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May 2, 2025

Project EB93012021

Mr. Chad Stobble  
Iowa Department of Natural Resources  
6200 Park Avenue Suite 200  
Des Moines, Iowa 50321

Re: Response and Additional Information Requested in the Letter April 2, 2025  
Lee Crawford Quarry  
DNR IS #57-BUD-23-97

Dear Mr. Stobble:

EB Solutions, Inc., on the behalf of Lee Crawford, appreciates the opportunity to submit this response and Additional Information for the above referenced Site.

The following is the additional information requested in the letter April 2, 2025.

**2023 AWQR**

1. Please see the response to questions 1 for 2024 AWQR below.
2. Water sample for MW3 on May 9, 2023, and water sample for MW1 on October 4, 2023, were received 40 and 100 minutes, respectively after holding time at the laboratory. The samples were kept under refrigerated and iced conditions. The samples were received with acceptable temperature. The samples would not exhibit degraded concentrations under the condition that the samples were kept.
3. Please see the response to questions 3 for 2024 AWQR below.

**2024 AWQR**

1. In 2022 and the first half of 2023 we used a Waterra pump and drop tubes with foot valves to sample the wells. We had issues with the foot valves coming off the drop tube. In the second half of 2023 we switched to sampling the monitoring wells with a downhole bladder pump. In the 2025 AWQR, we only use the bladder pump.

The difference between using a bladder pump and Waterra pump is the method of removing the groundwater out of the monitoring well. The Waterra pump sits at the top of the well and uses a tub with a foot-ball-value at the bottom that the pump moves up and down to pump the water. The bladder pump is a down hole pump that uses a air driven bladder that is squeezed and released to pump the water. Both methods are good for deep well over 50 feet in depth. The bladder pump gives more control over the rate of discharge and more consistent discharge of water from the well.

2. Water sample for MW5 on August 19, 2024, was rerun at the laboratory. The rerun was past the holding time. The sample was kept under refrigerated and iced conditions. The sample was received with an acceptable temperature. The samples would not exhibit degraded concentrations under the condition that the sample was kept. A comparison would have been made between the results. If there was a significant difference, it would have been noted. In this case, the results of the first run and the second run were similar and should be accepted as the same.
3. There is an increasing trend in sulfate at MW-4 and sulfate in MW1 was above the SMCL. Sulfate is a substance that occurs naturally in drinking water. Sulfate in drinking water currently has a SMCL of 250 mg/L, based on aesthetic effects (i.e. taste and odor). This EPA regulation is a non-mandatory water quality standard. These contaminants are not considered to present a risk to human health.

We completed a downgradient well survey to the north of MW1 and MW4 that are located on the north side of the property. We completed a Iowa Department of Natural Resources (IDNR) 1,000-foot well search from MW1 and MW4. We also completed a 1,000-foot visual well search from MW1 and MW4. The following active wells were identified

#### **MW1 Wells Search**

<b>Well Number</b>	<b>Address</b>	<b>Distance from MW1</b>	<b>Owner</b>
2227956/Visual	6400 Russell Drive NW, Cedar Rapids, Iowa 52405	826 feet west	Dennis and Sandra Bruns
2198221/Visual	1506 Brett Street, Cedar Rapids, Iowa 52405	952 feet southwest	Vance and Cindy Culler
Visual	1530 Brett Street, Cedar Rapids, Iowa 52405	973 feet west	Rayce and Amy Rouse
Visual	1514 Brett Street, Cedar Rapids, Iowa 52405	902 feet southwest	Nathan and Stephany Lykkegaard
Visual	1525 Brett Street, Cedar Rapids, Iowa 52405	669 feet west	Dennis and Penny Davis
Visual	1511 Brett Street, Cedar Rapids, Iowa 52405	803 feet southwest	Richard and Michelle Takes
Visual	1425 Brett Street, Cedar Rapids, Iowa 52405	833 feet southwest	Dale and Marybeth Williams
Visual	1413 Brett Street, Cedar Rapids, Iowa 52405	951 feet southwest	Timothy and Carol Tietz
Visual	5707 F Avenue NW, Cedar Rapids, Iowa 52405	920 feet southeast	Crawford Quarry-Office Well

Please refer to the attached map for MW1.

