

October 15, 2021
File No. 25221192.00

Mr. Matthew Graesch
Iowa Department of Natural Resources
502 E 9th Street
Des Moines, IA 50319

Subject: Incident Summary and Analytical Data
Crop Duster Plane Accident Near Carroll, Iowa
Iowa DNR Field Office Incident No. 071321-CMA-0730
Iowa DNR Contaminated Sites No. 2666

Dear Mr. Graesch:

As requested, we are supplying this summary of the sampling completed thus far for you today. We are still developing our findings due to the late nature of the laboratory reporting. We will provide a more comprehensive documentation report in the future. The background information on the incident described below was provided by Cura Emergency Services.

Incident Description

On July 13, 2021, an aircraft owned by Central Ag, L.L.C. (CA) was applying a solution of insecticide Chlorpyrifos 4E-AG (8 gallons) and Bifenthrin 2EC (3 gallons) from the onboard tank containing 180 gallons when the aircraft experienced engine failure due to unknown circumstances. The pilot dispensed the contents of the diluted insecticide in attempt to lighten the aircraft for an emergency landing. The aircraft then crashed landed. As a result of this incident, approximately 180 gallons of the diluted insecticide was released over multiple private properties to include a house, swimming pool, soil surfaces, and a pond. In addition, the emergency landing damaged the aircraft. As a result of the aircraft damage, an unknown amount (estimated to be less than 10 gallons) of JET A fuel and oil was released onto a soil surface.

Initial Action

On July 16, 2021, Mr. John Nepple (private property owner) retained a local construction company to excavate the insecticide-impacted soils and an aquatic biologist to assess the pond on his property.

Corrective Actions

On July 16, 2021, a local construction company hired by the private property owner arrived onsite. The crew excavated the insecticide-impacted soil surfaces under the direction of the Iowa Department of Natural Resources (IADNR) until no visual or olfactory indicators of insecticide were observed onsite. The IADNR collected soil samples and water samples from the pond for laboratory analysis. All insecticide-impacted soil was collected for transport and reuse in land application. The local construction crew demobilized from site.

On July 19, 2021, Environmental Restoration, L.L.C. (ER) arrived onsite. Following a site assessment, the supervisor determined insecticide was released to multiple areas to include a house, swimming pool, soil surfaces, and a pond. The supervisor further noted expired fish in the pond. The supervisor was unable to gain access to the crash site where the reported release of approximately 10 gallons



of JET A fuel and oil on a soil surface occurred. A local state park was assessed and no visual or olfactory evidence of insecticide was observed. The supervisor assessed all areas to determine the appropriate equipment needed in the remediation. The site was documented and the ER supervisor scheduled to return for remediation pending scheduling with property owners.

On July 29, 2021, at approximately 9:00 a.m. CDT, a crew from ER arrived onsite. The crew utilized a pressure washer to wash the insecticide-impacted surfaces around Mr. Nepple's pool and pool house. This included the concrete surfaces around the pool, furniture, railings, pool house sides, and roof. ER personnel utilized a vacuum truck to collect the rinsate from the pool until the pool's depth was 6" so as to not damage the pool liner as instructed by the homeowner. All insecticide and chlorine-impacted liquids were collected in one (1) vacuum truck and transferred into one (1) frac tank staged onsite. At approximately 12:30 p.m. CDT, the crew arrived at the crash site. ER personnel utilized hand tools to excavate the jet A fuel and oil-impacted soil surfaces vertically and laterally until no visual or olfactory evidence of jet A fuel or oil remained onsite. All jet A fuel and oil was collected in one (1) 55-gallon drum for transport and disposal. ER personnel secured the site and scheduled to return the following day to continue pressure washing activities.

On July 30, 2021, at approximately 9:00 a.m. CDT, a crew from ER arrived onsite. The crew utilized a pressure washer to finish washing the insecticide-impacted surfaces around Mr. Nepple's pool and pool house. The crew then utilized a pressure washer to wash Mr. Nepple's house and areas surrounding the house. This included the concrete surfaces of the driveway, railings, house sides, and roof. ER personnel utilized a vacuum truck to collect the rinsate and transferred into one (1) frac tank staged onsite. ER personnel secured the site and scheduled to return to transport the waste pending waste facility approval and IADNR guidance.

Additional Sampling

On September 8, 2021, at approximately 9:00 a.m. CDT, a crew from SCS Engineer arrived onsite to sample. The crew collected 11 soil samples and two (2) water samples. Soil samples were collected from the pond sediment; areas around the Nepple property, including the lawn; and the plane crash site. Water samples were collected from the Nepple pond and the nearby cattle well. A map showing the sample locations is attached, along with the laboratory analytical reports. Most of the samples showed no insecticides were present, and the pond water sample showed significant reductions in insecticide concentrations since the earlier DNR collected sample.

