



**NUTRIENT**  
ADVISORS

June 15, 2021

RECEIVED

Daniel Lemaistre  
Nebraska Department of Environment & Energy  
P.O. Box 98922  
Lincoln, NE 68509-8922

JUN 21 2021

Nebraska Dept of Environmental Quality  
By: \_\_\_\_\_ DEQ#192 \_\_\_\_\_

RE: AltEn, LLC  
NDEEID: 84069  
Subject: Compost Sampling

Dear Mr. Lemaistre:

Enclosed are the soil sample results taken from the compost pad at AltEn, LLC.

If you have any questions please call our office.

Sincerely,

Andy Scholting

Nutrient Advisors

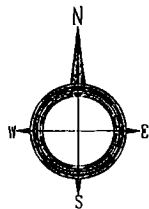
Enclosures



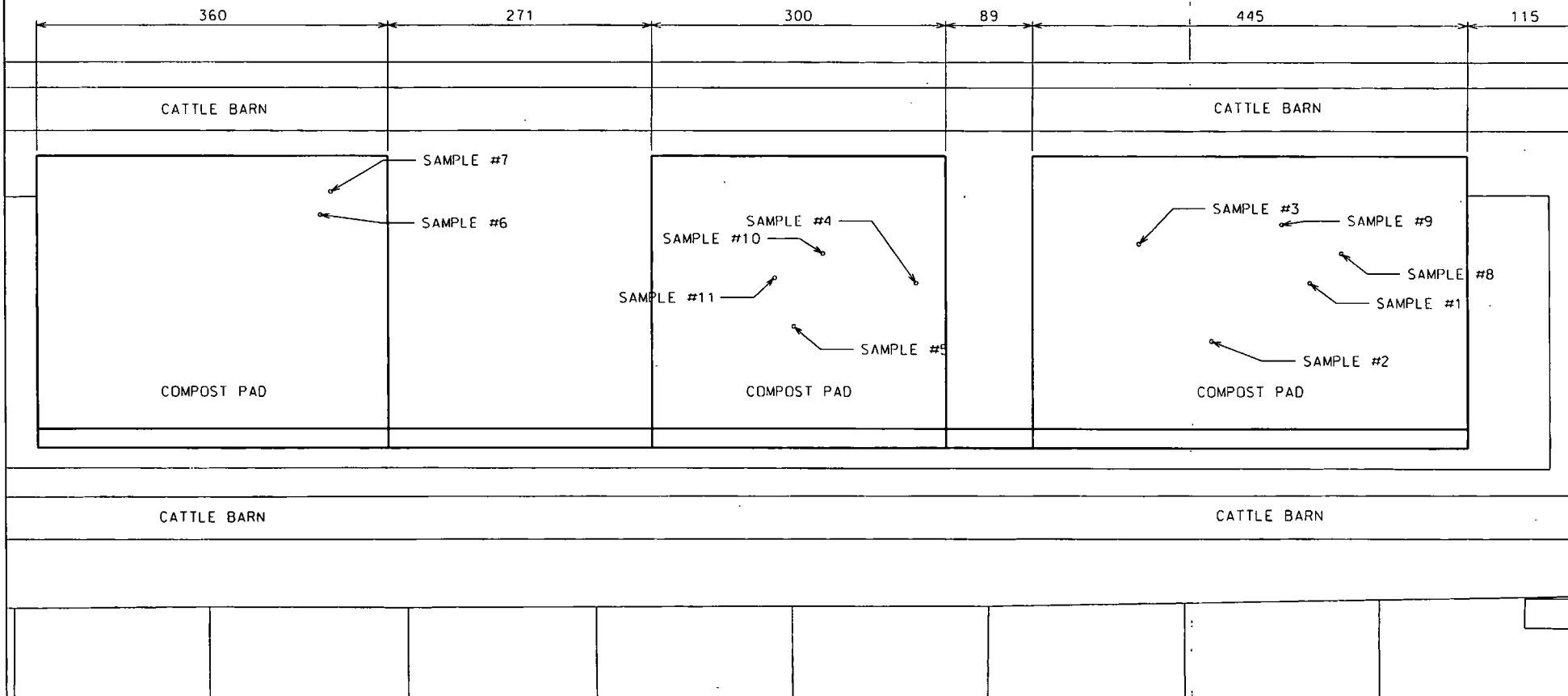
449 E. Deere Street • West Point, NE 68788  
Phone: 402.372.CAFO nutrientadvisors.com



COMPOST PAD  
 ALTEN, LLC  
 SW 1/2, SEC 12, T 14 N, R 8 E  
 SAUNDERS COUNTY  
 SETTLE AGRI SERVICES  
 AND ENGINEERING, INC



