPA)

The scope of U.S. Inspect's Relocation Property Assessment (RPA) inspection is limited to a visual inspection of a residence by a general home inspector who evaluates the house based on its "as is" condition as of the date it is inspected. The inspection is performed in accordance with the Employee Relocation Council (ERC) guidelines: the reporting of apparent defects that require corrective action is limited to structural problems, unsafe or hazardous conditions and inoperative systems or appliances. The inspector does not report on any defects of a cosmetic nature. Under those parameters, the home inspector will check on the conditions and operability of the following areas: lots and grounds, roof, exterior surfaces, garage/carports, structure, attic, basement, crawl space, electrical, heating system, air conditioning system, plumbing, on-site wells, pool and hot tub, fireplace/wood burning devices and the kitchen. The ERC Property Assessment is not a code inspection.

A Relocation Property Assessment does not include evaluation of an on-site waste system, if present. A Septic Dye test can be performed by a general home inspector if one is ordered along with the Relocation Property Assessment. A Septic Dye test should only be performed when the client specifically requests. We highly advise reading the information provided on the Septic Dye test before proceeding with this inspection. That information can be found here: [Septic Dye \(Client Directed\)](#).

The general inspector identifies all apparent defects and their locations and gives a cost estimate for the repairs when possible. The inspector will recommend a further evaluation by a specialty contractor in instances where more detailed information is required. There are variations to these outlines that are determined by specific client policies.

Relo Property Re-Assessment

This is a follow-up inspection normally used to determine if all the defects noted on the initial [Relo Property Assessment](#) have been properly repaired. This inspection should also be ordered if a portion of the property was inaccessible to the inspector or contractor during the initial inspection. U.S. Inspect will re-inspect all items that the original report identified as defective unless the client specifies otherwise. When placing the inspection order, any items other than the previously defective items need to be noted to insure they are included in the re-inspection.

To maintain report consistency whenever possible, the inspector or contractor that performed the initial inspection will also perform the follow-up inspection. Client must provide all documentation of repairs to U.S. Inspect. Repairs that are concealed (i.e. not visible without utilizing invasive procedures) cannot be re-inspected.

Topic 10: Summary of Inspection Types (continued)

Roof Re-Inspection

This is a follow-up inspection normally used to determine if all the defects noted on the initial [Roof \(RHI\)](#) or [Roof Special](#) inspection have been properly repaired. This inspection should also be ordered if a portion of the roof system was inaccessible to the inspector or contractor during the initial inspection. U.S. Inspect will re-inspect all items that the original report identified as defective unless the client specifies otherwise. When placing the inspection order, any items other than the previously defective items need to be noted to insure they are included in the re-inspection.

To maintain report consistency whenever possible, the inspector or contractor that performed the initial inspection will also perform the follow-up inspection. Client must provide all documentation of repairs to U.S. Inspect. Repairs that are concealed (i.e. not visible without utilizing invasive procedures) cannot be re-inspected (snow covered roofs, attics with no access, etc.).

Roof (RHI)

The U.S. Inspect Roof (RHI) inspection involves a visual evaluation of the roof cover and sheathing system by a general home inspector based upon the definitions and standards set forth in the ERC Guide. The inspector will visually inspect the current condition of the roof covering and evaluate the roof framing and sheathing by entering the attic (if accessible at the time of the inspection). Based on the visual inspection, the inspector will recommend corrective actions and cost estimates when repairs are required.

Roof Special

A Roof Special inspection involves an evaluation of the roof cover and sheathing by a qualified contractor. The contractor will visually evaluate the current condition of the roof covering and evaluate the roof framing and sheathing by entering the attic (if accessible at the time of the inspection). Based on the visual evaluation the contractor will recommend corrective actions and cost estimates when repairs are required. This inspection is performed according to local guidelines and regulations.

Seawall Special

The Seawall inspection is intended to evaluate the condition of a bulkhead, a dock, and related marine components that are present on a waterfront property. This inspection is usually performed by a structural engineer. There have been some circumstances where the local water ways are under the authority of a government agency, the Army Corp of Engineers for example. In these instances, the bulkhead, dock, or other marine components may be the responsibility of the government agency and therefore maintained by said agency. The responsibility for maintaining the bulkhead, dock, or marine component should be determined by the counselor prior to ordering a Seawall Special inspection.

Septic Dye (Client Directed)

A Septic Dye test involves flushing a tracer dye (in tablet form) through the system via a toilet and inspecting the leaching field for evidence of dye break-out (surfacing in the field) and other evidence of failure. Clients are advised that the dye test can only reveal current surface break-out and hence, a serious septic system failure that may require immediate action. Our research has shown that the dye test is inadequate and often does not produce visible results within the typical time frame of a general Property Assessment. Accordingly, a septic dye test performed according to the standards set forth in the ERC Guide should be acknowledged as a cursory check of a septic system's operability that is neither comprehensive nor dependable.

In lieu of a Septic Dye test, a much more in-depth [SeptiCheck](#) evaluation is recommended.

Topic 10: Summary of Inspection Types (continued)

SeptiCheck™

The SeptiCheck™ evaluation is a detailed procedure performed by an on-site waste management professional. The inspection involves opening and pumping the septic tank, examining the fluid level inside the tank, checking the condition of the tank and its baffles and probing the leaching field for the level of sub-surface liquid waste (effluent). Such methods invariably alert the relocation company to a wide range of potential septic system failures.

