

## ENVIRONMENT

**Title:** Survey Monitoring of Environmental Factors from Bedded Swine Systems,  
**NPB #01-161**

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### Abstract

Six deep bedded swine production sites were surveyed for hydrogen sulfide, ammonia and odor concentrations. Each site was observed four different times with readings 6 times over a 36 hour period. Hydrogen sulfide, ammonia and odor were measured at the building edge and downwind 100 feet. Hydrogen sulfide and ammonia were measured 500 feet downwind also. The site averages for hydrogen sulfide were found to range from 25 to 228 ppb at the building edge, 2 to 11 ppb 100 feet downwind and 4 to 8 ppb 500 feet downwind. Ammonia site averages were found to range from 2 to 11 ppm at the building edge, undetectable to 3 ppm downwind 100 feet and undetectable at 500 feet. Odor threshold site averages ranged from 130 to 580 at the building and 80 to 500 at a point 100 feet from the building. Single point hydrogen sulfide monitors were used 100 feet from the building at the four compass points. The downwind monitor yielded weighted averages ranging from 0.8 to 8.1 ppb for the six sites. This data is all based on limited observations.

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