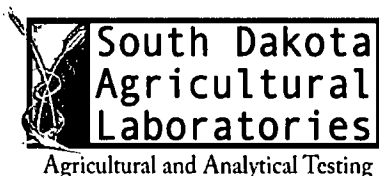
SCALE: 1"=100'



| Operation: AltEn, LLC |                     | Analyte Test Results      |                    |                    |                  |                |                           |                  |        |              |        |                          |        |       |        |                                       |        |
|-----------------------|---------------------|---------------------------|--------------------|--------------------|------------------|----------------|---------------------------|------------------|--------|--------------|--------|--------------------------|--------|-------|--------|---------------------------------------|--------|
| NDEEID: 84069         |                     | Date of Sample: 5/14/2021 |                    |                    |                  |                | Date of Sample: 5/26/2021 |                  |        |              |        |                          |        |       |        |                                       |        |
| Sample ID             | Thiabendazole (ppb) | Clothianidin (ppb)        | Thiamethoxam (ppb) | Azoxystrobin (ppb) | Glyphosate (ppb) | Nitrates (ppm) |                           | Phosphorus (ppm) |        | Sodium (ppm) |        | Organic Matter (percent) |        | pH    |        | Cation Exchange Capacities (meg/100g) |        |
|                       | 0-12"               | 0-12"                     | 0-12"              | 0-12"              | 0-12"            | 0-12"          | 12-36"                    | 0-12"            | 12-36" | 0-12"        | 12-36" | 0-12"                    | 12-36" | 0-12" | 12-36" | 0-12"                                 | 12-36" |
| ALT-CP-1              | 68.8                | 1,290                     | 192                | 7.41               | J7.0             | 9              | 5                         | 136              | 6      | 84           | 98     | 1.4                      | 1.5    | 5.8   | 5.9    | 23.1                                  | 32.5   |
| ALT-CP-2              | 72.7                | 830                       | 302                | 5.97               | J4.0             | 25             | 47                        | 148              | 58     | 36           | 23     | 1.3                      | 0.8    | 7.4   | 7.6    | 15.0                                  | 7.4    |
| ALT-CP-3              | 305.0               | 5,390                     | 1,240              | 57.20              | 554.0            | 75             | 4                         | 248              | 49     | 75           | 43     | 1.4                      | 0.3    | 7.3   | 8.5    | 13.9                                  | 5.5    |
| ALT-CP-4              | 46.1                | 1,350                     | 596                | 8.03               | ND               | 84             | 10                        | 116              | 23     | 91           | 67     | 2.6                      | 2.4    | 6.9   | 7.5    | 23.2                                  | 20.3   |
| ALT-CP-5              | 185.0               | 631                       | 226                | 20.10              | ND               | 7              | 2                         | 63               | 27     | 60           | 61     | 2.8                      | 2.3    | 7.8   | 7.6    | 18.6                                  | 19.2   |
| ALT-CP-6              | 189.0               | 751                       | 109                | 5.50               | ND               | 4              | 2                         | 60               | 37     | 54           | 60     | 2.4                      | 2.0    | 8.1   | 8.0    | 19.4                                  | 21.2   |
| ALT-CP-7              | 154.0               | 1,140                     | 238                | 11.10              | ND               | 12             | 3                         | 48               | 23     | 66           | 96     | 1.4                      | 1.5    | 7.9   | 7.8    | 19.6                                  | 22.1   |
| ALT-CP-8              | 18.4                | 3,860                     | 1,510              | J4.25              | ND               | 49             | 8                         | 42               | 3      | 107          | 93     | 1.6                      | 1.4    | 7.1   | 7.3    | 18.7                                  | 22.5   |
| ALT-CP-9              | 105.0               | 1,420                     | 326                | 13.40              | ND               | 32             | 53                        | 76               | 29     | 84           | 60     | 1.7                      | 1.2    | 7.3   | 7.1    | 25.8                                  | 23.2   |
| ALT-CP-10             | 152.0               | 1,910                     | 635                | 42.00              | J4.8             | 37             | 5                         | 113              | 46     | 115          | 135    | 3.4                      | 2.5    | 6.8   | 6.8    | 19.2                                  | 19.7   |
| ALT-CP-11             | 55.2                | 6,100                     | 1,420              | 20.20              | J6.4             | 113            | 24                        | 103              | 47     | 118          | 196    | 2.4                      | 1.4    | 6.7   | 7.3    | 22.7                                  | 24.1   |

ND = Not Detected above the limit of quantification

A "J" preceding the result of analysis indicates that the result falls below the Limit of Detection (LOD) and the Limit of Quantitation (LDQ) and is only an estimate.