In instances where state or local regulations require a specific inspection performed, U.S. Inspect will coordinate with the appropriate governing bodies whenever possible to arrange the necessary inspections. For example: Per the Title 5 regulations in Massachusetts, all real estate transfers require the relevant property to have a "Title 5" inspection performed on the private on-site waste system within, but no earlier than, two years preceding the closing date. Only state-approved contractors are allowed to perform these evaluations.

Other areas having similar requirements include, but are not limited to:

- The State of Missouri
- The State of Minnesota
- The State of Alaska (also includes a [Well](#) inspection)
- Geauga County, Ohio
- Jefferson County, Colorado
- Washtenaw County, Michigan (also includes a [Well](#) inspection)
- West Bloomfield, Michigan
- Tazewell County, Illinois

Because several of the counties may take some time to process the required paperwork (in some cases over 2 weeks), it is imperative that the septic inspection be ordered at the start of the relocation process.

Siding Condition

This inspection is used to identify all types of exterior siding surfaces that are present on a home and report on general overall condition of each exterior surface present with repair solutions as needed. Should the property have Composition Board Siding or EIFS/Synthetic Stucco the report will be issued as a Siding ID with a recommendation to order a Siding Board or Synthetic Stucco specialized inspection.

Siding ID

A Siding-ID inspection is meant to assist in the determination of the type siding on a property. A general home inspector performs this inspection, visually identifying the type of siding, its location and square footage. The inspector will note the presence of composition board siding or any type of stucco or EIFS cladding, so this inspection should be ordered when there is a question as to the type of siding on a property. This inspection is only meant to determine the presence of synthetic stucco or composition board siding, not to evaluate the condition or denote defects pertaining to such sidings.

If it is determined that synthetic stucco or composition board siding is present, then a [Synthetic Stucco Full \(EIFSEVAL\)](#) inspection or [Comp Board Inspection](#) should subsequently be ordered.

Topic 10: Summary of Inspection Types (continued)

Structural

U.S. Inspect's Structural Evaluation is performed by a licensed professional engineer. Its purpose is limited to establishing a fair determination of value by providing an opinion regarding the structural condition of a property at the time of the inspection and identifying observable structural defects. This evaluation does not include suggestions for maintenance, improvement or cosmetic defects. The structural inspection may address building code compliance depending on local regulations and their effect on resale.

Based on a visual evaluation, the engineer will render an opinion on the structure and an outline of recommend corrective actions, including cost estimates when applicable. This outline is not intended to be a design solution and the cost estimate only helps the client to understand the level of concern for the problems found. It is recommended to consult a local contractor for all repair solutions. This inspection is performed according to local guidelines and regulations.

Structural Partial

The Structural Partial inspection varies in scope from the [Structural](#) inspection because the evaluation is limited. When placing this order, the scope of the inspection must be specified. Based on a visual evaluation by a licensed professional engineer, an opinion of the structure will be made and corrective actions will be recommended, including cost estimates when applicable. This outline is not intended to be a design solution and the cost estimate only helps the client to understand the level of concern for the problems found. It is recommended to consult a local contractor for all repair solutions. This inspection is performed according to local guidelines and regulations.

Structural Re-Inspection

This is a follow-up inspection normally used to determine if the defects noted on the initial [Structural](#) evaluation have been properly repaired. This inspection can also be ordered if a portion of the property was inaccessible to the engineer during the initial inspection. U.S. Inspect will re-inspect all items that the original report identified as defective unless the client specifies otherwise. When placing the inspection order, any items other than the previously defective items need to be noted to insure they are included in the re-inspection.

To maintain report consistency whenever possible, the inspector or contractor that performed the initial inspection will also perform the follow-up inspection. Client must provide all documentation of repairs to U.S. Inspect. Repairs that are concealed (i.e. not visible without utilizing invasive procedures) cannot be re-inspected (sub-slab piers, etc.).

Synth Stucco Full (EIFSEVAL)

A U.S. Inspect EIFSEVAL is an inspection of a confirmed EIFS (Exterior Insulated Finish Surfaces, also known as synthetic stucco) system used as exterior cladding on a house. An inspector that is familiar with this type of system and trained to evaluate these systems performs this inspection.

The EIFS is evaluated based on its conformity to industry standards. The installation details are observed at the following areas:

- Terminations at the windows, door, utility and fixture penetrations
- Terminations at the grade, roofline, patio, deck, soffits, and junctions with other sidings
- Sloping of the decorative trim/details
- Flashings at the roofline terminations, deck, windows, and doors

Topic 10: Summary of Inspection Types (continued)

Synthetic Stucco Full (EIFSEVAL) (Continued)

Other observable conditions such as mold/mildew, cracking, expansion joints, impact and other damages, exposed system components, and system delaminations will be evaluated and reported.

Moisture testing is also part of the EIFSEVAL inspection. Moisture content is initially determined using a non-invasive wet wall meter. At all areas where the wet wall meter shows high moisture, a probe test is performed to accurately measure the moisture behind the surface of the stucco.