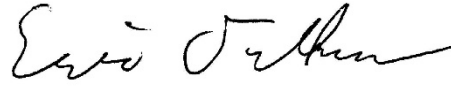
Matthew Graesch
October 15, 2021
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We are in the process of evaluating the analytical results and hope to discuss them with you soon.

Sincerely,



Tony Kollasch
Project Manager
SCS Engineers



Eric Oelkers, PG
Senior Project Manager
SCS Engineers

TJK/EO

cc: Jared Melton, Cura Environmental Services

Encl. Sample Location Map
Laboratory Results

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Sample Location Map

Nepple Property, Carroll, IA

- Water Sample
- Soil/Sediment Sample

Google Earth

Cattle Well

Excavated Area

Exc North

Exc NW

Exc East

Exc Center

Exc SW

Sediment West

Sediment East

Pond Sample

Pond Bank

Lawn

Swan Lake Trail

Swan Lake Trail

To Crash Site
Samples

200 ft



Collection Location pond water	Collector and Phone joyce charles 402/599-0256	Client Reference 25221192.00	Accession # 1836217
	Collected 2021-09-08 13:45	Received 2021-09-08 16:55	Project
CARROLL,	Report To TONY KOLLASCH SCS ENGINEERS 2380 DAIRY DR MADISON, WI 53718		Sample Description surface water
			Sample Type Non-Drinking Water
			Sample Source
			Sample Note(s) 1

RESULTS OF ANALYSIS - FINAL REPORT

TEST	RESULT (ug/L)	QUANT LIMIT	ANALYSIS NOTE(S)
Chlorinated Hydrocarbon Insecticides, EPA 8081			
Bifenthrin	<0.20	0.20	
GCMS Pesticides, EPA 8270			
Atrazine	0.1	0.1	
Chlorpyrifos	0.3	0.1	

SAMPLE AND ANALYSIS NOTES

- Upon arrival, sample met container and preservation requirements for the analysis requested. Please review carefully your sample results for additional analyte comments or method exceptions.

ANALYSIS INFORMATION

TEST	ANALYZED	SITE	RELEASED	ANALYSIS PREP
1. Chlorinated Hydrocarbon Insecticides, EPA 8081	2021-09-09 19:20 MWM, VER	3200	2021-09-10 17:05 TGC	Test 2
2. Prep by Separatory Funnel, EPA 3510 CHI	2021-09-09 11:16 JDA	3200	2021-09-10 15:16 MES	
3. GCMS Pesticides, EPA 8270	2021-09-14 09:23 LWL	3200	2021-09-15 12:26 TGC	Test 4
4. Prep by Separatory Funnel, EPA 3510 NP	2021-09-10 08:02 JDA	3200	2021-09-10 15:15 MES	

DESCRIPTION OF UNITS

ug/L = Micrograms per Liter

SITE(S) PERFORMING TESTING

3200 STATE HYGIENIC LABORATORY CORALVILLE, UNIVERSITY OF IOWA RESEARCH PK, 2490 CROSSPARK RD, CORALVILLE, IA 52241; Phone 319/335-4500; Fax 319/335-4555; Michael D. Schueller, M.S., Associate Director; Wade K. Aldous, Ph.D. (D)ABMM, Associate Director; IOWA ENVIRONMENTAL LAB ID #027

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Collection Location cattle well	Collector and Phone joyce charles 402/599-0256	Client Reference 25221192.00	Accession # 1836218
	Collected 2021-09-08 14:13	Received 2021-09-08 16:55	Project
CARROLL,	Report To TONY KOLLASCH SCS ENGINEERS 2380 DAIRY DR MADISON, WI 53718		Sample Description ground water
			Sample Type Non-Drinking Water
			Sample Source
			Sample Note(s) 1

RESULTS OF ANALYSIS - FINAL REPORT

TEST	RESULT (ug/L)	QUANT LIMIT	ANALYSIS NOTE(S)
Chlorinated Hydrocarbon Insecticides, EPA 8081 Bifenthrin	<0.20	0.20	
GCMS Pesticides, EPA 8270 Chlorpyrifos	<0.1	0.1	

SAMPLE AND ANALYSIS NOTES

- Upon arrival, sample met container and preservation requirements for the analysis requested. Please review carefully your sample results for additional analyte comments or method exceptions.

