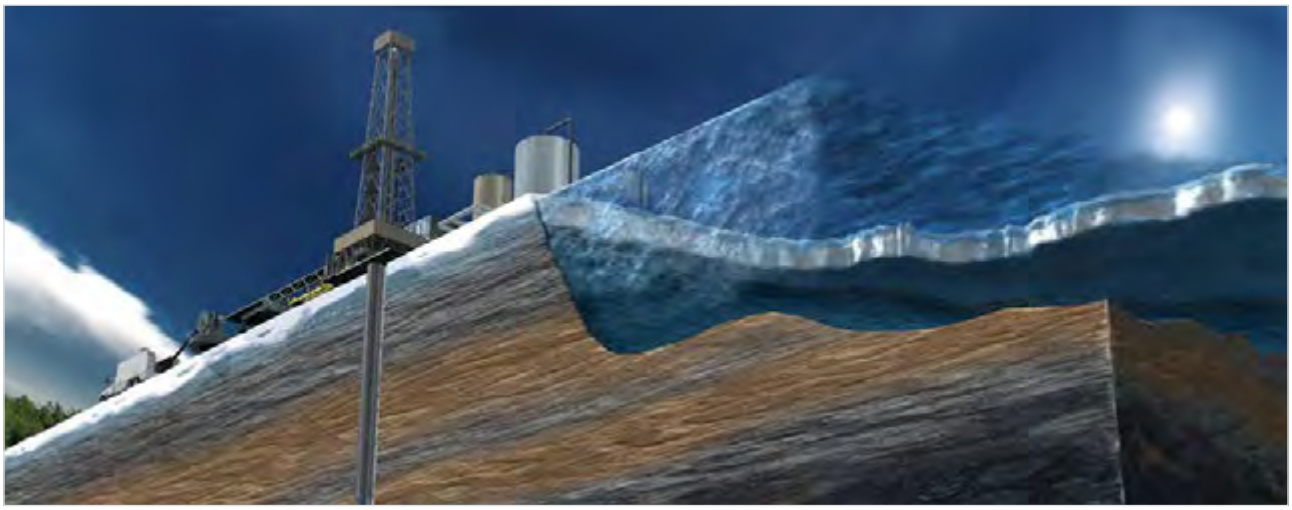
Cuttings Re-Injection (CRI)



M-I SWACO has developed an integrated Cuttings Re-Injection (CRI) process that has emerged as a cost-effective and sound solution for drilled waste disposal at environmentally sensitive and remote asset developments.

CRI operations may be done in situ at or near the waste generation site eliminating the need to package and haul cuttings long distances to treatment facilities. Operators save time, labor, rig space and mitigate HSE risk by avoiding transportation over water or on roadways. Originally conceived solely for drill cuttings injection, the Cuttings Re-Injection process has expanded to include many other waste streams generated during E&P operations.

The Cuttings Re-Injection system includes a slurrification process whereby drilling waste is collected, mixed with water, and conditioned to form a stabile slurry ready for injection into a suitable down-hole storage formation.