The levels of moisture are defined as: Acceptable – less than 19%; Further Inspection Required to Evaluate Any/All Damage – 19% to 29%; Possible Structural Damage – greater than or equal to 30%. Any areas that are not probed during the course of the inspection cannot be evaluated and no comments as to the condition of those areas can be given.

Hybrid stucco systems cannot typically be evaluated in the same manner as an EIFS home. This is because moisture testing is typically not possible when a metal lathe is present and because a hybrid system does not conform to any standards. Without an industry standard for a system, there is no set of standards to which one can compare the system.

Termite

This inspection is designed to detect either the presence of Wood-Destroying Insects (WDI). In states where required, this evaluation will also include detection of Wood-Destroying Organisms (WDO). When performing WDI or WDO inspections, U.S. Inspect is limited in its thoroughness by the transferee's willingness to render all areas of his or her house accessible to an inspector. As our inspectors' visibility and access is limited by walls or locked doors, transferee cooperation is essential for a comprehensive inspection.

Where an inspection report states "No action required," the inspection revealed no WDI infestations or WDO deterioration; therefore, neither chemical treatment nor repairs are needed for the home to pass inspection. "No action required" termite reports carry U.S. Inspect's nine-month, non-transferable warranty, except in California and Hawaii, where state laws limit termite inspection warranties to four months in California and thirty days in Hawaii. The U.S. Inspect warranty is extended only to the clients and guarantees that the inspected property will remain free of WDI (not WDO) for nine months or until the property transfers to a new owner.

A cost estimate for treatment is provided if the inspection reveals that a treatment is required. In states where conducive conditions must be corrected, a cost estimate for correction is provided. In all instances where damage has been observed, the inspector will note the damage and recommend that a licensed contractor be contacted for repairs. Termite inspections are performed in accordance with specific state regulations and guidelines, which vary from state to state.

Termite Re-Inspection

This inspection type is only used when repairs have been made to conducive conditions, fungus damage, or to inspect previously inaccessible areas. Before ordering this inspection, clients are advised to make certain that the work is complete and that it was not performed by the same supplier U.S. Inspect utilized to perform the original inspection. Upon receipt of a Termite Re-Inspection order, U.S. Inspect will assume that our supplier did not make the repairs.

Termite Update

A Termite Update should only be used when closing is nearing and the previously performed [Termite](#) inspection report is no longer considered current in the eyes of a lender. Our supplier will return to the property to perform another inspection that will satisfy lender requirements.

Topic 10: Summary of Inspection Types (continued)

UST Soil

The Underground Storage Tank (UST) Soil inspection entails an evaluation of the soils surrounding a UST to determine the possibility of contamination by heating fuel. Oil contamination in the nearby soils generally indicates a leak in the tank or nearby fuel lines. Testing involves drilling one to four borings in the proximity of the UST to obtain soil samples. The soil samples are taken and analyzed at a qualified lab to determine the presence of Total Petroleum Hydrocarbons (TPH). Based on the evaluation and lab results, remediation recommendations are provided. Cost cannot be determined due to the multiple variables when the soils remediation starts.

UST Tightness

An Underground Storage Tank (UST) tightness evaluation determines the integrity of the UST tank, associated fuel lines and vent lines. This test is a non-volumetric (per EPA classification) tank tightness test. This test involves sealing the tank, then inserting a controlled probe that contains a hydrophone, pressure transducer and a water level indicator. After introducing a slight vacuum [0.5 to 2.0 pounds per square inch (psi)] the testing professional uses the instruments to measure changes in pressure to determine the presence of a leak. This test, performed by a technician, cannot assess the presence or extent of soil contamination.

In the instance of a failed test, recommendations are provided with corresponding costs where applicable. If a leak is found in the tank, U.S. Inspect will recommend that the transferee abandon or remove the tank, as it is not possible to repair a leaking tank. The recommendation will also include removal and disposal of any contaminated soil. Specific local requirements and regulations may apply and must be determined by the repair contractor.

Water Penetration

The Water Penetration inspection involves evaluation of the interior areas of the dwelling below grade level (i.e. basement and/or crawl space). This inspection is performed in accordance with the Employee Relocation Council (ERC) guidelines. If water penetration is found in the basement and/or crawl space, the inspector will inspect the exterior of improperly sloped grading, downspouts that are not diverted away from the dwelling, overflowing gutters, missing gutters and downspouts or any other grading items that would direct water toward the dwelling. The inspector will also note any mold growth, water stains, standing water or excessive moisture.

Well Flow

A Well Flow inspection provides an assessment of a private well's ability to supply potable water to the dwelling. This inspection is performed by a general home inspector and is performed in accordance with the Employee Relocation Council (ERC) guidelines. A minimum of three Gallons Per Minute (gpm) after 30 minutes of operation is required. Based on the visual inspection, the inspector will also comment on the condition of the well equipment, such as the pump, pressure tank, and pressure gauge. Recommended corrective actions and cost estimates will be provided when repairs are required.

Some states and counties have specific regulations that govern well testing, such as the State of Alaska and Washtenaw County, Michigan. In the case of Alaska and Washtenaw County specifically, the well tests are coupled with the septic inspection (see [SeptiCheck](#) for details).

