COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

ELECTRONIC INVESTIGATION INTO	)	
THE IMPACT OF MADISON COUNTY FISCAL	)	CASE NO.
COURT'S USE OF MADISON COUNTY	)	2021-00422
UTILITIES DISTRICT'S SYSTEM FOR ITS FIBER	)	
OPTIC CABLE INSTALLATION PROJECT	)	

RESPONSE TO COMMISSION'S REQUEST FOR INFORMATION

Comes now, Madison County Utilities District (MCUD) and in response to the Commission's Request for Information and states as follows:

1. Refer to Case No. 2021-00218,1 Commission Staff's Second Request for Information (Staff Second Request), Item 1(c)(iv). Identify the dates of all of the meetings between Madison Fiscal Court and Madison District regarding this project.

a. Identify each individual attending these meetings.

10/12/2020 - Water District: Discuss Submission to DOW for Wet Fiber

Attendance: Reagan Taylor, Chris Iseral, Dustin Heiser, Colleen Chaney, Jared Webb, Jim Carr, John Clark, Tommy Bussell

Topic: Discuss the potential use of MCUD lines for CRALEY Deployment and gain support FROM MCUD to communicate with DOW.

11/04/2020 – CRALEY Inspection of first three valves

Attendance: Dustin Heiser, Chris Iseral, Jared Webb

Topic: Meet with MCUD Staff to review first valves in project to collection information from MCUD that will be sent to CRALEY as part of the Full Study to make sure the data captured is in the correct format.

11/06/2020 – CRALEY Inspection Completion LEX Road

Attendance: Dustin Heiser, Chris Iseral, Jared Webb

Topic: After confirmation that the data was in the correct format, we collected the data for the entire LEXRD run.

08/19/2021 – MCUD Discuss next steps

Attendance: Jared Webb, Dustin Heiser, Barb Moberly, Chris Iseral

Topic: Discussed timelines and draft contract

09/02/2021 – MCUD Communications Strategy

Attendance: Jared Webb, Dustin Heiser, Barb Moberly, Chris Iseral, Jill Williams

Topic: Boil water advisories, when and where people would be affected, talked about plans for repairs to lines with fiber and talked about draft contract.

b. Provide the minutes taken during these meetings.

No official meeting minutes were taken; however, topic and discussion details are listed above.

Chris Iseral

CHRIS ISERAL
Chief Information Officer
Madison County

2. Refer to Commission Staff's Third Request for Information (Staff's Third Request), Item 3. Madison District's response, "MCUD has agreed to forgo any compensation related to the deployment of fiber optic lines in the service of the CSEPP program and upgrade of the community emergency communications system."

a. Identify all additional expenses related to the installation of the fiber optic cable.

Madison County EMA/CSEPP will make use of MCUD Employees to assist in the management and oversight of the installation. Madison EMA/CSEPP will reimburse MCUD employees for the time spent on the installation. Madison EMA/CSEPP will also pay for lost water, water testing and other required items for notification to customers.

b. Identify the party that will be responsible for paying these additional expenses.

Madison County EMA/CSEPP will pay all costs incurred by MCUD.

c. Identify any additional expenses that may occur, such as additional labor costs during repairs while waiting on fiber optic cable removal.

There should be no additional cost to MCUD during a line break. Madison County EMA/CSEPP or its contractor will be onsite as soon as MCUD crews arrive. Madison EMA/CSEPP or the contractor will perform all work related to the CRALEY Solution.

d. Identify the party that will be responsible for these additional expenses.

Madison County EMA/CSEPP will be responsible for all cost related to the CRALEY Solution, the deployment and maintenance of the solution.

Chris Iseral

CHRIS ISERAL
Chief Information Officer
Madison County

3. Refer to Staff's Third Request, Item 4. The Water Resources Information System (WRIS) Portal managed by the Kentucky Infrastructure Authority (KIA) identifies 10" PVC pipe only in section of Link 21. The areas identified in the portal for Links 22 and 23 contain 8" PVC pipe and 4" AC pipe.

a. Confirm that Links 22 and 23 contain 10" PVC rather than 8" PVC pipe.

