



TBT ENGINEERING CONSULTING GROUP

June 7, 2021

Project#:20-559

TO: Travis Rob – Manager of Operations & Facilities

Project: Fort Frances Sewage Plant Generator

The following is a review of the Cummins submittal for the RFQ issued on April 26, 2021 for the supply, delivery, testing and commissioning of a standby power system for the Fort Frances Wastewater Treatment Plant.

General

1. Specification 26 32 14 (3.11.1). Cummins enclosure is provided with sound level of 75.3 dBA at 7 meters. This is not acceptable. The unit must comply with 75dBA at 7 meter requirement to meet MOE.
2. Warranty Offered: Two year - 1000 hour basic limited warranty. Specification 26 32 14 requests 2 year – 1500 hour basic limited warranty.
3. Load bank offered is ASCO 4800 which is not compliant to Specification 26 32 14 (3.12).
4. Specification 26 32 14 (2.9.3). Battery charger must be 20 amps. 10 amp battery charger not accepted.
5. Site-Off Loading: The 2nd paragraph of the RFQ states “*The supplier is to supply and install the generator unit onto the concrete slab including all related equipment*”. Cummins bid states on-site off loading by others. Cummins to adjust their bid to include the installation of equipment (generator, fuel tank and load bank).
6. Price Quoted: \$400,733.00 + Taxes

CUMMINS REVIEW OF SUBMITTAL

The following is a review with comments for the Cummins submittal received May 25, 2021.

Item 1 - ATS

1. If Cummins equipment is chosen provide Engineering Submittals for ATS as described in Specification Section 26 36 23 (2.4).

Item 2 - Generator

1. Confirm the generator unit is, at a minimum, Tier 1 compliant in terms of air emissions as set out in Table 1 of 40 CFR 89.112.
2. Confirm the generator meets the following requirement;

“Each exhaust stack that is part of the standby power system and that may discharge a product of combustion from the system into the air is orientated vertically”
3. If Cummins equipment is chosen provide Engineering Submittals for generator as described in Specification Section 26 32 23 14 (1.4).
4. Quote states the battery charger will be 12 amps regulated. Provide a 20 amp battery charger as stated in Specification Section 26 32 14 (2.9.3).

Item 3 – Fuel Tank

1. If Cummins equipment is chosen provide a detailed dimensional drawing of the fuel tank.
2. Confirm the fuel tank complies with all TSSA and CSA requirements.
3. Confirm all requirements for the fuel tank listed in Specification Section 26 32 14 (3.10) are.
4. Provide details on the Fuel Fill Alarm system.

Items 4,5,6,7,8,9

1. No Comment

Item 10

1. Provide detailed drawing of platforms.

Item 11

1. ASCO 4800 proposed by Cummins.
2. Non-compliances include;
 - a. ASCO 4800 constructed of heavy gauge aluminum in lieu of heavy gauge coated steel as per Specification 26 32 14 (3.12.10).



TBT ENGINEERING CONSULTING GROUP

- b. ASCO 4800 is not mounted on stand as per information provided. Specification 26 32 14 (3.12.9) states load bank shall have mounting legs of a length that is higher than the average snow height experienced in Fort Frances.
- c. Specification 26 32 14 3.12.12 and 3.12.12 state unit is to have horizontal airflow and exhaust hood to be angles downward. ASCO 4800 does not comply.
- 3. Provide details of the control units functionality.
- 4. The load bank offered by Cummins is non-compliant to Specification.

Item 12

- 1. Provide details and or schematic indicating function of the 50kVA isolation transformer.

Item 14

- 1. Commissioning must include building load as detailed in Specification 26 32 14 (4.4.2 and 4.4.3).
- 2. As part of the test the functionality of the load bank shall be demonstrated (Specification 3.12.6 and 3.13.7).

List of Clarification/Deviation/Exception

- 1. Specification 26 32 14 (2.9.3). Battery charger must be 20 amps. 10 amp battery charger not accepted.
- 2. Specification 26 32 14 (3.7.2). One emergency shutdown pushbutton not provided. This is acceptable. Please provide part number of recommended emergency shutdown pushbutton.
- 3. Specification 26 32 14 (3.11.1). Cummins enclosure is provided with sound level of 75.3 dBA at 7 meters. This is not acceptable. The unit must comply with 75dBA at 7 meter requirement to meet MOE.
- 4. Specification 26 32 14 (3.11.11). Provide details and or schematic indicating function of the 50kVA isolation transformer.
- 5. Specification 26 32 14 (3.12). Refer to Item 11 above.
- 5. Specification 26 32 14 (4.3). Warranty Offered: Two year - 1000 hour basic limited warranty. Specification 26 32 14 requests 2 year – 1500 hour basic limited warranty.