South Dakota Agricultural Laboratories  
1335 Western Avenue  
Brookings, South Dakota 57006  
Phone: 605-692-7325  
E-Mail: regina.wixon@sdaglabs.com

Report Date: 2021-05-28

Final Report

## Report Of Analysis

Nutrient Advisors  
449 E Deere St  
West Point, NE 68788

Received: 2021-05-18  
Reported: 2021-05-28  
Package Id: 20210518-003

| 21PE004043 Soil   |        | ALT-CP-1 |     |          |
|-------------------|--------|----------|-----|----------|
|                   | Result | LOD      | LOQ | Method   |
| Acetamprid ppb    | ND     | 2        | 4   | LC-MS/MS |
| Azoxystrobin ppb  | 7.41   | 2        | 5   | LC-MS/MS |
| Clothianidin ppb  | 1290   | 3        | 7   | LC-MS/MS |
| Dinotefuran ppb   | ND     | 3        | 7   | LC-MS/MS |
| Glyphosate ppb    | J7.00  | 3        | 10  | LC-MS/MS |
| Imidacloprid ppb  | J2.19  | 2        | 4   | LC-MS/MS |
| Nitenpyram ppb    | ND     | 3        | 7   | LC-MS/MS |
| Thiabendazole ppb | 68.8   | 1        | 4   | LC-MS/MS |
| Thiacloprid ppb   | ND     | 1        | 3   | LC-MS/MS |
| Thiamethoxam ppb  | 192    | 2        | 5   | LC-MS/MS |

| 21PE004044 Soil   |        | ALT-CP-2 |     |          |
|-------------------|--------|----------|-----|----------|
|                   | Result | LOD      | LOQ | Method   |
| Acetamprid ppb    | ND     | 2        | 4   | LC-MS/MS |
| Azoxystrobin ppb  | 5.97   | 2        | 5   | LC-MS/MS |
| Clothianidin ppb  | 830    | 3        | 7   | LC-MS/MS |
| Dinotefuran ppb   | ND     | 3        | 7   | LC-MS/MS |
| Glyphosate ppb    | J4.00  | 3        | 10  | LC-MS/MS |
| Imidacloprid ppb  | ND     | 2        | 4   | LC-MS/MS |
| Nitenpyram ppb    | ND     | 3        | 7   | LC-MS/MS |
| Thiabendazole ppb | 72.7   | 1        | 4   | LC-MS/MS |
| Thiacloprid ppb   | ND     | 1        | 3   | LC-MS/MS |
| Thiamethoxam ppb  | 302    | 2        | 5   | LC-MS/MS |

| 21PE004045 Soil   |        | ALT-CP-3 |     |          |
|-------------------|--------|----------|-----|----------|
|                   | Result | LOD      | LOQ | Method   |
| Acetamprid ppb    | ND     | 2        | 4   | LC-MS/MS |
| Azoxystrobin ppb  | 57.2   | 2        | 5   | LC-MS/MS |
| Clothianidin ppb  | 5390   | 3        | 7   | LC-MS/MS |
| Dinotefuran ppb   | ND     | 3        | 7   | LC-MS/MS |
| Glyphosate ppb    | 554    | 3        | 10  | LC-MS/MS |
| Imidacloprid ppb  | 7.85   | 2        | 4   | LC-MS/MS |
| Nitenpyram ppb    | ND     | 3        | 7   | LC-MS/MS |
| Thiabendazole ppb | 305    | 1        | 4   | LC-MS/MS |
| Thiacloprid ppb   | ND     | 1        | 3   | LC-MS/MS |
| Thiamethoxam ppb  | 1240   | 2        | 5   | LC-MS/MS |

| <b>21PE004046</b> | <b>Soil</b>   | <b>ALT-CP-4</b> |            |               |
|-------------------|---------------|-----------------|------------|---------------|
|                   | <u>Result</u> | <u>LOD</u>      | <u>LOQ</u> | <u>Method</u> |
| Acetamprid ppb    | ND            | 2               | 4          | LC-MS/MS      |
| Azoxystrobin ppb  | 8.03          | 2               | 5          | LC-MS/MS      |
| Clothianidin ppb  | 1350          | 3               | 7          | LC-MS/MS      |
| Dinotefuran ppb   | ND            | 3               | 7          | LC-MS/MS      |
| Glyphosate ppb    | ND            | 3               | 10         | LC-MS/MS      |
| Imidacloprid ppb  | 11.3          | 2               | 4          | LC-MS/MS      |
| Nitenpyram ppb    | ND            | 3               | 7          | LC-MS/MS      |
| Thiabendazole ppb | 46.1          | 1               | 4          | LC-MS/MS      |
| Thiacloprid ppb   | ND            | 1               | 3          | LC-MS/MS      |
| Thiamethoxam ppb  | 596           | 2               | 5          | LC-MS/MS      |

