



North Red Deer Regional Wastewater Services Commission

Special Meeting Agenda

Date:	March 11, 2024	Time:	3:00 pm
Location:	COUNCIL CHAMBERS, CITY OF LACOMBE, AB		
Invitees:	<p>Members: Mayor Grant Creasey, City of Lacombe – Chair Mayor Jamie Hoover, Town of Blackfalds – Vice Chair Councillor John Ireland, Lacombe County – Director</p> <p>NRDRWWSC CAO: Director Jordan Thompson, City of Lacombe</p> <p>Others: CAO Kim Isaak, Town of Blackfalds CAO Matthew Goudy, City of Lacombe Director Preston Weran, Town of Blackfalds Manager Tim Timmons, Lacombe County Manager Chris Huston, City of Lacombe Manager Angela Smith, City of Lacombe Operator Matt Sawitsky, City of Lacombe</p>		
Recorded by:	Iwalani Post - Administrative Assistant NRDRWWSC		
	1. Call to Order by Chair		
	2. Adoption of Agenda		
	3. New Business / Emergent Items: 3.1 H2S Monitoring RFQ Results		
	4. In Camera		
	5. Next Meeting Date April 8, 2024 at 10:00 am in Council Chambers, City of Lacombe		
	6. Adjournment		



REQUEST FOR DECISION

H2S Monitoring RFQ Results

Date: March 11th, 2024

Prepared by: Chris Huston

Presented by: Jordan Thompson, CAO

PURPOSE:

To present results to Commission members for the remote H₂S Monitoring Request for Quote (RFQ) from the December 4, 2023 motion:

"MOVED by Councillor Ireland that the Commission directs Administration to request proposals for an H₂S monitoring and SCADA solution for CAV#3 only, and that Administration expedite the costs and timelines options to bring back to the board."

ACTION/RECOMMENDATION:

THAT the Commission directs Administration to engage Biomaxx to install one sensor monitor air quality at CAV#3 for one year, funded from the Operating Reserve.

ISSUE ANALYSIS:

Operations posted a Remote H₂S Monitoring RFQ to the Alberta Purchasing Connection on December 14th, 2023. The competition closed on January 18th, 2024, with three submissions from interested vendors.

The RFQ requested options for sensors at the combination air release vaults (CAV) to monitor the air release at those locations and another sensor close to the residential home.

All proposals include an upfront equipment and installation cost and an annual subscription and calibration fee.

PROPOSALS:

	Accuflo Meter Service	Biomaxx Environmental	Sameng Inc
# Devices	4	4+1 (one spare)	8
Device Exchange	3 month	6 month	6 month
Real-time access & Trends	Yes	Yes	Yes
Calibration	3 months w/ exchange	6 month	6 month
Alarm Notification & Call Out	Email & Text	Email & Text	Email & Text
Self-powered	Yes	Yes	Yes
Warranty	1-year parts, 2-year battery	1-year	1-year

Installation from Order	5 weeks	6 weeks	3 weeks
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FINANCIAL IMPLICATIONS:

<u>One Year Monitoring</u>	Accuflo Meter Service	Biomaxx Environmental	Sameng Inc
Install at CAV #3 only	\$12,690	\$10,120	*\$20,000
Install at all CAV's and one near house	\$41,760	\$30,975	\$120,980

*Semeng did not disclose the cost per unit; this value is calculated from the lump sum provided.

ALTERNATIVES:

The Commission may choose to:

- A. **[Recommended]** THAT the Commission directs Administration to engage Biomaxx to install one sensor monitor air quality at CAV#3 for one year, funded from the Operating Reserve.

OR

- B. **[Alternative]** THAT the Commission directs Administration to engage Biomaxx to install four sensors to monitor air quality at all CAVs and near the resident's home for one year funded from the Operating Reserve.

OR

- C. THAT Commission directs Administration how it wishes to proceed.