ANALYSIS INFORMATION

TEST	ANALYZED	SITE	RELEASED	ANALYSIS PREP
1. Chlorinated Hydrocarbon Insecticides, EPA 8081	2021-09-09 19:57 MWM, VER	3200	2021-09-10 17:05 TGC	Test 2
2. Prep by Separatory Funnel, EPA 3510 CHI	2021-09-09 11:16 JDA	3200	2021-09-10 15:16 MES	
3. GCMS Pesticides, EPA 8270	2021-09-14 09:51 LWL	3200	2021-09-15 12:26 TGC	Test 4
4. Prep by Separatory Funnel, EPA 3510 NP	2021-09-10 08:02 JDA	3200	2021-09-10 15:15 MES	

DESCRIPTION OF UNITS

ug/L = Micrograms per Liter

SITE(S) PERFORMING TESTING

3200 STATE HYGIENIC LABORATORY CORALVILLE, UNIVERSITY OF IOWA RESEARCH PK, 2490 CROSSPARK RD, CORALVILLE, IA 52241; Phone 319/335-4500; Fax 319/335-4555; Michael D. Schueller, M.S., Associate Director; Wade K. Aldous, Ph.D. (D)ABMM, Associate Director; IOWA ENVIRONMENTAL LAB ID #027

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Collection Location crash west	Collector and Phone joyce charles 402/599-0256	Client Reference 25221 192.00	Accession # 1836206
	Collected 2021-09-08 10:47	Received 2021-09-08 16:53	Project
Report To TONY KOLLASCH SCS ENGINEERS 2380 DAIRY DR MADISON, WI 53718			Sample Description soil
			Sample Type Solid
			Sample Source
			Sample Note(s) 1

RESULTS OF ANALYSIS - FINAL REPORT

<u>TEST</u>	<u>RESULT (mg/kg)</u>	<u>QUANT LIMIT</u>	<u>ANALYSIS NOTE(S)</u>
<i>Volatile Petroleum Hydrocarbons, Iowa OA-1</i>			3
Benzene	<0.002	0.002	
Toluene	<0.002	0.002	
Ethylbenzene	<0.002	0.002	
Total Xylenes	<0.005	0.005	
<i>Total Extractable Hydrocarbons, Iowa OA-2</i>			2
Gasoline	<60.	60.	
Mineral spirits	<60.	60.	
Kerosene	3000	60.	
Diesel fuel	<60.	60.	
Motor oil	<60.	60.	
Total Extractable Hydrocarbons	3000	60.	
<i>Chlorinated Hydrocarbon Insecticides, EPA 8081</i>			
Bifenthrin	0.21	0.05	
<i>GCMS Pesticides, EPA 8270</i>			
Chlorpyrifos	<5.0	5.0	

SAMPLE AND ANALYSIS NOTES

1. Upon arrival, sample met container and preservation requirements for the analysis requested. Please review carefully your sample results for additional analyte comments or method exceptions.
2. The chromatographic profile of the sample extract is similar to this laboratory's kerosene standard. Quantitation is based on this laboratory's kerosene standard.
3. One or more non-target compounds were observed in the analysis of this sample.

ANALYSIS INFORMATION

<u>TEST</u>	<u>ANALYZED</u>	<u>SITE</u>	<u>RELEASED</u>	<u>ANALYSIS PREP</u>
1. Volatile Petroleum Hydrocarbons, Iowa OA-1	2021-09-09 20:50 LJL	3200	2021-09-13 14:02 TGC	
2. Total Extractable Hydrocarbons, Iowa OA-2	2021-09-17 11:11 JDA	3200	2021-09-20 20:58 TGC	Test 3
3. Prep by Sonication, Iowa OA-2	2021-09-15 09:07 JDA	3200	2021-09-16 11:27 LWL	
4. Chlorinated Hydrocarbon Insecticides, EPA 8081	2021-09-15 21:07 VER	3200	2021-09-20 21:06 TGC	Test 5
5. Prep by Sonication, EPA 3550 CHI	2021-09-14 08:00 LWL	3200	2021-09-16 13:19 JDA	
6. GCMS Pesticides, EPA 8270	2021-09-23 14:54 LJL	3200	2021-09-27 14:40 TGC	Test 7
7. Prep by Sonication, EPA 3550 NP	2021-09-10 08:00 MES, LWL	3200	2021-09-10 15:25 JDA	



Collection Location	Collector	Client Reference	Accession #
crash west	joyce charles	25221 192.00	1836206

DESCRIPTION OF UNITS

mg/kg = Milligrams per Kilogram

SITE(S) PERFORMING TESTING

3200 STATE HYGIENIC LABORATORY CORALVILLE, UNIVERSITY OF IOWA RESEARCH PK, 2490 CROSSPARK RD, CORALVILLE, IA 52241; Phone 319/335-4500; Fax 319/335-4555; Michael D. Schueller, M.S., Associate Director; Wade K. Aldous, Ph.D. (D)ABMM, Associate Director; IOWA ENVIRONMENTAL LAB ID #027