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**MW4 Wells Search**

<b>Well Number</b>	<b>Address</b>	<b>Distance from MW4</b>	<b>Owner</b>
Visual	5707 F Avenue NW, Cedar Rapids, Iowa 52405	33 feet northeast	Crawford Quarry-Shop Well
Visual	5714 F Avenue NW, Cedar Rapids, Iowa 52405	474 feet northwest	Crawford Quarry-Horse Barn Well
Visual	5707 F Avenue NW, Cedar Rapids, Iowa 52405	694 feet northwest	Crawford Quarry-Office Well

Please refer to the attached map for MW4. Well 2587315-Teahen Land LLC Chapel is located 2,333 feet northwest of MW4.

If we can be of further services to you, please contact us at 319-249-3293.

Sincerely,  
EB Solutions, Inc.

*Edward Bertch*

Ed D. Bertch, PG, CGP  
Senior Scientist

Attachments: 1,000-foot IDNR Well Search for MW1  
1,000-foot IDNR Well Search for MW4  
Map of Wells within 1,000-foot of MW1  
Map of Wells within 1,000-foot of MW4



## Well Search Report

Included in search	No. of wells	Database
X	0	IGS well database General well database maintained by IGS, location accuracy varies 3,730 to 25 ft., last updated 8/2005.
X	0	Public wells Municipal and nonmunicipal public well databases maintained by IGS, location varies 3,730 to 25 ft., under development.
X	0	SDWIS public wells Public well database developed from the Safe Drinking Water Information System database maintained by IDNR, estimated locational accuracy varies from 15m. to 3300m. Created from 5/2005 data.
X	3	Private well tracking system IDNR database management system for Grants-to-counties-covered wells. Locational accuracy unknown, assumed to be +/- 17 m., Last update 7/2005.
X	0	Wells registered for testing Wells tested under Grant-to-Counties program. Locational accuracy varies 1150 to 150 m.; Last update 9/2001, no future updates planned.
X	1	Permitted private wells Wells permitted under Grant-to-Counties program. Locational accuracy varies 1150 to 150 m.; Last update 9/2001, no future updates planned.
X	0	Registered abandoned wells Wells abandoned under Grant-to-Counties program. Locational accuracy varies 1150 to 150 m.; Last update 9/2001, no future updates planned.
X	0	Water use facilities Wells used by facilities permitted to withdraw >25,000 gallons per day, locational accuracy is +/-20m to 1150 m. Created from 7/2005 data.
X	0	Municipal wells and intakes Locational accuracy 220 m., last updated 8/96.
X	0	Ag drainage wells Locational accuracy 100 m., last updated 4/98.

## Well Search Detail

**Subject:** XY UTM Coordinates: 603538/4649452  
Search Radius (ft): 1000

### IGS Well Database

Map ID	Well No.	Location	Accuracy	Dist. From Point	Well Depth	Construction/ Permit Date	Owner/Permittees	Other Information
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No records found from this data source

### Public Wells

Map ID	Well No.	Location	Accuracy	Dist. From Point	Well Depth	Construction/ Permit Date	Owner/Permittees	Other Information
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No records found from this data source

### SDWIS public wells

Map ID	Well No.	Location	Accuracy	Dist. From Point	Well Depth	Construction/ Permit Date	Owner/Permittees	Other Information
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No records found from this data source

### Private Well Tracking System

Map ID	Well No.	Location	Accuracy	Dist. From Point	Well Depth	Construction/ Permit Date	Owner/Permittees	Other Information
315184	2227956	T83N, R8W, S23	nom. +/- 25m.	242 (m)	200	1/1/1980	Bruns, Dennis	Status: Active
315419	2116331	T83N, R8W, S23	nom. +/- 25m.	145 (m)	100	1/1/1954	Church, Laurie	Status: Plugged
315274	2198221	T83N, R8W, S23	nom. +/- 25m.	287 (m)	150	1/1/1987	Drahos, Don	Status: Active