Link 21 is 10" Link 22 is a 8"PVC and Link 23 is 8" PVC. CRALEY has documented the wrong pipe size in this section.

Link 21 is 10"PVC, coming off an 8"PVC and a separate 4" AC line.

Link 22 is 8" PVC that you will be using coming off the 10" PVC, with a 4" AC line beside of it.

Link 23 is 8" PVC, with a 4" AC line beside of it.

The 10" replaced the 8" and 4" in the area from carwash to the south half of Tebco for intersection work.

b. Confirm that the information in the WRIS Portal is incorrect.

The information in the WRIS Portal is CORRECT. We are reaching out to CRALEY for options and issues with documenting the wrong pipe size.

Chris Iseral

CHRIS ISERAL
Chief Information Officer
Madison County

4. Explain the party responsible for the first contact between the representatives of Craley Group Limited (Craley) and representatives of Madison Fiscal Court.

a. Explain when the first established contact between Madison Fiscal Court and Craley occurred.

Chris Iseral attended a virtual meeting with Bluegrass ADD about Rural Broadband, they mentioned that the city of Anacortes, WA was using something called CRALEY to deploy in water lines. It is believed this first contact was in June 2020.

b. Explain when the first established contact between Madison District and Craley occurred.

Chris Iseral requested contact from CRALEY through their website. Phil Dineen of Craley called Chris Iseral and briefly discussed the Craley solution and then Craley arranged a meeting with the engineers in Anacortes, WA for a discussion with Craley and Anacortes about their deployment.

Chris Iseral

CHRIS ISERAL
Chief Information Officer
Madison County

5. Refer to Staff's Third Request, Item 5 (b).

a. Explain in detail how the operating pressures and flows were determined via the Madison District's GIS and Telemetry systems.

The pressure that was collected was the live pressure on the discharge side of the pump station at the time of the data collection as provided by MCUD telemetry.

b. Provide the equipment utilized to determine the operating pressures and flows information.

MCUD gave the information to CRALEY based on discharge side of the pump from the Master Meter Telemetry System.

c. Explain if Madison District has a hydraulic model of its system.

MCUD states there is not a recent hydraulic system study.

d. Explain if the hydraulic model was used in establishing operating pressures and flows for the installation of the fiber optic cable. e. Identify the party that determined the information relied upon.

MCUD states that a hydraulic model was not used. Water system information was provided by MCUD.

Chris Iseral

CHRIS ISERAL
Chief Information Officer
Madison County

Been

JARED WEBB
Manager
Madison County Utilities

6. Refer to Staff's Third Request, Item 6(b).

a. Provide the name of the party that owns the hydrants that were not tested by the Madison County Fire Department in 2020.

Madison County Utilities owns all the hydrants in this system along this route. The hydrants were reported as needing repair and were therefore not tested. Flow testing has not been completed since the repairs were made.

b. Identify the Links in the proposed project where each hydrant is located.

MCUD reports only two hydrants on the run were not tested during the last testing by Madison County Fire Department. One is located on Link 13 at 2610 Lexington Road. The second hydrant is on link 12 at 2519 Lexington Rd.

Chris Iseral

CHRIS ISERAL
Chief Information Officer
Madison County

7. Refer to Staff's Third Request, Item 7.

a. Provide the C-factor that was assumed in pipe calculations of pressure loss in the Hydraulic Regime.

b. Explain if the C-factor was confirmed through field testing or hydraulic modelling of the system.

There are two aspects here, firstly modelling for a standard water pipe, and the modelling where a Messenger Pipe is introduced.

Modelling for standard pipe is well understood. The Hazen-Williams coefficient varies among pipe materials. The Messenger Pipe is HDPE and so has a very smooth and consistent surface regardless of any given pipe surface roughness.

A typical C of 140 is used, as nominally that of PVC, steel/DI etc. will generally be slightly lower than this (and in the case of metal pipes with internal corrosion/tuberculation, will be lower than that of a new pipe). HDPE will generally be slightly higher than this (also HDPE retains low surface friction over time).

