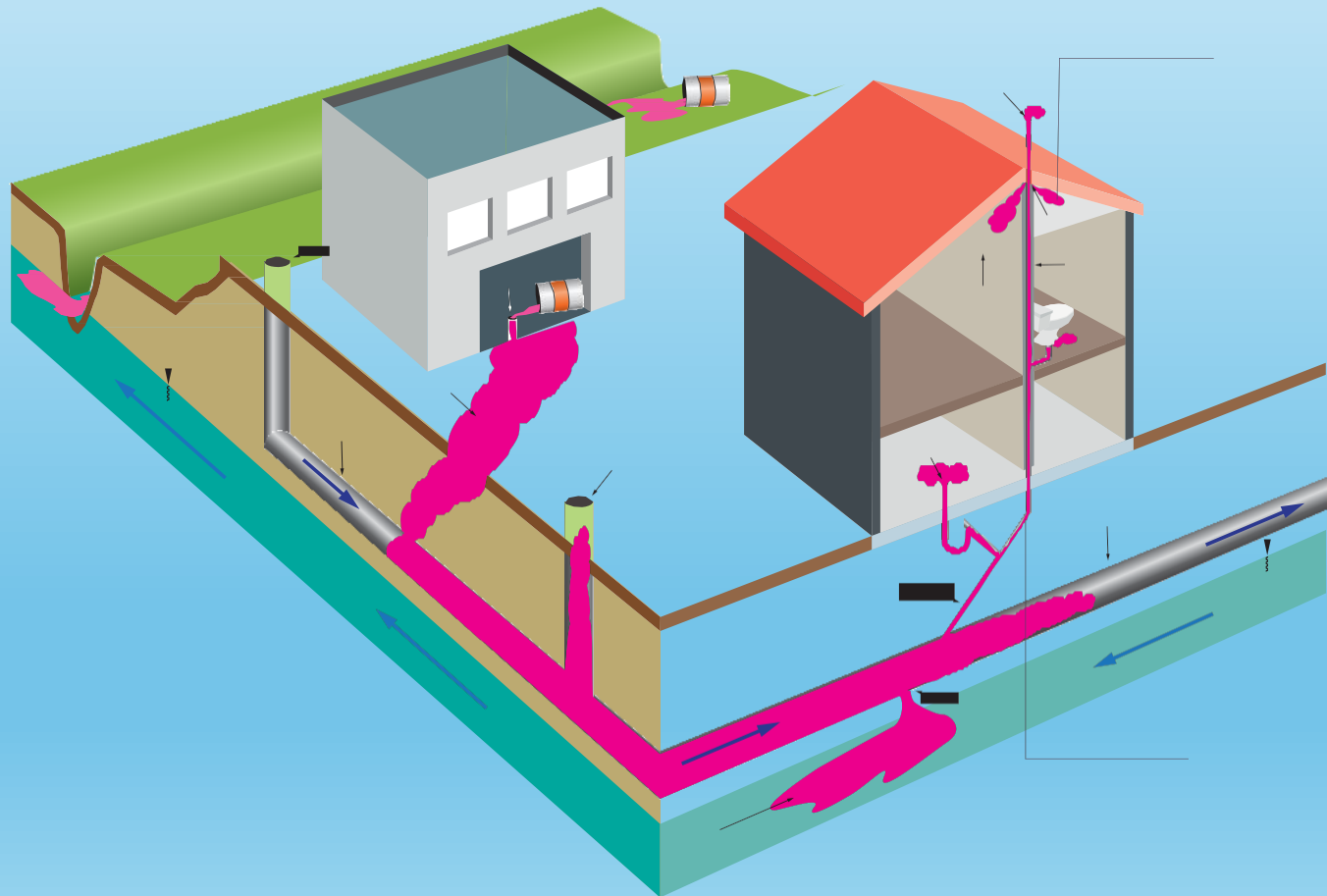


The Vapor Caper: Part II