### Wells Registered For Testing

Map ID	Well No.	Location	Accuracy	Dist. From Point	Well Depth	Construction/ Permit Date	Owner/Permittees	Other Information
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No records found from this data source

### Permitted Private Wells

Map ID	Well No.	Location	Accuracy	Dist. From Point	Well Depth	Construction/ Permit Date	Owner/Permittees	Other Information
315161	18370	T83N, R8W, Sec. 23, NW, NW, SE	Calc. +/- 285m.	(m)	220	11/17/1994	Unknown	Primary use: Domestic/household

### Abandoned Wells (plugged)

Map ID	Well No.	Location	Accuracy	Dist. From Point	Well Depth	Construction/ Permit Date	Owner/Permittees	Other Information
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No records found from this data source

### Water Use Facilities

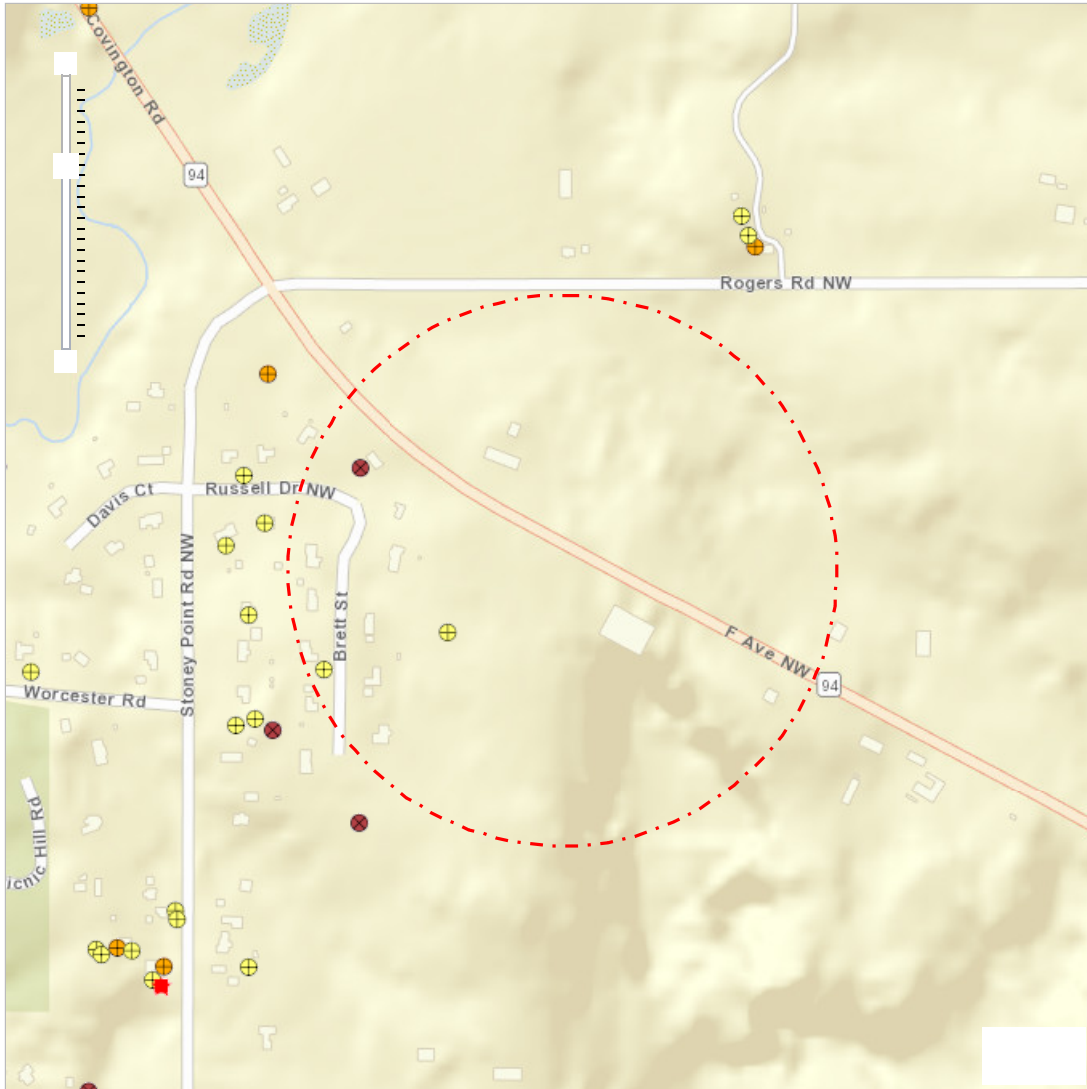
Map ID	Well No.	Location	Accuracy	Dist. From Point	Well Depth	Construction/ Permit Date	Owner/Permittees	Other Information
No records found from this data source								

