

PCS 84069

Buell, Thomas

From: Buell, Thomas
Sent: Thursday, April 29, 2021 6:55 AM
To: Mark Bowers
Subject: AltEn - Pond Sampling Results
Attachments: 4-27-2021_-_PCS_-_84069_-_DEQ_Letter_-_SAMPLING_RESULTS.pdf

Mark:

Attached to this email are the pond sampling results we discussed earlier this week. Please let me know if you have any questions.

Tom Buell

DIVISION ADMINISTRATOR, MONITORING AND REMEDIATION DIVISION

Nebraska Department of Environment and Energy

P.O. Box 98922

Lincoln, Nebraska 68509-8922

DIRECT: (402) 471-4270 / MAIN OFFICE (402) 471-2186



NEBRASKA

Good Life. Great Resources.

DEPT. OF ENVIRONMENT AND ENERGY

April 27, 2021

Evelyn and Stan Keiser
887 County Road 5
Ashland, NE 68003

RE: Pond Pesticide Sampling
Facility ID: 84069
Program ID: NE0137634
Subject: Surface Water Sampling Results



Pete Ricketts, Governor

Dear Mr. and Mrs. Keiser:

This letter is an update to our April 9, 2021 letter concerning the sampling results for the March 26, 2021 surface water sampling conducted by the Nebraska Department of Environment and Energy (NDEE) from the pond on your property related to the environmental investigation at the AltEn, LLC facility.

Enclosed are the laboratory results for the surface water sample "21PE002251" collected from the pond on your property on March 26, 2021, as well as all previous laboratory results provided in previous correspondence. The first column of the laboratory report identifies each chemical that was tested for. The third column provides the numeric results of the chemical in units of Parts Per Billion (ppb) which is also equivalent to micrograms per liter, or $\mu\text{g/L}$. The J-coded results show estimated values for chemicals detected less than the detection limit for that chemical. A result followed by a result of "ND" indicates that the chemical was not detected.

Below is a comprehensive table showing all the sample results collected from your pond in comparison to levels that the Environmental Protection Agency (EPA) indicates may be of concern for fish or invertebrates. The March 26, 2021 sampling results indicate that Thiabendazole was detected at 50.1 ppb exceeding the EPA Invertebrate Chronic level; Clothianidin was detected at 50.3 ppb exceeding the EPA Invertebrate Acute and Chronic levels; and Thiamethoxam exceeded the EPA Invertebrate Acute and Chronic levels at 60.6 ppb. The remaining pesticides were either not detected or below the EPA levels.

Chemical	3-26-2021 Results (ppb or $\mu\text{g/L}$) 21PE002251	3-02-21 Results (ppb or $\mu\text{g/L}$) 21PE001504	Fish Acute ($\mu\text{g/L}$)	Fish Chronic ($\mu\text{g/L}$)	Invertebrate Acute ($\mu\text{g/L}$)	Invertebrate Chronic ($\mu\text{g/L}$)
Desthio-Prothioconazole	J 3.78	J 1.38	--	--	--	--
Tebuconazole	7.62	J 4.43	1,135	11	1,440	120
Thiabendazole	50.1	16.9	280	110	155	42
Clothianidin	50.3	ND	50,750	9,700	11	0.05
Fluoxastrobin	6.50	ND	--	--	--	--
Thiamethoxam	60.6	ND	57,000	20,000	17.5	0.74

Bold indicates data exceeds acceptable EPA levels

"J" indicates data is less than detection limit for chemical

"--" indicates that a benchmark is not available for this chemical



20210141637

Department of Environment and Energy
P.O. Box 98922
Lincoln, Nebraska 68509-8922

Jim Macy, Director
OFFICE: 402-477-1218 FAX: 402-477-1209
need more info@nebraska.gov

The results also exceeded Title 117 – Nebraska Surface Water Quality Standards for Dissolved Oxygen, Total Phosphate as P and Ammonia as N as indicated in the table below.