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Report To	Collection Location crash east	Collector and Phone joyce charles 402/599-0256	Client Reference 25221192.00	Accession # 1836207
	CARROLL,	Collected 2021-09-08 10:58	Received 2021-09-08 16:53	Project
	TONY KOLLASCH SCS ENGINEERS			Sample Description soil
	2380 DAIRY DR MADISON, WI 53718			Sample Type Solid
				Sample Source
				Sample Note(s) 1

RESULTS OF ANALYSIS - FINAL REPORT

<u>TEST</u>	<u>RESULT (mg/kg)</u>	<u>QUANT LIMIT</u>	<u>ANALYSIS NOTE(S)</u>
<i>Volatile Petroleum Hydrocarbons, Iowa OA-1</i>			2
Benzene	<0.002	0.002	
Toluene	<0.002	0.002	
Ethylbenzene	<0.002	0.002	
Total Xylenes	<0.005	0.005	
<i>Total Extractable Hydrocarbons, Iowa OA-2</i>			3
Gasoline	<60.	60.	
Mineral spirits	<60.	60.	
Kerosene	4500	60.	
Diesel fuel	<60.	60.	
Motor oil	<60.	60.	
Total Extractable Hydrocarbons	4500	60.	
<i>Chlorinated Hydrocarbon Insecticides, EPA 8081</i>			
Bifenthrin	0.22	0.05	
<i>GCMS Pesticides, EPA 8270</i>			
Chlorpyrifos	<8.4	8.4	

SAMPLE AND ANALYSIS NOTES

1. Upon arrival, sample met container and preservation requirements for the analysis requested. Please review carefully your sample results for additional analyte comments or method exceptions.
2. One or more non-target compounds were observed in the analysis of this sample.
3. The chromatographic profile of the sample extract is similar to this laboratory's kerosene standard. Quantitation is based on this laboratory's kerosene standard.

ANALYSIS INFORMATION

<u>TEST</u>	<u>ANALYZED</u>	<u>SITE</u>	<u>RELEASED</u>	<u>ANALYSIS PREP</u>
1. Volatile Petroleum Hydrocarbons, Iowa OA-1	2021-09-09 21:52 LJL	3200	2021-09-13 14:02 TGC	
2. Total Extractable Hydrocarbons, Iowa OA-2	2021-09-17 10:11 JDA	3200	2021-09-20 20:58 TGC	Test 3
3. Prep by Sonication, Iowa OA-2	2021-09-15 09:07 JDA	3200	2021-09-16 11:27 LWL	
4. Chlorinated Hydrocarbon Insecticides, EPA 8081	2021-09-15 21:43 VER	3200	2021-09-20 21:06 TGC	Test 5
5. Prep by Sonication, EPA 3550 CHI	2021-09-14 08:00 LWL	3200	2021-09-16 13:19 JDA	
6. GCMS Pesticides, EPA 8270	2021-09-23 15:22 LJL	3200	2021-09-27 14:40 TGC	Test 7
7. Prep by Sonication, EPA 3550 NP	2021-09-10 08:00 MES, LWL	3200	2021-09-10 15:25 JDA	



Collection Location	Collector	Client Reference	Accession #
crash east	joyce charles	25221192.00	1836207

DESCRIPTION OF UNITS

mg/kg = Milligrams per Kilogram

SITE(S) PERFORMING TESTING

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Report To	Collection Location exc north	Collector and Phone joyce charles 402/599-0256	Client Reference 25221192.00	Accession # 1836208
	CARROLL,	Collected 2021-09-08 12:11	Received 2021-09-08 16:53	Project
	TONY KOLLASCH SCS ENGINEERS			Sample Description soil
	2380 DAIRY DR MADISON, WI 53718			Sample Type Solid
				Sample Source
				Sample Note(s) 1

RESULTS OF ANALYSIS - FINAL REPORT

TEST	RESULT (mg/kg)	QUANT LIMIT	ANALYSIS NOTE(S)
Chlorinated Hydrocarbon Insecticides, EPA 8081 Bifenthrin	<0.05	0.05	
GCMS Pesticides, EPA 8270 Chlorpyrifos	<0.017	0.017	

SAMPLE AND ANALYSIS NOTES

1. Upon arrival, sample met container and preservation requirements for the analysis requested. Please review carefully your sample results for additional analyte comments or method exceptions.