Topic 10: Summary of Inspection Types (continued)

Well Inspection – Re-Inspection - NJ Only

This is a follow-up inspection to the [Well Test – NJ Only](#) inspection that, per the relocation client's policy, will need to be ordered if the original ground water potability test failed. As the repair to the system may have included installation of a filtration system, it is important to state in the order notes if the well water sample is to be taken after a filtration system or at an untreated ground water source. Unlike the [Well Test – NJ Only](#) test, collection and testing of this sample is not regulated by the state and a certified lab does not have to perform the inspection. U.S. Inspect will re-inspect all items that the original report identified as defective unless the client specifies otherwise. When placing the inspection order, any items other than the previously defective items need to be noted to insure they are included in the re-inspection.

Well Potability

Utilizing a general home inspector, a well potability involves the collecting a water sample and sending it to a water testing laboratory. The well water sample is drawn on the date of the inspection and therefore the water test is considered "as is" as it was collected at the time and on the date of the inspection. In instances where state or local regulations require a specific inspection performed, U.S. Inspect will coordinate with the appropriate governing bodies whenever possible to arrange the necessary inspections. The testing parameters are based upon the definitions and standards set forth by the Employee Relocation Council (ERC). The analysis of the water sample identifies the presence of the following:

- Coliform bacteria
- Chlorine
- Nitrate

If requested, analysis can include other variables.

Well Re-Inspection

This is a follow-up inspection normally used to determine if the defects noted on the initial [Well Flow](#), [Well Special](#), or [Well Potability](#) inspections have been properly repaired. U.S. Inspect will re-inspect all items that the original report identified as defective unless the client specifies otherwise. When placing the inspection order, any items other than the previously defective items need to be noted to insure they are included in the re-inspection.

To maintain report consistency whenever possible, the inspector or contractor that performed the initial inspection will also perform the follow-up inspection. Client must provide all documentation of repairs to U.S. Inspect. Repairs that are concealed (i.e. not visible without utilizing invasive procedures) cannot be re-inspected (wiring in the walls, etc.).

Well Special

A Well Special inspection utilizes a qualified contractor to evaluate the condition and yield of a private well. The contractor will visually evaluate the overall condition and operability of the well system and/or the individual components (if accessible) such as the pump, pressure tank and pipes associated with the well. This evaluation does not include an evaluation of the general plumbing of the house as would a [Plumbing Special](#) inspection. Based on the well yield and performance of the well system at the time of the evaluation, the contractor will recommend corrective actions and cost estimates when repairs are required. This inspection is performed according to local guidelines and regulations.

Topic 10: Summary of Inspection Types (continued)

Well Test - NJ Only

New Jersey has unique regulations for testing well water. These parameters include testing for Total Coliform, Fecal Coliform (E. Coli), Nitrates, Iron, Manganese, pH, VOCs (Volatile Organic Compounds), and Lead. In some counties, the water sample will also be tested for Arsenic and/or Mercury and/or Gross Alpha Particles. This inspection is not a [Well Flow](#) evaluation; New Jersey does not govern the well water yield, only the water quality.

These tests have to be performed by a certified lab employee and all wells must be marked using GPS mapping. The reports will be sent to the state. If this test fails the state does not require remediation. The regulation only indicates that the buyers and sellers must be made aware of the results. However, if the relocation client's policy is that if the ground water test fails then a [Well Inspection – Re-Inspection – NJ Only](#) be ordered.

Topic 11: Mold

Mold Screening

Even though it's been around for thousands of years, mold is a relatively new issue of concern in residential housing. Mold contamination has led to numerous lawsuits across the country, and its attention has catapulted to the top of popular media such as Dateline NBC, Newsweek, Time magazine and The Wall Street Journal. It has sometimes been referred to as "the asbestos of the new millennium," inferring that mold is an issue of paramount concern among the real estate community. Mold found in homes is linked to water intrusion problems. Moisture from roof leaks, hidden plumbing leaks and basement water penetrations are the most obvious potential contributors to an interior mold problem.



What is Mold?

Molds are simple, microscopic organisms whose purpose in the ecosystem is to break down organic materials. They can be found wherever there are organic materials and moisture, which is necessary for mold growth. Molds are found both indoors and outdoors in any area of the country (some are visible and some are not). Except in structures where all of the incoming air is cleaned, there is never going to be a "mold-free" condition. Therefore, the intent is to have the indoor condition no worse than the outdoor condition. Mold screening of the indoor and outdoor conditions should determine if an indoor mold problem exists and what types of molds are growing indoors.

Conditions Conducive to Mold Growth

Airborne spores will eventually land and settle on a surface. Spores may or may not germinate immediately, but they are built for survival. The spores may lay dormant, waiting for the right condition for growth. The following conditions may be conducive for mold growth:

- Moisture: Moisture is key. When looking for the source of a mold growth, look for moisture. Spores can survive in as little as 65% humidity.
- Food source: organic materials in a structure (wood, drywall, insulation, and natural fibers) that may have been exposed to moisture
- Raw materials processed quickly (common in newer homes)
- Minimal air circulation/exchange rates (common with present day energy codes)
- HVAC systems (porous materials, moisture, and dirt)
- Changes in ductwork (dirt and moisture)

Testing and Sampling Methodologies

Air Sampling

Although there are no defined standards or exposure limits, it is possible to identify houses with possible mold contamination by comparing the indoor and outdoor levels of mold spores using the air sampling method. A review of the recommendations by the nation's leading testing laboratories shows air sampling to be the method of choice for residential mold screening.

