

Andrew Tintle  
State of Florida DEP Chemistry Laboratory  
2600 Blair Stone Rd  
Rm A416D MS6512  
Tallahassee, FL 32399-2400

***SOIL-69***



***Final Report***

## **Soil/Hazardous Waste Proficiency Testing**

**Soil Study**

**Open Date: 01/25/10**

**Close Date: 03/11/10**

**Report Issued Date: 04/01/10**

April 1, 2010

Andrew Tintle  
State of Florida DEP Chemistry Laboratory  
2600 Blair Stone Rd  
Rm A416D MS6512  
Tallahassee, FL 32399-2400

Enclosed is your final report for ERA's SOIL-69 Proficiency Testing (PT) study. Your final report includes an evaluation of all results submitted by your laboratory to ERA.

Data Evaluation Protocols: All analytes in ERA's SOIL-69 Proficiency Testing (PT) study have been evaluated using the following tiered approach. If the analyte is listed in the most current National Environmental Laboratory Accreditation Conference (NELAC) PT Field of Testing tables, the evaluation was completed by comparing the reported result to the acceptance limits generated using the criteria contained in the NELAC FoPT tables. If the analyte is not included in the NELAC FoPT tables, the reported result has been evaluated using the procedures outlined in ERA's Standard Operating Procedure for the Generation of Performance Acceptance Limits (SOP 0260).

Corrective Action Help: As part of your accreditation(s), you may be required to identify the root cause of any "Not Acceptable" results, implement the necessary corrective actions, and then satisfy your PT requirements by participating in a Supplemental (QuiK™ Response) or future ERA PT study. ERA's technical staff is available to help your laboratory resolve any technical issues that may be impairing your PT performance and possibly affecting your routine data quality. Our laboratory and technical staff have well over three hundred years of collective experience in performing the full range of environmental analyses. As part of our technical support, ERA offers QC samples that can be helpful in helping you work through your technical issues.

Thank you for your participation in ERA's SOIL-69 Proficiency Testing study. If you have any questions, please contact Shawn Kassner, Proficiency Testing Manager, PT Curtis Wood, Director of Regulatory Affairs and Business Development, at 1-800-372-0122.

Sincerely,



Shawn Kassner  
Proficiency Testing Manager



Jay R. McBurney  
Quality Program Manager

attachments  
smk

| Report Recipient | Contact/Phone Number      | Reporting Type |
|------------------|---------------------------|----------------|
| Florida          | Steve Arms / 904-791-1502 | All Analytes   |

# SOIL-69 Definitions & Study Discussion

**Study Dates: 01/25/10 - 03/11/10**

**Report Issued: 04/01/10**

## SOIL Study Definitions

The Reported Value is the value that the laboratory reported to ERA.

The ERA assigned value for the Organic Proficiency Testing Standards is equal to 100% of the parameter present in the standard as determined by gravimetric and/or volumetric measurements made during standard preparation as applicable. The ERA assigned value for the Inorganic Proficiency Testing Standards, with the exception of the TCLP Metals in Soil, is equal to the maximum amount of the parameter available in the standard by applicable EPA methodologies. The ERA assigned value for the TCLP metals is equal to the mean of ERA's internal analytical analyses. All NELAC parameters not added to a standard are given an assigned Value of "0", per the guidance issued by the NELAC Board of Directors, on December 14, 2000. Non-NELAC parameters not added to a standard may be given an assigned value of less than a minimum verified concentration as determined in the background soil for applicable EPA methodologies.

The Acceptance Limits are established per the NELAC PT program criteria or ERA's SOP for the Generation of Performance Acceptance Limits™ as applicable.

The Performance Evaluation:

|                |                                                       |
|----------------|-------------------------------------------------------|
| Acceptable     | = Reported Value falls within the Acceptance Limits.  |
| Not Acceptable | = Reported Value falls outside the Acceptance Limits. |
| No Evaluation  | = Reported Value cannot be evaluated.                 |
| Not Reported   | = No Value reported.                                  |

The Method Description is the method the laboratory reported to ERA.

## SOIL Study Discussion

ERA's SOIL-69 Proficiency Testing (PT) study has been reviewed by ERA senior management and certified compliant with the requirements of the National Environmental Laboratory Accreditation Conference (NELAC), Proficiency Testing Program Standards, Chapter 2, July 2003.