| <b>21PE004047</b> | <b>Soil</b>   | <b>ALT-CP-5</b> |            |               |
|-------------------|---------------|-----------------|------------|---------------|
|                   | <u>Result</u> | <u>LOD</u>      | <u>LOQ</u> | <u>Method</u> |
| Acetamprid ppb    | ND            | 2               | 4          | LC-MS/MS      |
| Azoxystrobin ppb  | 20.1          | 2               | 5          | LC-MS/MS      |
| Clothianidin ppb  | 631           | 3               | 7          | LC-MS/MS      |
| Dinotefuran ppb   | ND            | 3               | 7          | LC-MS/MS      |
| Glyphosate ppb    | ND            | 3               | 10         | LC-MS/MS      |
| Imidacloprid ppb  | 4.93          | 2               | 4          | LC-MS/MS      |
| Nitenpyram ppb    | ND            | 3               | 7          | LC-MS/MS      |
| Thiabendazole ppb | 185           | 1               | 4          | LC-MS/MS      |
| Thiacloprid ppb   | ND            | 1               | 3          | LC-MS/MS      |
| Thiamethoxam ppb  | 226           | 2               | 5          | LC-MS/MS      |

| <b>21PE004048</b> | <b>Soil</b>   | <b>ALT-CP-6</b> |            |               |
|-------------------|---------------|-----------------|------------|---------------|
|                   | <u>Result</u> | <u>LOD</u>      | <u>LOQ</u> | <u>Method</u> |
| Acetamprid ppb    | ND            | 2               | 4          | LC-MS/MS      |
| Azoxystrobin ppb  | 5.50          | 2               | 5          | LC-MS/MS      |
| Clothianidin ppb  | 751           | 3               | 7          | LC-MS/MS      |
| Dinotefuran ppb   | ND            | 3               | 7          | LC-MS/MS      |
| Glyphosate ppb    | ND            | 3               | 10         | LC-MS/MS      |
| Imidacloprid ppb  | J2.79         | 2               | 4          | LC-MS/MS      |
| Nitenpyram ppb    | ND            | 3               | 7          | LC-MS/MS      |
| Thiabendazole ppb | 189           | 1               | 4          | LC-MS/MS      |
| Thiacloprid ppb   | ND            | 1               | 3          | LC-MS/MS      |
| Thiamethoxam ppb  | 109           | 2               | 5          | LC-MS/MS      |

| <b>21PE004049</b> | <b>Soil</b>   | <b>ALT-CP-7</b> |            |               |
|-------------------|---------------|-----------------|------------|---------------|
|                   | <u>Result</u> | <u>LOD</u>      | <u>LOQ</u> | <u>Method</u> |
| Acetamprid ppb    | ND            | 2               | 4          | LC-MS/MS      |
| Azoxystrobin ppb  | 11.1          | 2               | 5          | LC-MS/MS      |
| Clothianidin ppb  | 1140          | 3               | 7          | LC-MS/MS      |
| Dinotefuran ppb   | ND            | 3               | 7          | LC-MS/MS      |
| Glyphosate ppb    | ND            | 3               | 10         | LC-MS/MS      |
| Imidacloprid ppb  | 4.99          | 2               | 4          | LC-MS/MS      |
| Nitenpyram ppb    | ND            | 3               | 7          | LC-MS/MS      |
| Thiabendazole ppb | 154           | 1               | 4          | LC-MS/MS      |
| Thiacloprid ppb   | ND            | 1               | 3          | LC-MS/MS      |
| Thiamethoxam ppb  | 238           | 2               | 5          | LC-MS/MS      |

| <b>21PE004050</b> | <b>Soil</b>   | <b>ALT-CP-8</b> |            |               |
|-------------------|---------------|-----------------|------------|---------------|
|                   | <u>Result</u> | <u>LOD</u>      | <u>LOQ</u> | <u>Method</u> |
| Acetamprid ppb    | ND            | 2               | 4          | LC-MS/MS      |
| Azoxystrobin ppb  | J4.25         | 2               | 5          | LC-MS/MS      |
| Clothianidin ppb  | 3860          | 3               | 7          | LC-MS/MS      |
| Dinotefuran ppb   | ND            | 3               | 7          | LC-MS/MS      |
| Glyphosate ppb    | ND            | 3               | 10         | LC-MS/MS      |
| Imidacloprid ppb  | 11.6          | 2               | 4          | LC-MS/MS      |
| Nitenpyram ppb    | ND            | 3               | 7          | LC-MS/MS      |
| Thiabendazole ppb | 18.4          | 1               | 4          | LC-MS/MS      |
| Thiacloprid ppb   | ND            | 1               | 3          | LC-MS/MS      |
| Thiamethoxam ppb  | 1510          | 2               | 5          | LC-MS/MS      |