A Messenger Pipe only occupies a relatively small percentage of internal water pipe area and is of HDPE construction and while its presence increases the internal wetted perimeter to a small degree, the HDPE presents a very smooth surface to flow.

We have had no reports from any installations of noticeable increase in head-loss. Maximum Messenger Pipe diameter is always scaled for any given circumstance (pipe diameter and flow velocity) to mitigate this.

Chris Iseral

CHRIS ISERAL
Chief Information Officer
Madison County

8. Refer to Staff's Third Request, Item 11.

a. Identify all analysis performed related to pole attachments of the project.

The County did not look at pole attachments. Pole attachments require on going fees and are susceptible to adverse weather events like ice storms and tornadoes. Emergency Communications systems prefer directional bore or underground systems to protect system integrity.

b. Provide copies of all bids received for directional boring and trenching.

Attached as Attachment #1

Chris Iseral

CHRIS ISERAL
Chief Information Officer
Madison County

9. Refer to Staff's Third Request, Item 13.

a. Identify when the contact with Kentucky American Water was made.
September 2022

b. Provide the name of the individual that was contacted.
Adam Caswell

c. Provide the name of the individual that made the contact
Colleen Chaney

d. Provide the response provided by Kentucky American Water.
Colleen Chaney is no longer employed by Madison County. Copied below is the last communication she received from Kentucky American Water:

"Hey Colleen, thanks for reaching out and apologies for the delay in this. I heard back from our general counsel this morning suggesting we need to have a call with members of our engineering team to further discuss. There seems to be momentum building around the project as a pilot program American Water nationally hasn't yet been part of, but it may be a bit slow in getting to "yes". I appreciate your patience in this as we try to get more familiar and comfortable with the idea. I hope you don't mind if I ping you before our next call to reeducate myself on the opportunity."

KAW saw a presentation of CRALEY and had follow up questions. The last contact with KAW was February 2021.

Chris Iseral

CHRIS ISERAL
Chief Information Officer
Madison County

10. Provide any plans that have been made to establish a fiber optic cable link across the Kentucky River. Appendix B Page 4 of 5 Case No. 2021-00422

a. Provide copies of any plans that detail how the project will cross the Kentucky River, the permits if required, and the proposed length of time for that phase of project implementation.

As part of our Regional Public Safety Radio system the most ideal connectivity is fiber optics, since our County in boarded by the Kentucky river we would have to cross the river to complete the project. The Regional Public Safety Radio system planning is still in the viability stage and has not matured to the point of project details as requested.

b. If no plans have been drafted, explain how the project will cross the Kentucky River.

It is not know at this point whether it is even possible or viable to cross the Kentucky River. All discussions with KAW and the Regional Public Safety Radio system are preliminary at best. The current focus is on Madison County and getting fiber to our Public Safety towers.

c. If permits are required, provide copies or explain why they have not been obtained at present.

Expansion across the river is beyond the scope of the current project and all discussions regarding the Regional Public Safety Radio, while critical to the health and safety of the rate payers in the area, are preliminary in nature.

Chris Iseral

CHRIS ISERAL
Chief Information Officer
Madison County

11. Identify all locations of fiber installation within existing waterlines that have occurred in the United States that the Madison District is aware of.

Anacortes, Washington.

San Diego, California

Chris Iseral

CHRIS ISERAL
Chief Information Officer
Madison County

12. Identify the pressure loss along the length of the project during peak water demand periods due to the fiber optic cable installation.

a. If there is pressure loss, provide the amount of this pressure loss

Please see attached engineering study provided by HMB engineering, attached as Attachment #2. Additionally, Mike Parker, engineer for Craley provided the following response:

This was detailed in the Full Study, with the water flow information provided. The highest flow provided within a pipe for any given diameter was used for calculations.

Chris Iseral

CHRIS ISERAL
Chief Information Officer
Madison County

13. Identify the pressure loss during fire flows at any point of the project due to the fiber optic cable installation.

a. If there is pressure loss, provide the amount of this pressure loss.

