

NEBRASKA

Good Life. Great Resources.

DEPT. OF ENVIRONMENT AND ENERGY

April 13, 2021

Cassi Deerson
796 Co Rd. K
Mead, NE 68041

RE: Deerson Private Well
Facility ID: 84069
Program ID: NE0137634
Subject: Private Well Pesticide Sampling Results

Dear Ms. Deerson:

The Nebraska Department of Environment and Energy (NDEE) is conducting drinking water well sampling near Mead, Nebraska related to an environmental investigation at the AltEn, LLC facility. On March 9, 2021, NDEE sampled your private drinking water well. The NDEE appreciates your participation in this investigation.

Enclosed are the laboratory results for groundwater sample "Test #3- Deerson Tap" collected from your well at 796 Co Rd. K. The samples were tested for various types of pesticides associated with the seed treatment of field corn. The first column of the laboratory report identifies each chemical that was tested for. The third column- titled, "As Received"- provides the numeric results of the chemical in units of Parts Per Billion (ppb) which is also equivalent to micrograms per liter, or ug/L. A result followed by a result of "ND" indicates that the chemical was not detected.

The results indicate that there were no pesticides detected in the sample collected from your private well.

If you have any questions regarding any potential health effects associated with exposure to these chemicals, please contact Sue Dempsey at (402) 471-0510 or sue.dempsey@nebraska.gov. If you have any questions regarding the laboratory data enclosed, please contact me or Zoe DeGrande at (402) 471-2186 or mike.felix@nebraska.gov or zoe.degrande@nebraska.gov.

Thank you again for your assistance.

Sincerely,

Mike Felix
Section Supervisor
Superfund/VCP Section
Monitoring and Remediation Division

Enclosures

cc: Sue Dempsey, Nebraska Department of Health and Human Services w/enclosure



Pete Ricketts, Governor



20210021922

Performed By:

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

Collected By:

Nebraska Dept. of Environment & Energy-David
 Schum
 245 Fallbrook Blvd
 Lincoln, NE 68521
 Phone: 402-471-4709
 E-Mail: david.schumacher@nebraska.gov

Report Date: 2021-04-07**Final Report****South Dakota Agricultural Laboratories has examined the sample of**

Limfinite Package Id : 20210317-003
 Lab Sample Id : 21PE001935
 Customer Sample Id : Test #3- Deerson Tap
 Sample Description : Water
 Date Collected : 2021-03-09
 Date Received : 2021-03-17
 Cooler Temp :

RESULTS

ANALYTE	UNIT	AS RECEIVED	LOD	DETECTION LIMIT	METHOD	DATE OF EXTRACTION	DATE OF ANALYSIS
Abamectin	ppb	ND	3	10	LC-MS/MS	2021-03-18	2021-03-19
Acetamid	ppb	ND	1	3	LC-MS/MS	2021-03-18	2021-03-18
Azoxystrobin	ppb	ND	1	3	LC-MS/MS	2021-03-18	2021-03-18
Brassinazole	ppb	ND	2	5	LC-MS/MS	2021-03-18	2021-03-20
Clothianidin	ppb	ND	2.5	8	LC-MS/MS	2021-03-18	2021-03-18
Cyproconazole	ppb	ND	2	5	LC-MS/MS	2021-03-18	2021-03-20
Desthio-Prothioconazole	ppb	ND	2	5	LC-MS/MS	2021-03-18	2021-03-20
Difenoconazole	ppb	ND	1	4	LC-MS/MS	2021-03-18	2021-03-20
Dimoxystrobin	ppb	ND	3	8	LC-MS/MS	2021-03-18	2021-03-18
Dinotefuron	ppb	ND	1.2	4	LC-MS/MS	2021-03-18	2021-03-18
Epoxiconazole	ppb	ND	1	3	LC-MS/MS	2021-03-18	2021-03-20
Fluconazole	ppb	ND	1	4	LC-MS/MS	2021-03-18	2021-03-20
Fluoxastobin	ppb	ND	1	3	LC-MS/MS	2021-03-18	2021-03-18
Glufosinate	ppb	ND	3	10	LC-MS/MS	2021-03-29	2021-04-05
Glyphosate	ppb	ND	3	10	LC-MS/MS	2021-03-29	2021-04-05
Imidacloprid	ppb	ND	1.2	4	LC-MS/MS	2021-03-18	2021-03-18
Ipconazole	ppb	ND	2	6	LC-MS/MS	2021-03-18	2021-03-20
Isavuconazole	ppb	ND	1	4	LC-MS/MS	2021-03-18	2021-03-20
Metconazole	ppb	ND	2	5	LC-MS/MS	2021-03-18	2021-03-20
Nitenpyram	ppb	ND	2.5	8	LC-MS/MS	2021-03-18	2021-03-18
Orysastobin	ppb	ND	2	7	LC-MS/MS	2021-03-18	2021-03-18
Picoxystrobin	ppb	ND	1	3	LC-MS/MS	2021-03-18	2021-03-18
Propiconazole	ppb	ND	2	5	LC-MS/MS	2021-03-18	2021-03-20
Prothioconazole	ppb	ND	2	6	LC-MS/MS	2021-03-18	2021-03-20
Pyraclostrobin	ppb	ND	1	3	LC-MS/MS	2021-03-18	2021-03-18
Ravuconazole	ppb	ND	1	3	LC-MS/MS	2021-03-18	2021-03-20
Sulfonic Acid Prothioconazole	ppb	ND	3	8	LC-MS/MS	2021-03-18	2021-03-20
Tebuconazole	ppb	ND	2	5	LC-MS/MS	2021-03-18	2021-03-20
Tetraconazole	ppb	ND	1	4	LC-MS/MS	2021-03-18	2021-03-20
Thiabendazole	ppb	ND	2	5	LC-MS/MS	2021-03-18	2021-03-20