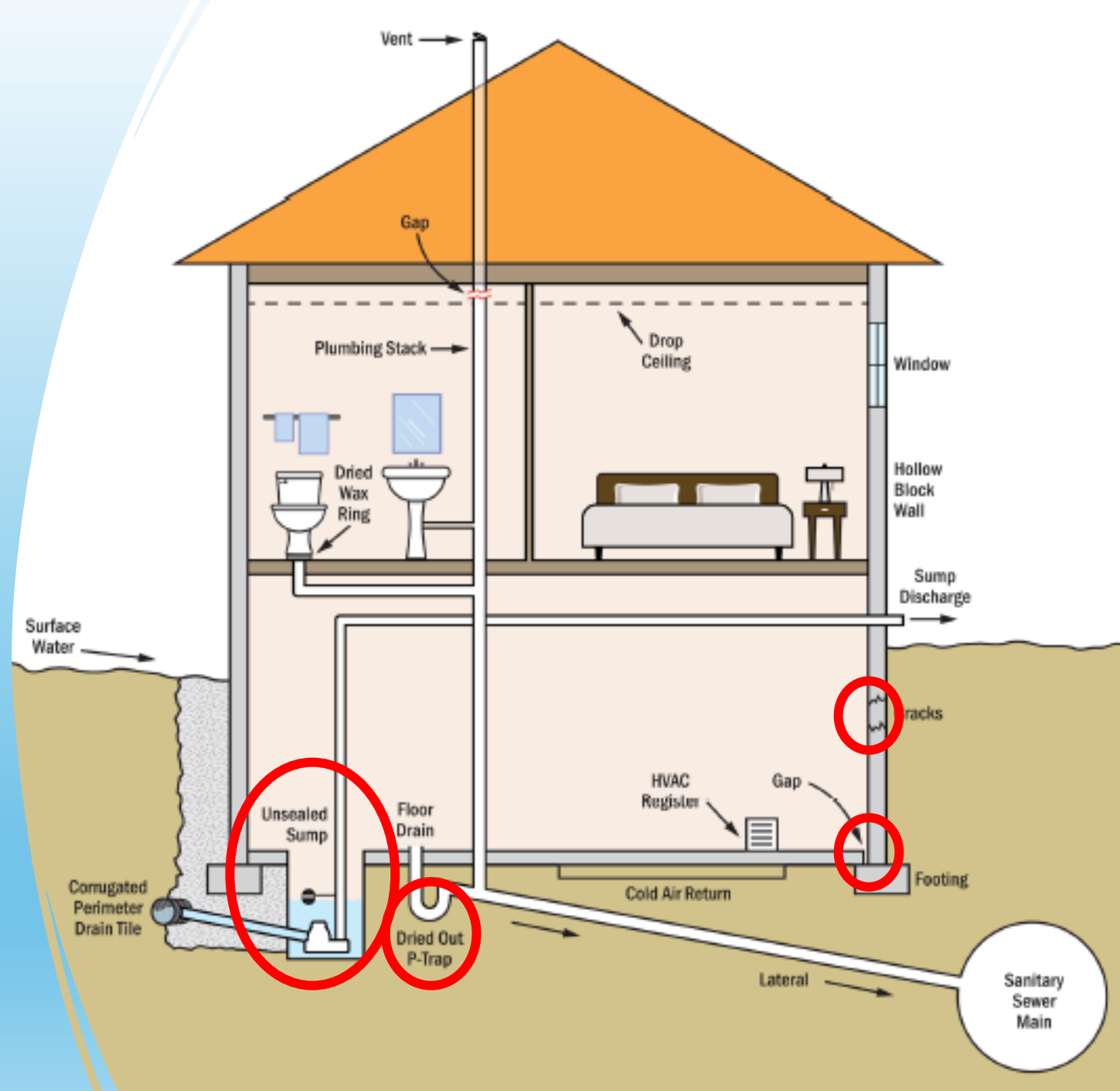
Preferential Pathway Investigation and Abatement

