

Technical Consultant: Daniel Robb

Project Participant: Patterson Farms - 102N & 102E

1st visit: 7/30/2009

All monitoring instrumentation was inspected to insure that it is accurately installed and that it reliably measures the required data. The monitoring equipment is installed in the correct location, and meter readings were verified with one time measurements.

2nd visit: 4/6/2010

All monitoring equipment is in same location and operating correctly. No changes were observed with the electric panels, or meters. The oil cooler on the Cat genset went bad and contaminated the antifreeze with oil. The Caterpillar genset now has a new oil cooler installed. Also the farm has been using liquid waste in addition to food waste in the digester. This was causing some gas quality issues initially, which seem to have been figured out.

3rd visit: 7/15/2010

All monitoring equipment is in same location and operating correctly. No changes were observed with the meters, genset, or electric panels. The Guascor engine had been having trouble running during some of the hotter days, due to inability to reject enough heat.

The existing Caterpillar genset was down for a number of days in late April / early May due to overheating issues associated with the high temperatures.

4th visit: 11/2/2010

All monitoring equipment is in same location and operating correctly. No changes were observed with the meters, genset, or electric panels. The Cat engine is down in order to be rebuilt, as normally scheduled maintenance. The farm is flaring all gas that was typically used by the engine. It is expected to be out of commission for up to 30 days.

5th visit: 3/15/2011

All monitoring equipment is in same location and operating correctly. No changes were observed with the meters, genset, or electric panels. The site has been having trouble getting enough gas to the engines to run them at full capacity due to fouled up scrubber. Another gas line was installed from the powered flare back to the Cat engine, which bypasses the scrubber, in

order to reach full capacity. *If used this will effect system efficiency for Patterson Existing since the gas would not be measured by the flow meter.*

6th visit: 8/4/2011

All monitoring equipment is in the same location and operating correctly. No changes were observed with the meters, genset, or electrical panels. The existing CAT generator was down for the end of June and the beginning of July so that a new radiator could be installed. Recently the farm has been using a different type of food waste that hasn't been producing as much gas as usual. The new food waste and low gas production is the reason for the decreased power output from both engines.

6th visit: 8/4/2011

All monitoring equipment is in the same location and operating correctly. No changes were observed with the meters, genset, or electrical panels.

7th visit: 11/18/2012

All monitoring equipment is in the same location and operating correctly. No changes were observed with the meters, genset, or electrical panels.

8th visit: 1/17/2012

Sage flowmeters are out for calibration.

9th visit: 5/23/2012

Flowmeters were re-installed after calibration; accumulators were reset. All monitoring equipment is in the same location and operating correctly. No changes were observed with the meters, genset, or electrical panels.

10th visit: 8/23/2012

All monitoring equipment is in the same location and operating correctly. No changes were observed with the meters, genset, or electrical panels.

11th visit: 11/7/2012

All monitoring equipment is in the same location and operating correctly. No changes were observed with the meters, genset, or electrical panels.

