Cuttings-reinjection (CRI) operations play a vital role in waste management within the E&P industry. At ConocoPhillips, our commitment to health, safety and the environment is captured in our core values, which are highlighted through our SPIRIT initiative emphasizing safety, people, integrity, responsibility, innovation and teamwork. Managing drilling waste from our global operations is only one of the many aspects of the SPIRIT initiative, and it represents ConocoPhillips' commitment to industry leadership and environmental stewardship.

The injection of cuttings and other drilling waste into subsurface formations is often the most cost-effective means of managing these materials. However, cost aside, the most important benefit of CRI—or, generically, "solids injection"—for ConocoPhillips and the industry as a whole is that solids-injection operations provide a proven means for the disposal of drilling waste in a safe and environmentally friendly manner. The article “The Cutting Edge in Drilling-Waste Management,” page 54, describes CRI technologies.

In many regions of the world, the North Sea being a case in point, zero-discharge regulations now prevent the routine disposal of cuttings or solids to the seabed. Today, even in the absence of specific discharge regulations, companies such as ConocoPhillips have voluntarily adopted zero-discharge policies, making practices that limit or eliminate discharges to the environment part of everyday operations. In zero-discharge situations, two principal alternatives are available to the operator. First, the solids can be handled and shipped to shore in the so-called skip-and-ship process and then disposed of in available landfill space. By their very nature, skip-and-ship operations can present safety risks owing to repeated handling of solid and liquid waste. These operations also require substantial land-based disposal volumes and, in reality, only transfer waste from one terrestrial environment to another. Alternatively, waste materials can be injected downhole, ultimately returning these materials to their source. In specific terms, CRI offers the following benefits:

• adheres to zero-discharge regulations and policies by eliminating overboard discharges to the sea
• eliminates both offshore and onshore handling and need for landfill volume
• returns oilfield solids to their native environment
• provides an environmentally responsible method for waste disposal in remote locations where land-based disposal is not an option
• reduces or eliminates safety and logistical challenges associated with the repeated handling of waste materials during skip-and-ship-type operations.

While CRI operations have significant benefits, they are not a universal panacea. In some drilling environments, boundary formations that provide containment of injected materials may not be present. In these cases, other solids-disposal options must be employed.

When a suitable injection environment is available, CRI operations require careful evaluation, design, implementation and monitoring of the injection process so that all risks are minimized and containment is maintained. Adequate monitoring of the injection process must be employed to demonstrate positive containment and also to provide metrics against which the design and implementation can be updated and improved.

Solids-injection operations have continued to gain acceptance around the globe by providing a safe and environmentally friendly means of oilfield-solids disposal. It is critical that future CRI operations follow best practices for evaluation, design, implementation and monitoring to maintain this good track record. In this light, work has begun on an SPE monograph on solids injection to capture the state of the art in best practices. Scheduled for completion in late 2007, the monograph will bring together insights from many of the experts in the solids-injection field, including from ConocoPhillips. It will provide a breadth of technical information and will focus and illustrate the keys to successful CRI operations.

As ConocoPhillips and others in the E&P industry continue to explore and develop reserves in increasingly difficult areas of the world, we will maintain our sharp focus on our core principles—especially health, safety and the environment. Cuttings-reinjection operations, properly designed, implemented and monitored, will continue to play a pivotal role in adherence to our principles through the management and reduction of oilfield wastes.

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