**Section 258.APPENDIX D Land Application Area Sampling**

The number of composite sample collected from the land application area will depend on the size of the land application area. For areas up to 20 acres in size, the land application area must be divided into quadrants and a composite sample will be collected from each quadrant, providing four samples. Land application areas larger than 20 acres will be divided into five-acre square grids approximately 467 feet long on each side. A composite sample s will be collected from each of 4 randomly selected five-acre squares in land application areas up to 80 acres in size, representing no less than 25 percent of the five-acre grids. Land application areas larger than 80 acres will have 25 percent of the five-acre squares randomly sampled. The five-acre squares will be sampled by dividing the square into quadrants and obtaining a composite grab sample from each of the four quadrants. The number of composite samples for each land application area must be determined by multiplying the number of five-acre squares by 0.25 and rounding to the nearest whole number.

SAMPLE NUMBER DETERMINATION

|  |  |  |
| --- | --- | --- |
| LAND APPLICATION AREA(ACRES) (A) | NUMBER OF FIVEACRE SQUARES (N) | NUMBER OFSAMPLES (S) |
|  |  |  |
| 5 | N/A | 4 |
| 10 | N/A | 4 |
| 15 | N/A | 4 |
| 20 | N/A | 4 |
| 40 | 8 | 4 |
| 60 | 12 | 4 |
| 80 | 16 | 4 |
| 100 | 20 | 5 |
| 120 | 24 | 6 |
| 140 | 28 | 7 |
| 160 | 32 | 8 |
| A | N=A/5 | S=N/4 |

The sample locations must be determined by assigning consecutive numbers to each five-acre square. A series of random numbers must be generated using a computer spreadsheet program or a random number table. The numbered five-acre squares that correspond to the random numbers must be sampled until the required number of samples is obtained.

The laboratory results must be evaluated to determine the mean concentration and standard deviation of the sample. The value of the concentration reported as present but below detection limit will be used in the calculations. A value of zero will be used for results that are reported as non-detectable.

All land application area samples must be collected from the soil profile, starting at the soil surface and extending to a depth specified in Section 258.90 of this Part.

(Source: Section 258.APPENDIX D renumbered from Section 258.APPENDIX C and amended at 26 Ill. Reg. 17155, effective November 18, 2002)