Municipal Wells And Intakes								
Map ID	Well No.	Location	Accuracy	Dist. From Point	Well Depth	Construction/ Permit Date	Owner/Permittees	Other Information
No records found from this data source								

Ag Drainage Wells								
Map ID	Well No.	Location	Accuracy	Dist. From Point	Well Depth	Construction/ Permit Date	Owner/Permittees	Other Information
No records found from this data source								

## Well Search Buffered Map

**Subject:** XY UTM Coordinates: 603538/4649452  
Search Radius (ft): 1000



### Map Notes:

- UST
- ★ LUST
- ✱ Wells

Please refer to the Accuracy column in Well Search Detail.

Since multiple points can be at the same spot (as those located to the center of a quarter section), points were randomly dispersed within 10 meters around that spot so all points can be seen.



## Well Search Report

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## Well Search Detail

**Subject:** XY UTM Coordinates: 603963/4649215  
Search Radius (ft): 1000

### IGS Well Database

Map ID	Well No.	Location	Accuracy	Dist. From Point	Well Depth	Construction/ Permit Date	Owner/Permittees	Other Information
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No records found from this data source

### Public Wells

Map ID	Well No.	Location	Accuracy	Dist. From Point	Well Depth	Construction/ Permit Date	Owner/Permittees	Other Information
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No records found from this data source

### SDWIS public wells

Map ID	Well No.	Location	Accuracy	Dist. From Point	Well Depth	Construction/ Permit Date	Owner/Permittees	Other Information
316409	2587315	T83N, R08W, Sec. 23	Calc. +/- 930'	(m)			TEAHEN LAND LLC - CHAPEL	PWSID: IA5715212 STATUS: Not Used

### Private Well Tracking System

Map ID	Well No.	Location	Accuracy	Dist. From Point	Well Depth	Construction/ Permit Date	Owner/Permittees	Other Information
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No records found from this data source

### Wells Registered For Testing

Map ID	Well No.	Location	Accuracy	Dist. From Point	Well Depth	Construction/ Permit Date	Owner/Permittees	Other Information
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No records found from this data source

### Permitted Private Wells

Map ID	Well No.	Location	Accuracy	Dist. From Point	Well Depth	Construction/ Permit Date	Owner/Permittees	Other Information
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No records found from this data source

### Abandoned Wells (plugged)

Map ID	Well No.	Location	Accuracy	Dist. From Point	Well Depth	Construction/ Permit Date	Owner/Permittees	Other Information
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No records found from this data source

### Water Use Facilities

Map ID	Well No.	Location	Accuracy	Dist. From Point	Well Depth	Construction/ Permit Date	Owner/Permittees	Other Information
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No records found from this data source

