

CAUSE-OF-LOSS REPORT · CASE 084 · SAMPLE

Newport Coast ledge residence

Mechanism	tidal intrusion
Level	-9 ft garage
Location	Newport Coast, California
Prepared by	L3 Energy Construction, The Hydrotech Lab
Engineer of record	named separately where one is engaged

This is a sample report. It shows the form and depth of a Hydrotech Lab cause-of-loss report. The property, readings and outcomes are illustrative and do not describe a real client.

CHAPTER 1 · THE PATHOLOGY

Three king tides, no rain, and water standing on the garage floor.

The owner first saw it at the floor drain: a sheet of clear water spreading across a garage that sits nine feet below the street. It was a dry week. It came back on the next king tide, and the one after.

Two contractors had treated it as plumbing. The drain was snaked, then the slab was coated. The coating blistered within a month, and a white salt line appeared fourteen inches up the north wall.

OBSERVATION	FINDING
First reported	Dec 2024 king tide, standing water at the floor drain
Recurrence	three consecutive king-tide cycles
Lower slab	about 4 ft above MLLW
Perimeter drainage	none found
Sump	pit present; discharge line capped inside the wall
Salt line	14 in up the north wall

CHAPTER 2 · DIAGNOSTIC RECONSTRUCTION

How the path was established

The question was whether the water came through the walls, up through the slab, or back through the drain. We measured before opening anything.

METHOD	PROCEDURE / STANDARD	WHAT IT SHOWED
Water-table logging	pressure logger in the sump pit, 21 days	The table followed the tide by about two hours and cleared the slab on each king tide.

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Moisture mapping	pin and non-invasive meters, logged to plan	A wet band along the slab edge and both cold joints. Walls dry above the salt line.
Thermal imaging	infrared survey at low and at high tide	A cold plume rising from the slab perimeter at high tide only.
Drain isolation	trench drain plugged and filled, 24 h	Level held. The drain was not the path.

Recommended scope of repair

- 1 Perimeter drain at the footing, tied to a new sump with duplex pumps and a high-water alarm.
- 2 Positive-side membrane on both below-grade walls where access allowed; crystalline treatment on the inside face where it did not.
- 3 Pressure relief at the slab; cold joints routed and sealed.
- 4 Discharge line re-run to an approved outlet.

CHAPTER 3 · RESTORED STATE

Verification

The garage stayed dry through the December 2025 king tides. The logger is still in the pit, and the owner can read the water table from a phone.

MEASURE	READING	STATE
Water table under slab	held 18 in below	stable
Lower level	dry, Dec 2025 king tides	stable
Pumps	duplex, alternating, alarmed	active
Monitoring	logger left in the pit	active

Scope and limits. This report states the cause of water intrusion as established by the field methods listed, and a scope of repair a licensed contractor can bid from. It is not an engineering report. Structural, geotechnical or coastal engineering conclusions are the work of the engineer of record.