Per the requirements of the NELAC Proficiency Testing Program, a full review of all homogeneity, stability, and accuracy verification data was completed. All analytical verification data for all analytes in the Soil study standards met the acceptance criteria contained in the NELAC Proficiency Testing Program Standards, Chapter 2, July 2003. If the analyte is included in the NELAC Fields of Testing list the acceptance limits were calculated based on the NELAC Proficiency Testing Program Standards, Chapter 2, July 2003. If the analyte is not included in the NELAC Fields of Testing list, the acceptance limits were calculated using the procedures outlined in ERA's Standard Operating Procedure for the Generation of Performance Acceptance Limits (SOP 0260, Rev. 2.0).

The data submitted by participating laboratories was also examined for study anomalies. There were no anomalies observed during the statistical review of the data.

ERA's SOIL-69 Proficiency Testing study reports shall not be reproduced except in its entirety and not without the permission of the participating laboratory. The report must not be used by the participating laboratories to claim product endorsement any agency of the U. S. government.

The data contained herein are confidential and intended for your use only.

If you have any questions or concerns regarding your assessment in ERA's SOIL Proficiency Testing program, please contact Shawn Kassner, Proficiency Testing Manager, or Curtis Wood, Director of Regulatory Affairs and Business Development, at 1-800-372-0122.



Study: **SOIL-69**

ERA Customer Number: **S744803**

Laboratory Name: **State of Florida DEP  
Chemistry Laboratory**

## Inorganic Results



# SOIL-69 Final Complete Report

Andrew Tintle  
QA Officer  
State of Florida DEP Chemistry Laboratory  
2600 Blair Stone Rd  
Rm A416D MS6512  
Tallahassee, FL 32399-2400  
(850) 245-8075

EPA ID: FL01181  
ERA Customer Number: S744803  
Report Issued: 04/01/10  
Study Dates: 01/25/10 - 03/11/10

| Anal. No. | Analyte | Units | Reported Value | Assigned Value | Acceptance Limits | Performance Evaluation | Method Description |
|-----------|---------|-------|----------------|----------------|-------------------|------------------------|--------------------|
|-----------|---------|-------|----------------|----------------|-------------------|------------------------|--------------------|

## SOIL Metals in Soil (cat# 620)

|      |            |       |       |       |              |              |           |
|------|------------|-------|-------|-------|--------------|--------------|-----------|
| 1000 | Aluminum   | mg/kg | 11800 | 10100 | 4340 - 15200 | Acceptable   | EPA 6010C |
| 1005 | Antimony   | mg/kg | 109   | 259   | 25.9 - 304   | Acceptable   | EPA 6010C |
| 1010 | Arsenic    | mg/kg | 123   | 120   | 76.2 - 143   | Acceptable   | EPA 6010C |
| 1015 | Barium     | mg/kg | 376   | 340   | 241 - 409    | Acceptable   | EPA 6010C |
| 1020 | Beryllium  | mg/kg | 96.7  | 99.5  | 68.6 - 116   | Acceptable   | EPA 6010C |
| 1025 | Boron      | mg/kg | 170   | 176   | 90.4 - 194   | Acceptable   | EPA 6010C |
| 1030 | Cadmium    | mg/kg | 117   | 122   | 80.6 - 139   | Acceptable   | EPA 6010C |
| 1035 | Calcium    | mg/kg | 7210  | 6380  | 4960 - 8410  | Acceptable   | EPA 6010C |
| 1040 | Chromium   | mg/kg | 99.9  | 102   | 64.7 - 122   | Acceptable   | EPA 6010C |
| 1050 | Cobalt     | mg/kg | 153   | 149   | 98.8 - 167   | Acceptable   | EPA 6010C |
| 1055 | Copper     | mg/kg | 79.3  | 84.5  | 55.0 - 94.5  | Acceptable   | EPA 6010C |
| 1070 | Iron       | mg/kg | 16000 | 15000 | 4250 - 21900 | Acceptable   | EPA 6010C |
| 1075 | Lead       | mg/kg | 177   | 171   | 112 - 192    | Acceptable   | EPA 6010C |
| 1085 | Magnesium  | mg/kg | 3450  | 2980  | 1960 - 3990  | Acceptable   | EPA 6010C |
| 1090 | Manganese  | mg/kg | 479   | 446   | 340 - 548    | Acceptable   | EPA 6010C |
| 1095 | Mercury    | mg/kg |       | 17.9  | 8.37 - 24.2  | Not Reported |           |
| 1100 | Molybdenum | mg/kg | 88.7  | 104   | 57.0 - 114   | Acceptable   | EPA 6010C |
| 1105 | Nickel     | mg/kg | 120   | 123   | 78.8 - 138   | Acceptable   | EPA 6010C |
| 1125 | Potassium  | mg/kg | 3200  | 2690  | 1710 - 3820  | Acceptable   | EPA 6010C |
| 1140 | Selenium   | mg/kg | 227   | 230   | 142 - 272    | Acceptable   | EPA 6010C |
| 1150 | Silver     | mg/kg | 58.2  | 56.5  | 34.5 - 69.2  | Acceptable   | EPA 6010C |
| 1155 | Sodium     | mg/kg | 820   | 757   | 410 - 1040   | Acceptable   | EPA 6010C |
| 1160 | Strontium  | mg/kg | 125   | 112   | 77.8 - 143   | Acceptable   | EPA 6010C |
| 1165 | Thallium   | mg/kg | 193   | 192   | 117 - 224    | Acceptable   | EPA 6010C |
| 1175 | Tin        | mg/kg | 146   | 150   | 79.7 - 190   | Acceptable   | EPA 6010C |
| 1180 | Titanium   | mg/kg |       | 208   | 0.00 - 398   | Not Reported |           |
| 1185 | Vanadium   | mg/kg | 122   | 121   | 73.7 - 146   | Acceptable   | EPA 6010C |
| 1190 | Zinc       | mg/kg | 347   | 319   | 214 - 383    | Acceptable   | EPA 6010C |