When properties are found to have higher levels of mold indoors than outdoors (amplification), further investigation is recommended. It is assumed that a higher ratio of indoor mold is indicative of an internal mold growth, which, if confirmed, should be corrected. It is generally believed by the scientific community that elevated levels of mold would inevitably lead to the discovery of some form of moisture penetration such as a leaky roof, hidden plumbing leak or other water infiltration problem.

Limitation- There will be cases where visible mold exists but for which air sampling will not result in an amplification concern. In these cases, even though air quality may not be an imminent concern, the presence of visible mold will likely require some level of remediation. These situations must be dealt with on a file-by-file basis to determine the client's risk tolerance.

Topic 11: Mold (continued)

Tape Lift Sampling

A tape lift imprint can be used to sample a surface with suspected fungal growth. The tape is analyzed by direct microscopic examination. Identification to group or genus will be possible, depending on the presence and visibility of fungal structures.

Limitation- Tape lift samples may identify the presence of toxic molds that have not yet manifested into an air quality concern.

Mold Classifications

There are approximately 100,000 genera of mold species known today, with approximately 80 genera suspected of causing some form of illness. Only a fraction of the 80 genera are considered toxic. Molds are organized into three groups according to human responses—Allergenic, Pathogenic and Toxigenic.

Allergenic Molds

Allergenic molds do not usually produce life-threatening health effects, and are most likely to affect those who are already allergic or asthmatic. The human system responses to allergenic molds tend to be relatively mild, typically producing only scratchy throats and rashes

Pathogenic Molds

Molds producing pathogenic responses usually produce some type of infection. They can cause serious health effects in persons with suppressed immune systems, although a normal, healthy individual can probably resist infection by these organisms regardless of dose. In some cases, high exposure may cause hypersensitivity pneumonitis (an acute response to exposure to an organism.)

Toxigenic Molds

Mycotoxins can cause serious health effects. These agents have toxic effects ranging from short-term irritation to immunosuppression and possibly cancer. These molds do not compete well with other organisms and are far less common. Therefore, when toxigenic molds are found further evaluation is recommended.

Mold Exposure Standards

No scientific exposure standards currently exist for mold. Some believe that the development of exposure standards could be years away. According to the EPA's report on Indoor Air Quality,⁹ the EPA has not established uniform air quality standards covering airborne biological substances such as fungal spores. This is due to a lack of convincing epidemiological evidence.

Even with the EPA's statement of health concern, there are still no EPA¹⁰ regulations or standards today for mold contamination and exposure. The reason for this, according to the New York City Department of Health's *Guidelines of Assessments and Remediation of Fungi in Indoor Environments*¹¹ is "susceptibility varies with the genetic predisposition, age, state of health and concurrent exposures. For these reasons, and because measurements of exposure are not standardized...it is not possible to determine precise 'safe' or 'unsafe' levels of exposure for people in general." One can draw an analogy between mold and cigarette smoking. The exact number of cigarettes per day that lead to cancer has never been defined, yet it is generally recognized within the epidemiological and medical communities that smoking is a clear health threat. Nevertheless, the growing mountain of anecdotal medical evidence leads many experts with whom we have spoken to speculate that some standard of safe and unsafe exposure will eventually be developed for mold, just as they were with radon in the late 1980's.

In 1994, the Center for Disease Control (CDC) reviewed a case control study in the Cleveland, Ohio area of the first 10 cases of pulmonary hemosiderosis, which results from bleeding of the lungs. In a subsequent report, *Pulmonary Hemorrhage/Hemosiderosis Among Infants*,¹³ the CDC concluded that pulmonary hemosiderosis was associated directly with increased levels of household fungi, including the toxin-producing mold *Stachybotrys*. But in a recent update on that study, the CDC reversed its initial conclusions and now believes that an association was not adequately proven and that more CDC research is necessary.

Topic 12: Exterior Insulation and Finishing System

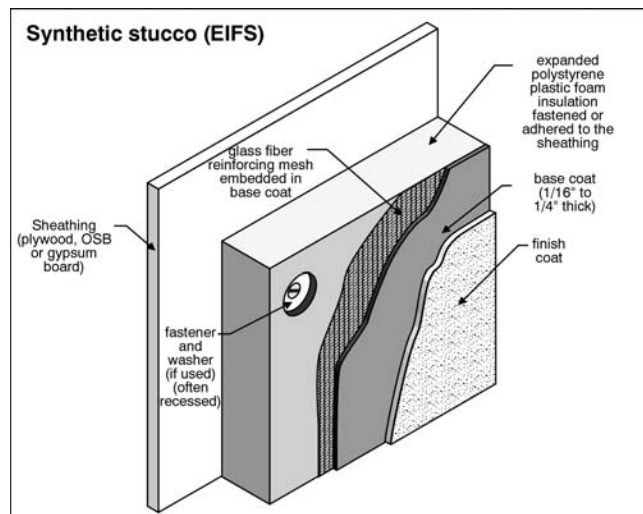
What is EIFS?

Exterior Insulation and Finishing Systems (EIFS) are a cladding used in residential and commercial construction. EIFS is also commonly known as Synthetic Stucco. Because of the insulation value and multitude of aesthetic features the system offers, EIFS quickly gained popularity in higher-end construction.