Parameter	3-26-2021 Results (mg/L)	2-22-2021 Results (mg/L)	Surface Water Quality Standard
Dissolved Oxygen	0.4	38.2#	Not less than 3.0*
pH	6.7	8.3	Between 6.5-9.0
Conductivity (umhos/cm)	483	1,011	Not more than 2000
Nitrate + Nitrite (as N)	<RL	1.06	--
Total Suspended Solids	30.0	26	--
Total Kjeldahl Nitrogen	23.4	4.52	--
Total Phosphate as P	7.12	0.735	0.050
Ammonia as N	13.4	0.126	46.33/4.45**
Chloride	17.9	68.8	860/230***
Temperature	8.4°C	NA	--
Dissolved Oxygen (saturation)	2.6 %	NA	--
Turbidity (NTU's)	36.1	NA	--
Sodium, Dissolved	13.8	NA	--

Bold indicates data exceeds Surface Water Quality Standards

* - One-day minimum criterion that applies October 1 through March 31

** - Ammonia concentration exceeded the thirty-day average criteria for Title 117-Surface Water Standards, Chapter 4, Section 003, Warmwater Aquatic Life Use Class Specific Criteria, Specifically Section 003.04A2 (thirty-day average). Ammonia concentration does not exceed the one-hour average for Title 117-Surface Water Standards, Chapter 4, Section 003, Warmwater Aquatic Life Use Class Specific Criteria, Specifically Section 003.04A1, Total Ammonia (one-hour average). Since this was a single sample, there is no one hour average so the results are for comparison to Surface Water Standards.

*** - Not to exceed 860 mg/L at any time or a 4-day average concentration of 230 mg/L

- pond was exhibiting super-saturated conditions of 283% likely due to heavy algal growth/photosynthesis occurring under ice.

"--" indicates that a standard is not available for this chemical

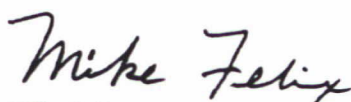
"NA" - Not analyzed

"<RL" - less than Reporting Limit. The lowest amount of analyte that can be accurately reported by the method used.

Dissolved Oxygen, pH and Conductivity - field measurements taken during sampling

If you have any questions, 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

Enclosure

NEBRASKA

State of Nebraska

Public Health
Environmental Lab

Nebraska Public Health Environmental Lab

3701 S 14th St

Lincoln, NE 68502

(402) 471-2122

(402) 471-2080 (fax)

Dave Ihrie
NDEE-SURFACE WATER UNIT
245 FALLBROOK BLVD
PO BOX 98922
Lincoln, NE 68509-8922

ANALYTICAL RESULT QUALIFIERS

Workorder:

Profile: 03 FISH KILL, RTN:03 Fish Kill/Complaints

Lab ID:	723847	Date Received:	2/22/2021	Matrix:	Water
Sample ID:	723847	Date Collected:	2/22/2021 11:20		
Sample By:	BUBB, DAVE	Date Reported:	3/11/2021 11:22		
Location:	MIDLAKE01 KIZER POND				

Parameters	Your Results	Units	Qual	Report Limit	MCL or AL	Analyzed	By
Analytical Method: Lachat 10-107-04-1-A NO3+NO2							
Nitrate + Nitrite (As N)	1.06	mg/L		0.05	10	2/23/2021	JDL
Analytical Method: EPA 160.2 - TSS							
TSS (Non-Filterable Residue)	26.0	mg/L		5		2/25/2021	SEP
Analytical Method: TKN_TPO4							
Prep Date	2/24/2021						AMJ
Total Kjeldahl Nitrogen	4.52	mg/L		0.5		2/26/2021	AMJ
Total Phosphate as P	0.735	mg/L		0.04		2/26/2021	AMJ
Analytical Method: EPA 350.1 - Ammonia							
Prep Date	03/09/2021						JDL
Ammonia as N, Distilled	0.126	mg/L		0.05		3/11/2021	JDL
Analytical Method: Lachat 10-117-07-1-A Chloride							
Chloride	68.8	mg/L		1		3/1/2021	AAP

SAMPLE COMMENTS:

[1] Rec'd on ice, 7.3°C

REMARKS: See reverse side of report for description of acronyms and data qualifiers. For inquiries on result interpretation call: (402) 471-6435.www.dhhs.ne.gov/lab

ACRONYMS

- MCL = Maximum Contaminant Level – The concentration of the analyte which has been determined by the EPA to put the public health at risk. Concentrations below this level are considered acceptable.
- AL = Action Levels (AL) apply only to lead and copper and are not based on known or expected health effects. An Action Level is the concentration of a contaminant in a sample which, if exceeded and grouped with other samples, triggers treatment techniques or other requirements which a water system must follow.
- <RL = Less than Reporting Limit. The lowest amount of the analyte that can be accurately reported by the method used.
- NG = Not Given. The information was not supplied by the collector on the request form or the information was not readable.
- ND or NT = Not determined or not tested.