# SOIL-69 Final Complete Report

Andrew Tintle  
QA Officer  
State of Florida DEP Chemistry Laboratory  
2600 Blair Stone Rd  
Rm A416D MS6512  
Tallahassee, FL 32399-2400  
(850) 245-8075

EPA ID: FL01181  
ERA Customer Number: S744803  
Report Issued: 04/01/10  
Study Dates: 01/25/10 - 03/11/10

| Anal. No. | Analyte | Units | Reported Value | Assigned Value | Acceptance Limits | Performance Evaluation | Method Description |
|-----------|---------|-------|----------------|----------------|-------------------|------------------------|--------------------|
|-----------|---------|-------|----------------|----------------|-------------------|------------------------|--------------------|

## SOIL Metals in Soil (cat# 620)

|      |            |       |      |       |              |              |                 |
|------|------------|-------|------|-------|--------------|--------------|-----------------|
| 1000 | Aluminum   | mg/kg |      | 10100 | 4340 - 15200 | Not Reported |                 |
| 1005 | Antimony   | mg/kg |      | 259   | 25.9 - 304   | Not Reported |                 |
| 1010 | Arsenic    | mg/kg |      | 120   | 76.2 - 143   | Not Reported |                 |
| 1015 | Barium     | mg/kg |      | 340   | 241 - 409    | Not Reported |                 |
| 1020 | Beryllium  | mg/kg |      | 99.5  | 68.6 - 116   | Not Reported |                 |
| 1025 | Boron      | mg/kg |      | 176   | 90.4 - 194   | Not Reported |                 |
| 1030 | Cadmium    | mg/kg |      | 122   | 80.6 - 139   | Not Reported |                 |
| 1035 | Calcium    | mg/kg |      | 6380  | 4960 - 8410  | Not Reported |                 |
| 1040 | Chromium   | mg/kg |      | 102   | 64.7 - 122   | Not Reported |                 |
| 1050 | Cobalt     | mg/kg |      | 149   | 98.8 - 167   | Not Reported |                 |
| 1055 | Copper     | mg/kg |      | 84.5  | 55.0 - 94.5  | Not Reported |                 |
| 1070 | Iron       | mg/kg |      | 15000 | 4250 - 21900 | Not Reported |                 |
| 1075 | Lead       | mg/kg |      | 171   | 112 - 192    | Not Reported |                 |
| 1085 | Magnesium  | mg/kg |      | 2980  | 1960 - 3990  | Not Reported |                 |
| 1090 | Manganese  | mg/kg |      | 446   | 340 - 548    | Not Reported |                 |
| 1095 | Mercury    | mg/kg | 18.0 | 17.9  | 8.37 - 24.2  | Acceptable   | DEPSOP:HG-008-3 |
| 1100 | Molybdenum | mg/kg |      | 104   | 57.0 - 114   | Not Reported |                 |
| 1105 | Nickel     | mg/kg |      | 123   | 78.8 - 138   | Not Reported |                 |
| 1125 | Potassium  | mg/kg |      | 2690  | 1710 - 3820  | Not Reported |                 |
| 1140 | Selenium   | mg/kg |      | 230   | 142 - 272    | Not Reported |                 |
| 1150 | Silver     | mg/kg |      | 56.5  | 34.5 - 69.2  | Not Reported |                 |
| 1155 | Sodium     | mg/kg |      | 757   | 410 - 1040   | Not Reported |                 |
| 1160 | Strontium  | mg/kg |      | 112   | 77.8 - 143   | Not Reported |                 |
| 1165 | Thallium   | mg/kg |      | 192   | 117 - 224    | Not Reported |                 |
| 1175 | Tin        | mg/kg |      | 150   | 79.7 - 190   | Not Reported |                 |
| 1180 | Titanium   | mg/kg |      | 208   | 0.00 - 398   | Not Reported |                 |
| 1185 | Vanadium   | mg/kg |      | 121   | 73.7 - 146   | Not Reported |                 |
| 1190 | Zinc       | mg/kg |      | 319   | 214 - 383    | Not Reported |                 |