ATTACHMENTS:

2023 – RFD CAV Odour Approach

2023 – NRDRWSC H2S Monitoring Request For Quote



REQUEST FOR DECISION

Combination Air Vacuum Valve Options

Date: December 4, 2023

Prepared by: Jordan Thompson, CAO

Presented by: Jordan Thompson, CAO

PURPOSE:

To provide the Board with options regarding their combination air/vacuum valves.

ACTION/RECOMMENDATION:

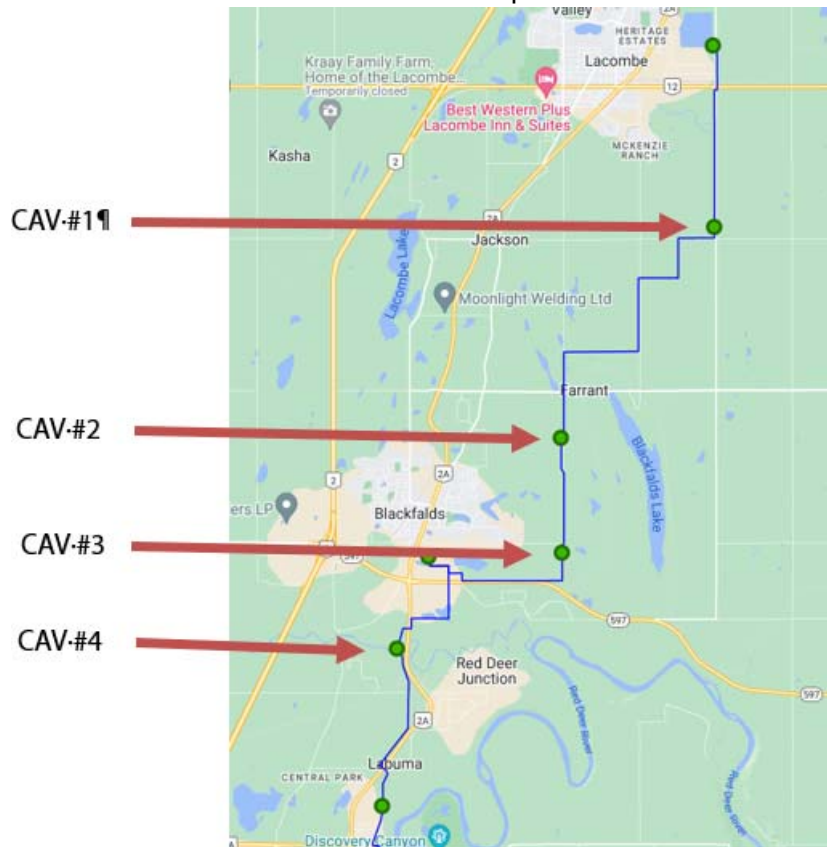
- A. **[Recommended, option 1]** THAT the Commission Directs Administration to request proposals for an H₂S monitoring and SCADA solution for the Commission’s four combination air vacuum vaults.

Alternative motions are included at the end of this report for the Board’s consideration.

ISSUE ANALYSIS:

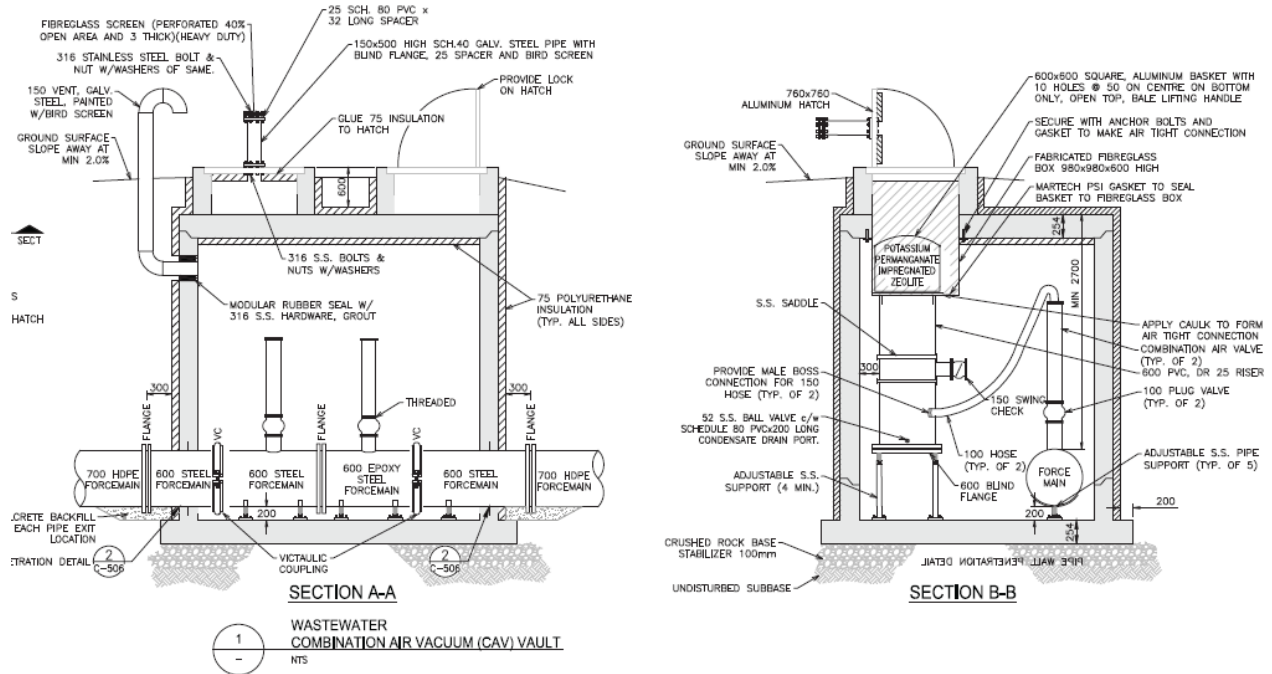
Background

The function of an air/vacuum valve is to protect a pipeline from damage. Air/vacuum valves expel large quantities of air accumulating at high points in the pipeline and admit large quantities of air to relieve a vacuum when liquids drain downhill within the



pipeline. The Commission owns and operates four combination air/vacuum vaults (CAVs).

Each CAV vault has a venting system that forces vented air through a basket of potassium permanganate – a dry chemical commonly used to filter air pollutants from wastewater. The dry chemical must be replaced regularly as the natural chemical reaction depletes it. Our standard protocol includes a weekly vault inspection and topping off the chemical as required.



Issue

The Commission has received complaints about occasional offensive odours emanating from CAV#3, which triggered inspections by Commission operators. Following the most recent complaint, operators detected no odours emanating from the valve. Additionally, our operators topped off the dry chemical the week before the complaint and confirmed that it was not depleted during their recent inspection. Also, Administration received a call from an Environment and Parks representative advising that they also received a related complaint regarding odours. The representative concluded the call, satisfied with documenting the Commission's actions to date and did not provide any direction or make any requests of the Commission after the call.

To assess the root cause of the odours and develop a long-lasting solution, Administration requires additional information and a more detailed understanding of the specific circumstances surrounding these incidents.

Administration seeks the Board's direction to pursue one of the following CAV upgrade options, with option 1 being the Administration's recommendation. Prior to securing a contractor to implement any solution, Administration will return to the Board for approval to proceed.

1. *Install H₂S trending and SCADA capability to the CAVs.*

High Level Cost Estimate: \$25K-\$80K

Administration will issue an RFP seeking monitoring and SCADA solutions to allow Commission operators to continuously log H₂S levels at the Commission's four CAVs. The cost of this solution may vary significantly depending on power source availability and the selected communication system. This solution aims to collect data and confirm the odour issue, which is important in establishing its root cause and developing mitigating solutions, if any.

2. *Modify the vent system at CAV#3*

High Level Cost Estimate: \$10K-\$80K

Administration will seek quotes from qualified contractors to recommend a vent stack modification solution to mitigate odours drifting to the nearby residential home. For example, this may involve raising the CAV vent stack to allow gasses to dissipate and pass over the residential home, modifying the potassium permanganate basket, or other solutions the contractor recommends. This solution targets CAV#3 only.