| <b>21PE004051</b> | <b>Soil</b>   | <b>ALT-CP-9</b> |            |               |
|-------------------|---------------|-----------------|------------|---------------|
|                   | <u>Result</u> | <u>LOD</u>      | <u>LOQ</u> | <u>Method</u> |
| Acetamprid ppb    | ND            | 2               | 4          | LC-MS/MS      |
| Azoxystrobin ppb  | 13.4          | 2               | 5          | LC-MS/MS      |
| Clothianidin ppb  | 1420          | 3               | 7          | LC-MS/MS      |
| Dinotefuran ppb   | ND            | 3               | 7          | LC-MS/MS      |
| Glyphosate ppb    | ND            | 3               | 10         | LC-MS/MS      |
| Imidacloprid ppb  | J2.42         | 2               | 4          | LC-MS/MS      |
| Nitenpyram ppb    | ND            | 3               | 7          | LC-MS/MS      |
| Thiabendazole ppb | 105           | 1               | 4          | LC-MS/MS      |
| Thiacloprid ppb   | ND            | 1               | 3          | LC-MS/MS      |
| Thiamethoxam ppb  | 326           | 2               | 5          | LC-MS/MS      |

| <b>21PE004052</b> | <b>Soil</b>   | <b>ALT-CP-10</b> |            |               |
|-------------------|---------------|------------------|------------|---------------|
|                   | <u>Result</u> | <u>LOD</u>       | <u>LOQ</u> | <u>Method</u> |
| Acetamprid ppb    | ND            | 2                | 4          | LC-MS/MS      |
| Azoxystrobin ppb  | 42.0          | 2                | 5          | LC-MS/MS      |
| Clothianidin ppb  | 1910          | 3                | 7          | LC-MS/MS      |
| Dinotefuran ppb   | ND            | 3                | 7          | LC-MS/MS      |
| Glyphosate ppb    | J4.80         | 3                | 10         | LC-MS/MS      |
| Imidacloprid ppb  | 34.3          | 2                | 4          | LC-MS/MS      |
| Nitenpyram ppb    | ND            | 3                | 7          | LC-MS/MS      |
| Thiabendazole ppb | 152           | 1                | 4          | LC-MS/MS      |
| Thiacloprid ppb   | ND            | 1                | 3          | LC-MS/MS      |
| Thiamethoxam ppb  | 635           | 2                | 5          | LC-MS/MS      |

| <b>21PE004053</b> | <b>Soil</b>   | <b>ALT-CP-11</b> |            |               |
|-------------------|---------------|------------------|------------|---------------|
|                   | <u>Result</u> | <u>LOD</u>       | <u>LOQ</u> | <u>Method</u> |
| Acetamprid ppb    | ND            | 2                | 4          | LC-MS/MS      |
| Azoxystrobin ppb  | 20.2          | 2                | 5          | LC-MS/MS      |
| Clothianidin ppb  | 6100          | 3                | 7          | LC-MS/MS      |
| Dinotefuran ppb   | ND            | 3                | 7          | LC-MS/MS      |
| Glyphosate ppb    | J6.40         | 3                | 10         | LC-MS/MS      |
| Imidacloprid ppb  | 49.1          | 2                | 4          | LC-MS/MS      |
| Nitenpyram ppb    | ND            | 3                | 7          | LC-MS/MS      |
| Thiabendazole ppb | 55.2          | 1                | 4          | LC-MS/MS      |
| Thiacloprid ppb   | ND            | 1                | 3          | LC-MS/MS      |
| Thiamethoxam ppb  | 1420          | 2                | 5          | LC-MS/MS      |

A "J" preceding the result of analysis indicates that the result falls between the Limit of Detection (LOD) and the Limit of Quantitation (LOQ) and is only an estimate.

The LOD is the lowest quantity of an analyte that can be distinguished from the absence of the analyte.

The LOQ is the limit that an analyte can be accurately detected.

ND Not Detected

Reviewed and approved by Regina Wixon, Ph.D.