# SOIL-69 Final Complete Report

Andrew Tintle  
QA Officer  
State of Florida DEP Chemistry Laboratory  
2600 Blair Stone Rd  
Rm A416D MS6512  
Tallahassee, FL 32399-2400  
(850) 245-8075

EPA ID: FL01181  
ERA Customer Number: S744803  
Report Issued: 04/01/10  
Study Dates: 01/25/10 - 03/11/10

| Anal. No. | Analyte | Units | Reported Value | Assigned Value | Acceptance Limits | Performance Evaluation | Method Description |
|-----------|---------|-------|----------------|----------------|-------------------|------------------------|--------------------|
|-----------|---------|-------|----------------|----------------|-------------------|------------------------|--------------------|

## SOIL Metals in Soil (cat# 620)

|      |            |       |      |       |              |              |           |
|------|------------|-------|------|-------|--------------|--------------|-----------|
| 1000 | Aluminum   | mg/kg |      | 10100 | 4340 - 15200 | Not Reported |           |
| 1005 | Antimony   | mg/kg | 114  | 259   | 25.9 - 304   | Acceptable   | EPA 6020A |
| 1010 | Arsenic    | mg/kg | 123  | 120   | 76.2 - 143   | Acceptable   | EPA 6020A |
| 1015 | Barium     | mg/kg | 370  | 340   | 241 - 409    | Acceptable   | EPA 6020A |
| 1020 | Beryllium  | mg/kg | 95.9 | 99.5  | 68.6 - 116   | Acceptable   | EPA 6020A |
| 1025 | Boron      | mg/kg |      | 176   | 90.4 - 194   | Not Reported |           |
| 1030 | Cadmium    | mg/kg | 123  | 122   | 80.6 - 139   | Acceptable   | EPA 6020A |
| 1035 | Calcium    | mg/kg |      | 6380  | 4960 - 8410  | Not Reported |           |
| 1040 | Chromium   | mg/kg | 105  | 102   | 64.7 - 122   | Acceptable   | EPA 6020A |
| 1050 | Cobalt     | mg/kg | 152  | 149   | 98.8 - 167   | Acceptable   | EPA 6020A |
| 1055 | Copper     | mg/kg | 82.4 | 84.5  | 55.0 - 94.5  | Acceptable   | EPA 6020A |
| 1070 | Iron       | mg/kg |      | 15000 | 4250 - 21900 | Not Reported |           |
| 1075 | Lead       | mg/kg | 177  | 171   | 112 - 192    | Acceptable   | EPA 6020A |
| 1085 | Magnesium  | mg/kg |      | 2980  | 1960 - 3990  | Not Reported |           |
| 1090 | Manganese  | mg/kg | 507  | 446   | 340 - 548    | Acceptable   | EPA 6020A |
| 1095 | Mercury    | mg/kg |      | 17.9  | 8.37 - 24.2  | Not Reported |           |
| 1100 | Molybdenum | mg/kg | 90.9 | 104   | 57.0 - 114   | Acceptable   | EPA 6020A |
| 1105 | Nickel     | mg/kg | 122  | 123   | 78.8 - 138   | Acceptable   | EPA 6020A |
| 1125 | Potassium  | mg/kg |      | 2690  | 1710 - 3820  | Not Reported |           |
| 1140 | Selenium   | mg/kg | 237  | 230   | 142 - 272    | Acceptable   | EPA 6020A |
| 1150 | Silver     | mg/kg | 62.1 | 56.5  | 34.5 - 69.2  | Acceptable   | EPA 6020A |
| 1155 | Sodium     | mg/kg |      | 757   | 410 - 1040   | Not Reported |           |
| 1160 | Strontium  | mg/kg |      | 112   | 77.8 - 143   | Not Reported |           |
| 1165 | Thallium   | mg/kg | 202  | 192   | 117 - 224    | Acceptable   | EPA 6020A |
| 1175 | Tin        | mg/kg |      | 150   | 79.7 - 190   | Not Reported |           |
| 1180 | Titanium   | mg/kg |      | 208   | 0.00 - 398   | Not Reported |           |
| 1185 | Vanadium   | mg/kg |      | 121   | 73.7 - 146   | Not Reported |           |
| 1190 | Zinc       | mg/kg | 344  | 319   | 214 - 383    | Acceptable   | EPA 6020A |

