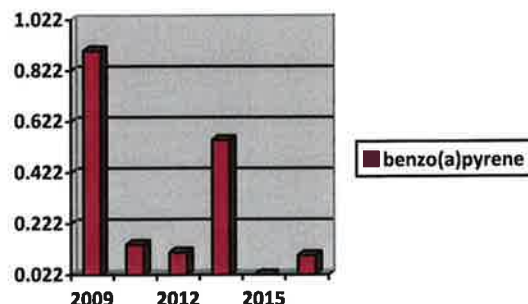
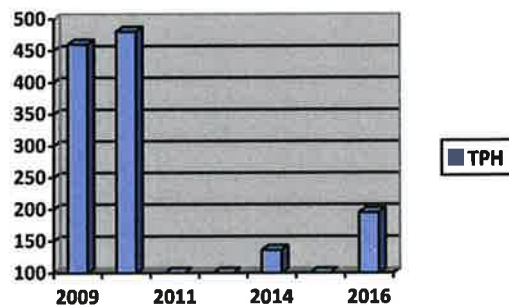


# LINN Energy

Linn Operating, Inc.  
Piceance Asset  
Parachute, Colorado  
February 1, 2017

## F01 697 Landfarming Plan – Facility ID #443326

- History
  - Seven wells were drilled on this well pad in 2008. One of the wells was plugged and abandoned. The remaining six wells were completed and are producing. These wells were drilled with the use of diesel based drilling mud. The drill cuttings were mixed with clean soil and stockpiled on site. Composite samples of these spoils have been taken annually (except 2013) beginning in 2009. Discrete samples were taken in 2016.
- Current Status
  - Approximately 5,300 cubic yards of spoil material that is being treated on site by land farming is remnants from drilling and completion operations. The landfarming operations have taken place since the summer of 2012. The landfarming material was spread out on location to a depth of approximately 18" on Nov. 16, 2016. Samples taken since September 24, 2012 report that this material fails COGCC Table 910-1 for benzo(a)pyrene at various levels (0.024 – 0.9). TPH levels from composite and discrete sampling did not exceed the COGCC Table 910-1 standards at any time on this location.



- Treatment - 2017
  - Spoil will be turned over by an excavator four to six times (depending on weather and snow conditions) during the warm months in 2017. The soil will be turned over with the frequency established in the plan as a minimum or with a higher frequency if possible. The soil has been spread out to increase exposure to the atmosphere and sunlight as much as possible on the production pad.
  - Pre-treatment samples taken in early spring will determine the amount of amendments that will be added to the spoil based on an analysis of nutrients present in the spoils.
  - Amendments.
    - Based on analysis, phosphorus fertilizer may or may not be added during each tilling operation to address the benzo(a)pyrene.
- Samples and lab tests
  - Phase I - Composite sample will be taken from 8 locations on the spoil pile in early summer and analyzed.
    - If composite sample passes, discrete samples will be taken to confirm the composite samples.
      - If discrete samples pass, spoil will be buried per COGCC rules and interim reclamation of the pad will take place.
      - If discrete samples fail, landfarming will continue.
    - If composite sample fails, landfarming will continue.
  - Phase II - Composite sample will be taken from 8 locations on the spoil pile in late fall and analyzed.
    - Procedure will be the same as Phase I
- Continuation
  - Process will continue into 2019 until spoil passes COGCC Table 910-1.