PAGE 1/3

REPORT DATE **JUN 14, 2021**

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**SOIL ANALYSIS REPORT by MIDWEST LABORATORIES**  
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| LAB<br>NUMBER | SAMPLE<br>IDENTIFICATION | ORGANIC<br>MATTER |  | PHOSPHORUS     |                  |                       |       | NEUTRAL AMMONIUM ACETATE (EXCHANGEABLE) |      |      |        | pH   |     | CATION<br>EXCHANGE<br>CAPACITY | PERCENT BASE SATURATION<br>(COMPUTED) |         |          |         |     |      |      |      |      |      |     |
|---------------|--------------------------|-------------------|--|----------------|------------------|-----------------------|-------|---|------|------|--------|------|-----|--------------------------------|---------------------------------------|---------|----------|---------|-----|------|------|------|------|------|-----|
|               |                          |                   |  | P <sub>1</sub> | P <sub>2</sub>   | BICARBONATE<br>P      | K     | Mg                                      | Ca   | Na   | %<br>K |      |     |                                | %<br>Mg                               | %<br>Ca | %<br>H   | %<br>Na |     |      |      |      |      |      |     |
|               |                          |                   |  | L.O.I.         | WEAK BRAY<br>1:7 | STRONG<br>BRAY<br>1:7 | OLSEN |   |      |      |        |      |     |                                |                                       |         |          |         |     |      |      |      |      |      |     |
|               |                          |                   |  | PERCENT RATE   | ppm RATE         | ppm RATE              | ppm   | RATE                                    | ppm  | RATE | ppm    | RATE | ppm | RATE                           | 1:1                                   |         | meq/100g |         |     |      |      |      |      |      |     |
| 38007997      | CP-1                     | 1.4               |  | 136            |                  | 160                   |       |   | 1201 |      | 1004   |      |     | 1368                           |                                       | 84      |          | 5.8     | 6.5 | 23.1 | 13.3 | 36.2 | 29.6 | 19.3 | 1.6 |
| 38007998      | CP-2                     | 1.3               |  | 148            |                  | 150                   |       |   | 522  |      | 442    |      |     | 1958                           |                                       | 36      |          | 7.4     |     | 15.0 | 8.9  | 24.6 | 65.5 |      | 1.0 |
| 38007999      | CP-3                     | 1.4               |  | 248            |                  |                       |       | 115                                     | 220  |      | 504    |      |     | 1542                           |                                       | 75      |          | 7.3     |     | 13.9 | 11.8 | 30.2 | 55.7 |      | 2.3 |
| 38008000      | CP-4                     | 2.6               |  | 116            |                  | 144                   |       |   | 971  |      | 707    |      |     | 2887                           |                                       | 91      |          | 6.9     |     | 23.2 | 10.7 | 25.4 | 62.2 |      | 1.7 |
| 38008001      | CP-5                     | 2.8               |  | 63             |                  | 132                   |       | 126                                     |      | 825  |        | 592  |     | 2262                           |                                       | 60      |          | 7.8     |     | 18.6 | 11.4 | 26.5 | 60.7 |      | 1.4 |
| 38008002      | CP-6                     | 2.4               |  | 60             |                  | 126                   |       | 122                                     |      | 1102 |        | 609  |     | 2258                           |                                       | 54      |          | 8.1     |     | 19.4 | 14.6 | 26.2 | 58.0 |      | 1.2 |
| 38008003      | CP-7                     | 1.4               |  | 48             |                  | 141                   |       | 93                                      |      | 1110 |        | 675  |     | 2172                           |                                       | 66      |          | 7.9     |     | 19.6 | 14.5 | 28.7 | 55.3 |      | 1.5 |
| 38008004      | CP-8                     | 1.6               |  | 42             |                  | 131                   |       | 105                                     |      | 750  |        | 808  |     | 1918                           |                                       | 107     |          | 7.1     |     | 18.7 | 10.3 | 36.0 | 51.2 |      | 2.3 |
| 38008005      | CP-9                     | 1.7               |  | 76             |                  | 160                   |       | 139                                     |      | 654  |        | 681  |     | 3616                           |                                       | 84      |          | 7.3     |     | 25.8 | 6.5  | 22.0 | 70.1 |      | 1.4 |
| 38008006      | CP-10                    | 3.4               |  | 113            |                  | 142                   |       |   |      | 663  |        | 566  |     | 2460                           |                                       | 115     |          | 6.8     |     | 19.2 | 8.9  | 24.6 | 63.9 |      | 2.6 |

[illegible]

PAGE 2/3

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**SOIL ANALYSIS REPORT by MIDWEST LABORATORIES**  
**VIEW YOUR SUBMITTAL FORM**