## SOIL Nutrients in Soil (cat# 869)

|      |                            |       |      |      |            |              |                 |
|------|----------------------------|-------|------|------|------------|--------------|-----------------|
| 1515 | Ammonia as N               | mg/kg |      | 384  | 70.4 - 500 | Not Reported |                 |
| 1795 | Total Kjeldahl Nitrogen    | mg/kg |      | 689  | 294 - 967  | Not Reported |                 |
| 2040 | Total Organic Carbon (TOC) | mg/kg | 2180 | 2210 | 221 - 6960 | Acceptable   | DEPSOP:NU-076-1 |
| 1910 | Total Phosphorus           | mg/kg |      | 536  | 162 - 872  | Not Reported |                 |



Study: **SOIL-69**

ERA Customer Number: **S744803**

Laboratory Name: **State of Florida DEP  
Chemistry Laboratory**

## Organic Results



# SOIL-69 Final Complete Report

Andrew Tintle  
QA Officer  
State of Florida DEP Chemistry Laboratory  
2600 Blair Stone Rd  
Rm A416D MS6512  
Tallahassee, FL 32399-2400  
(850) 245-8075

EPA ID: FL01181  
ERA Customer Number: S744803  
Report Issued: 04/01/10  
Study Dates: 01/25/10 - 03/11/10

| Anal. No. | Analyte | Units | Reported Value | Assigned Value | Acceptance Limits | Performance Evaluation | Method Description |
|-----------|---------|-------|----------------|----------------|-------------------|------------------------|--------------------|
|-----------|---------|-------|----------------|----------------|-------------------|------------------------|--------------------|