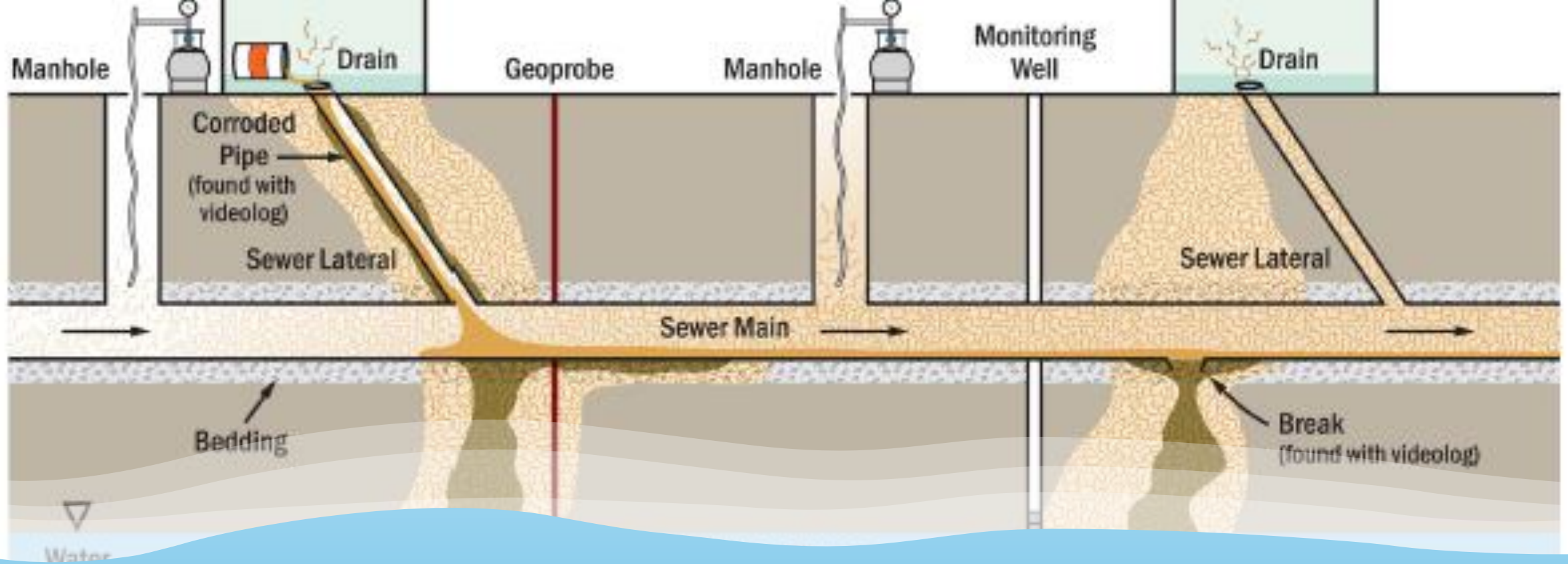


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Buildings

- Sumps
- Floor Drains
- Gaps/Seams
- Cracks





Utility Corridors

- Compromised pipes
- Pipe bedding
- Intercept groundwater, mobilizing contaminants through the pipe and bedding material
- Leak to groundwater, creating secondary source areas and plumes

