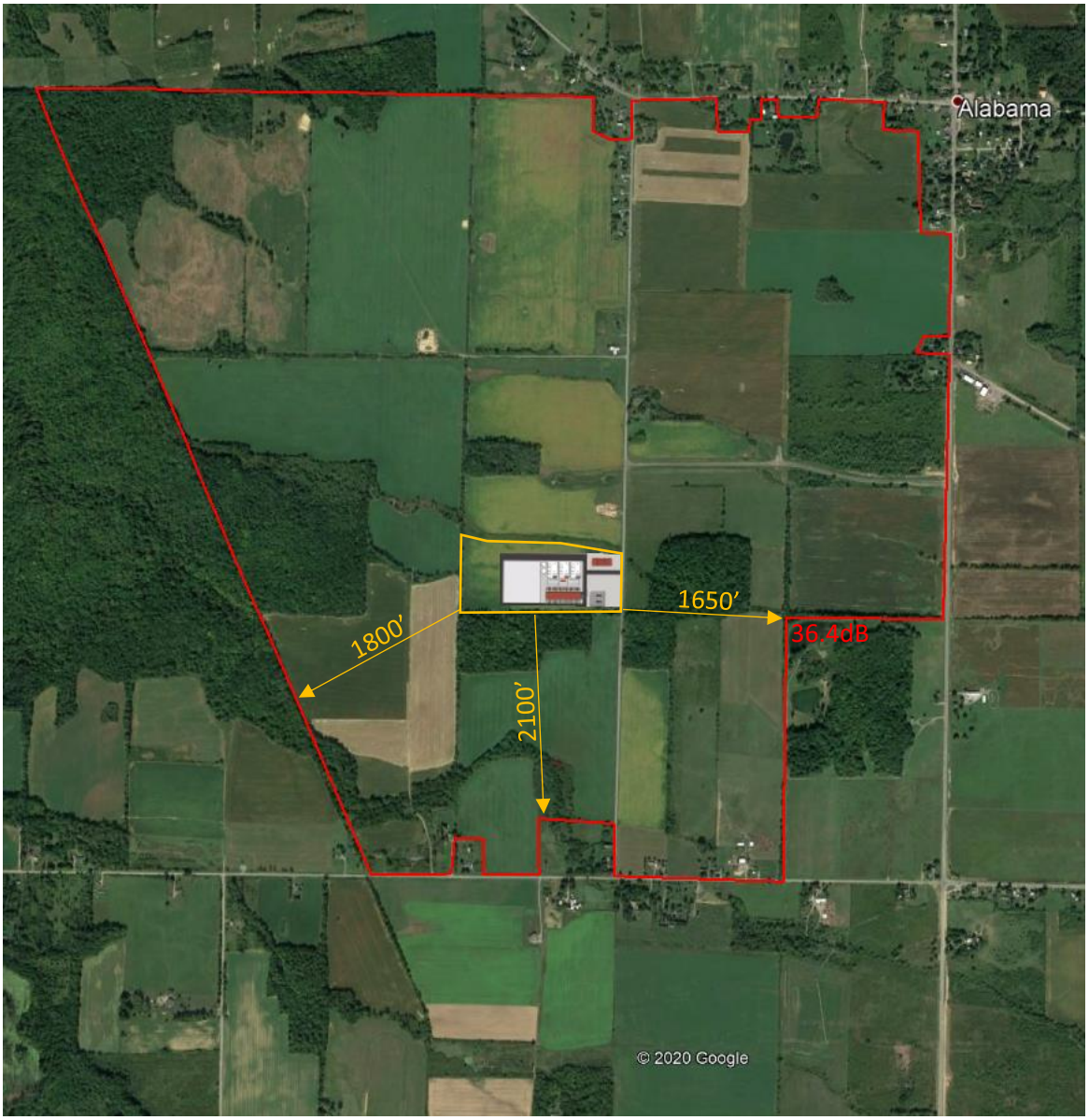

Figure 1 – Distances from liquefaction compressors to STAMP boundaries

Generally, hydrogen production is a very quiet process with few moving parts and only electric drive motors in use. The loudest piece of equipment on the site is the helium compressor located within the liquefaction train which is measured at 90 dB 1’ from the source. After phase 2 there could be a total of 12 compressors located throughout the site. Assuming all these sources located together, the total sound pressure is calculated‡ as follows:

$$dB_{total} = 10 \times \log\left(\sum_{i=1}^{n}\left(\frac{dB_i}{10}\right)\right)$$

For 12 90dB sources the total sound pressure level is 100.8 dB

Figure 1 about shows the distance from the boundaries of the project site to the nearest STAMP boundary. The shortest distance is 1650' from the eastern edge. Which results in a noise level at the boundary of 36.4 dB according to the following calculation[†]:

$$SPL_2 = SPL_1 - 20 \times \log(R_2/R_1)$$

Where, SPL_1 = 100.8 dB; R_1= 1' and R_2 = 1650' and SPL_2 is the Sound Pressure Level at the STAMP boundary.

This represents a worst-case number because it assumes all the noise sources are located at the same point at the worst-case location on the site boundary. In fact, the sources are distributed throughout the site, well away from the boundaries so they do not add as a single point source and their distances are greater to the STAMP boundary.

The worst-case noise level calculated is consistent with the 2012 Final Generic Environmental Impact Statement Findings Statement.

[‡]http://apps.usd.edu/coglab/schieber/psyc707/pdf/AddedNoiseLevels.pdf

[†]https://www.omnicalculator.com/physics/distance-attenuation#sound-attenuation-formula