## SOIL Base/Neutrals and Acids in Soil (cat# 467)

|      |                                       |       |        |      |             |              |           |
|------|---------------------------------------|-------|--------|------|-------------|--------------|-----------|
| 5500 | Acenaphthene                          | µg/kg | 2580   | 2560 | 538 - 3210  | Acceptable   | EPA 8270D |
| 5505 | Acenaphthylene                        | µg/kg | 6870   | 6950 | 1640 - 8470 | Acceptable   | EPA 8270D |
| 5145 | 2-Amino-1-methylbenzene (o-toluidine) | µg/kg |        | 0.00 |             | Not Reported |           |
| 5545 | Aniline                               | µg/kg |        | 0.00 |             | Not Reported |           |
| 5555 | Anthracene                            | µg/kg | < 60.0 | 0.00 |             | Acceptable   | EPA 8270D |
| 5595 | Benzidine                             | µg/kg |        | 0.00 |             | Not Reported |           |
| 5610 | Benzoic acid                          | µg/kg |        | 0.00 |             | Not Reported |           |
| 5575 | Benzo(a)anthracene                    | µg/kg | 4580   | 4520 | 1340 - 5300 | Acceptable   | EPA 8270D |
| 5585 | Benzo(b)fluoranthene                  | µg/kg | 4760   | 4470 | 1210 - 6000 | Acceptable   | EPA 8270D |
| 5600 | Benzo(k)fluoranthene                  | µg/kg | 4830   | 4430 | 1200 - 5730 | Acceptable   | EPA 8270D |
| 5590 | Benzo(g,h,i)perylene                  | µg/kg | 5000   | 5580 | 1030 - 6330 | Acceptable   | EPA 8270D |
| 5580 | Benzo(a)pyrene                        | µg/kg | 6740   | 6800 | 1510 - 8340 | Acceptable   | EPA 8270D |
| 5630 | Benzyl alcohol                        | µg/kg |        | 0.00 |             | Not Reported |           |
| 5760 | bis(2-Chloroethoxy)methane            | µg/kg | 4930   | 5260 | 959 - 6270  | Acceptable   | EPA 8270D |
| 5765 | bis(2-Chloroethyl)ether               | µg/kg | 4660   | 7200 | 735 - 7920  | Acceptable   | EPA 8270D |
| 5780 | bis(2-Chloroisopropyl)ether           | µg/kg | 6510   | 6970 | 834 - 7930  | Acceptable   | EPA 8270D |
| 5660 | 4-Bromophenyl-phenylether             | µg/kg | 6860   | 6780 | 1990 - 8280 | Acceptable   | EPA 8270D |
| 5670 | Butylbenzylphthalate                  | µg/kg | 4890   | 4390 | 946 - 5880  | Acceptable   | EPA 8270D |
| 5680 | Carbazole                             | µg/kg |        | 0.00 |             | Not Reported |           |
| 5745 | 4-Chloroaniline                       | µg/kg |        | 0.00 |             | Not Reported |           |
| 5700 | 4-Chloro-3-methylphenol               | µg/kg | 5400   | 5710 | 1270 - 6500 | Acceptable   | EPA 8270D |
| 5790 | 1-Chloronaphthalene                   | µg/kg |        | 0.00 |             | Not Reported |           |
| 5795 | 2-Chloronaphthalene                   | µg/kg | < 60.0 | 0.00 |             | Acceptable   | EPA 8270D |
| 5800 | 2-Chlorophenol                        | µg/kg | 2820   | 3400 | 340 - 3750  | Acceptable   | EPA 8270D |
| 5825 | 4-Chlorophenyl-phenylether            | µg/kg | < 60.0 | 0.00 |             | Acceptable   | EPA 8270D |
| 5855 | Chrysene                              | µg/kg | < 60.0 | 0.00 |             | Acceptable   | EPA 8270D |
| 5895 | Dibenz(a,h)anthracene                 | µg/kg | 3690   | 3740 | 837 - 4770  | Acceptable   | EPA 8270D |
| 5905 | Dibenzofuran                          | µg/kg | 7380   | 7420 | 1850 - 8540 | Acceptable   | EPA 8270D |
| 5925 | Di-n-butylphthalate                   | µg/kg | 4610   | 4200 | 816 - 5720  | Acceptable   | EPA 8270D |
| 4610 | 1,2-Dichlorobenzene                   | µg/kg |        | 3170 | 317 - 3660  | Not Reported |           |
| 4615 | 1,3-Dichlorobenzene                   | µg/kg |        | 0.00 |             | Not Reported |           |
| 4620 | 1,4-Dichlorobenzene                   | µg/kg |        | 3320 | 332 - 3650  | Not Reported |           |



# SOIL-69 Final Complete Report

Andrew Tintle  
QA Officer  
State of Florida DEP Chemistry Laboratory  
2600 Blair Stone Rd  
Rm A416D MS6512  
Tallahassee, FL 32399-2400  
(850) 245-8075

EPA ID: FL01181  
ERA Customer Number: S744803  
Report Issued: 04/01/10  
Study Dates: 01/25/10 - 03/11/10

| Anal. No. | Analyte | Units | Reported Value | Assigned Value | Acceptance Limits | Performance Evaluation | Method Description |
|-----------|---------|-------|----------------|----------------|-------------------|------------------------|--------------------|
|-----------|---------|-------|----------------|----------------|-------------------|------------------------|--------------------|

