BCI
BASIC CONCEPTS INC
Justrite Safety Group

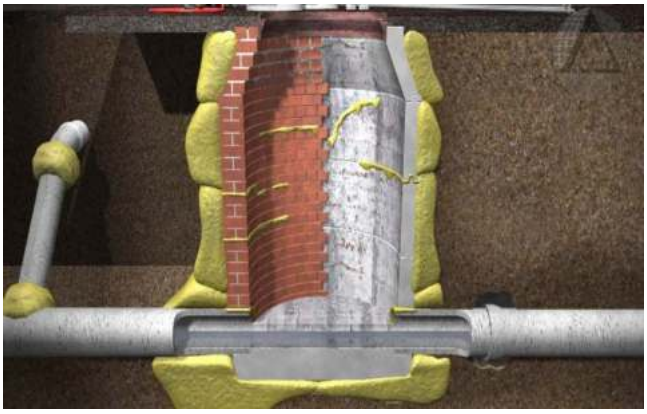
their safety is essential.
Protecting people, property, and the planet.

Stopping Groundwater Infiltration

Chemical grouting is one of the most efficient techniques used to stop ground water infiltration into under ground structures or sewer collection systems. There are two main types of grout injection; crack injection and curtain grouting. Crack injection is specific targeted points to stop small to medium leaks that happen from shifting or moving concrete, usually in joints. Curtain grouting is when you drill through the structure into the soil and completely encapsulate the outside of the structure. Hows it done?

Our crews inject reactive chemical grouts through cracks or construction joints that are the infiltration channels for ground water. These hydrophilic grouts react with water and start to expand rapidly. The water helps speed up the expansion of the grout which turns into an impenetrable foam. This foam seals the leaks and fills any channels the water was traveling from.

Curtain grouting uses a different technique. These grouts retain the consistency of water, and as they are injected through the structure, into the adjacent bedding soil, they displace the air and water between soil particles and rapidly gel in these void spaces. Once gelled, the grout binds the soil into a cohesive mass, blocking the point of ground water leakage into the sewer pipe. This “seals the soil”, stopping ground water peculation through the soil and into the structure. With up to 50% void areas in back-fill soils, this process has proven to be very effective and long lasting for completely sealing entire structures.



Visual representation of curtain grouting a manhole. The grout is injected through the walls, encapsulating the entire structure from any water infiltration.

Active leak in a liftstation joint. Crews start to drill into the area around the joint to prepare for grout injection.

Grout injection at several places around the leak to ensure the water source is stopped. Leak 100% sealed and ready to be coated with SC-3900 Lining System.