ANALYSIS INFORMATION

TEST	ANALYZED	SITE	RELEASED	ANALYSIS PREP
1. Chlorinated Hydrocarbon Insecticides, EPA 8081	2021-09-15 22:20 VER	3200	2021-09-20 21:10 TGC	Test 2
2. Prep by Sonication, EPA 3550 CHI	2021-09-14 08:00 LWL	3200	2021-09-16 13:19 JDA	
3. GCMS Pesticides, EPA 8270	2021-09-23 07:59 LJL	3200	2021-09-27 14:41 TGC	Test 4
4. Prep by Sonication, EPA 3550 NP	2021-09-10 08:00 MES, LWL	3200	2021-09-10 15:25 JDA	

DESCRIPTION OF UNITS

mg/kg = Milligrams per Kilogram

SITE(S) PERFORMING TESTING

3200 STATE HYGIENIC LABORATORY CORALVILLE, UNIVERSITY OF IOWA RESEARCH PK, 2490 CROSSPARK RD, CORALVILLE, IA 52241; Phone 319/335-4500; Fax 319/335-4555; Michael D. Schueller, M.S., Associate Director; Wade K. Aldous, Ph.D. (D)ABMM, Associate Director; IOWA ENVIRONMENTAL LAB ID #027

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Collection Location exc east	Collector and Phone joyce charles 402/599-0256	Client Reference 25221192.00	Accession # 1836209
	Collected 2021-09-08 12:18	Received 2021-09-08 16:53	Project
Report To TONY KOLLASCH SCS ENGINEERS 2380 DAIRY DR MADISON, WI 53718			Sample Description soil
			Sample Type Solid
			Sample Source
			Sample Note(s) 1

RESULTS OF ANALYSIS - FINAL REPORT

<u>TEST</u>	<u>RESULT (mg/kg)</u>	<u>QUANT LIMIT</u>	<u>ANALYSIS NOTE(S)</u>
Chlorinated Hydrocarbon Insecticides, EPA 8081 Bifenthrin	<0.05	0.05	
GCMS Pesticides, EPA 8270 Chlorpyrifos	<0.017	0.017	

SAMPLE AND ANALYSIS NOTES

1. Upon arrival, sample met container and preservation requirements for the analysis requested. Please review carefully your sample results for additional analyte comments or method exceptions.

ANALYSIS INFORMATION

<u>TEST</u>	<u>ANALYZED</u>	<u>SITE</u>	<u>RELEASED</u>	<u>ANALYSIS PREP</u>
1. Chlorinated Hydrocarbon Insecticides, EPA 8081	2021-09-15 22:57 VER	3200	2021-09-20 21:10 TGC	Test 2
2. Prep by Sonication, EPA 3550 CHI	2021-09-14 08:00 LWL	3200	2021-09-16 13:19 JDA	
3. GCMS Pesticides, EPA 8270	2021-09-23 08:27 LJL	3200	2021-09-27 14:41 TGC	Test 4
4. Prep by Sonication, EPA 3550 NP	2021-09-10 08:00 MES, LWL	3200	2021-09-10 15:25 JDA	

DESCRIPTION OF UNITS

mg/kg = Milligrams per Kilogram

SITE(S) PERFORMING TESTING

3200 STATE HYGIENIC LABORATORY CORALVILLE, UNIVERSITY OF IOWA RESEARCH PK, 2490 CROSSPARK RD, CORALVILLE, IA 52241; Phone 319/335-4500; Fax 319/335-4555; Michael D. Schueller, M.S., Associate Director; Wade K. Aldous, Ph.D. (D)ABMM, Associate Director; IOWA ENVIRONMENTAL LAB ID #027

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Collection Location exc northwest		Collector and Phone joyce charles 402/599-0256	Client Reference 25221192.00	Accession # 1836210
Report To TONY KOLLASCH SCS ENGINEERS 2380 DAIRY DR MADISON, WI 53718		Collected 2021-09-08 12:25	Received 2021-09-08 16:53	Project
		Sample Description soil		
		Sample Type Solid		
		Sample Source		
		Sample Note(s) 1		

RESULTS OF ANALYSIS - FINAL REPORT

<u>TEST</u>	<u>RESULT (mg/kg)</u>	<u>QUANT LIMIT</u>	<u>ANALYSIS NOTE(S)</u>
Chlorinated Hydrocarbon Insecticides, EPA 8081 Bifenthrin	<0.05	0.05	
GCMS Pesticides, EPA 8270 Chlorpyrifos	<0.017	0.017	

SAMPLE AND ANALYSIS NOTES

1. Upon arrival, sample met container and preservation requirements for the analysis requested. Please review carefully your sample results for additional analyte comments or method exceptions.