## SOIL Base/Neutrals and Acids in Soil (cat# 467) (Continued)

|      |                            |       |        |       |              |              |           |
|------|----------------------------|-------|--------|-------|--------------|--------------|-----------|
| 5945 | 3,3'-Dichlorobenzidine     | µg/kg |        | 0.00  |              | Not Reported |           |
| 6000 | 2,4-Dichlorophenol         | µg/kg | 3430   | 3890  | 421 - 4530   | Acceptable   | EPA 8270D |
| 6005 | 2,6-Dichlorophenol         | µg/kg | 7460   | 10500 | 1940 - 11600 | Acceptable   | EPA 8270D |
| 6070 | Diethylphthalate           | µg/kg | < 60.0 | 0.00  |              | Acceptable   | EPA 8270D |
| 6130 | 2,4-Dimethylphenol         | µg/kg | < 360  | 0.00  |              | Acceptable   | EPA 8270D |
| 6135 | Dimethylphthalate          | µg/kg | < 60.0 | 0.00  |              | Acceptable   | EPA 8270D |
| 6175 | 2,4-Dinitrophenol          | µg/kg | < 360  | 7620  | 0.00 - 8380  | Acceptable   | EPA 8270D |
| 6185 | 2,4-Dinitrotoluene         | µg/kg | 5720   | 5440  | 876 - 7110   | Acceptable   | EPA 8270D |
| 6190 | 2,6-Dinitrotoluene         | µg/kg | 5040   | 4980  | 1370 - 5910  | Acceptable   | EPA 8270D |
| 6200 | Di-n-octylphthalate        | µg/kg | 3210   | 2820  | 411 - 4060   | Acceptable   | EPA 8270D |
| 6065 | bis(2-Ethylhexyl)phthalate | µg/kg | 7080   | 6460  | 1510 - 8340  | Acceptable   | EPA 8270D |
| 6265 | Fluoranthene               | µg/kg | < 60.0 | 0.00  |              | Acceptable   | EPA 8270D |
| 6270 | Fluorene                   | µg/kg | 4750   | 4550  | 1320 - 5500  | Acceptable   | EPA 8270D |
| 6275 | Hexachlorobenzene          | µg/kg | 5950   | 5860  | 1720 - 6990  | Acceptable   | EPA 8270D |
| 4835 | Hexachlorobutadiene        | µg/kg | 6380   | 7170  | 998 - 7940   | Acceptable   | EPA 8270D |
| 6285 | Hexachlorocyclopentadiene  | µg/kg | < 60.0 | 0.00  |              | Acceptable   | EPA 8270D |
| 4840 | Hexachloroethane           | µg/kg | < 180  | 0.00  |              | Acceptable   | EPA 8270D |
| 6315 | Indeno(1,2,3-cd)pyrene     | µg/kg | 3670   | 3500  | 350 - 5170   | Acceptable   | EPA 8270D |
| 6320 | Isophorone                 | µg/kg | < 60.0 | 0.00  |              | Acceptable   | EPA 8270D |
| 6360 | 4,6-Dinitro-2-methylphenol | µg/kg | 1720   | 7830  | 0.00 - 8610  | Acceptable   | EPA 8270D |
| 6385 | 2-Methylnaphthalene        | µg/kg | < 60.0 | 0.00  |              | Acceptable   | EPA 8270D |
| 6400 | 2-Methylphenol             | µg/kg | 3190   | 5010  | 600 - 5510   | Acceptable   | EPA 8270D |
| 6410 | 3&4-Methylphenol           | µg/kg | 2890   | 3890  | 338 - 4280   | Acceptable   | EPA 8270D |
| 5005 | Naphthalene                | µg/kg | < 60.0 | 0.00  |              | Acceptable   | EPA 8270D |
| 6460 | 2-Nitroaniline             | µg/kg |        | 0.00  |              | Not Reported |           |
| 6465 | 3-Nitroaniline             | µg/kg |        | 0.00  |              | Not Reported |           |
| 6470 | 4-Nitroaniline             | µg/kg |        | 0.00  |              | Not Reported |           |
| 5015 | Nitrobenzene               | µg/kg | 4090   | 4430  | 551 - 5230   | Acceptable   | EPA 8270D |
| 6490 | 2-Nitrophenol              | µg/kg | 4740   | 6100  | 610 - 6770   | Acceptable   | EPA 8270D |
| 6500 | 4-Nitrophenol              | µg/kg | 4470   | 5330  | 600 - 7050   | Acceptable   | EPA 8270D |
| 6525 | N-Nitrosodiethylamine      | µg/kg |        | 0.00  |              | Not Reported |           |
| 6530 | N-Nitrosodimethylamine     | µg/kg | 7100   | 7160  | 0.00 - 8170  | Acceptable   | EPA 8270D |



# SOIL-69 Final Complete Report

Andrew Tintle  
QA Officer  
State of Florida DEP Chemistry Laboratory  
2600 Blair Stone Rd  
Rm A416D MS6512  
Tallahassee, FL 32399-2400  
(850) 245-8075

EPA ID: FL01181  
ERA Customer Number: S744803  
Report Issued: 04/01/10  
Study Dates: 01/25/10 - 03/11/10

| Anal. No. | Analyte | Units | Reported Value | Assigned Value | Acceptance Limits | Performance Evaluation | Method Description |
|-----------|---------|-------|----------------|----------------|-------------------|------------------------|--------------------|
|-----------|---------|-------|----------------|----------------|-------------------|------------------------|--------------------|

