

Federal 8-89-7 #1
Waste Management Plan
SG Interests I Ltd.

The following waste management plan is preliminary as of 11/13/2013 and will be updated as necessary throughout the permitting processes (Colorado Oil and Gas Conservation Commission, USDA Forest Service, and US Bureau of Land Management). This information will be presented to the federal agencies as the Surface Use Plan of Operations is updated and will incorporate all state and federal conditions of approval.

SG would use a closed-loop system for drill cuttings and fluids. Drill cuttings would be processed to remove excess drilling fluids. A cuttings bin would likely be used rather than a reserve pit or cuttings pit to contain drill cutting. This cuttings bin is typically a lined trailer container that holds cuttings aboveground until the trailer is hauled to an approved cuttings disposal area. The location of the disposal area is not known at the time of this version of the plan.

The location and access roads will be kept orderly and as clean as practicable at all times. All garbage and trash will be put in a trash container. The container will be periodically emptied at an approved disposal site. A portable latrine will be provided for human wastes, and wastes will be pumped from portable toilets and hauled to an approved sanitation facility. Sewage will not be buried on location.

No salts are anticipated on this well location.

Material Safety Data Sheets (MSDS) for all chemicals and hazardous materials that are used during the drilling, completion, and producing operations will be maintained as per 29 CFR 1910.1200(g). Any petroleum product or other spills will be cleaned up immediately and the material will be hauled to an approved facility. The operator will prevent gasoline, diesel fuel, oil, grease, or any other petroleum products and drilling fluids from migrating off the location or from entering any live stream or riparian area. A spill kit will be available on site during completion and drilling operations. Fuels and lubricants will be transported by fuels distributors and will be stored in facilities specifically designed for that purpose.

Following hydraulic fracturing operations, fluids that return to the surface are referred to as flowback. A large percentage of the flowback volume returns to the surface in the first few days following hydraulic fracturing. Flowback will be captured immediately following hydraulic fracturing and will be stored in tanks on location. From these tanks, fluids will be trucked to and disposed of at a permitted commercial disposal facility. Assuming 80% of the water used for well completion (approximately 8,000 BBL) flows back immediately and must be hauled off location, approximately 100 round trips with 80 BBL water trucks would be required. SG Interests discloses fluid components used in hydraulic fracturing operations online at FracFocus, which is a public access website (fracfocus.org).

Produced water will be separated from the gas and stored in tanks on location. Once the solids (coal fines, etc.) have settled out of the water in the tank, it will be filtered and trucked to a commercial disposal facility.