

## De minimis proforma

<b>EPR 2016, Schedule 22 Exclusion 3 (3) (b)</b> <b>– relating only to Onshore Oil and Gas</b>	
Description of Activity	<p>Acid Treatment – this is a well maintenance activity which removes scale deposition from produced water that accumulates on well bore equipment during oil extraction.</p> <p>This scale is typically dissolved from the system by using a 15% solution of hydrochloric acid with water.</p> <p>This operation does not involve the pressurisation of the circulating fluids in order to penetrate the reservoir. There is no intention to discharge fluids into the surrounding rock formation, however limited contact may occur where there are perforations in the well.</p> <p>Potassium chloride brine is used before and after the acid treatment to flush the well and to suppress any chemical reactions that could cause formation damage which would block the well perforations.</p>
Site Location (Inc. NGR)	<p>Brockham Oil Site, Feltons Lane, Brockham, Surrey</p> <p>BRX2-Y: TQ 18850 48660</p> <p>BRX4-Z: TQ 18842 48649</p>
Operator	Angus Energy Limited
Date of notification	17 <sup>th</sup> December 2018
Chemicals to be used	<ul style="list-style-type: none"> <li>• Potassium Chloride (3% solution in water, used for pre-flush and displacement fluid/overflush).</li> <li>• Hydrochloric Acid (15% solution in water, used for main acid treatment).</li> </ul>
Volumes of fluids to be used (and ratio between chemical and water if applicable)	<p>Nominal Volumes per well = 45 m<sup>3</sup> in total, of which:</p> <ul style="list-style-type: none"> <li>• 5 m<sup>3</sup> (KCl pre-flush)</li> <li>• 20 m<sup>3</sup> (HCl acid treatment)</li> </ul>

	<ul style="list-style-type: none"> <li>20 m<sup>3</sup> (KCl used as displacement fluid and overflush to aid recovery of spent acid and scale)</li> </ul>
Depth of connection with formation	<p>Perforations are within the oil bearing formations (the Portland sandstone in the case of well BRX2-Y, and the Kimmeridge Formation for BRX4-Z) at the following depths:</p> <p>BRX2-Y: 616.10 – 631.32 m below ground level TVD</p> <p>BRX4-Z: 779 – 965 m below ground level TVD</p>
Does the formation where connection may be made, or discharge occurs, contain groundwater?	Yes
Will the fluid be introduced into the well bore at a pressure below the formation fracture pressure?	Yes
Frequency if appropriate	Typically annual, but more or less as conditions in the wells require.
Disposal of the spent product or back flow	The dissolved scale, spent acid and brine are returned to surface for disposal at a suitable permitted off-site facility.
Exclusion	We consider that the activity will have no discernible or detrimental impact on the receiving groundwater and consider it to be 'environmentally trivial'.
Determination Date	18 <sup>th</sup> December 2018
Area Determination Contact	XXXXXXXX (XXXXXXXX – Groundwater & Contaminated Land, Kent & South London)

*You must send your completed proforma to XXXXXXXXX in the the E & B groundwater team for recording/ reporting purposes*