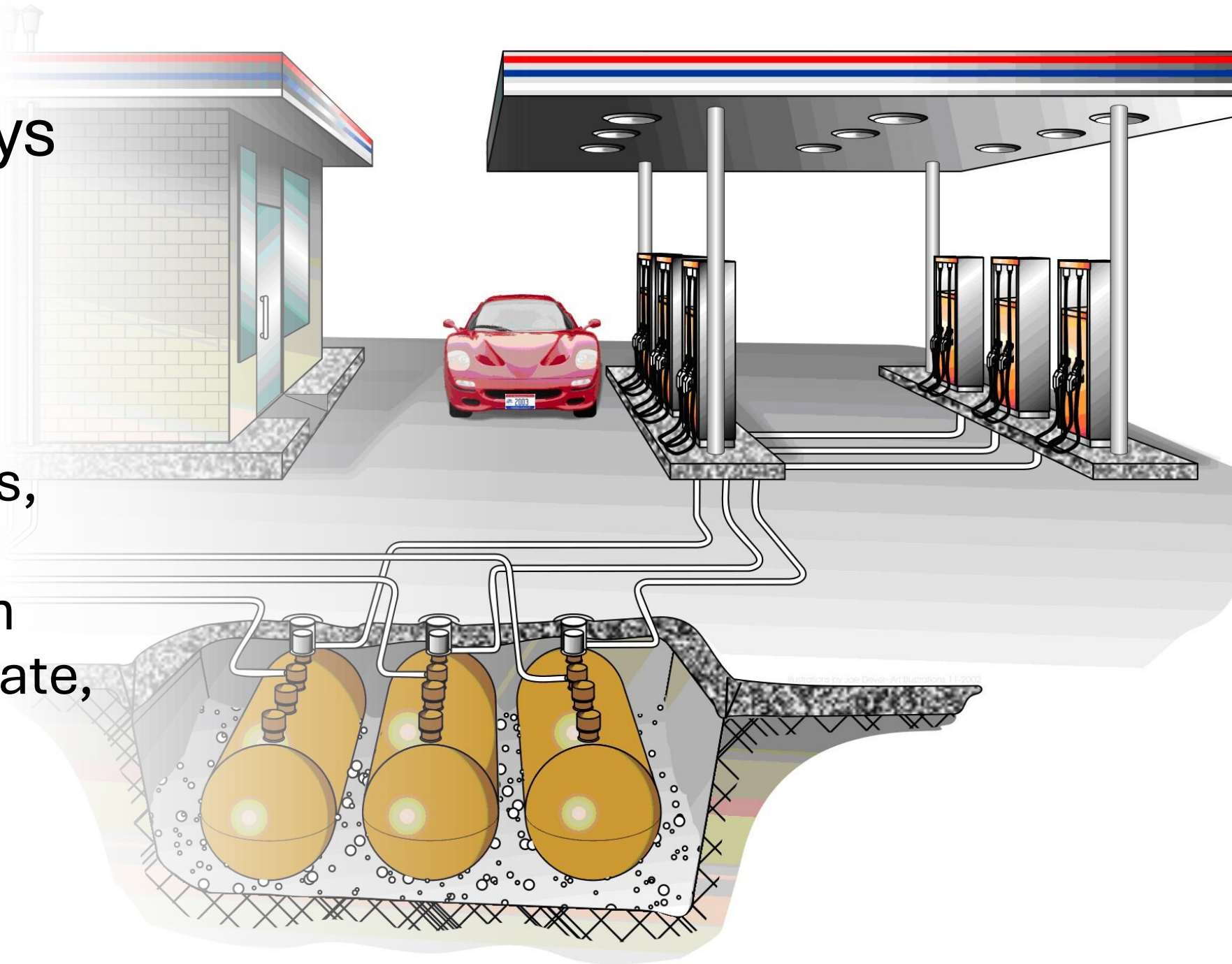
Utility Pipes and Bedding

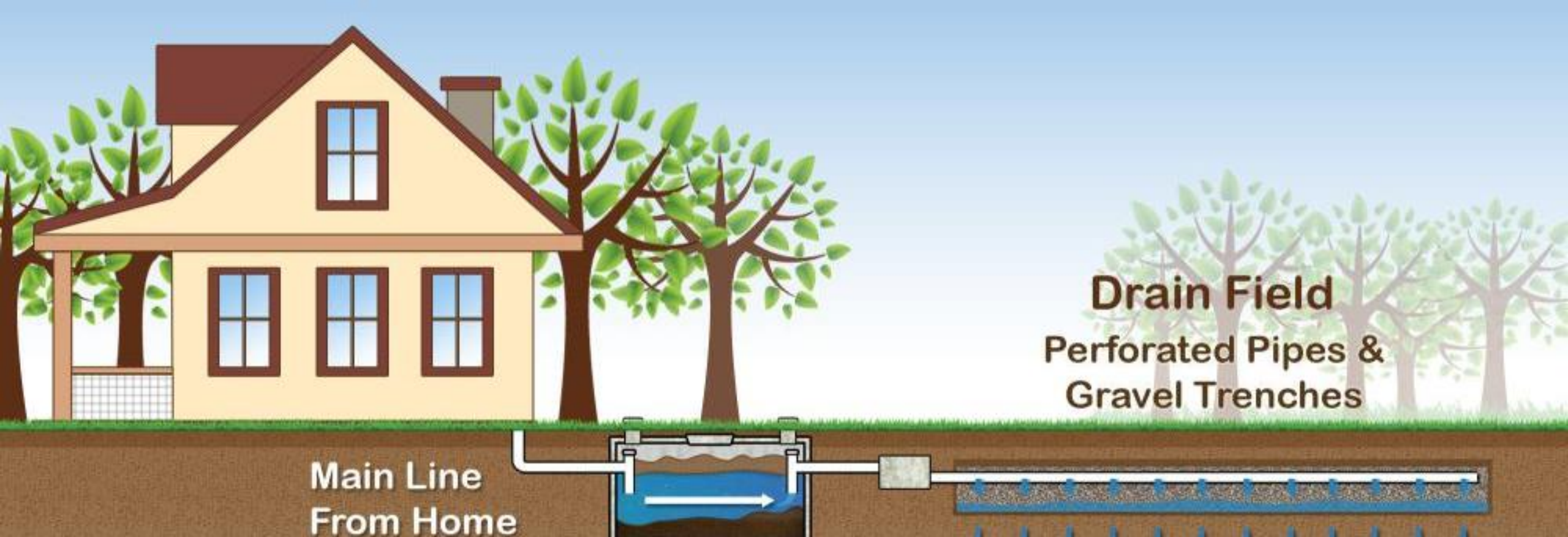


Other Pathways

Storage Tank Systems

Migration from dispenser sumps, through fuel line bedding, through tank field aggregate, through electric conduit bedding



