



November 3, 2009

Mr. and Mrs. Evans
7987 WCR 19
Ft Lupton, Colorado 80621

RE: Results of the Investigation Concerning Stressed Vegetation on Your Property
NENE Section 28 – Township 2 North – Range 67 West
Weld County, Colorado; Complaint No. 200216887

Dear Mr. and Mrs. Evans:

As you are aware, the Colorado Oil & Gas Conservation Commission (COGCC) staff responded to a complaint from you on August 14, 2009 regarding a leak or possible leaks on 2 gas gathering pipelines adjacent to your property on the north side of Weld County road 19. You expressed concern that leaks along the Machii-Ross gathering pipeline may be responsible for stressed vegetation you have observed on your property. On or around August 14, 2009 Machii-Ross and Duke Energy Midstream inspected their natural gas gathering pipelines and Machii-Ross repaired a small leak.

PREVIOUS INVESTIGATION

In 2007 the COGCC investigated a similar concern under COGCC complaint No. 200114492. As part of that investigation, the COGCC conducted an investigation of shallow subsurface gas (soil gas) along the north and east parts of your property. Twenty-three individual soil gas sample sites were surveyed and one additional soil gas sample for laboratory analysis was collected and analyzed. No methane gas was observed in any of the sample locations and the composition of the soil gas samples was similar to the composition of air. The conclusion of the investigation was that the observed stressed vegetation on your property was not the results of the natural gas gathering pipeline operations. I have attached a copy of the 2007 investigation report to this letter.

CURRENT INVESTIGATION

Machii-Ross Gathering Pipeline Leak Testing

As discussed previously, the COGCC opened a complaint investigation in August 2009 to address your continuing concerns concerning stressed/dead vegetation on your property and the possible connection to leak(s) on the Machii-Ross natural gas gathering pipeline adjacent to the northern boundary of your property. Based on the identification of a repaired leak in the Machii-Ross pipeline and the continuing presence of the odor and gas meter detection of unprocessed natural gas (and methane) at the northwestern side of the intersection of county road 19 and 18, the COGCC issued a Notice of Alleged Violation (NOAV) to Machii-Ross on August 20, 2009 requiring Machii-Ross to conduct testing or pressure testing of their gathering pipeline to evaluate

the line for possible leaks. On or around August 31, 2009 Machii-Ross conducted several hydrotests of the pipeline from just north of the county road 18 and 19 to the intersection of county roads 18 and 17 (approximately 1 mile to the west along county road 18). Machii-Ross attempted to pressure test the pipeline to 60 pounds per square inch (PSI) which is around 5 times the normal operating pressure of the pipeline (10 to 12 PSI). The line was found to be leaking at the county road 18 and 19 intersection. Several repairs were made to the pipeline and on September 9, 2009 the line was tested to 58 PSI and held for 24 hours. COGCC staff witnessed the end of the test on September 10, 2009. Machii-Ross has submitted a 24 hour pressure chart for the hydrotest. Because the gathering pipeline held pressure, the COGCC allowed Machii-Ross to place the line back into active operation. Additionally the NOAV issued to Machii-Ross was resolved.

Vegetation, Soil Sampling, and Initial Methane Gas Survey

On August 29, 2009, the COGCC and Dr. Carolyn Fordham of Terra Technologies Environmental Services, LLC, conducted investigations on your property. Investigated were stressed vegetation on your property (vegetation samples were collected for follow-on laboratory evaluation) and surface soil samples were collected to evaluate soil salinity and nutrients. A hand-held methane detection meter was also used to detect for methane in prairie dog burrows just west of your driveway. The result of the investigation shows no obvious soil, salinity or nutrient cause for the overall stressed vegetation is present. No methane detections were found on your property. The sample of the lilac showed the presence of powdery mildew, which is endemic in Colorado and treatable with an appropriate fungicide.

Dr Fordham found that magnesium was elevated in the soils on your property and suggests that, although magnesium by itself is unlikely to be a cause of vegetation stress, the use of magnesium chloride (mag chloride) as a dirt road dust suppressor and winter road deicer has been observed to cause vegetation stress, and the application of magnesium chloride on the roads adjacent to your property may be attributable to some of the vegetation effects that you have observed. I have attached a copy of Dr. Fordham's report to this letter.

Trihydro Soil Gas Investigation

On September 22, 2009, Trihydro and COGCC staff installed 13 soil gas (or vapor) push-probe sampling points adjacent to the Machii-Ross gathering pipeline and on your property for the identification of methane gas in the shallow subsurface. Sample locations were selected based on either proximity to the pipeline or distressed vegetation. Other than two locations at the intersection of county roads 18 and 19, none of the remaining 11 sample locations had detections of methane. Two soil gas sample submitted for laboratory analysis contained very low concentrations of methane of 0.00047 percent and 0.00019 percent, both similar to methane volumes found in normal air and not to any methane gas impact to your property. A copy of the Trihydro report is attached to this report.

CONCLUSIONS

Based on the results of both the 2007 investigation (under complaint No. 200114492) and the investigation for this complaint (No. 200216887), the stressed vegetation on your property is not related to leaks(s) in the Machii-Ross natural gas gathering pipeline or the presence of natural gas in the soil gas on your property. Because no evidence of oil & gas operations can be identified that are responsible for the stressed vegetation on your property, COGCC complaint investigation No. 200216887 is resolved and no further investigation will be conducted at this time.

If you have any questions or would like to discuss these matters further, please contact me at the COGCC in Denver via e-mail (robert.chesson@state.co.us) or by phone at 303-894-2100, extension 5112.

Respectfully,

A handwritten signature in black ink, appearing to read 'Robert H. Chesson', with a long horizontal flourish extending to the right.

Robert H. Chesson, C.P.G., P.G.
Environmental Protection Specialist

cc: Dave Neslin – COGCC
Debbie Baldwin – COGCC
Jim Precup - COGCC
Machii-Ross c/o Andy Peterson, Peterson Energy Operating, Inc.