DATA QUALIFIERS

- A = The value given is an average value; determined by analyzing aliquots of the same sample two or more times
- B = The results are based upon colony counts outside the acceptable range. Fecal coliform results require that the plate count be in the range of 20-60. Fecal strep results require that the plate count be in the range of 20-100 colonies.
- C = The result given is a calculated value; it was not determined by direct analysis.
- E = Indication of possible interference.
- F = The sample was received in improper condition (container, temperature, preservative, sample container broken, paperwork discrepancies, air bubbles, insufficient volume, excess turbidity, chlorine smell, etc.)
- H = The sample was beyond the maximum holding time when received by the laboratory. It was therefore, not analyzed.
- J = The associated numerical value is an estimated quantity.
- K = The actual value is less than the value given.
- L = The actual value is greater than the value given.
- M = The analysis was inconclusive due to matrix interferences. The sample needs to be recollected.
- Q = The sample was beyond the maximum holding time prior to analysis.
- R = The sample was delivered to the lab, but due to laboratory accident, it was unable to be analyzed.
- S = Not all of the associated quality control criteria were met for this analyte.

TOTAL COLIFORM TERMINOLOGY (DRINKING WATER)

Total coliform / E.coli Routine Compliance Monitoring – Required monitoring samples which are sent to each PWS System monthly or quarterly.

Repeat Samples – The method used for repeat samples, EPA 9223B-QT, provides the number of organisms in colony forming units (CFU) instead of presence or absence.

OR – ORIGINAL – One repeat sample must be taken from the same tap as the original positive

DN – DOWNSTREAM – One repeat sample must be collected within 5 service connections downstream of the original positive sample site.

UP – UPSTREAM – One repeat sample must be collected within 5 service connections upstream of the original positive sample site.

TG – TRIGGERED – This water sample is to be collected from a source well (or a common or representative sample point for multiple wells) for systems required to conduct triggered sampling under the Ground Water Rule. If more than one well is being used by the system, additional samples should be collected using sample kits and submission forms designated as "TG". The system must request additional TG sample kits if needed.

Additional Routines – Systems collecting samples on a quarterly schedule must collect additional routine monitoring samples the month following one or more total coliform positive samples. Systems must collect at least three (3) routine samples during the next month.

Special – These samples are non-compliance samples and may be used to determine the presence of total coliform after a pressure loss, repairs, or routine maintenance.

Units – cfu/100ml – Colony Forming Units per milliliters – A unit of bacteria that will form one colony in 100 milliliters of sample.

Excessive Age – The sample was received at least 30 hours after it was collected. This test was not performed.

Insufficient Amount – The amount of samples the lab received was less than the 100 ml required to perform the test.

Improper Container – The container used to collect the sample was inappropriate for the test required.

Damage – Something damaged the sample before it could be tested. The bottle may have been broken or sample contaminated.

Insufficient Sample Information – The sample collector failed to include the laboratory request form with the sample, date of samples on the request form or the collector may have put the same lab number on multiple samples.

Excess Chlorine Interference – The results can not be determined due to excess chlorine in the sample.

Total Coliform Present – The test detected the presence of total coliform. The sample **does not** meet bacteriological standards.

Total Coliform Absent – The test did not detect the presence of any total coliform. The sample **meets** bacteriological standards.

E. Coli Present – The test detected the presence of E. Coli in the sample. The sample **does not** meet bacteriological standards.

E. Coli Absent – The test did not detect the presence of any E. Coli in the sample. The sample **meets** bacteriological standards.

0 – The test did not detect the presence of any Total Coliform or E. Coli in the sample. The sample **meets** bacteriological standards.

Any Number over 0 – The test detected Total Coliform or E. Coli present in the sample. The number indicated the total number of colony forming units present in 100 ml of the sample. The sample **does not** meet bacteriological standards.

