Table S4. F and p-values from 4-Way ANOVA (total df = 119) examining the effect of site, nitrogen amendment (N), carbon amendment (C) and pH alteration on greenhouse gas (CH_4, CO_2, N_2O) production, denitrification, the proportion of CH_4 produced relative to total carbon production, and the proportion of N_2O produced relative to total denitrification.

	CH_4 production (square root transform)	**CO_2 production (square root transform)**	**N_2O production (square root transform)**	**Denitrification rate (log transform)**	**CH_4 / (CO_2 + CH_4) (log transform)**	**N_2O/ Denitrification (square root transform)**
Site (df = 2)	F = 152.14, **p < 0.001**	F = 0.37, p = 0.692	F = 31.17, **p < 0.001**	F = 5.20, **p = 0.007**	F = 61.69, **p < 0.001**	F = 0.19, p = 0.828
Nitrogen (df = 1)	F = 0.02, p = 0.903	F = 0.20, p = 0.655	F = 1251.93, **p < 0.001**	F = 2015.3, **p < 0.001**	F = 0.19, p = 0.662	F = 41.88, **p < 0.001**
Carbon (df = 1)	F = 14.04, **p < 0.001**	F = 79.58, **p < 0.001**	F = 346.73, **p < 0.001**	F = 64.6, **p < 0.001**	F = 3.76, **p = 0.056**	F = 1.60, p = 0.210
pH (df = 1)	F = 2.92, p = 0.091	F = 77.25, **p < 0.001**	F = 41.67, **p < 0.001**	F = 0.10, p = 0.758	F = 0.86, p = 0.355	F = 4.51, **p = 0.036**
Site × N (df = 2)	F = 0.11, p = 0.898	F = 0.61, p = 0.547	F = 30.81, **p < 0.001**	F = 10.74, **p < 0.001**	F = 1.44, p = 0.242	F = 0.62, p = 0.541
Site × C (df = 2)	F = 0.79, p = 0.457	F = 1.23, p = 0.298	F = 21.10, **p < 0.001**	F = 7.77, **p = 0.001**	F = 0.25, p = 0.777	F = 1.79, p = 0.173
Site × pH (df = 2)	F = 3.04, **p = 0.053**	F = 0.622, p = 0.539	F = 27.13, **p < 0.001**	F = 5.55, **p = 0.005**	F = 3.46, **p = 0.036**	F = 0.01, p = 0.992
N × C (df = 1)	F = 12.40, **p < 0.001**	F = 0.01, p = 0.926	F = 329.37, **p < 0.001**	F = 5.30, **p = 0.024**	F = 9.98, **p = 0.002**	F = 1.00, p = 0.321
N × pH (df = 1)	F = 25.74, **p < 0.001**	F = 2.83, p = 0.096	F = 46.13, **p < 0.001**	F = 19.15, **p < 0.001**	F = 9.44, **p = 0.003**	F = 4.73, **p = 0.032**
C × pH (df = 1)	F = 31.41, **p < 0.001**	F = 2.65, p = 0.107	F = 20.96, **p < 0.001**	F = 0.84, p = 0.363	F = 32.11, **p < 0.001**	F = 13.39, **p < 0.001**
Site × N × C (df = 2)	F = 1.28, p = 0.284	F = 0.71, p = 0.496	F = 19.87, **p < 0.001**	F = 0.67, p = 0.512	F = 3.73, **p = 0.028**	F = 0.99, p = 0.376
Site × N × pH (df = 2)	F = 5.12, **p = 0.008**	F = 1.39, p = 0.254	F = 26.47, **p < 0.001**	F = 6.04, **p = 0.003**	F = 0.58, p = 0.563	F = 1.30, p = 0.828
Site × C × pH (df = 2)	F = 37.92, **p < 0.001**	F = 0.46, p = 0.634	F = 32.66, **p < 0.001**	F = 5.55, **p = 0.005**	F = 39.36, **p < 0.001**	F = 0.84, p = 0.434
N × C × pH (df = 1)	F = 1.71, p = 0.194	F = 0.05, p = 0.827	F = 26.35, **p < 0.001**	F = 35.24, **p < 0.001**	F = 0.15, p = 0.699	F = 1.41, p = 0.238
Site × N × C × pH (df = 2)	F = 12.28, **p < 0.001**	F = 1.57, p = 0.214	F = 31.99, **p < 0.001**	F = 5.73, **p = 0.004**	F = 6.47, **p = 0.002**	F = 0.20, p = 0.818

Values in bold are significant at an alpha < 0.05.