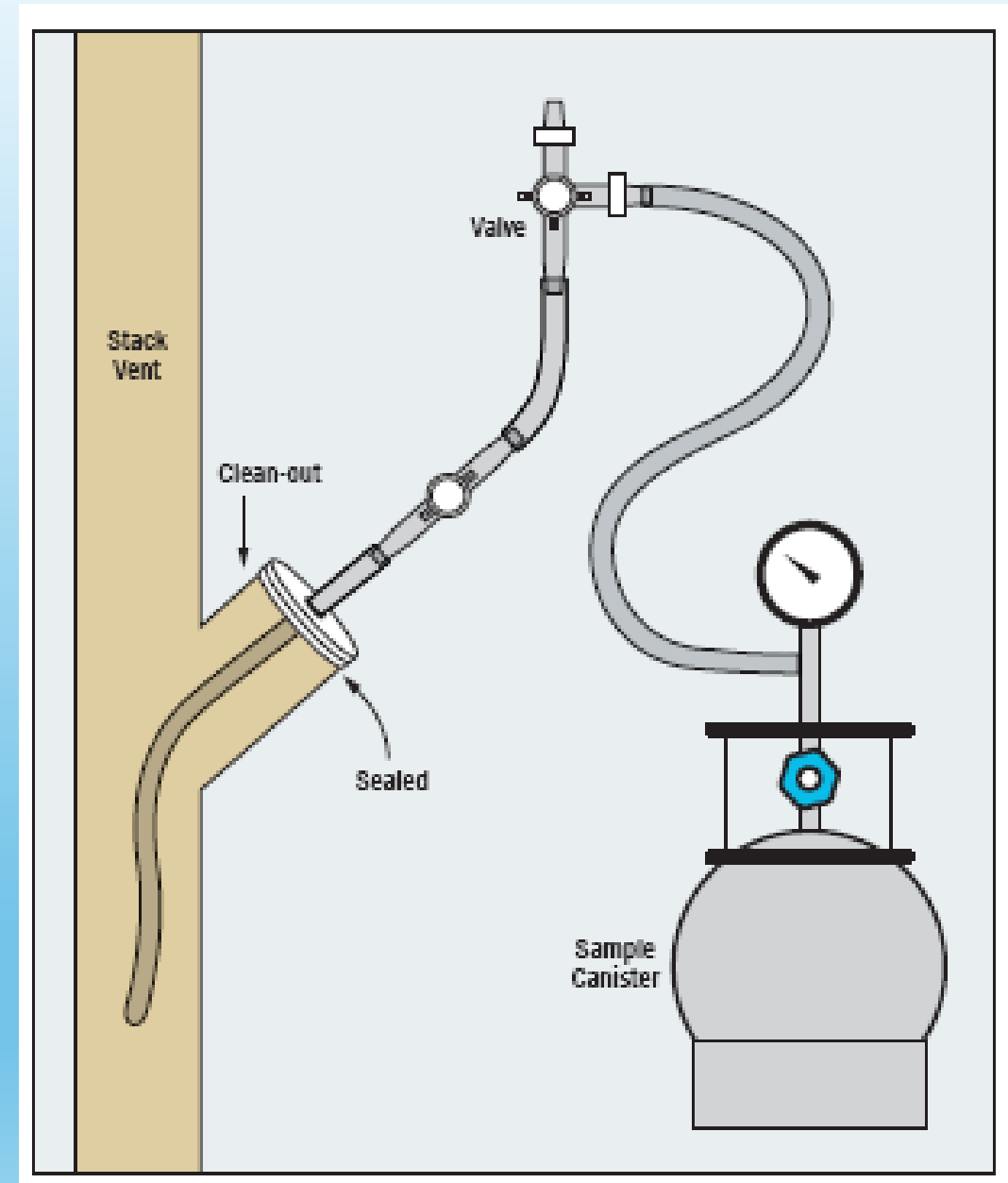


Other Pathways

Septic System Drain Fields

Investigation

- Sampling in sewer manholes and/or cleanouts
- Design drawings – utility locations and depths
- Video logging
- Geophysics (GPR)