3. *Relocate CAV#3 Vault*

High Level Cost Estimate: \$400K-\$600K

Administration will engage its engineering consultant to design the relocation, develop a shutdown plan in consultation with Commission operators, tender the construction package and provide construction monitoring and administration. This solution targets CAV#3 only.

ALTERNATIVES:

- B. **[Recommended, option 1]** THAT the Commission Directs Administration to request proposals for an H₂S monitoring and SCADA solution for the Commission's four combination air vacuum vaults.

OR

C. **[Alternative, option 2]** THAT the Commission Directs Administration to request quotes to modify the CAV#3 vent stack to mitigate odours drifting to the nearby residential home.

OR

D. **[Alternative, option 3]** THAT the Commission Directs Administration to engage its engineering consultant to develop a construction package and cost estimate to relocate CAV#3 to mitigate odours drifting to the nearby residential home.

ATTACHMENTS:

- In-Camera

December 14th, 2023

H2S Gas Monitoring Request for Quote

The North Red Deer Regional Wastewater Services Commission (NRDRWWSC) requests quotes from interested parties to install remote H2S sensors with live monitoring. These devices will be deployed at the wastewater combination air release vaults, meeting the minimum scope criteria.

Scope of Request:

1. **H2S devices shall follow applicable CSA standards.**
2. Provide a detailed plan and quotation for services to review the H2S monitoring program. Please provide costs for individual H2S units and an overall cost to deploy at the stations. Example of minimum monitoring requirement:
 - Live interface to the monitors.
 - Device status.
 - Gas levels and trends.
 - Alarm setpoints.
 - Call-out notification.
3. Self-powered and weather-resistant remote H2S devices.
4. How and where will the devices be placed to provide accurate monitoring results.
5. Proposed timeline and schedule, including device replacement.
6. Additional devices (if needed) to minimize monitoring downtime if a device fails or needs replacing.
7. Any reoccurring monitoring subscriptions.
8. Warranty period.
9. Provide details of what is not included and if there are any recommended options for the Commission to consider.
10. Minimum Contractor Qualifications (see Appendix A)
11. Are there any value-added items for the Commission's consideration.
12. Provide a breakdown of costs for each unit. Is there a limited number of devices that can be monitored?
13. Appendix B – CAV drawing and pictures.
14. **The Request for Quotation closes January 18th 2023, at 1:30 PM**
15. **Email responses to chuston@lacombe.ca**

For further inquiries, please contact:

Chris Huston
Operations Supervisor
North Red Deer Regional Wastewater Services Commission