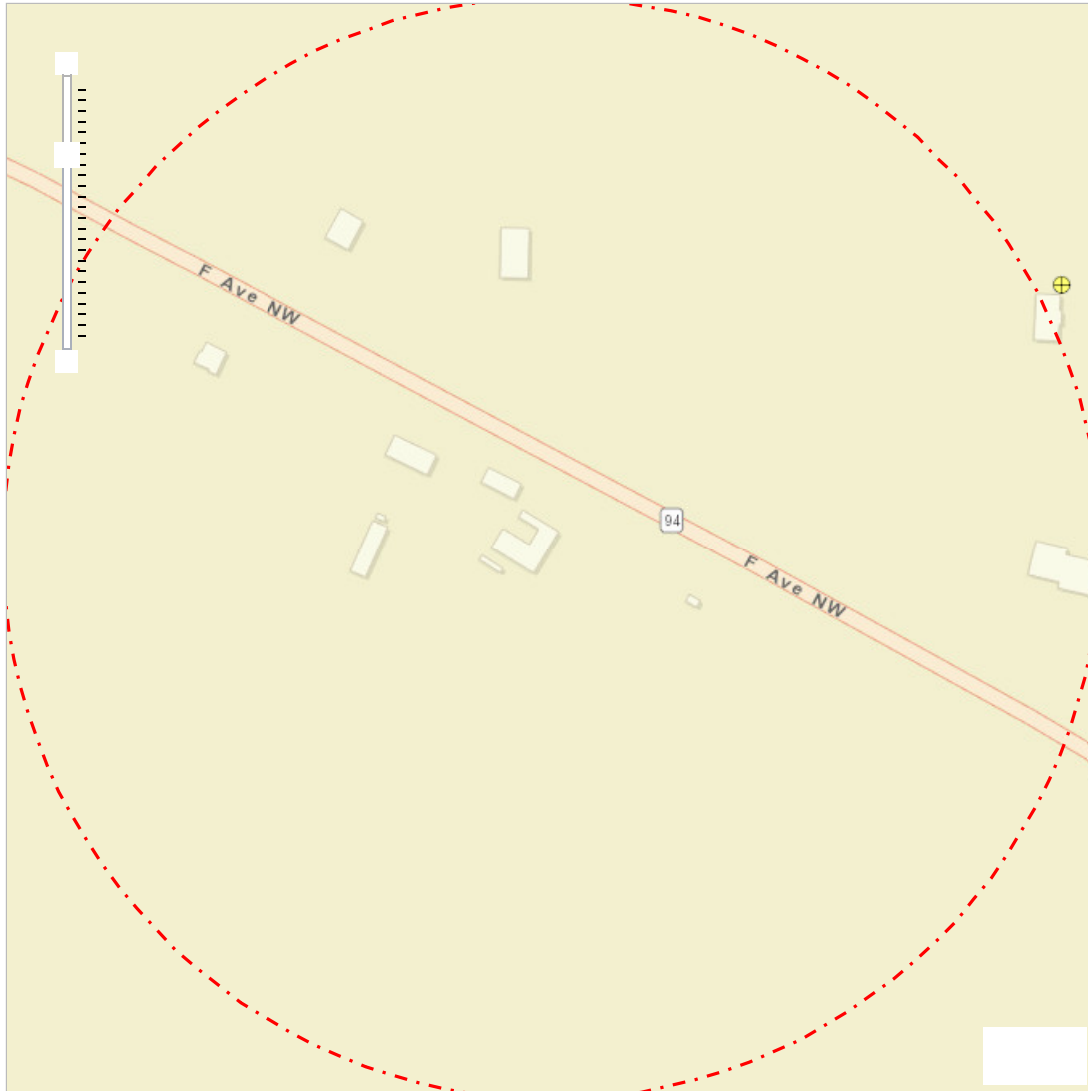
### Municipal Wells And Intakes

Map ID	Well No.	Location	Accuracy	Dist. From Point	Well Depth	Construction/ Permit Date	Owner/Permittees	Other Information
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## Well Search Buffered Map

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### Map Notes:

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