EIFS arrived in the U.S. in 1969 as an exterior cladding for commercial construction. Until 1976, Dryvit was the only U.S. manufacturer of EIFS. By the end of the 1970's, many more manufacturers entered the market and EIFS began to grow into the residential market. Widespread residential use became notable in the early to mid-1980s. EIFS can sometimes be found on homes built before that time period if they have undergone renovations.



There are four basic components that make up EIFS systems: EPS or Polyisocyanurate foam board insulation, polymer-based base coat, fiberglass mesh embedded in the base coat, and a synthetic finish coat. All EIFS manufacturers have similar installation details, which were compiled by the EIFS Industry Manufacturers Association (EIMA) to create the Industry Standard installation details.



What are the basic types of EIFS?

Barrier systems - The original systems are called 'barrier' systems. A barrier system is meant to create a completely weatherproof cladding on the outside of the house. Because the intent of the system is to completely keep water out of the wall cavity, no additional drainage provisions were incorporated in the design. All other types of siding systems incorporate some type of component that allows for water drainage and moisture vapor diffusion. The lack of drainage components makes it imperative that these systems be installed with great attention to detail.

Drainable systems - Water-Managed EIFS, also known as a Drainable system were developed during the 1990's to address issues seen in barrier EIFS. Drainable systems provide a provision to allow water to drain out from behind the siding. This provision comes in the form of a drainage mat between the foam insulation and sheathing or grooves in the foam insulation. A drainage track is then installed at the bottom of the wall to allow water to escape. With the exception of the drainage components, installation details for these systems are almost identical to those of barrier systems. Thus, if a drainable system is not installed properly, moisture issues can arise. The debate over whether these systems properly address water management continues. Drainable systems are not part of the class action suits and little formal data exists about their success/failure rate.

Hybrids - Hybrid stucco systems can often times resemble EIFS. Builders, in their attempts to mimic the insulation value of EIFS in other stucco siding applications, mixed and matched different components of EIFS and conventional stucco systems. Because these systems do not meet the specifications set forth by any stucco manufacturer, there are no installation guidelines to evaluate these systems against. Also, metal mesh, a component often used in hybrid systems interferes with traditional moisture testing techniques.

Topic 12: EIFS (continued)

What is the major issue with EIFS?

Proper installation is a MUST. Barrier EIFS claddings rely heavily on sealants and flashings to create a waterproof cladding. When water penetrates the system, it is trapped between the solid foam insulation and the sheathing. This allows the wood sheathing and framing to rot or otherwise deteriorate. However, one benefit of EIFS is that because the lack of metal or masonry components, it allows for testing to determine if moisture is present behind.



What is a Synthetic Stucco inspection?

A synthetic stucco inspection is a visual and intrusive evaluation used to determine if the EIFS was properly installed and functioning properly. Additionally, this evaluation will observe the exterior of the structure for improper installations, mold, mildew, compression cracking, impact damage, delamination, and visual irregularities. The services are provided in a manner consistent with the Department of Insurance of North Carolina. The EIFSEVAL™ is focused around five basic areas: system penetrations, system terminations, system flashings, general system conditions, and moisture content.

Moisture content tests are performed using a non-intrusive instrument called a wet-wall meter. A wet-wall meter determines if there is excessive moisture. At all areas where excessive moisture is detected, a probe-type moisture meter is inserted into the wall cavity to measure the percentage of moisture content of the material in the wall cavity. The small holes created by the probe are then caulked.



Levels of moisture can be defined by the following:

Less than 19% - Acceptable

Greater than 19% - Further Inspection that evaluates any and all damage

Greater than 30% - Possible Structural Damage

Common EIFS terms:

Back Wrapping: Protecting the edges of the foam board insulation by wrapping the reinforcing fiberglass mesh and base coat around and behind the edge.

Backer Rod: Closed cell foam rod that surrounds the penetration and acts as a bridge for the sealant.

Barrier System: EIFS cladding that is designed to prevent moisture from getting behind its surface.

Base Coat: Initial covering of cement/polymers over the foam board insulation.

Delamination: Separation of the EIFS from the substrate due to compression or loss of adhesion.

Drainable System: EIFS cladding that is designed to prevent moisture from getting behind its surface, but provides a provision to allow water to drain out from behind the siding in the event of moisture penetration.

EPS: Expanded polystyrene (polystyrene beads are puffed up like popcorn and adhered together into boards or sheets - very similar to Styrofoam).

Substrate: Plywood, OSB, or gypsum board on the outside of the wall framing to which the EIFS is attached.

Synthetic Stucco: A common alternative name for EIFS.

More information can be found on the web including:

www.eima.com

www.exterior-design-inst.com

Conventional Stucco

(results type: CONVENTIONAL)

- Applied over load-bearing substrates (masonry, plywood, exterior-rated gypsum)
- 3 cement-based coats (base, scratch, finish)
- Secondary vapor barrier
- Galvanized metal mesh/lathe
- System thickness between ¾" and 2"
- Is rigid under moderate pressure, will sound solid when tapped.
- Commonly called Conventional, Hard-Coat, Traditional, 3-coat, or Cement/Concrete stucco.