Thiacloprid	ppb	ND	2	6	LC-MS/MS	2021-03-18	2021-03-18
Thiamethoxam	ppb	ND	1	3	LC-MS/MS	2021-03-18	2021-03-18
Trifloxystrobin	ppb	ND	1	5	LC-MS/MS	2021-03-18	2021-03-18
Uniconazole	ppb	ND	1	3	LC-MS/MS	2021-03-18	2021-03-20
Voriconazole	ppb	ND	1	4	LC-MS/MS	2021-03-18	2021-03-20

QUALITY ASSURANCE

ANALYTE	UNIT	DUPLICATE	SPIKE RECOVERY	MATRIX BLANK	PROCESS BLANK	INSTRUMENT BLANK
Abamectin	ppb	21PE001934	95.0	ND	ND	ND
Acetamprid	ppb	21PE001928	122	ND	ND	ND
Azoxystrobin	ppb	21PE001934	101	ND	ND	ND
Brassinazole	ppb	21PE001934	109	ND	ND	ND
Clothianidin	ppb	21PE001928	112	ND	ND	ND
Cyproconazole	ppb	21PE001934	117	ND	ND	ND
Desthio-Prothioconazole	ppb	21PE001934	122	ND	ND	ND
Difenoconazole	ppb	21PE001934	117	ND	ND	ND
Dimoxystrobin	ppb	21PE001934	123	ND	ND	ND
Dinotefuron	ppb	21PE001928	108	ND	ND	ND
Epoxiconazole	ppb	21PE001934	103	ND	ND	ND
Fluconazole	ppb	21PE001934	119	ND	ND	ND
Fluoxastrobin	ppb	21PE001934	111	ND	ND	ND
Glufosinate	ppb	21PE001928	91.4	ND	ND	ND
Glyphosate	ppb	21PE001928	124	ND	ND	ND
Imidacloprid	ppb	21PE001928	124	ND	ND	ND
Ipconazole	ppb	21PE001934	97.4	ND	ND	ND
Isavuconazole	ppb	21PE001934	112	ND	ND	ND
Metconazole	ppb	21PE001934	123	ND	ND	ND
Nitenpyram	ppb	21PE001928	112	ND	ND	ND
Orysastrobin	ppb	21PE001934	87.2	ND	ND	ND
Picoxystrobin	ppb	21PE001934	108	ND	ND	ND
Propiconazole	ppb	21PE001934	113	ND	ND	ND
Prothioconazole	ppb	21PE001934	111	ND	ND	ND
Pyraclostrobin	ppb	21PE001934	124	ND	ND	ND
Ravuconazole	ppb	21PE001934	116	ND	ND	ND
Sulfonic Acid Prothioconazole	ppb	21PE001934	104	ND	ND	ND
Tebuconazole	ppb	21PE001934	108	ND	ND	ND
Tetraconazole	ppb	21PE001934	115	ND	ND	ND
Thiabendazole	ppb	21PE001934	99.4	ND	ND	ND
Thiacloprid	ppb	21PE001928	122	ND	ND	ND
Thiamethoxam	ppb	21PE001928	123	ND	ND	ND
Trifloxystrobin	ppb	21PE001934	123	ND	ND	ND
Uniconazole	ppb	21PE001934	117	ND	ND	ND
Voriconazole	ppb	21PE001934	104	ND	ND	ND

Comments:

Definitions:

ppb - parts per billion

Detection Limit - Lowest concentration that can be quantitatively reported with confidence

ND - Not Detected above the limit of quantification

Duplicate - Concentration found in repeat sample analysis

Spike Recovery - Recovery based on a known amount of active ingredient spiked into a similar-matrix, blank sample
Matrix Blank - A similar-matrix, blank sample is evaluated
Process Blank - A sample without any matrix (soil, vegetation etc) is processed through the sample analysis procedure
Instrument Blank - Injection solvent is run to demonstrate no carryover between injections on the instrument

BRIEF METHOD DESCRIPTION

Strobins in Water - Purpose and Scope

Strobins are fairly polar and are usually determined by LC-MS/MS. The limits of detection for the strobins are 1 ppb for limit of detection and 5 ppb for limit of quantitation.

