Best Management Practices (BMP) for GHG reduction

When applicable the following BMPs will be used for the project.

1) Pneumatic Controllers (see Note 1)
    a. Low bleed/no bleed NG controllers
2) Equipment Leaks/Fugitive Emissions (see Note 2)
    a. OGIC LDAR review required by OOOOa
    b. Well site OOOOa requirements are semiannual monitoring starting before 6/3/2017 or 60 days after start of operation
3) Fixed Roof, Atmospheric Pressure Hydrocarbon Liquid Storage Tanks (see Note 3)
    a. Tank vent to flare
4) Pneumatic Pumps (see Note 4)
    a. OOOOa requires control of these if possible
    b. Control requirement target is 95% reduction
5) Reciprocating Compressors – Rod Packing Vent (see note 5 below)
    a. Evaluate during LDAR
    b. Replace Rod Packing in accordance with OOOOa (even though not applicable to well sites)

Explanation:

These BMP are meant for the production phase only. During drilling and completions gas that is emitted will be flared as the BMP to reduce methane emissions. Some equipment listed above will not be present during the production phase but was included for completeness. If at a future date this equipment is added, the applicable BMP will be followed.

1) Natural gas driven pneumatic controllers must be low bleed per NSPS OOOOa but where possible, zero bleed devices will be used.

2) Since this well will be drilled and completed after September 18, 2015, the site will be subject to NSPS OOOOa equipment leak requirements, including a semi-annual LDAR inspection. Tioga plans to utilize an optical gas imaging camera (OGIC) to meet this requirement which will reduce methane emissions from leaks.

3) Currently there are only plans for a produced water tank during the production phase which will have minimal VOC and GHG emissions, therefore exempting it from requiring a flare.

4) There are no pneumatic pumps planned at this time.

5) There are no reciprocating compressors planned at this time.