

STAFF REPORT

THE CORPORATION OF THE TOWN OF COBOURG



Report to:	Mayor and Council Members	Priority:	<input type="checkbox"/> High <input checked="" type="checkbox"/> Low
Submitted by:	Bill Peeples, Manager Environmental Services, bpeeples@cobourg.ca	Meeting Type:	Open Session <input checked="" type="checkbox"/> Closed Session <input type="checkbox"/>
Meeting Date:	March 29, 2021		
Report No.:	Public Works-020-21		
Submit comments to Council			

Subject/Title: Alum Room HVAC – Plant 2

RECOMMENDATION:

THAT Council approve the purchase a new Makeup Air Unit (MUA) for the Chemical Storage Building at Plant #2 from *Engineered Air* at a cost of \$61,404. This price includes parts, labour, non-refundable HST and a 15% contingency.

Council approved \$100,000 for this project in the Environmental Services 2021 Capital Budget.

1. STRATEGIC PLAN

N/A

2. PUBLIC ENGAGEMENT

N/A

3. PURPOSE

To install a tempered air exchanger in the Alum Storage Room at Water Pollution Control Plant #2 to make it compliant with Ontario Health & Safety requirements.

4. ORIGIN AND LEGISLATION

Environmental Services 2021 Capital Budget

5. BACKGROUND

Operators must enter the lower levels of the Chemical Storage Building daily to check the tank levels and confirm proper operation of the chemical feed pumps. The Occupational Health and Safety Regulations requires this area to be ventilated with tempered air at a rate sufficient to remove chemical vapours and ensure an adequate oxygen supply for staff.

The Chemical Storage Room at Plant #2 has no ventilation at all. The building uses electric heaters to warm and recirculate existing air. As a result, the air inside the building is stagnant and noticeably pungent with chemical fumes. In addition, the damp and corrosive air is causing spalling of the interior concrete. A Makeup Air Unit will allow this poor quality air to be removed and with fresh, tempered, outside air.

6. ANALYSIS

A Makeup Air Unit needs to be installed in the Chemical Storage Building at Plant #2 in order to meet current OHSA Regulations (See specifications below).

Minimum Equipment Specifications:

- Nominal 2,000 CFM @ 1.5" WC ESP
- 2- speed fan motor
- 2- position motorized inlet air damper c/w bird screen & outdoor air weather hood.
- 2" pleated filters with MERV 8 rating
- Unit mounted service disconnect switch
- ETL/CSA certified natural gas construction
- Hinged access doors for ease of service access
- Gas input minimum 200,000/160,000 BTUH output
- Designed for 80 F temperature rise
- Stainless steel heat exchanger and burner designed for 100% outside air
- Modulating burner turn down ratio 15:1
- 18-gauge double wall, weather tight cabinet with 1" high density thermal insulation
- Remote control panel with on/off control, system ON indication lights, low speed/high speed selector with indicator lights, supply air temperature thermostat
- 575 Volts PH3
- Horizontal configuration c/w end intake and end discharge
- 10 yr factory extended warranty heat exchanger
- 1 yr factory all parts

7. FINANCIAL IMPLICATIONS/BUDGET IMPACTS

Quotations were solicited from three (3) Makeup Air Unit (MUA) manufacturers:

1. Engineered Air: \$21,850 + Non-Refundable HST = \$22,235
2. Reznor: \$18,905 + Non-Refundable HST = \$19,238 + 10-Yr Warranty \$700 = \$19,605

3. Modine: \$21,685+ Non-Refundable HST = \$22,067 + 10-Yr Warranty \$700 = \$22,385

The Reznor and Modine units are of commercial grade construction. The Engineered Air unit is industrial grade and constructed entirely of stainless steel. Historical data from the industry shows that the average lifespan of the Reznor and Modine MUA units is 7-10 years while Engineered Air units are known to last in excess of 30 years.

Engineered Air units are manufactured in Canada (Newmarket, ON), so obtaining parts should be easier than the other two units that are made in the USA. While it is possible to purchase an extended warranty for the Reznor and Modine units, the warranty would only cover parts, not labour. The superior quality of the Engineered Air unit negates the need to purchase an extended warranty.

The Reznor unit was the lowest price, but was disqualified as it failed to meet the minimum specifications. The Modine and Engineered Air units were nearly identical in price, but the Engineered Air unit is of far superior quality and has a life expectancy nearly quadruple that of the Modine unit. The Engineered Air unit is deemed the best choice.

Total Cost of Engineered Air MUA Unit:

Purchase Cost: \$21,850

Parts & Labour*: \$30,629

Total: \$52,479

Total Cost Including Non-Refundable HST: \$53,403

Contingency (15%): \$8,011

Total Estimated Cost of the Installed (Engineered Air) MUA Unit: \$61,414

8. CONCLUSION

A Makeup Air Unit is required for the Alum Building at Plant #2. It is required to ensure health and safety of staff. The Engineered Air MUA unit represents the best value of the submitted quotes.

Report Approval Details

Document Title:	Alum Room HVAC - Plant 2 - Public Works-020-21.docx
Attachments:	
Final Approval Date:	Mar 11, 2021

This report and all of its attachments were approved and signed as outlined below:

Bill Peeples, Manager of Environmental Services - Mar 9, 2021 - 2:45 PM

Laurie Wills, Director of Public Works - Mar 9, 2021 - 4:34 PM

Tracey Vaughan, Chief Administrative Officer - Mar 11, 2021 - 2:45 PM