VaporSafe™

VAPOR INTRUSION
ASSESSMENT, MONITORING & RESPONSE SERVICES

www.GroundswellTech.com

Vapor Intrusion Assessment and Monitoring Method Comparison Matrix

Objectives	VaporSafe™ Continuous Analyzer and Web Response	Multiple 8hr or 24hr Canister Sampling Events	Multiple 5min to 15min Canister Sampling Events	Multiple 1wk to 2wk Canister Sampling Events	Multiple > 3day Passive Sampling Events	Building Pressure Cycling	Portable GC/MS	Portable GC/PID	Portable High Sensitivity PID	Field Deployable GC/ECD	Trace Atmosphere Gas Analysis (TAGA) Unit	High Volume Sampling	Indicator, Tracer and Surrogate Testing
Acute Risk Prevention	✓✓✓	—	—	—	—	—	—	—	—	—	—	—	—
Automated Response	✓✓✓	—	—	—	—	—	—	—	—	—	—	—	—
Automated Web Reporting	✓✓✓	—	—	—	—	—	—	—	—	—	—	—	—
Automated Alerting	✓✓✓	—	—	—	—	—	—	—	—	—	—	—	—
Sample to Measurement Result in < 15 minutes	✓✓✓	—	—	—	—	—	✓✓	✓	✓	✓✓✓	✓✓	—	—
Characterize Migration Pathway(s) in Vadose Zone (Spatial/Temporal Variability)	✓✓✓	✓✓	✓✓	✓✓	✓	—	✓✓	✓✓	✓	✓✓	✓✓	✓	✓✓
Address Long Term Temporal Variability of Indoor Air Concentration	✓✓✓	✓	—	✓✓	✓✓	✓✓	✓	✓	—	✓✓	—	—	✓✓
Address Short Term (e.g., 24hrs or less) Temporal Variability of Indoor Air Concentration	✓✓✓	✓✓	✓	—	—	✓✓	✓✓	✓	—	✓✓	✓	—	✓✓
Locate Vapor Entry Point(s)	✓✓✓	—	✓	—	✓	✓✓✓	✓✓	✓✓	✓	✓✓	✓✓	—	✓✓
Assess Mixing/Spatial Variability Within Building	✓✓✓	✓	✓	✓	✓		✓✓	✓	—	✓✓	✓✓	—	✓✓
Locate Background Indoor Sources	✓✓✓	✓	✓	✓	✓	✓✓✓	✓✓	✓	—	✓✓	✓✓	—	Supplemental
Identify Correlations with Natural/Anthropogenic Parameters	✓✓✓	—	—	—	—	✓	✓	✓	✓	✓	✓	—	✓
Notes	Meets Key Objectives	Requires More Time to Derive Result than Acute Exposure Duration of Concern; Time-Integrated Measurement	Requires More Time to Derive Result than Acute Exposure Duration of Concern; Time-Integrated Measurement	Requires More Time to Derive Result than Acute Exposure Duration of Concern; Time-Integrated Measurement	Requires More Time to Derive Result than Acute Exposure Duration of Concern; Time-Integrated Measurement	Need to be Careful of Preferential Pathways, Natural Pressure Dynamics, and Employ Chemical Monitoring	Requires Expertise to Operate; Can be Unstable when Temperature Changes; Only a Single Point in Time/Space Measurement	Not Typically Sufficiently Sensitive for Indoors; Unstable when Temperature Changes; Only a Single Point in Time/Space Measurement	Not Typically Sufficiently Sensitive for Indoors; Unstable when Temperature Changes; Only a Single Point in Time/Space Measurement	Need to Operate in Continuous Monitoring and Mode to Meet Additional Objectives	Requires Expertise to Operate; Only a Single Point in Time/Space Measurement	Need to be Careful of Preferential Pathways and Natural Pressure Dynamics	Can be Used to Augment other Options; Not Always Sufficient as Stand-Alone

* Modified after Walker et al. 2018

GROUNDSWELL
EARTH MONITORING SOFTWARE

Groundswell Technologies, Inc.
7127 Hollister Ave., Suite 25A-108
Goleta, CA 93117 USA

www.GroundswellTech.com
805-899-8142 (office)
805-844-6854 (cell)

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ENVIRONMENTAL GEOSCIENCE