



# BUILDING ANALYSTS



"Hang-on, Son—we're going four-wheelin!"

# WHY VAPOR GETS THROUGH SLAB-ON-GRADE CONSTRUCTION

## COMMON PROBLEMS AND SOURCES:

- Improper concrete slab design, mix, placement and curing
- Surface and subsurface moisture not addressed in the site design
- Pipe leaks below or adjacent slabs
- Moisture traveling under the slab along utility trenches
- Ground water or perched ground water soils conditions underlying slabs

## PREVENTION:

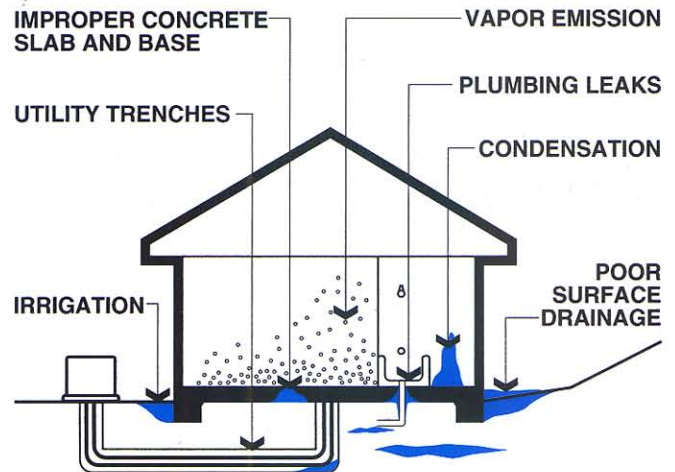
- Obtain a comprehensive and reliable geotechnical survey addressing soils-related moisture concerns
- Control surface and subsurface drainage
- Design landscape to limit the need for excessive irrigation adjacent buildings
- Control roof run-off water
- Install a sub-slab vapor retarder or membrane, and drainage base

## REMEDIAL ACTION:

- Seek advice by a qualified geotechnical consultant
- Check for and correct any pipe leaks
- Correct surface drainage where needed
- Limit irrigation at the building perimeter
- Treat slab with slab sealer system where appropriate (Calcium Chloride Dome Tests are necessary to determine the rate of vapor transmission)

## POTENTIAL PROBLEMS AND DAMAGE:

- Staining and lifting of floor coverings
- Efflorescence salts leaching out of slab
- Reduced life of floor coverings
- Increased humidity inside building affecting air quality and contributing to mold growth
- Building contents and fixtures moisture damaged



**Building Analysts** is a full-service architectural and engineering firm with many years of experience in construction litigation. Our services include: architectural and structural investigations, repair recommendations, preparation of exhibits and expert testimony. We hope this newsletter is helpful. Please contact Stan Livingston, Pete diGirolamo, Bob Carroll or Dave Kuivainen if you need our input or recommendation:

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WINTER 1999

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