

Noble Energy, Inc. Onsite Water Recycling Summary

Noble Energy Inc. proposes to recycle and reuse E&P produced water waste, per COGCC rule 907.2(3), from the Faith LC34-785 Multi Location at NWNW Sec. 34, T9N, R59W in Weld County, Colorado during downhole frac operations estimated on June 1, 2015. Noble will utilize recycled flowback by using oil/water separation, coagulation/flocculation, dissolved air flotation, oxidation, potential softening, and filtration to achieve applicable frac standards. The ratio of fresh water to recycled water for each well is estimated at 7:1 (70,000 bbls fresh water to 10,000 bbls recycled water). The E&P waste produced at the frac site will be trucked offsite and disposed of at an approved licensed injection facility. The fresh water will be stored in Poseidon storage tanks which hold 40,000bbls and the frac water will be stored in 500bbl frac tanks on the well pad location.

Best Practice Management (BMP) stormwater controls, following CDPHE's general stormwater permit, will be utilized around the perimeter of the well pad to eliminate runoff. Routine 14 day stormwater inspections will occur during the lifecycle of the well pad location to maintain compliance with Noble Energy's stormwater management plan. The latest stormwater inspection and site figure showing BMP's is attached. The oil and gas location will not be expanded or altered in any way.

See attachments

REVISION HISTORY			
Rev		Date	Change Originator
1	Initial Release	5/21/2015	P. Johnson
2	Revision	5/22/2015	P. Johnson