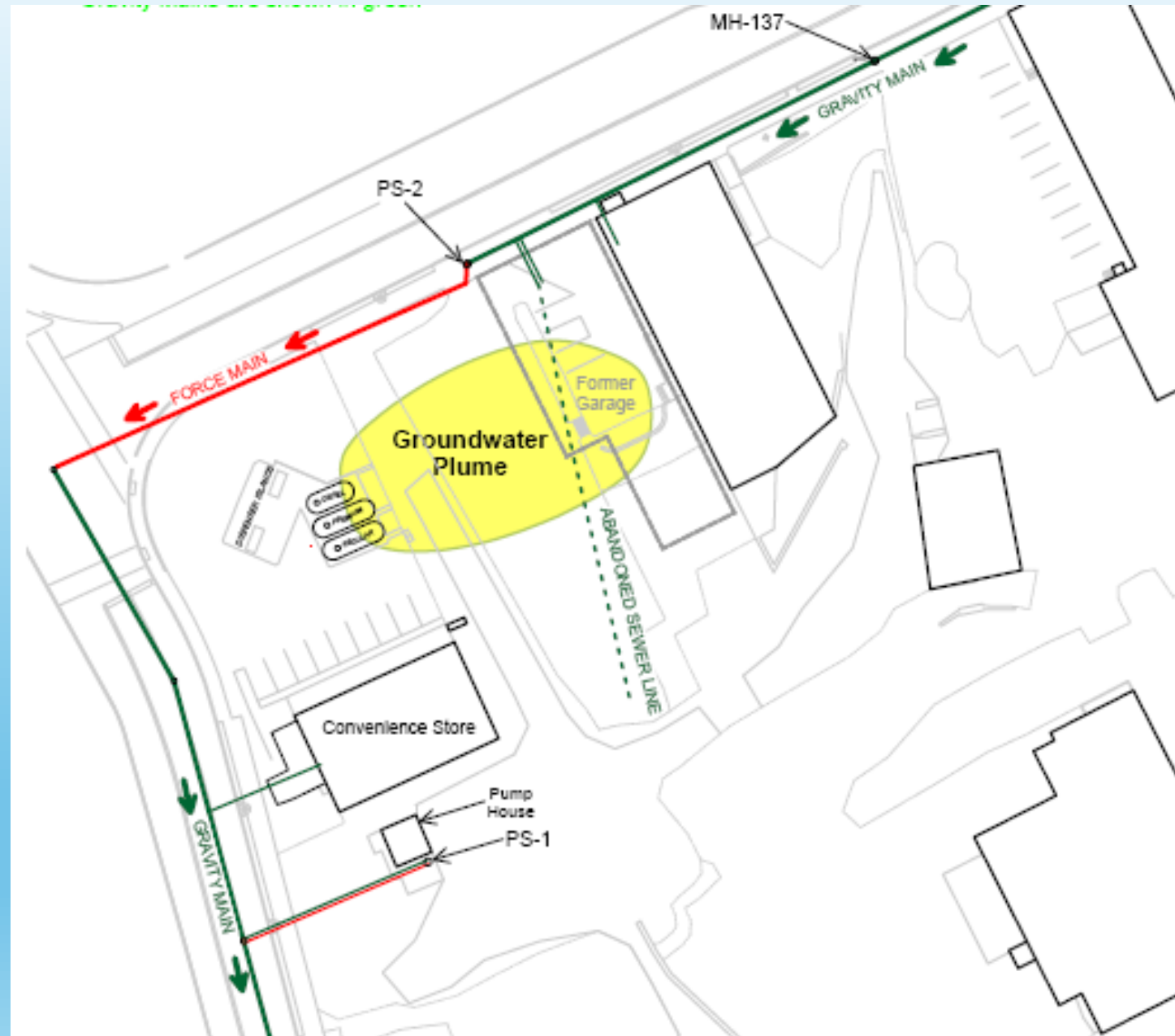


Video Logging



Case Study- UST Release

- Contaminant migration through groundwater
- Plume intercepts abandoned sewer
- Sewer bedding facilitated flow to main
- Gap at connection where service line meets main



Case Study- UST Release

- Vapors enter downgradient building through gap at service connection
- Vapors enter pump stations as contaminated water is conveyed through sewer main
- Vapors enter convenience store – no trap installed