| LAB<br>NUMBER | SAMPLE<br>IDENTIFICATION | ORGANIC<br>MATTER |  | PHOSPHORUS   |          |                |                | NEUTRAL AMMONIUM ACETATE (EXCHANGEABLE) |     |           |      | pH   |      | CATION<br>EXCHANGE<br>CAPACITY | PERCENT BASE SATURATION<br>(COMPUTED) |        |          |         |         |         |         |        |      |     |
|---------------|--------------------------|-------------------|--|--------------|----------|----------------|----------------|---|-----|-----------|------|------|------|--------------------------------|---------------------------------------|--------|----------|---------|---------|---------|---------|--------|------|-----|
|               |                          |                   |  |              |          |                |                | POTASSIUM                               |     | MAGNESIUM |      |      |      |                                |                                       |        |          |         |         | CALCIUM |         | SODIUM |      |     |
|               |                          |                   |  | L.O.I.       |          | P <sub>1</sub> | P <sub>2</sub> | BICARBONATE<br>P                        | K   | Mg        | Ca   | Na   | SOIL |                                | BUFFER                                | C.E.C. | %<br>K   | %<br>Mg | %<br>Ca | %<br>H  | %<br>Na |        |      |     |
|               |                          |                   |  | PERCENT RATE | ppm RATE | ppm RATE       | ppm            | RATE                                    | ppm | RATE      | ppm  | RATE | ppm  |                                | RATE                                  | 1:1    | meq/100g |         |         |         |         |        |      |     |
| 38008007      | CP-11                    | 2.4               |  | 103          |          | 150            |                |   | 771 |           | 725  |      | 2834 |                                | 118                                   |        | 6.7      |         | 22.7    | 8.7     | 26.6    | 62.4   |      | 2.3 |
| 38008008      | CP-1                     | 1.5               |  | 6            |          | 147            |                |   | 182 |           | 1101 |      | 3377 |                                | 98                                    |        | 5.9      |         | 32.5    | 1.4     | 28.2    | 52.0   | 17.1 | 1.3 |
| 38008009      | CP-2                     | 0.8               |  | 58           |          | 125            |                | 38                                      | 191 |           | 222  |      | 983  |                                | 23                                    |        | 7.6      | 6.5     | 7.4     | 6.6     | 25.0    | 67.0   |      | 1.4 |
| 38008010      | CP-3                     | 0.3               |  | 49           |          | 99             |                | 37                                      | 207 |           | 181  |      | 647  |                                | 43                                    |        | 8.5      |         | 5.5     | 9.7     | 27.4    | 59.5   |      | 3.4 |
| 38008011      | CP-4                     | 2.4               |  | 23           |          | 137            |                | 49                                      | 340 |           | 609  |      | 2808 |                                | 67                                    |        | 7.5      |         | 20.3    | 4.3     | 25.0    | 69.3   |      | 1.4 |
| 38008012      | CP-5                     | 2.3               |  | 27           |          | 94             |                | 62                                      | 440 |           | 587  |      | 2583 |                                | 61                                    |        | 7.6      |         | 19.2    | 5.9     | 25.5    | 67.2   |      | 1.4 |
| 38008013      | CP-6                     | 2.0               |  | 37           |          | 161            |                | 78                                      | 563 |           | 652  |      | 2820 |                                | 60                                    |        | 8.0      |         | 21.2    | 6.8     | 25.6    | 66.4   |      | 1.2 |
| 38008014      | CP-7                     | 1.5               |  | 23           |          | 119            |                | 43                                      | 643 |           | 788  |      | 2694 |                                | 96                                    |        | 7.8      |         | 22.1    | 7.5     | 29.7    | 60.9   |      | 1.9 |
| 38008015      | CP-8                     | 1.4               |  | 3            |          | 112            |                | 32                                      | 276 |           | 949  |      | 2691 |                                | 93                                    |        | 7.3      |         | 22.5    | 3.1     | 35.1    | 60.0   |      | 1.8 |
| 38008016      | CP-9                     | 1.2               |  | 29           |          | 126            |                | 53                                      | 331 |           | 784  |      | 3104 |                                | 60                                    |        | 7.1      |         | 23.2    | 3.7     | 28.2    | 67.0   |      | 1.1 |

| Sample ID | NITRATE-N (FIA) |       |             |       |       |             |       |       |             |       | SULFUR<br>S<br>ICAP |      | DTPA Extraction |      |                 |      |            |      |              |      |            |      | EXCESS<br>LIME<br>RATE | SOLUBLE<br>SALTS<br>1:1<br>mmhos/<br>cm |  | RATE |
|-----------|-----------------|-------|-------------|-------|-------|-------------|-------|-------|-------------|-------|---------------------|------|-----------------|------|-----------------|------|------------|------|--------------|------|------------|------|------------------------|---|--|------|
|           | Surface         |       |             | Sub 1 |       |             | Sub 2 |       |             | Total |                     |      | ZINC<br>Zn      |      | MANGANESE<br>Mn |      | IRON<br>Fe |      | COPPER<br>Cu |      | BORON<br>B |      |                        |   |  |      |
|           | ppm             | lbs/A | depth<br>IN | ppm   | lbs/A | depth<br>IN | ppm   | lbs/A | depth<br>IN | lbs/A | ppm                 | RATE | ppm             | RATE | ppm             | RATE | ppm        | RATE | ppm          | RATE | ppm        | RATE |                        |   |  |      |
| CP-11     | 113             | 407   | 0-12        |       |       |             |       |       |             | 407   |                     |      |                 |      |                 |      |            |      |              |      |            |      | L                      | 1.3                                     |  |      |
| CP-1      | 5               | 36    | 12-36       |       |       |             |       |       |             | 36    |                     |      |                 |      |                 |      |            |      |              |      |            |      | L                      | 4.3                                     |  |      |
| CP-2      | 47              | 338   | 12-36       |       |       |             |       |       |             | 338   |                     |      |                 |      |                 |      |            |      |              |      |            |      | L                      | 0.4                                     |  |      |
| CP-3      | 4               | 29    | 12-36       |       |       |             |       |       |             | 29    |                     |      |                 |      |                 |      |            |      |              |      |            |      | L                      | 0.2                                     |  |      |
| CP-4      | 10              | 72    | 12-36       |       |       |             |       |       |             | 72    |                     |      |                 |      |                 |      |            |      |              |      |            |      | L                      | 0.8                                     |  |      |
| CP-5      | 2               | 14    | 12-36       |       |       |             |       |       |             | 14    |                     |      |                 |      |                 |      |            |      |              |      |            |      | L                      | 0.5                                     |  |      |
| CP-6      | 2               | 14    | 12-36       |       |       |             |       |       |             | 14    |                     |      |                 |      |                 |      |            |      |              |      |            |      | L                      | 0.5                                     |  |      |
| CP-7      | 3               | 22    | 12-36       |       |       |             |       |       |             | 22    |                     |      |                 |      |                 |      |            |      |              |      |            |      | L                      | 0.7                                     |  |      |
| CP-8      | 8               | 58    | 12-36       |       |       |             |       |       |             | 58    |                     |      |                 |      |                 |      |            |      |              |      |            |      | L                      | 2.1                                     |  |      |
| CP-9      | 53              | 382   | 12-36       |       |       |             |       |       |             | 382   |                     |      |                 |      |                 |      |            |      |              |      |            |      | L                      | 0.7                                     |  |      |