Strobins in Water - References

J. Klein and L. Alder, JAOACI 86(5): 101501037 (2003)

Strobins in Water - Basic Principles

Strobin water samples are extracted into aqueous methanol followed by filtration and preparation for LC-MS/MS.

This SOP is for the determination of Strobins in soil, water and vegetation. The limits of detection for soil, water and vegetation range from 1 ppb to 2 ppb. The limit of quantitation is 5 ppb for soil, water and vegetation.

The Strobins include: Fluoxastrobin, Trifloxystrobin, Oryastrobin, Pyraclostrobin, Azoxystrobin, Picoxystrobin and Dimoxystrobin.

Azoles in soil, vegetation and water - Purpose and Scope

Azoles are not ionic and are soluble in many organic solvents. Several of them are volatile enough for gas chromatography, but in this laboratory, LC-MS/MS has been used for azole analysis. The limits of detection for the azoles are 1 ppb for limit of detection and 5 ppb for limit of quantitation.

Azoles in soil, vegetation and water - References

Analytical Methods for Pesticides and Plant Growth Regulators. (G. Zweig, ed.) Vol.X, pp. 347 19.1.2.2 Klein and Alder. JAOAC. 86(5): 1015-37 (2003). 19.1.2.3 Ramsteiner et al. JAOAC. 57(1): 192-201 (1974).

Azoles in soil, vegetation and water - Basic Principles

Azole soil, vegetation, and water samples can be extracted in aqueous methanol, filtered and prepared for LC-MS/MS analysis.

Neonicotinoids in soil, water and vegetation - Purpose and Scope

Neonicotinoids are a class of neuro-active insecticides chemically similar to nicotine. The limits of detection for the neonicotinoids are 1 ppb for limit of detection and 5 ppb for limit of quantitation.

Neonicotinoids in soil, water and vegetation - References

J. Klein and L. Alder, JAOACI 86(5): 101501037 (2003)

Neonicotinoids in soil, water and vegetation - Basic Principles

Neonicotinoids are fairly polar and are extracted with aqueous acetonitrile, filtered and prepared for LC-MS/MS analysis.

Reviewed and approved by Regina Wixon, Ph.D.

Submitted by the customer:

20210317-003
21PE001932-1935



20210317-003
21PE001932-001935

Pesticide Residue Sample Submission Form

South Dakota Agricultural Laboratories
1335 Western Avenue
Brookings, SD. 57006
(605) 692-7325

Well #1 - Weible Faucet 1932
Well #2 - Weible Hydrant 1933
Well #3 - Hanson Hydrant 1934
Test #3 - Deerson Tap 1935

Name: Dave Schumacher *Sample ID: _____
Address: 245 Fallbrook Blvd. City: Lincoln State: NE
Zip: 68521 Phone: (502) 471-4709 **Email: david.schumacher@nebraska.gov
*Sample ID must be marked clearly on the sample you submit. **Results will be emailed to the provided email address.
Billing Information: ☐ Check box if billing is the same as the customer information PO Box 98922
Name: Nebraska Dept. of Environment and Energy Address: 245 Fallbrook Blvd.
City: Lincoln State: NE Zip: 68521
Phone: (502) 471-4709 Email: NDEE.accounting@nebraska.gov

Individual tests are \$162 each, unless otherwise marked. Scans are \$212 and include all of the compounds in a particular category. Acceptable samples include Vegetation, Water or Soil. Call to confirm other substrates.

Thank you for choosing South Dakota Agricultural Labs! We do add analytes to our testing regiment throughout the year. If a chemical of interest is not listed, please call us:

(605) 692-7325.

How much sample should you send?

Please send 30g of vegetation or 100g of soil to run an individual test. What does this look like? For vegetation, it would be about a quart sized bag packed full. If more than one test is required, please fill a gallon sized bag. For soil samples, please send 2 cups, if more than one test is required send 4 cups.

Analyses offered

Please turn page over to view the current pesticide analyses.

If you are interested in a screen of active ingredients, please check the box next to the **bold-faced** heading. This will include all active ingredients within the PGR screen for \$212.

Example: PGR Screen ☒

If you are interested in single analyses, please circle the active ingredients. The cost of each individual analyte is \$162 unless otherwise marked.

Example: Mesotrione

Sample(s) Received at SD Ag Labs

Date 2021-03-17

Received by
Alyssa Kennedy