USMH: 137
DSMH: PS2

10:04:36a
05/18/17

USMH: 137
DSMH: PS2

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05/18/17

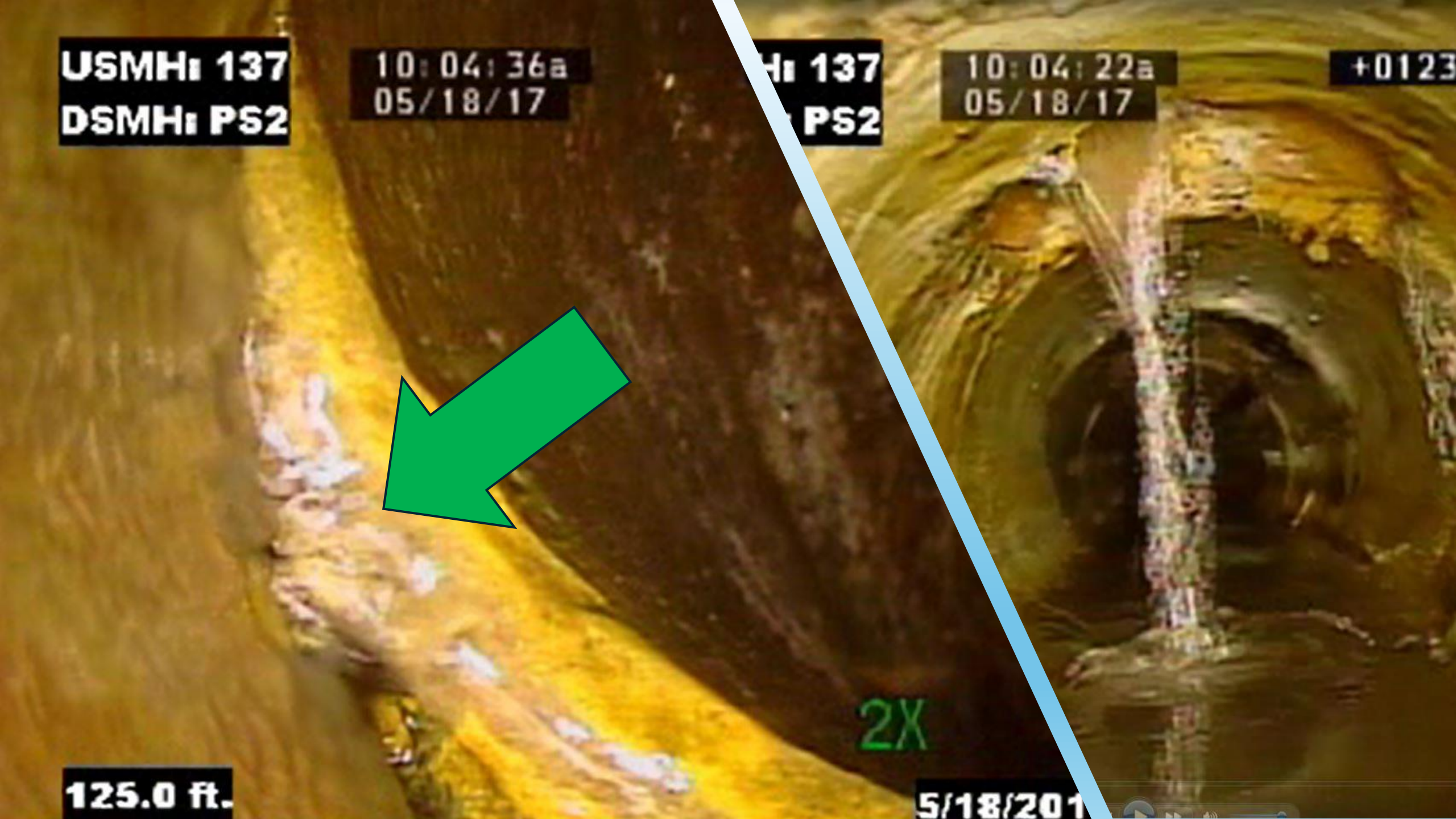
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2X

125.0 ft.

5/18/2017



Case Study-UST Release

REMEDIAL ACTIONS

1. VENTILATION SYSTEMS

- Pump Stations
- Convenience Store

2. PIPE REHABILITATION

- Tee installation at service connections to mains
- Trap installed at convenience store



Case Study-UST Release

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