

To: Helis Oil & Gas, LLC
From: Kristjan Varnik, Tetra Tech, Inc.
Subject: August Noise Monitoring Report
Date: September 30, 2015

Helis Energy has contracted Tetra Tech to provide environmental monitoring during exploration and development activities in Mandeville, Louisiana. This memo provides information on acoustic monitoring during September 2015.

Two noise monitoring locations were selected for this project. Site 1 is at the intersection of Interstate 12 and LA Highway 1088 (Figure 1). Other than intermittent noise produced by construction equipment moving soil for the project, noise at this location is dominated by traffic on I-12.

Site 2 is at Lakeshore High School (Figure 2). The monitoring stations were set up within the fenced-in air monitoring areas to protect the equipment and increase reliability of data. Ambient noise generated by air handling equipment was prevalent at all the potential monitoring sites evaluated at Lakeshore High School. To reduce the influence of near-by noise, the acoustic monitoring station was positioned so that the equipment shed for the air monitoring station shielded the acoustic sensor from air conditioning noise to the extent possible.



Figure 1. Acoustic monitoring at Site 1



Figure 2. Acoustic monitoring at Site 2

Measurements were taken with a Larson Davis 831 real-time sound level analyzer equipped with a PCB model 377B02 1/2" precision condenser microphone. This instrument has an operating range of 5 dB to 140 dB, and an overall frequency range of 8 to 20,000 Hz. It meets or exceeds all requirements in the American National Standards Institute (ANSI) standards for Type 1 sound level meters for quality and accuracy (precision). The sound meters are Larson Davis 831 Sound level meters connected to a portable PC with internet connectivity. Sound levels and equipment status are remotely monitored over the internet. The microphones and windscreens were tripod-mounted at an approximate height of 1.5 to 1.7 meters (4.9 to 5.6 feet) above grade away from effects of ground level noise and reflective surfaces. The calibration sheets of the equipment are included in Appendix A.

Summary of Sound Levels (July 27 to August 31, 2015)

Sound monitoring stations were deployed on June 26th, 2015. Sound levels at both stations were normally below the state regulatory threshold of 60 dBA. Instances where sound levels increased in one location, but not the other, are indicative of minor events occurring near one of the microphones. Instances where a large increase of sound is prevalent on both meters are indicative of major sound events.

Site 1 – Intersection of I-12 and LA 1088

Sound levels are just below 60 dBA most of the time (Figure 3). Storms and natural sounds (frogs and crickets) are the source of large spikes. Air quality monitors are responsible for the cyclic increase in sound levels that occurred throughout the month. The station was demobilized at the end of September.

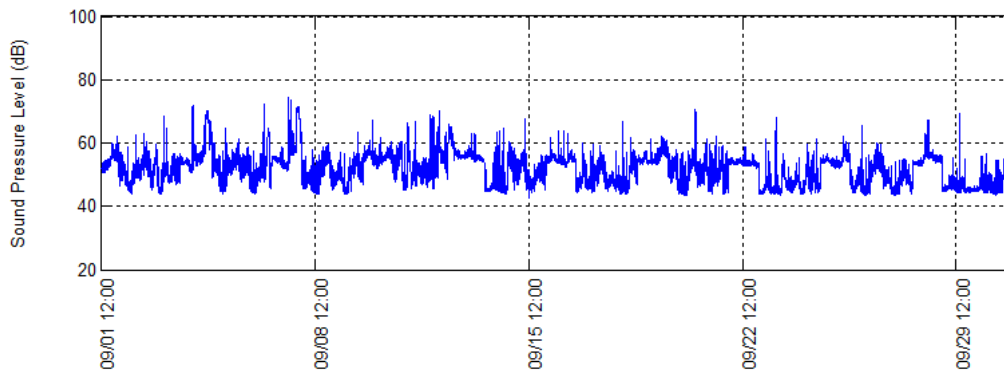


Figure 3. Sound Graph at Site 1 (September 1st – September 30, 2015)

Site 2 – Lakeshore High School

Site 2 was deployed slightly later than station Site 1 (Figure 4). Sound levels are just below 60 dBA most of the time. Sounds on the school grounds including buses, air handling units, and air quality monitors are responsible for the cyclic increase in sound levels that occurred throughout the month. Sounds occurring daily at 7am routinely exceeded the 60 dBA level, but were not unusually loud or obtrusive. The station was serviced in September.

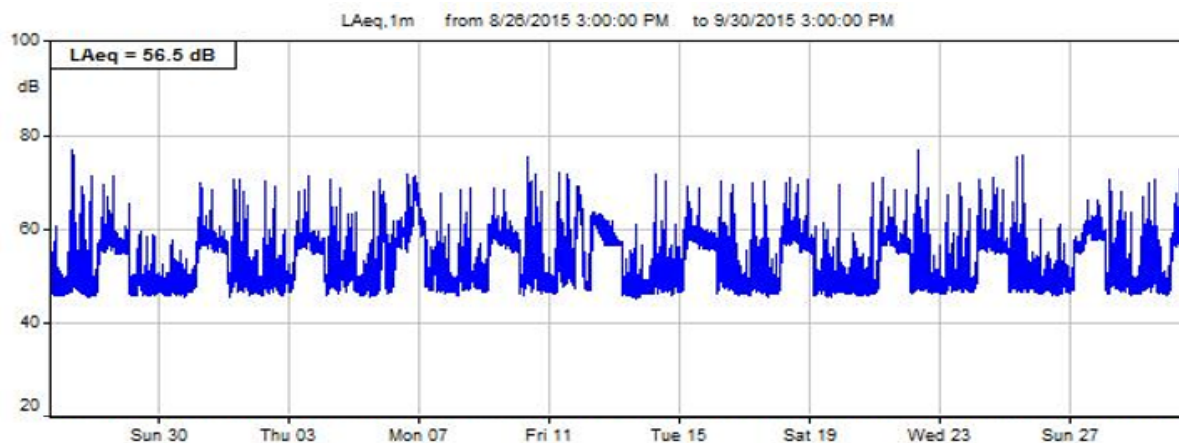


Figure 4. Sound Graph at Site 2 (August 26th – September 30, 2015)