TBT ENGINEERING

CONSULTING GROUP

Notes

1. Site-Off Loading: The 2nd paragraph of the RFQ states "*The supplier is to supply and install the generator unit onto the concrete slab including all related equipment*". Cummins bid states on-site off loading by others. Cummins to adjust their bid to include the installation of equipment (generator, fuel tank and load bank).
2. Quote states 150A/208v 3 phase load-center is required to accommodate all heaters, lights, receptacles and battery charger. The power requirement for the load-center seem exorbitant. Please provide power requirement details on all loads to be connected to the load-center.

END OF CUMMINS REVIEW



TBT ENGINEERING CONSULTING GROUP

June 7, 2021

Project#:20-559

TO: Travis Rob – Manager of Operations & Facilities

Project: Fort Frances Sewage Plant Generator

The following is a review of the Pritchard submittal for the RFQ issued on April 26, 2021 for the supply, delivery, testing and commissioning of a standby power system for the Fort Frances Wastewater Treatment Plant.

General

1. Specification 26 32 14 (3.11.1). Pritchard enclosure is provided with sound level of 76 dBA at 7 meters. This is not acceptable. The unit must comply with 75dBA at 7 meter requirement to meet MOE.
2. Warranty Offered: Three year - 1000 hour basic limited warranty. Specification 26 32 14 requests 2 year – 1500 hour basic limited warranty.
3. Load bank offered is ASCO 4600 which is not compliant to Specification 26 32 14 (3.12).
4. Site-Off Loading: The 2nd paragraph of the RFQ states “*The supplier is to supply and install the generator unit onto the concrete slab including all related equipment*”. Pritchard bid states offloading at site is not included. Pritchard to adjust their bid to include the installation of equipment (generator, fuel tank and load bank).
5. Price Quoted: \$402,400.00 + Taxes

PRITCHARD REVIEW OF SUBMITTAL

Engine

1. Confirm the generator unit is, at a minimum, Tier 1 compliant in terms of air emissions as set out in Table 1 of 40 CFR 89.112.
2. Confirm the generator meets the following requirement;

“Each exhaust stack that is part of the standby power system and that may discharge a product of combustion from the system into the air is orientated vertically”.

Alternator

1. No Comment.

Digital Genset Controller

1. No Comment.

Winterized Sound Enclosure

1. Specification 26 32 14 (3.11.1). Pritchard enclosure is provided with sound level of 76 dBA at 7 meters. This is not acceptable. The unit must comply with 75dBA at 7 meter requirement to meet MOE.
2. Quote states 200A/208v 3 phase load-center is required to accommodate all heaters, lights, receptacles and battery charger. The power requirement for the load-center seem exorbitant. Please provide power requirement details on all loads to be connected to the load-center.

Fuel Tank

1. If Pritchard equipment is chosen provide a detailed dimensional drawing of the fuel tank.
2. Confirm the fuel tank complies with all TSSA and CSA requirements.
3. Confirm all requirements for the fuel tank listed in Specification Section 26 32 14 (3.10) are.
4. Provide details on the Fuel Fill Alarm system.

Features

1. 600A 100% rated load to be complete with shunt trip Specification 26 32 14 (3.3.1).

Additional Features

1. Provide detailed drawing of platforms.

Load Bank

1. ASCO 4600 proposed by Pritchard.
2. Non-compliances include;
 - a. ASCO 4600 constructed of heavy gauge aluminum in lieu of heavy gauge coated steel as per Specification 26 32 14 (3.12.10).



TBT ENGINEERING CONSULTING GROUP

- b. ASCO 4600 is not mounted on stand as per information provided. Specification 26 32 14 (3.12.9) states load bank shall have mounting legs of a length that is higher than the average snow height experienced in Fort Frances.
 - c. Specification 26 32 14 3.12.12 and 3.12.12 state unit is to have horizontal airflow and exhaust hood to be angles downward. ASCO 4600 does not comply.
- 3. Provide details of the control units functionality.
 - 4. The load bank offered by Pritchard is non-compliant to Specification.

Transfer Switch

- 1. No Comment.