Class PB EIFS

(results type: EIFS)

- Applied over Manufacturer approved substrate (Plywood/OSB, exterior-rated gypsum, brown-board, masonry, cement-board)
- Must have foam insulation (EPS or Polyisocyanurate ONLY! EXPS not allowed)
- Minimum foam thickness is 1" for Polyisocyanurate, ¾" for EPS Maximum foam thickness = 4"
- Fiberglass reinforcing mesh
- Basecoat typically 1/8" thick
- System thickness (no foam) no greater than ¼"
- Will compress under moderate pressure, will sound hollow when tapped.
- Commonly called Synthetic, Fake, Dryvit, or Artificial stucco.
- System may also be a "drainable" system

Quick-R System (results type: EIFS)

- Polyisocyanurate foam, minimum foam thickness is 1", attached/applied over open framing or an approved substrate
- Weather barrier between foam and weather sensitive framing/substrate
- Uses class PB basecoat material, typically 1/8"
- Will have fiberglass reinforcing mesh (prior to 1994, mesh will only be a seams)
- Will have synthetic finish coat
- System thickness (no foam) no greater than ¼"

Class PM EIFS/One-Coat Stucco

(results type: HYBRID)

- Applied over Manufacturer approved substrate (Plywood/OSB, exterior-rated gypsum, brown-board, masonry, cement-board)
- Must have foam board insulation (Polyisocyanurate, EPS or EXPS)
- Minimum foam thickness is 1" for ALL foam types. Maximum thickness is 4"
- Foam is mechanically attached to substrate
- Secondary vapor barrier may be present
- Will have fiberglass or metal mesh/lathe
- Basecoat typically ¼" to 3/8"
- Will have synthetic finish coat
- Is rigid under moderate pressure, will sound solid when tapped.

Parge-Coat

- Cementitious base applied directly to a substrate
- Typically no reinforcing mesh/lathe or weather barrier present
- System thickness usually less than ½"
- Substrate is most commonly concrete masonry block

Direct-Applied

(results type: DIRECT APPLIED)

- Applied over Manufacturer approved substrate (Plywood/OSB, exterior-rated gypsum, brown-board, masonry)
- Is applied directly to the substrate (**no foam!!!**)
- Maximum total system thickness = ¼"
- Will have synthetic base and finish coats, & fiberglass reinforcing mesh
- Is rigid under pressure, will sound solid when tapped.
- **Picture in your mind "EIFS minus the foam"**

Textured Panel

(results type: TEXTURED PANEL)

- Pre-manufactured panels with "stucco" appearance finish
- Available in 4'x8' or 4'x9' sheets
- Typically framed in wood trim (commonly known as "Tudor" style)

Note: This is not a true stucco product. Rather, it is a hardboard/composition board product with a "stucco" like finish.

Hybrid System

(results type: HYBRID)

- System that shares components or installation methods of above systems, but does not follow all steps/components

*Note: The examples are just a **sample** of some possible hybrid systems. Any time that the recommended components and/or required application methods are not followed, chances are that the system **may be a hybrid.***

Examples of Hybrids

- Conventional Stucco over any foam board insulation
- PB EIFS system applied over EXPS foam
- PB EIFS system with no reinforcing mesh
- Conventional Stucco that is less than ½" thick (even ½" is really stretching the margins)
- Class PB system over foam less than ¾" thick

Topic 13: Chinese Drywall

TO: U.S. Inspect Clients
FROM: U.S. Inspect, LLC
DATE: April 9, 2010
RE: UPDATE - Chinese Drywall Concerns

Introduction

The purpose of this letter is to provide an update regarding recent news related to defective (Chinese) drywall. As we continue to track events surrounding this matter, it is important to bring you the latest findings and news.

HUD and CPSC News Release

On April 2nd, 2010 the U.S. Department of Urban Development (HUD) and the U.S. Consumer Product Safety Commission (CPSC) released a document which outlines the agencies' recommendations for remediation of properties containing defective (Chinese) drywall. The document, titled "Interim Remediation Guidance for Homes with Corrosion from Problem Drywall", can be accessed on the web at <http://www.cpsc.gov/info/drywall/guidance0410.pdf>.

Quick Facts

- The document is termed as "interim guidance". This means they are providing guidance based on the results of investigations completed to date. Modifications are possible as other pending investigations and studies are completed and new information is ascertained.
- The guide addresses the removal of all possible problem drywall in a subject property where confirmed evidence is present (manufacturer identification markings, corroded metal components, Sulfur odor, etc.)
- The guide also recommends the replacement of impacted metal components of the home that may pose a safety concern to the occupants. This includes;
 1. Removal of all fire safety alarm devices (including smoke and carbon monoxide alarms)
 2. Removal of all electrical components and wiring (including outlets, switches, and circuit breakers)
 3. Removal of all gas service piping and fire suppression sprinkler systems
- The stated recommendations in this document address *only* components that can pose *safety* concerns. *Please note that other components, such as plumbing and HVAC systems should also be evaluated and replaced as needed.*
- The guide recognizes that other forms of less costly and less intrusive remediation has been or is being marketed to affected property owners. However, these methods have not been thoroughly vetted and the science behind them, and the ability of these methods to perform long-term, has not been ascertained.
- Please be advised that any remediation process that seeks to leave defective drywall in place does not address the stigma that will continue to be associated with this product. Resale of such property will likely prove a significant challenge as the public's knowledge of this issue increases.
- Studies focused on reports of potential adverse health effects caused by the off-gassing of defective drywall have not been completed. As such, there is no conclusive information regarding this matter and this guide does not address this subject.