MPN-Most Probable Number. An index of the number of bacteria that, more probably than any other number, would give the results shown by the lab examination; it is not an actual enumeration.

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ANALYTICAL RESULT QUALIFIERS

Workorder: 8839 DEQ03262021

Profile: 03 FISH KILL, RTN:03 Fish Kill/Complaints

Lab ID:	730797	Date Received:	3/29/2021	Matrix:	Water
Sample ID:	CC03903262101	Date Collected:	3/26/2021 10:20		
Sample By:	BUBB, DAVE	Date Reported:	4/14/2021		
Location:	KEISER POND				

Parameters	Your Results	Units	Qual	Report Limit	MCL or AL	Analyzed	By
Analytical Method: Lachat 10-107-04-1-A NO3+NO2							
Nitrate + Nitrite (As N)	<RL	mg/L		0.05	10	3/30/2021	JDL
Analytical Method: SM 3111B - Minerals by AA							
Sodium Dissolved	13.8	mg/L		0.15		4/9/2021	TMG
Analytical Method: EPA 160.2 - TSS							
TSS (Non-Filterable Residue)	30.0	mg/L		5		4/1/2021	JDL
Analytical Method: TKN_TPO4							
Prep Date	4/6/2021						AAP
Total Kjeldahl Nitrogen	23.4	mg/L		0.5		4/7/2021	AAP
Total Phosphate as P	7.12	mg/L		0.04		4/7/2021	AAP
Analytical Method: EPA 350.1 - Ammonia							
Prep Date	4/5/2021						JDL
Ammonia as N, Distilled	13.4	mg/L		0.05		4/7/2021	JDL
Analytical Method: Lachat 10-117-07-1-A Chloride							
Chloride	17.9	mg/L		1		3/29/2021	AAP

SAMPLE COMMENTS:

[1] Rcv'd on ice 4 1C

REMARKS: See reverse side of report for description of acronyms and data qualifiers. For inquiries on result interpretation call: (402) 471-6435.

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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: 2021-04-20**Final Report****South Dakota Agricultural Laboratories has examined the sample of**

Limfinite Package Id : 20210330-002
 Lab Sample Id : 21PE002251
 Customer Sample Id : Kaiser Pond #1
 Sample Description : Water
 Date Collected : 2021-03-26
 Date Received : 2021-03-30
 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	2021-04-01	2021-04-01
Acetamprid	ppb	ND	1	3	LC-MS/MS	2021-04-01	2021-04-01
Azoxystrobin	ppb	ND	1	3	LC-MS/MS	2021-04-01	2021-04-01
Brassinazole	ppb	ND	2	5	LC-MS/MS	2021-04-01	2021-04-01
Clothianidin	ppb	50.3	2.5	8	LC-MS/MS	2021-04-01	2021-04-01
Cyproconazole	ppb	ND	2	5	LC-MS/MS	2021-04-01	2021-04-01
Desthio-Prothioconazole	ppb	J3.78	2	5	LC-MS/MS	2021-04-01	2021-04-01
Difenoconazole	ppb	ND	1	4	LC-MS/MS	2021-04-01	2021-04-01
Dimoxystrobin	ppb	ND	3	8	LC-MS/MS	2021-04-01	2021-04-01
Dinotefuron	ppb	ND	1.2	4	LC-MS/MS	2021-04-01	2021-04-01
Epoxiconazole	ppb	ND	1	3	LC-MS/MS	2021-04-01	2021-04-01
Fluconazole	ppb	ND	1	4	LC-MS/MS	2021-04-01	2021-04-01
Fluoxastrobin	ppb	6.50	1	3	LC-MS/MS	2021-04-01	2021-04-01
Glufosinate	ppb	ND	3	10	LC-MS/MS	2021-04-07	2021-04-16
Glyphosate	ppb	ND	3	10	LC-MS/MS	2021-04-07	2021-04-16
Imidacloprid	ppb	ND	1.2	4	LC-MS/MS	2021-04-01	2021-04-01
Ipconazole	ppb	ND	2	6	LC-MS/MS	2021-04-01	2021-04-01
Isavuconazole	ppb	ND	1	4	LC-MS/MS	2021-04-01	2021-04-01
Itraconazole	ppb	ND	1	5	LC-MS/MS	2021-04-01	2021-04-01
Metconazole	ppb	ND	2	5	LC-MS/MS	2021-04-01	2021-04-01
Nitenpyram	ppb	ND	2.5	8	LC-MS/MS	2021-04-01	2021-04-01
Oryastrobin	ppb	ND	2	7	LC-MS/MS	2021-04-01	2021-04-01
Picoxystrobin	ppb	ND	1	3	LC-MS/MS	2021-04-01	2021-04-01
Posaconazole	ppb	ND	2	5	LC-MS/MS	2021-04-01	2021-04-01
Propiconazole	ppb	ND	2	5	LC-MS/MS	2021-04-01	2021-04-01
Prothioconazole	ppb	ND	2	6	LC-MS/MS	2021-04-01	2021-04-01
Pyraclostrobin	ppb	ND	1	3	LC-MS/MS	2021-04-01	2021-04-01
Ravuconazole	ppb	ND	1	3	LC-MS/MS	2021-04-01	2021-04-01
Sulfonic Acid Prothioconazole	ppb	ND	3	8	LC-MS/MS	2021-04-01	2021-04-01
Tebuconazole	ppb	7.62	2	5	LC-MS/MS	2021-04-01	2021-04-01