P: (403) 782-1256

E: chuston@lacombe.ca

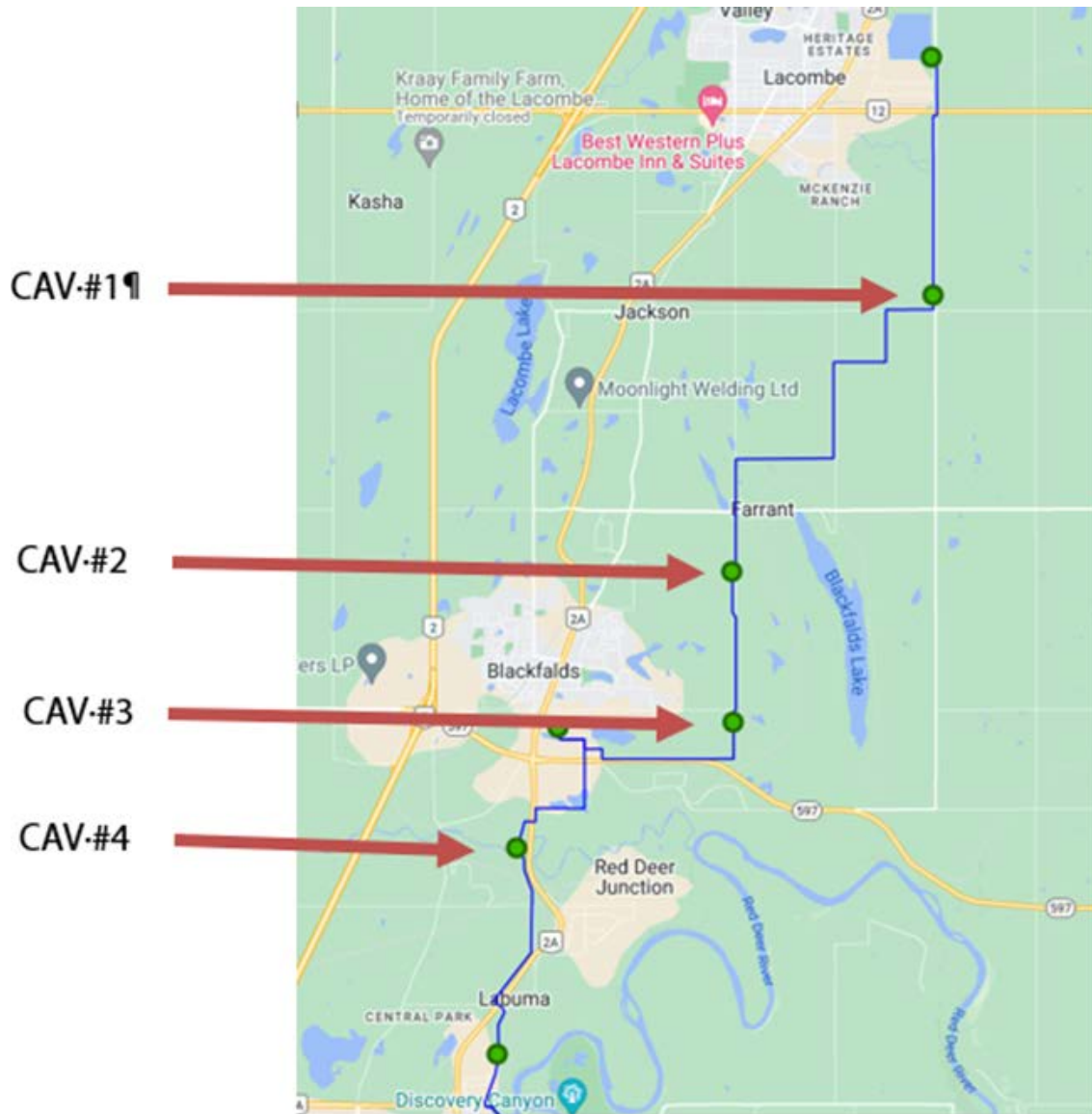
Appendix A – Minimum Contractor Qualifications

1. 3-5 years experience installing and utilizing the proposed equipment;
2. Experience installing and monitoring the devices on a wastewater CAV chamber;
3. Provide proof of experience and a minimum of three (3) references;
4. For OH&S regulations in the province of Alberta, the successful proponent will be considered the "Prime Contractor" for all activities that they engage in with the NRDRWWSC;
5. Do you have a COR or SECOR certification and is recognized by the Province of Alberta (Certificate of Recognition (COR) or Small Employer Certificate of Recognition);
6. The successful party shall have the capacity to supply the necessary equipment, fuel, labour, manpower, software, all parts and materials required for generator maintenance;
7. Comply with all applicable Codes and Standards for the Province of Alberta, OH&S and Commission Bylaws and Policies;
8. Be able to provide the City with an invoice and an up-to-date WCB certificate along with the invoice.

Certificate of Recognition ("COR or SECOR")

1. A certificate of recognition is awarded to employers who develop health and safety programs that meet established standards. The City requires that the Contractor has a valid COR or SECOR;
2. The Contractor shall attend coordination and safety meetings with Commission staff as required.

Appendix B – CAV Drawing and Example Site Pictures



The CAV chambers use dry odour media in baskets to treat the sewer gases released from the line. The H₂S devices must be able to test the treated air that is released into the atmosphere.