Topic 13: Chinese Drywall (continued)

Pending Litigation

In light of the multiple claims pending in numerous states, an effort was introduced to consolidate litigation under one jurisdiction in order to accomplish a “class-action” status. Currently Multi-District Litigation procedures are assigned to the U.S. District Court in Louisiana. To date, the only actions undertaken by the court are a number of pre-trial orders intended to outline the parameters for the trial proceedings. Updates for the pending litigation can be found on the U.S. courts website at <http://www.laed.uscourts.gov/Drywall/Drywall.htm>.

Identification & Testing

The subject document focuses only on the remediation of defective drywall. There is no new data that offers alternatives for identification and/or testing other than that which is already available. Please refer to our previous Memorandum documents at www.usinspect.com/chinesedrywall.

Continued Focus

U.S. Inspect will continue to monitor the events surrounding this issue as investigations, further testing, law suits and official determinations are made. We trust that the information provided here will prove helpful in advancing your understanding of this matter as you consider and develop policies to better position yourself and your clients. Please feel free to address all questions and concerns with your U.S. Inspect contact. We are eager to understand your perspectives since ultimately our aim is to protect your interests.

Topic 14: Recommended Best Practices

To lower overall home sale costs and more effectively manage home sale risk, the following best practices are recommended when designing relocation policies:

Previously Listed Properties	Avoid having the transferee list his or her property on their own in the hopes that they will sell their home and avoid the formal cost of relocation services; in today's difficult real estate market, there is downside risk that the home will not sell without professional help and quickly become shopworn and result in an inventoried property
Appraiser Price Opinion (APO)	The use of an APO upon a transferee initiation is a great tool to verify the accuracy of the BMA and more accurately set the original list price
Assign by Appraiser	Require your supplier assign orders directly to individual appraisers, not firms to ensure the most qualified appraiser is assigned
Assign by Performance	Require your supplier select appraisers based on performance metrics – Absolute Variance, Turn-time, Report Quality and Professionalism
Out-of-Network Appraisers	Use of an out-of-network appraiser should be avoided as it will typically result in substandard turn times and a higher loss on sale
Appraiser Options	Limit the number of appraisers the transferee can choose to three (3) to ensure the most accurate appraisers are selected
Transferee "Brag Sheet"	To reduce the likelihood of appeals from transferees after the valuation, they should be encouraged to provide the appraiser with a brag sheet about the property
Broker's Market Analysis (BMA)	BMAs should be provided to the appraisal management company to enhance the appraisal review process
Homeowner Disclosure	Ensure all transferees complete the ERC Homeowner Disclosure Statement
Forecasting	To ensure highest possible accuracy in assessing value – and per Worldwide ERC® recommendations – the forecasting period should not exceed 120 days
Exception properties	Properties that are considered an exception to the client policy have a high probability to result in significant home sale losses and should be excluded from the program
Condominiums	Condominium properties in buildings that are >40% rented are harder to finance as Fannie Mae and Freddie Mac will not purchase such loans; order the ERC Condominium Addendum with the appraisal to identify these properties

Topic 14: Recommended Best Practices (continued)

Allowable Spread	The practice of trying to save money by increasing the allowable spread between two appraisals (to avoid a third), is misplaced typically offset by the negative variance impact; The allowable spread should be no more than 5%
Verbal Valuations	Given the fluctuations in today's market, verbal valuations should be eliminated
List vs. Anticipated Sales Price (ASP)	To ensure properties are priced to sell, the list price should immediately be adjusted to no more than 105% of the ASP upon determination of the GPO
General Inspections	General inspections should be completed on all properties
Property Inspections	Ensure all inspections are completed prior to accepting a property into inventory; Value impairments and closing difficulties will be avoided
ERC Inspection Guidelines	Follow ERC inspection guidelines – ERC's inspection guidelines address the most common issues of interest for relocation properties. Designed to allow the relocation provider to require repairs and / or better prepare for reasonable negotiation.
Contractor Bids	Obtain contractor bids for required repairs
Formal Appeal Process	To ensure fairness and constancy, a standard appeal process should be defined as part of the relocation policy
Re-appraisals and Appraisal Updates	Appraisals estimate the value of a property at a specific point in time; Market changes and changes to the condition of the subject property or surrounding amenities can have significant impact on value conclusions; Therefore, it is recommended to order updates or re-appraisals if more than 30 days have elapsed from the date of appraisal
Property Condition Report	To improve marketability and ensure the agent is properly managing the property for sale, utilize a Property Condition Report for an independent and unbiased inspection by a licensed appraiser
Inventory Reporting	Provide data and feedback regarding inventory homes to the appraisal management company and require that this information be shared with the appraisers; This information is vital in identifying potential appraiser variance issues sooner so appropriate action can be taken (coaching, exclusion from new lists, etc.)
Pre-purchase Appraisal	To ensure transferees pay fair market for their new home, a pre-purchase Appraisal should be ordered; will also protect the employer from loss-on-sale on future relocations
Pre-purchase General Home Inspection	To ensure that the transferee is aware of any health and safety issues present in the property they are purchasing, a pre-purchase general home inspection should be performed