



OD11 Pipeline Leak (Spill #483115)

Operator Knowledge - Produced Water Analysis

Grand River Gathering LLC ("GRG") operates gathering lines that receive natural gas from Caerus' Piceance operations. The OD11 spill occurred on one of GRG's gathering lines, transporting natural gas with entrained produced water that enters the pipeline from the Caerus OD11 well pad upstream of the pipeline. GRG has collected a produced water sample from the OD11 storage tank to determine the pH and Arsenic of produced water being produced from the area. The produced water sample results are outlined below:

Sample Name	Sample Date	Sample Type	pH	Arsenic
20230713-OD11-PW	07/13/2023	Tank	7.22	<0.0100

The Operator recognizes that the presumable source for impacts at this location would be associated with produced water that may be entrained in the natural gas transported in the pipeline. Based on the laboratory analytical results of a produced water sample collected from the OD11 tank storage, Summit believes that pH and Arsenic exceedances found in the remediation excavation are not due to natural gas pipeline transportation but are rather naturally occurring background concentrations within the area.