

Enquiry: NR97564

Charter date: 18/09/18

Customer name: Ada Zaffina

Dear Ada,

Please see the answers to your questions below. You can find more information on acidisation in our frequently asked questions document: https://consult.environment-agency.gov.uk/onshore-oil-and-gas/onshore-oil-and-gas-regulation-information-page/supporting_documents/Acidisation%20FAQs%20January%202018.pdf

1. Is the EA notified when an operator performs the following injection operations/at what stage is the EA notified?

For new sites operators must apply for and hold the appropriate Environment Agency permits before they begin operations. We issue permits when we are satisfied that the operator has demonstrated how they will provide a high level of protection to people and the environment. For existing sites that do not have a modern permit we are undertaking a re-permitting process whereby operators are asked to apply for a new permit. To cover the interim period the Environment Agency have issued a Regulatory Position Statement. There is no formal requirement for operators to notify the Environment Agency of the exact timing of an acid wash operation.

For fracture acidisation operations, the operator will be required to complete a hydraulic fracture plan which requires Environment Agency approval before operations can commence. This plan is specific to the site and operations proposed and will contain specific reporting and notification requirements. We publish agreed hydraulic fracture plans on our Citizen Space pages: https://consult.environment-agency.gov.uk/consultation_finder/. You can use the 'Find Consultations' search box to search for any published plans.

The HSE have notification requirements under the Borehole Sites and Operations Regulations (1995). You may wish to contact the HSE directly for further details.

2. What information is reported (start/end date, injected volume, injection pressure)

As explained in our response to question 1, reporting requirements are dependent on the activity and permit in place for a particular site.

Operators are required to operate in line with their issued permit (including any approved waste management plan). However operators are not routinely required to submit ongoing evidence of this beyond what is required under specific permit conditions and therefore the Environment Agency does not hold records of the timing, volumes or pressures of acidisation activities.

For fracture acidisation, we require enhanced reporting, as agreed in the hydraulic fracture plan.

3. Is this information available to the public?

All reports made by operators to the Environment Agency are held on the Public Register. For some sites of high public interest we may also make this information available on our Citizen Space pages: https://consult.environment-agency.gov.uk/consultation_finder/.

4. What is the EA's definition of matrix acidisation and acid fracking?

The following definitions are taken from our FAQs on acidisation. More information is available [here](#)

(https://consult.environment-agency.gov.uk/onshore-oil-and-gas/onshore-oil-and-gas-regulation-information-page/supporting_documents/Acidisation%20FAQs%20January%202018.pdf)

Acid fracturing/fracture acidisation:

Fracture acidisation involves pumping dilute acid into the oil and / or gas reservoir from the well. To enable fracture acidisation the acid is pumped in to the well at pressures above the geological formation fracturing pressure. The purpose of fracture acidisation is to enhance or create new flow paths to the well. Pumping the acid at pressure opens up new fractures and fissures and/or dissolving material in the target formation that is restricting flow to the well. This technique is generally used in lower permeability geological formations.

The acid will not flow readily in to the target formation so is pumped at a higher pressure to force the acid through the existing or induced fractures. The pressure applied, which will be above the geological formation fracturing pressure, enables the rock to be fractured as well as to be dissolved.

The Environment Agency does consider fracture acidisation to be a form of stimulation. Fracture acidisation does treat the geological formation, with the aim of stimulating flow in the oil and/ or gas reservoir. Fracture acidisation may also be referred to as “hydraulic fracturing”.

Matrix acidisation:

Matrix acidisation involves pumping dilute acid into the oil and / or gas reservoir from the well. The acid is injected, or “squeezed”, in to the geological formation at a pressure that is above the geological formation pressure but below the formation fracturing pressure.

This technique is generally used in higher permeability geological formations. The dilute acid will flow along existing fractures and fissures in the rock. The acid reacts with the geological formation, dissolving the rock, resulting in enlargement of natural pores, fractures and fissures to enhance the permeability of the rock. This increases the productivity of the well.

The Environment Agency does consider matrix acidisation to be a form of stimulation. Matrix acidisation does treat the geological formation, with the aim of stimulating flow in the oil and/ or gas reservoir.