Tetraconazole	ppb	ND	1	4	LC-MS/MS	2021-04-01	2021-04-01
Thiabendazole	ppb	50.1	2	5	LC-MS/MS	2021-04-01	2021-04-01
Thiacloprid	ppb	ND	2	6	LC-MS/MS	2021-04-01	2021-04-01
Thiamethoxam	ppb	60.6	1	3	LC-MS/MS	2021-04-01	2021-04-01
Trifloxystrobin	ppb	ND	1	5	LC-MS/MS	2021-04-01	2021-04-01
Uniconazole	ppb	ND	1	3	LC-MS/MS	2021-04-01	2021-04-01
Voriconazole	ppb	ND	1	4	LC-MS/MS	2021-04-01	2021-04-01

QUALITY ASSURANCE

ANALYTE	UNIT	DUPLICATE	SPIKE RECOVERY	MATRIX BLANK	PROCESS BLANK	INSTRUMENT BLANK
Abamectin	ppb	ND	128	ND	ND	ND
Acetamprid	ppb	21PE002669	117	ND	ND	ND
Azoxystrobin	ppb	21PE002267	109	ND	ND	ND
Brassinazole	ppb	21PE002267	116	ND	ND	ND
Clothianidin	ppb	21PE002669	89.4	ND	ND	ND
Cyproconazole	ppb	21PE002267	102	ND	ND	ND
Desthio-Prothioconazole	ppb	21PE002267	103	ND	ND	ND
Difenoconazole	ppb	21PE002267	113	ND	ND	ND
Dimoxystrobin	ppb	21PE002267	110	ND	ND	ND
Dinotefuron	ppb	21PE002669	116	ND	ND	ND
Epoxiconazole	ppb	21PE002267	102	ND	ND	ND
Fluconazole	ppb	21PE002267	128	ND	ND	ND
Fluoxastrobin	ppb	21PE002267	116	ND	ND	ND
Glufosinate	ppb	ND	87.9	ND	ND	ND
Glyphosate	ppb	ND	73.7	ND	ND	ND
Imidacloprid	ppb	21PE002669	104	ND	ND	ND
Ipconazole	ppb	21PE002267	112	ND	ND	ND
Isavuconazole	ppb	21PE002267	115	ND	ND	ND
Itraconazole	ppb	21PE002267	107	ND	ND	ND
Metconazole	ppb	21PE002267	116	ND	ND	ND
Nitenpyram	ppb	21PE002669	112	ND	ND	ND
Orysastrobin	ppb	21PE002267	97.7	ND	ND	ND
Picoxystrobin	ppb	21PE002267	114	ND	ND	ND
Posaconazole	ppb	21PE002267	116	ND	ND	ND
Propiconazole	ppb	21PE002267	109	ND	ND	ND
Prothioconazole	ppb	21PE002267	112	ND	ND	ND
Pyraclostrobin	ppb	21PE002267	115	ND	ND	ND
Ravuconazole	ppb	21PE002267	123	ND	ND	ND
Sulfonic Acid Prothioconazole	ppb	21PE002267	114	ND	ND	ND
Tebuconazole	ppb	21PE002267	84.2	ND	ND	ND
Tetraconazole	ppb	21PE002267	113	ND	ND	ND
Thiabendazole	ppb	21PE002267	114	ND	ND	ND
Thiacloprid	ppb	21PE002669	116	ND	ND	ND
Thiamethoxam	ppb	21PE002669	117	ND	ND	ND
Trifloxystrobin	ppb	21PE002267	117	ND	ND	ND
Uniconazole	ppb	21PE002267	106	ND	ND	ND
Voriconazole	ppb	21PE002267	128	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, Orysastrobin, 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:



20210330-002
21PE002251

5
1g

Pesticide Residue Sample Submission Form

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

20210330-002
21PE002251

Ka. ser Pond #1

Name: Dave Schumacher *Sample ID: _____
Address: 245 Fallbrook Blvd. City: Lincoln State: NE
Zip: 68521 Phone: (402) 471-4709 Email: dave.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
Name: Nebraska Dept. of Environment and Energy Address: PO Box 98922
City: Lincoln State: NE Zip: 68521
Phone: (402) 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: 2021-03-30
Received by
Alyssa Kennedy

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 and Energy
PO Box 98922
Lincoln, NE 68509
Phone: 402-471-3377
E-Mail: wade.gregson@nebraska.gov

Report Date: 2021-04-01**Amended Report****South Dakota Agricultural Laboratories has examined the sample of**

Limfinite Package Id : 20210305-002
Lab Sample Id : 21PE001504
Customer Sample Id : Off-site Surface Water
Sample Description : Water
Date Collected : 2021-03-03
Date Received : 2021-03-05
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	2021-03-12	2021-03-12
Acetamprid	ppb	ND	1	3	LC-MS/MS	2021-03-08	2021-03-09
Azoxystrobin	ppb	ND	1	5	LC-MS/MS	2021-03-08	2021-03-10
Brassinazole	ppb	ND	1	5	LC-MS/MS	2021-03-08	2021-03-08
Clothianidin	ppb	ND	2.5	8	LC-MS/MS	2021-03-08	2021-03-09
Cyproconazole	ppb	ND	1	5	LC-MS/MS	2021-03-08	2021-03-08
Desthio-Prothioconazole	ppb	J1.38	1	5	LC-MS/MS	2021-03-08	2021-03-08
Difenoconazole	ppb	ND	1	5	LC-MS/MS	2021-03-08	2021-03-08
Dimoxystrobin	ppb	ND	1	5	LC-MS/MS	2021-03-08	2021-03-10
Dinotefuron	ppb	ND	1.2	4	LC-MS/MS	2021-03-08	2021-03-09
Epoxiconazole	ppb	ND	1	5	LC-MS/MS	2021-03-08	2021-03-08
Fluconazole	ppb	ND	1	5	LC-MS/MS	2021-03-08	2021-03-08
Fluoxastrobin	ppb	ND	1	5	LC-MS/MS	2021-03-08	2021-03-10
Glufosinate	ppb	ND	3	10	LC-MS/MS	2021-03-09	2021-03-11
Glyphosate	ppb	ND	3	10	LC-MS/MS	2021-03-09	2021-03-11
Imidacloprid	ppb	ND	1.2	4	LC-MS/MS	2021-03-08	2021-03-09
Ipconazole	ppb	ND	1	5	LC-MS/MS	2021-03-08	2021-03-08
Isavuconazole	ppb	ND	1	5	LC-MS/MS	2021-03-08	2021-03-08
Metconazole	ppb	ND	1	5	LC-MS/MS	2021-03-08	2021-03-08
Nitenpyram	ppb	ND	2.5	8	LC-MS/MS	2021-03-08	2021-03-09
Orysastrobin	ppb	ND	1	5	LC-MS/MS	2021-03-08	2021-03-10
Picoxystrobin	ppb	ND	1	5	LC-MS/MS	2021-03-08	2021-03-10
Propiconazole	ppb	ND	1	5	LC-MS/MS	2021-03-08	2021-03-08
Prothioconazole	ppb	ND	1	5	LC-MS/MS	2021-03-08	2021-03-08
Pyraclostrobin	ppb	ND	1	5	LC-MS/MS	2021-03-08	2021-03-10
Ravuconazole	ppb	ND	1	5	LC-MS/MS	2021-03-08	2021-03-08
Sulfonic Acid Prothioconazole	ppb	ND	1	5	LC-MS/MS	2021-03-08	2021-03-20
Tebuconazole	ppb	J4.43	1	5	LC-MS/MS	2021-03-08	2021-03-08
Tetraconazole	ppb	ND	1	5	LC-MS/MS	2021-03-08	2021-03-08
Thiabendazole	ppb	16.9	1	5	LC-MS/MS	2021-03-08	2021-03-08
Thiacloprid	ppb	ND	2	6	LC-MS/MS	2021-03-08	2021-03-09