PAGE 3/3

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**SOIL ANALYSIS REPORT by MIDWEST LABORATORIES**  
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| LAB<br>NUMBER | SAMPLE<br>IDENTIFICATION | ORGANIC<br>MATTER |     | PHOSPHORUS     |                  |                       |       | NEUTRAL AMMONIUM ACETATE (EXCHANGEABLE) |     |           |     | pH   |        | CATION<br>EXCHANGE<br>CAPACITY | PERCENT BASE SATURATION<br>(COMPUTED) |     |        |      |     |      |      |     |      |
|---------------|--------------------------|-------------------|-----|----------------|------------------|-----------------------|-------|---|-----|-----------|-----|------|--------|--------------------------------|---------------------------------------|-----|--------|------|-----|------|------|-----|------|
|               |                          |                   |     |                |                  |                       |       | POTASSIUM                               |     | MAGNESIUM |     |      |        |                                | CALCIUM                               |     | SODIUM |      | % K | % Mg | % Ca | % H | % Na |
|               |                          |                   |     | P <sub>1</sub> | P <sub>2</sub>   | BICARBONATE<br>P      | K     | Mg                                      | Ca  | Na        |     |      |        |                                |                                       |     |        |      |     |      |      |     |      |
|               |                          |                   |     | L.O.I.         | WEAK BRAY<br>1:7 | STRONG<br>BRAY<br>1:7 | OLSEN |   |     |           |     | SOIL | BUFFER |                                | C.E.C.                                |     |        |      |     |      |      |     |      |
|               |                          | PERCENT RATE      | ppm | RATE           | ppm              | RATE                  | ppm   | RATE                                    | ppm | RATE      | ppm | RATE | 1:1    | meq/100g                       |                                       |     |        |      |     |      |      |     |      |
| 38008017      | CP-10                    | 2.5               |     | 46             |                  | 101                   |       | 244                                     |     | 586       |     | 2711 |        | 135                            |                                       | 6.8 |        | 19.7 | 3.2 | 24.8 | 69.0 |     | 3.0  |
| 38008018      | CP-11                    | 1.4               |     | 47             |                  | 133                   |       | 360                                     |     | 838       |     | 3068 |        | 196                            |                                       | 7.3 |        | 24.1 | 3.8 | 29.0 | 63.7 |     | 3.5  |

| Sample ID | NITRATE-N (FIA) |       |          |       |       |          |       |       |          | SULFUR S<br>ICAP |      | DTPA Extraction |         |      |              |      |         |      |           |      |          |      |                  |                   |  |  |  |  |  |
|-----------|-----------------|-------|----------|-------|-------|----------|-------|-------|----------|------------------|------|-----------------|---------|------|--------------|------|---------|------|-----------|------|----------|------|------------------|-------------------|--|--|--|--|--|
|           | Surface         |       |          | Sub 1 |       |          | Sub 2 |       |          |                  |      | Total<br>lbs/A  | ZINC Zn |      | MANGANESE Mn |      | IRON Fe |      | COPPER Cu |      | BORON B  |      | EXCESS LIME RATE | SOLUBLE SALTS 1:1 |  |  |  |  |  |
|           | ppm             | lbs/A | depth IN | ppm   | lbs/A | depth IN | ppm   | lbs/A | depth IN | ppm              | RATE |                 | ppm     | RATE | ppm          | RATE | ppm     | RATE | ppm       | RATE | mmhos/cm | RATE |                  |                   |  |  |  |  |  |
| CP-10     | 5               | 36    | 12-36    |       |       |          |       |       |          | 36               |      |                 |         |      |              |      |         |      |           |      |          | L    |                  | 1.0               |  |  |  |  |  |
| CP-11     | 24              | 173   | 12-36    |       |       |          |       |       |          | 173              |      |                 |         |      |              |      |         |      |           |      |          | L    |                  | 1.2               |  |  |  |  |  |