PEAK HYDROGEOLOGIC

Residential Property Considerations

In lieu of exhaustive and expensive Phase I & II Environmental Site Assessments (ESAs), purchasers or owners of residential properties may elect to perform a Limited ESA. Some common residential property challenges are described below:

#	Challenges	Sources
1.)	Previous release of contaminants at concentrations hazardous to human health and the environment.	From historic or current activities on-site or at hydraulically up-gradient, adjoining properties used for: -Agricultural, commercial, or industrial purposes -Home automobile/engine repair -Above or underground storage tanks (esp. heating oil/fuel tanks >30 years old) -Chemical/paint mixing, storage, application, and transport areas -Dry-cleaning
2.)	Indoor air quality from radon, mold, asbestos, leaks/ spills, or clandestine drug labs at concentrations hazardous to human health.	Some spills/leaks have the potential to impact indoor air quality via release from neighboring soils or sub-slab vapors. Homes formerly used for clandestine drug labs may not be cleaned to appropriate standards, thus exposing occupant to harmful volatile organic vapors. Radon is naturally occurring and derived via sub-slab vapors from underlying bedrock. Mold occurs in areas of pro-longed exposure to moisture (basements and bathrooms). Asbestos containing materials are still present as surfacing, thermal, roofing, and flooring materials in many structures constructed >30 years ago.
3.)	Poor water quality/quantity from on-site water well	Quality issues: hardness, odor, taste, health issues from high/low pH, heavy or radioactive metals, bacteria (fecal coliform), fertilizers, pesticides, volatile and semi-volatile organics (solvents) Quantity issues: Limited or decreasing production due to limited depth, biofouling, corrosion, turbidity, scale formation (mineral precipitation), or fracture collapse, or porosity reduction from dewatering.

Solutions:
1.) Identify the potential concerns via a site walk and review of site history.
2.) Where applicable, confirm the absence/presence of contamination in environmental media (indoor air, soil vapor, sub-slab vapors, soil, sediment, surface water, groundwater) via field screening and/or collection of samples for laboratory analysis.
3.) Recommend corrective action (e.g. additional testing, litigation, appropriate off-site disposal, encapsulation, deed restrictions, remediation/treatment, etc.).
4.) In some instances, financial assurance mechanisms are in place to cover a portion of the costs.

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