ANALYSIS INFORMATION

<u>TEST</u>	<u>ANALYZED</u>	<u>SITE</u>	<u>RELEASED</u>	<u>ANALYSIS PREP</u>
1. Chlorinated Hydrocarbon Insecticides, EPA 8081	2021-09-16 00:47 VER	3200	2021-09-20 21:10 TGC	Test 2
2. Prep by Sonication, EPA 3550 CHI	2021-09-14 08:00 LWL	3200	2021-09-16 13:19 JDA	
3. GCMS Pesticides, EPA 8270	2021-09-23 08:55 LJL	3200	2021-09-27 14:41 TGC	Test 4
4. Prep by Sonication, EPA 3550 NP	2021-09-10 08:00 MES, LWL	3200	2021-09-10 15:25 JDA	

DESCRIPTION OF UNITS

mg/kg = Milligrams per Kilogram

SITE(S) PERFORMING TESTING

3200 STATE HYGIENIC LABORATORY CORALVILLE, UNIVERSITY OF IOWA RESEARCH PK, 2490 CROSSPARK RD, CORALVILLE, IA 52241; Phone 319/335-4500; Fax 319/335-4555; Michael D. Schueller, M.S., Associate Director; Wade K. Aldous, Ph.D. (D)ABMM, Associate Director; IOWA ENVIRONMENTAL LAB ID #027

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Collection Location exc center		Collector and Phone joyce charles 402/599-0256	Client Reference 25221192.00	Accession # 1836211
CARROLL,		Collected 2021-09-08 12:32	Received 2021-09-08 16:53	Project
Report To	TONY KOLLASCH SCS ENGINEERS 2380 DAIRY DR MADISON, WI 53718			Sample Description soil
				Sample Type Solid
				Sample Source
				Sample Note(s) 1

RESULTS OF ANALYSIS - FINAL REPORT

<u>TEST</u>	<u>RESULT (mg/kg)</u>	<u>QUANT LIMIT</u>	<u>ANALYSIS NOTE(S)</u>
Chlorinated Hydrocarbon Insecticides, EPA 8081 Bifenthrin	<0.05	0.05	
GCMS Pesticides, EPA 8270 Chlorpyrifos	<0.017	0.017	

SAMPLE AND ANALYSIS NOTES

- Upon arrival, sample met container and preservation requirements for the analysis requested. Please review carefully your sample results for additional analyte comments or method exceptions.

ANALYSIS INFORMATION

<u>TEST</u>	<u>ANALYZED</u>	<u>SITE</u>	<u>RELEASED</u>	<u>ANALYSIS PREP</u>
1. Chlorinated Hydrocarbon Insecticides, EPA 8081	2021-09-16 01:23 VER	3200	2021-09-20 21:10 TGC	Test 2
2. Prep by Sonication, EPA 3550 CHI	2021-09-14 08:00 LWL	3200	2021-09-16 13:19 JDA	
3. GCMS Pesticides, EPA 8270	2021-09-23 09:24 LJL	3200	2021-09-27 14:41 TGC	Test 4
4. Prep by Sonication, EPA 3550 NP	2021-09-10 08:00 LWL	3200	2021-09-10 15:25 JDA	

DESCRIPTION OF UNITS

mg/kg = Milligrams per Kilogram

SITE(S) PERFORMING TESTING

3200 STATE HYGIENIC LABORATORY CORALVILLE, UNIVERSITY OF IOWA RESEARCH PK, 2490 CROSSPARK RD, CORALVILLE, IA 52241; Phone 319/335-4500; Fax 319/335-4555; Michael D. Schueller, M.S., Associate Director; Wade K. Aldous, Ph.D. (D)ABMM, Associate Director; IOWA ENVIRONMENTAL LAB ID #027

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Collection Location exc southwest	Collector and Phone joyce charles 402/599-0256	Client Reference 25221192.00	Accession # 1836212
CARROLL,	Collected 2021-09-08 12:39	Received 2021-09-08 16:53	Project
Report To	TONY KOLLASCH SCS ENGINEERS 2380 DAIRY DR MADISON, WI 53718		Sample Description soil
			Sample Type Solid
			Sample Source
			Sample Note(s) 1

RESULTS OF ANALYSIS - FINAL REPORT

TEST	RESULT (mg/kg)	QUANT LIMIT	ANALYSIS NOTE(S)
Chlorinated Hydrocarbon Insecticides, EPA 8081 Bifenthrin	<0.05	0.05	
GCMS Pesticides, EPA 8270 Chlorpyrifos	<0.017	0.017	

SAMPLE AND ANALYSIS NOTES

1. Upon arrival, sample met container and preservation requirements for the analysis requested. Please review carefully your sample results for additional analyte comments or method exceptions.