Features

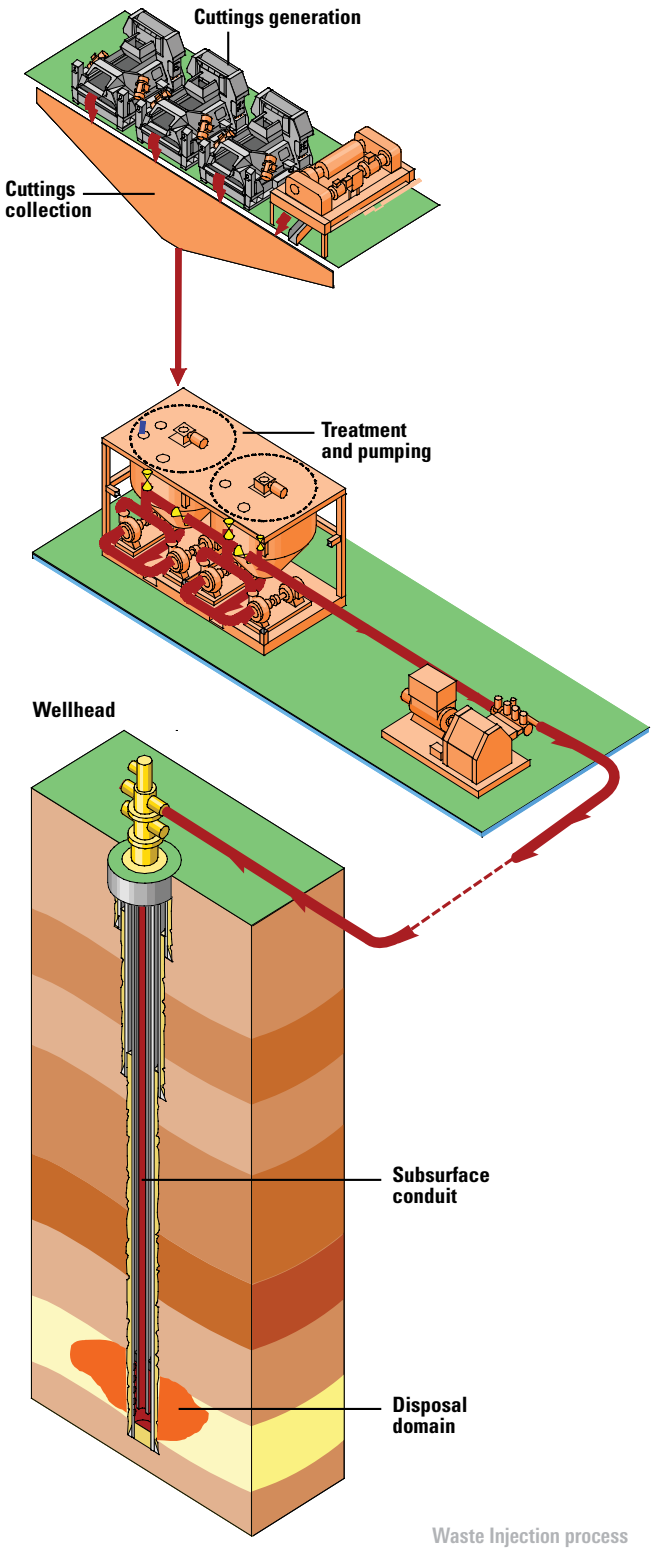
- All-inclusive process that includes geomechanical modeling and simulation, well and operation design, data acquisition, and monitoring assurance
- Multi-disciplinary network of engineers
- Highly trained operational personnel
- Specially dedicated injection training centers
- Capable of injecting variety of wastes, including slurrified cuttings, lube oil, rig drain fluids, produced water, waste mud and crude-oil contaminated cuttings, among others
- Includes collection and conveyance mechanism, high-pressure pump and slurrification systems, subsurface disposal domain and data collection and monitoring

Benefits

- Provides permanent disposal solution
- Reduces disposal costs
- Minimizes environmental liabilities; meets all zero discharge requirements and lowers CO_2 emissions
- Customized solution

System components

Basic Components of Cuttings Re-Injection



Waste Injection process

Injection Process Overview

The Cuttings Re-Injection process involves the gathering of solids and wastes through a series of specialized equipment that classify, degrade, mix and condition them into stable and pumpable slurries. Afterwards, the slurry is injected via hydraulic fracturing into a subsurface formation that earlier had been analyzed and deemed suitable for the permanent isolation of the waste. The proper injection formation is identified at the onset as one that will ensure injected waste does not propagate into undesirable zones protecting the environment surrounding the disposal zone.

The equipment package comprises a conveyance apparatus, slurrification unit, high-pressure injection pumps and monitoring equipment. The skid-mounted Cuttings Re-Injection Analyst delivers real-time and recordable injection pressure, density and volume data. All of the equipment and processes are operated by high skilled specialists, who undergo extensive training at dedicated Cuttings Re-Injection training centers worldwide.