The above question was forwarded to Mike Parker, Engineer with Craley. The following is his response. Additional information will be provided once received:

We will prepare a guideline calculation for loss in any individual section for 'fire-flow'. From this I take it you refer to when a fire hydrant is used actively. I propose to calculate flow in these circumstances by using a simulation of the opening from which flow would pass (i.e. this would be the opening to the end of the fire hose and not the port size to the hydrant - and we should assume here several hoses deployed simultaneously), I believe that if we used an opening diameter of say 1.5" then this would acceptably simulate several hoses in use - could you please confirm, and we will then provide simulation results of pressure head-loss from increased flow velocity.

Chris Iseral

CHRIS ISERAL
Chief Information Officer
Madison County

14. Provide the amount in feet and percentage of the total project of mains installed in existing easements.

The entire project is in the existing easement, the total footage of the LEXRD run is roughly 44,000 feet.

Chris Issral

CHRIS ISERAL
Chief Information Officer
Madison County

15. Provide the amount of mains in feet and percentage of the total project installed in an existing right-of-way.

All of the project will be installed in existing right-of-way or existing easements.

Chris Iseral

CHRIS ISERAL
Chief Information Officer
Madison County

16. Explain if any of the vaults to be constructed are located in existing easements.

a. Explain if new easements will need to be obtained.

All vaults are in the existing easement. There is no construction on the vault, the precast concrete vault will be installed near the valve. The fiber loop will be stored in the vault and will provide access to the valve and fitting from a key-hole inside the vault down to the fitting.

b. Explain if the easements allow for appurtenances to be constructed that are not related to the operation of the water mains.

The current easements are broad enough to allow for all appurtenances "connected with" the water line and no new easements will be sought.

c. Explain if the easements allow for appurtenances to be constructed that are not related to the operation of the water meters.

The current easements are broad enough to allow for all appurtenances "connected with" the water line and no new easements will be sought.

d. Explain if the easements allow for appurtenances to be constructed that are not related to the operation of the water lines.

The current easements allow for appurtenances "connected with" the water line.

Chris Iseral

CHRIS ISERAL
Chief Information Officer
Madison County

Jud Patterson

HON. JUD PATTERSON
Counsel for MCUD

17. Provide any material provided to the Division of Water and explain if the installation project will also include use of the Craley Sensing technology.

a. If so, provide any additional expense for the technology.

Because of the cost of the Sensing technology MCUD chose not to make use of the technology at this time.

b. If not, explain why there is no additional expense for the technology.

Since the sensing portion is out of the scope of EMA/CSEPP that pool of money could not be used to purchase it. MCUD would have to purchase and maintain this technology. MCUD is aware of the technology and may consider adding the capability later.

Chris Iseral

CHRIS ISERAL
Chief Information Officer
Madison County

Respectfully submitted,

Jud Patterson

Hon. Jud Patterson
Patterson Law Office, PLLC
228A. West Main Street
P.O. Box 825
Richmond, Kentucky 40475
Jud@judpatterson.com
(859) 623-6233

Signature: CHRIS ISERAL

Email: chris.iseral@madisoncountyky.us

Response 2021-00422

Final Audit Report 2022-02-14

Created:	2022-02-14
By:	Jud Patterson (jud@judpatterson.com)
Status:	Signed
Transaction ID:	CBJCHBCAABAAKYcrSf-1eaHeE9Xu3Y4nOLyXNQQEcMNS

"Response 2021-00422" History

Document created by Jud Patterson (jud@judpatterson.com)
2022-02-14 - 9:08:42 PM GMT

Document emailed to Chris Iseral (chris.iseral@madisoncountyky.us) for signature
2022-02-14 - 9:10:09 PM GMT

Email viewed by Chris Iseral (chris.iseral@madisoncountyky.us)
2022-02-14 - 9:16:47 PM GMT

Document e-signed by Chris Iseral (chris.iseral@madisoncountyky.us)
Signature Date: 2022-02-14 - 9:32:12 PM GMT - Time Source: server

Agreement completed.
2022-02-14 - 9:32:12 PM GMT