Factory Testing

- 1. No Comment

Onsite Testing

- 1. Commissioning must include building load as detailed in Specification 26 32 14 (4.4.2 and 4.4.3).
- 2. As part of the test the functionality of the load bank shall be demonstrated (Specification 3.12.6 and 3.13.7)

General Notes

- 1. Site-Off Loading: The 2nd paragraph of the RFQ states "*The supplier is to supply and install the generator unit onto the concrete slab including all related equipment*". Pritchard bid states offloading at site is not included. Pritchard to adjust their bid to include the installation of equipment (generator, fuel tank and load bank).
- 2. Provide specific details of external piping, wiring, and mechanical connections to be done by others.

END OF PRITCHARD REVIEW

June 7, 2021

Project#:20-559

TO: Travis Rob – Manager of Operations & Facilities

Project: Fort Frances Sewage Plant Generator

The following is a review of the Toromont submittal for the RFQ issued on April 26, 2021 for the supply, delivery, testing and commissioning of a standby power system for the Fort Frances Wastewater Treatment Plant.

General

1. Toromont is stating that the unit complies with sound level requirement of 75dBA at 7 meters.
2. Warranty Offered: Five year - 2500 hour basic limited warranty. Specification 26 32 14 requests 2 year – 1500 hour basic limited warranty.
3. No details on load bank provided. Until details provided, non-compliant.
4. Specification 26 32 14 (2.9.3). Battery charger must be 20 amps. 10 amp battery charger not accepted.
5. Site-Off Loading: The 2nd paragraph of the RFQ states “*The supplier is to supply and install the generator unit onto the concrete slab including all related equipment*”. Toromont bid states site off-loading, positioning and installation by others. Toromont to adjust their bid to include the installation of equipment (generator, fuel tank and load bank).
6. Price Quoted: \$492,624.00 + Taxes

TOROMONT REVIEW OF SUBMITTAL

Cooling System

1. No comment.

Air System

1. No Comment.



TBT ENGINEERING CONSULTING GROUP

Fuel System

1. If Toromont equipment is chosen provide a detailed dimensional drawing of the fuel tank.
2. Confirm the fuel tank complies with all TSSA and CSA requirements.
3. Confirm all requirements for the fuel tank listed in Specification Section 26 32 14 (3.10) are.
4. Provide details on the Fuel Fill Alarm system.

Mounting System

1. No Comment.

Enclosure

1. The compliance to noise level of 75dBA at 7 meters is noted. The unit must comply with this requirement to meet MOE.

Finish

1. No Comment.

Starting System

1. Specification 26 32 14 (2.9.3). Battery charger must be 20 amps. 10 amp battery charger not accepted.

Generator

1. Confirm the generator unit is, at a minimum, Tier 1 compliant in terms of air emissions as set out in Table 1 of 40 CFR 89.112.
2. Confirm the generator meets the following requirement;

"Each exhaust stack that is part of the standby power system and that may discharge a product of combustion from the system into the air is orientated vertically".

Circuit Breaker(s) (Unit Mounted)

1. Breaker #2 must be complete with shunt trip.

Controls

1. No Comment.

Relay Outputs

1. Three relay outputs minimum are required as per Specification 26 32 14 (3.15.1).

Shop Test

1. No Comment.

Site Test and Site Work

1. Commissioning must include building load as detailed in Specification 26 32 14 (4.4.2 and 4.4.3).
2. As part of the test the functionality of the load bank shall be demonstrated. Specification 26 32 14 (3.12.6 and 3.13.7)

Clarifications and Exceptions to this bid

1. Site-Off Loading: The 2nd paragraph of the RFQ states "*The supplier is to supply and install the generator unit onto the concrete slab including all related equipment*". Toromont bid states site off-loading, positioning and installation by others. Toromont to adjust their bid to include the installation of equipment (generator, fuel tank and load bank).
2. Load Tests: Load tests to be completed using building load and provided load bank. Specification 26 32 14 (3.12.6 and 3.13.7)
3. Battery Charger: Specification 26 32 14 (2.9.3). Battery charger must be 20 amps. 10 amp battery charger not accepted.
4. Load Bank Circuit Breaker: To be complete with shunt trip.
5. Specification 26 32 14 (3.11): Provide receptacle.
6. Specification 26 32 14 (3.12) Load Bank: Without specification sheet and general arrangement drawing the load bank cannot be approved.

END OF TOROMONT REVIEW