ANALYSIS INFORMATION

TEST	ANALYZED	SITE	RELEASED	ANALYSIS PREP
1. Chlorinated Hydrocarbon Insecticides, EPA 8081	2021-09-16 02:00 VER	3200	2021-09-20 21:10 TGC	Test 2
2. Prep by Sonication, EPA 3550 CHI	2021-09-14 08:00 LWL	3200	2021-09-16 13:19 JDA	
3. GCMS Pesticides, EPA 8270	2021-09-23 09:52 LJL	3200	2021-09-27 14:41 TGC	Test 4
4. Prep by Sonication, EPA 3550 NP	2021-09-10 08:00 LWL	3200	2021-09-10 15:25 JDA	

DESCRIPTION OF UNITS

mg/kg = Milligrams per Kilogram

SITE(S) PERFORMING TESTING

3200 STATE HYGIENIC LABORATORY CORALVILLE, UNIVERSITY OF IOWA RESEARCH PK, 2490 CROSSPARK RD, CORALVILLE, IA 52241; Phone 319/335-4500; Fax 319/335-4555; Michael D. Schueller, M.S., Associate Director; Wade K. Aldous, Ph.D. (D)ABMM, Associate Director; IOWA ENVIRONMENTAL LAB ID #027

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Report To	Collection Location pond bank	Collector and Phone joyce charles 402/599-0256	Client Reference 25221192.00	Accession # 1836213
	CARROLL,	Collected 2021-09-08 12:48	Received 2021-09-08 16:53	Project
	TONY KOLLASCH SCS ENGINEERS			Sample Description soil
	2380 DAIRY DR MADISON, WI 53718			Sample Type Solid
				Sample Source
				Sample Note(s) 1

RESULTS OF ANALYSIS - FINAL REPORT

TEST	RESULT (mg/kg)	QUANT LIMIT	ANALYSIS NOTE(S)
Chlorinated Hydrocarbon Insecticides, EPA 8081 Bifenthrin	<0.05	0.05	
GCMS Pesticides, EPA 8270 Chlorpyrifos	<0.017	0.017	

SAMPLE AND ANALYSIS NOTES

1. Upon arrival, sample met container and preservation requirements for the analysis requested. Please review carefully your sample results for additional analyte comments or method exceptions.

ANALYSIS INFORMATION

TEST	ANALYZED	SITE	RELEASED	ANALYSIS PREP
1. Chlorinated Hydrocarbon Insecticides, EPA 8081	2021-09-16 02:37 VER	3200	2021-09-20 21:10 TGC	Test 2
2. Prep by Sonication, EPA 3550 CHI	2021-09-14 08:00 LWL	3200	2021-09-16 13:19 JDA	
3. GCMS Pesticides, EPA 8270	2021-09-23 10:20 LJL	3200	2021-09-27 14:41 TGC	Test 4
4. Prep by Sonication, EPA 3550 NP	2021-09-10 08:00 LWL	3200	2021-09-10 15:25 JDA	

DESCRIPTION OF UNITS

mg/kg = Milligrams per Kilogram

SITE(S) PERFORMING TESTING

3200 STATE HYGIENIC LABORATORY CORALVILLE, UNIVERSITY OF IOWA RESEARCH PK, 2490 CROSSPARK RD, CORALVILLE, IA 52241; Phone 319/335-4500; Fax 319/335-4555; Michael D. Schueller, M.S., Associate Director; Wade K. Aldous, Ph.D. (D)ABMM, Associate Director; IOWA ENVIRONMENTAL LAB ID #027

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Collection Location lawn	Collector and Phone joyce charles 402/599-0256	Client Reference 25221192.00	Accession # 1836214
	Collected 2021-09-08 12:55	Received 2021-09-08 16:53	Project
Report To	TONY KOLLASCH SCS ENGINEERS 2380 DAIRY DR MADISON, WI 53718		Sample Description soil
			Sample Type Solid
			Sample Source
			Sample Note(s) 1

RESULTS OF ANALYSIS - FINAL REPORT

<u>TEST</u>	<u>RESULT (mg/kg)</u>	<u>QUANT LIMIT</u>	<u>ANALYSIS NOTE(S)</u>
Chlorinated Hydrocarbon Insecticides, EPA 8081 Bifenthrin	<0.05	0.05	
GCMS Pesticides, EPA 8270 Chlorpyrifos	<0.017	0.017	

SAMPLE AND ANALYSIS NOTES

- Upon arrival, sample met container and preservation requirements for the analysis requested. Please review carefully your sample results for additional analyte comments or method exceptions.