## SOIL Base/Neutrals and Acids in Soil (cat# 467) (Continued)

|      |                            |       |        |       |              |              |           |
|------|----------------------------|-------|--------|-------|--------------|--------------|-----------|
| 6535 | N-Nitrosodiphenylamine     | µg/kg | < 60.0 | 0.00  |              | Acceptable   | EPA 8270D |
| 6545 | N-Nitroso-di-n-propylamine | µg/kg | 7360   | 7370  | 750 - 8940   | Acceptable   | EPA 8270D |
| 6590 | Pentachlorobenzene         | µg/kg |        | 11100 | 2660 - 12800 | Not Reported |           |
| 6605 | Pentachlorophenol          | µg/kg | < 60.0 | 0.00  |              | Acceptable   | EPA 8270D |
| 6615 | Phenanthrene               | µg/kg | 5070   | 4970  | 1440 - 5870  | Acceptable   | EPA 8270D |
| 6625 | Phenol                     | µg/kg | < 60.0 | 0.00  |              | Acceptable   | EPA 8270D |
| 6665 | Pyrene                     | µg/kg | < 60.0 | 0.00  |              | Acceptable   | EPA 8270D |
| 5095 | Pyridine                   | µg/kg |        | 0.00  |              | Not Reported |           |
| 6715 | 1,2,4,5-Tetrachlorobenzene | µg/kg |        | 0.00  |              | Not Reported |           |
| 6735 | 2,3,4,6-Tetrachlorophenol  | µg/kg |        | 0.00  |              | Not Reported |           |
| 5155 | 1,2,4-Trichlorobenzene     | µg/kg | 7010   | 8090  | 1350 - 8900  | Acceptable   | EPA 8270D |
| 6835 | 2,4,5-Trichlorophenol      | µg/kg | 4370   | 4840  | 641 - 5580   | Acceptable   | EPA 8270D |
| 6840 | 2,4,6-Trichlorophenol      | µg/kg | 6120   | 6630  | 1150 - 7350  | Acceptable   | EPA 8270D |

## SOIL Chlorinated Acid Herbicides in Soil (cat# 626)

|      |                          |       |     |      |             |              |                 |
|------|--------------------------|-------|-----|------|-------------|--------------|-----------------|
| 8505 | Acifluorfen              | µg/kg |     | 580  | 0.00 - 638  | Not Reported |                 |
| 8530 | Bentazon                 | µg/kg |     | 328  | 18.6 - 451  | Not Reported |                 |
| 8540 | Chloramben               | µg/kg |     | 780  | 55.1 - 858  | Not Reported |                 |
| 8545 | 2,4-D                    | µg/kg | 745 | 748  | 74.8 - 1090 | Acceptable   | DEPSOP:LC-001-2 |
| 8560 | 2,4-DB                   | µg/kg | 422 | 682  | 0.00 - 1090 | Acceptable   | DEPSOP:LC-001-2 |
| 8550 | Dacthal diacid (DCPA)    | µg/kg |     | 0.00 |             | Not Reported |                 |
| 8555 | Dalapon                  | µg/kg |     | 0.00 |             | Not Reported |                 |
| 8595 | Dicamba                  | µg/kg | 285 | 457  | 45.7 - 639  | Acceptable   | DEPSOP:LC-001-2 |
| 8600 | 3,5-Dichlorobenzoic acid | µg/kg |     | 432  | 0.00 - 600  | Not Reported |                 |
| 8605 | Dichlorprop              | µg/kg |     | 150  | 0.00 - 235  | Not Reported |                 |
| 8620 | Dinoseb                  | µg/kg | 337 | 422  | 0.00 - 702  | Acceptable   | DEPSOP:LC-001-2 |
| 7775 | MCPA                     | µg/kg |     | 0.00 |             | Not Reported |                 |
| 7780 | MCPP                     | µg/kg |     | 0.00 |             | Not Reported |                 |
| 6500 | 4-Nitrophenol            | µg/kg |     | 758  | 0.00 - 1100 | Not Reported |                 |
| 6605 | Pentachlorophenol        | µg/kg |     | 627  | 0.00 - 692  | Not Reported |                 |
| 8645 | Picloram                 | µg/kg |     | 352  | 0.00 - 471  | Not Reported |                 |
| 8655 | 2,4,5-T                  | µg/kg | 666 | 689  | 68.9 - 1000 | Acceptable   | DEPSOP:LC-001-2 |
| 8650 | 2,4,5-TP (Silvex)        | µg/kg | 379 | 342  | 34.2 - 550  | Acceptable   | DEPSOP:LC-001-2 |