Thiamethoxam	ppb	ND	1	3	LC-MS/MS	2021-03-08	2021-03-09
Trifloxystrobin	ppb	ND	1	5	LC-MS/MS	2021-03-08	2021-03-10
Uniconazole	ppb	ND	1	5	LC-MS/MS	2021-03-08	2021-03-08
Voriconazole	ppb	ND	1	5	LC-MS/MS	2021-03-08	2021-03-08

QUALITY ASSURANCE

ANALYTE	UNIT	DUPLICATE	SPIKE RECOVERY	MATRIX BLANK	PROCESS BLANK	INSTRUMENT BLANK
Abamectin	ppb	21PE001509	81.1	ND	ND	ND
Acetamprid	ppb	ND	106	ND	ND	ND
Azoxystrobin	ppb	21PE001509	102	ND	ND	ND
Brassinazole	ppb	21PE001509	106	ND	ND	ND
Clothianidin	ppb	ND	86.7	ND	ND	ND
Cyproconazole	ppb	21PE001509	90.2	ND	ND	ND
Desthio-Prothioconazole	ppb	21PE001509	96.9	ND	ND	ND
Difenoconazole	ppb	21PE001509	92.3	ND	ND	ND
Dimoxystrobin	ppb	21PE001509	110	ND	ND	ND
Dinotefuron	ppb	ND	109	ND	ND	ND
Epoxiconazole	ppb	21PE001509	115	ND	ND	ND
Fluconazole	ppb	21PE001509	98.3	ND	ND	ND
Fluxastrobin	ppb	21PE001509	108	ND	ND	ND
Glufosinate	ppb	21PE001509	98.9	ND	ND	ND
Glyphosate	ppb	21PE001509	102	ND	ND	ND
Imidacloprid	ppb	ND	109	ND	ND	ND
Ipconazole	ppb	21PE001509	94.9	ND	ND	ND
Isavuconazole	ppb	21PE001509	87.5	ND	ND	ND
Metconazole	ppb	21PE001509	99.3	ND	ND	ND
Nitenpyram	ppb	ND	108	ND	ND	ND
Orysastrobin	ppb	21PE001509	95.4	ND	ND	ND
Picoxystrobin	ppb	21PE001509	98.2	ND	ND	ND
Propiconazole	ppb	21PE001509	108	ND	ND	ND
Prothioconazole	ppb	21PE001509	120	ND	ND	ND
Pyraclostrobin	ppb	21PE001509	86.9	ND	ND	ND
Ravuconazole	ppb	21PE001509	85.4	ND	ND	ND
Sulfonic Acid Prothioconazole	ppb	21PE001509	85.7	ND	ND	ND
Tebuconazole	ppb	21PE001509	90.0	ND	ND	ND
Tetraconazole	ppb	21PE001509	86.4	ND	ND	ND
Thiabendazole	ppb	21PE001509	101	ND	ND	ND
Thiacloprid	ppb	ND	102	ND	ND	ND
Thiamethoxam	ppb	ND	105	ND	ND	ND
Trifloxystrobin	ppb	21PE001509	79.1	ND	ND	ND
Uniconazole	ppb	21PE001509	90.2	ND	ND	ND
Voriconazole	ppb	21PE001509	100	ND	ND	ND

Comments:

Definitions:

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