ANALYSIS INFORMATION

<u>TEST</u>	<u>ANALYZED</u>	<u>SITE</u>	<u>RELEASED</u>	<u>ANALYSIS PREP</u>
1. Chlorinated Hydrocarbon Insecticides, EPA 8081	2021-09-16 03:13 VER	3200	2021-09-20 21:10 TGC	Test 2
2. Prep by Sonication, EPA 3550 CHI	2021-09-14 08:00 LWL	3200	2021-09-16 13:19 JDA	
3. GCMS Pesticides, EPA 8270	2021-09-23 10:48 LJL	3200	2021-09-27 14:41 TGC	Test 4
4. Prep by Sonication, EPA 3550 NP	2021-09-10 08:00 LWL	3200	2021-09-10 15:25 JDA	

DESCRIPTION OF UNITS

mg/kg = Milligrams per Kilogram

SITE(S) PERFORMING TESTING

3200 STATE HYGIENIC LABORATORY CORALVILLE, UNIVERSITY OF IOWA RESEARCH PK, 2490 CROSSPARK RD, CORALVILLE, IA 52241; Phone 319/335-4500; Fax 319/335-4555; Michael D. Schueller, M.S., Associate Director; Wade K. Aldous, Ph.D. (D)ABMM, Associate Director; IOWA ENVIRONMENTAL LAB ID #027

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Collection Location sediment east	Collector and Phone joyce charles 402/599-0256	Client Reference 25221192.00	Accession # 1836215
	Collected 2021-09-08 13:20	Received 2021-09-08 16:53	Project
Report To TONY KOLLASCH SCS ENGINEERS 2380 DAIRY DR MADISON, WI 53718			Sample Description soil
			Sample Type Solid
			Sample Source
			Sample Note(s) 1

RESULTS OF ANALYSIS - FINAL REPORT

TEST	RESULT (mg/kg)	QUANT LIMIT	ANALYSIS NOTE(S)
Chlorinated Hydrocarbon Insecticides, EPA 8081 Bifenthrin	0.23	0.05	
GCMS Pesticides, EPA 8270 Chlorpyrifos	0.31	0.17	

SAMPLE AND ANALYSIS NOTES

- Upon arrival, sample met container and preservation requirements for the analysis requested. Please review carefully your sample results for additional analyte comments or method exceptions.

ANALYSIS INFORMATION

TEST	ANALYZED	SITE	RELEASED	ANALYSIS PREP
1. Chlorinated Hydrocarbon Insecticides, EPA 8081	2021-09-16 03:50 VER	3200	2021-09-20 21:10 TGC	Test 2
2. Prep by Sonication, EPA 3550 CHI	2021-09-14 08:00 LWL	3200	2021-09-16 13:19 JDA	
3. GCMS Pesticides, EPA 8270	2021-09-23 13:58 LJL	3200	2021-09-27 14:40 TGC	Test 4
4. Prep by Sonication, EPA 3550 NP	2021-09-10 08:00 LWL	3200	2021-09-10 15:25 JDA	

DESCRIPTION OF UNITS

mg/kg = Milligrams per Kilogram

SITE(S) PERFORMING TESTING

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Collection Location sediment west	Collector and Phone joyce charles 402/599-0256	Client Reference 25221192.00	Accession # 1836216
CARROLL,	Collected 2021-09-08 13:33	Received 2021-09-08 16:53	Project
Report To TONY KOLLASCH SCS ENGINEERS 2380 DAIRY DR MADISON, WI 53718	Sample Description soil		
	Sample Type Solid		
	Sample Source		
	Sample Note(s) 1		

RESULTS OF ANALYSIS - FINAL REPORT

TEST	RESULT (mg/kg)	QUANT LIMIT	ANALYSIS NOTE(S)
Chlorinated Hydrocarbon Insecticides, EPA 8081 Bifenthrin	<0.50	0.50	
GCMS Pesticides, EPA 8270 Chlorpyrifos	<0.17	0.17	

SAMPLE AND ANALYSIS NOTES

1. Upon arrival, sample met container and preservation requirements for the analysis requested. Please review carefully your sample results for additional analyte comments or method exceptions.

ANALYSIS INFORMATION

TEST	ANALYZED	SITE	RELEASED	ANALYSIS PREP
1. Chlorinated Hydrocarbon Insecticides, EPA 8081	2021-09-16 15:40 VER	3200	2021-09-20 21:10 TGC	Test 2
2. Prep by Sonication, EPA 3550 CHI	2021-09-14 08:00 LWL	3200	2021-09-16 13:19 JDA	
3. GCMS Pesticides, EPA 8270	2021-09-23 14:26 LJL	3200	2021-09-27 14:40 TGC	Test 4
4. Prep by Sonication, EPA 3550 NP	2021-09-10 08:00 LWL	3200	2021-09-10 15:25 JDA	

DESCRIPTION OF UNITS

mg/kg = Milligrams per Kilogram

SITE(S) PERFORMING TESTING

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