

## **Wabush Service Upgrade – Wabush Airport, NL**

**EC373-230778/A**

### **AMENDMENT # 2**

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THE FOLLOWING AMENDMENT TO THE TENDER DOCUMENTS IS EFFECTIVE IMMEDIATELY.  
THE AMENDMENT SHALL FORM A PART OF THE CONTRACT DOCUMENTS.  
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### **ADDENDUM NO. 1**

#### **Specifications:**

Specifications issued with this Addendum: **26 12 16.01 - Dry Type transformers up to 600V**

#### **Questions & Answers:**

**Question # 1:** There is no spec provided for the 15Kva transformer – pls provide clarification?

**Answer # 1:** Refer to attached specification 26 12 16.01

**Question # 2:** Confirm who is the existing manufacturer of the Normal Power CSB board and it's interrupting rating/name plate data.

**Answer # 2:** Manufacturer: Square D Interrupting Capacity: 42kAIC as per nameplate  
Main Breaker: 2000AF/1200AT 50kAIC Masterpact  
ATB Main Breaker: 1600AF/800AT Masterpact

**Question # 3:** Confirm who is the existing manufacturer of the Emergency Power CSB board and its interrupting rating/name plate data.

**Answer # 3:** Manufacturer: ITE Industries Limited 1000A-347/600V/3Phase/4W/SO 4\_23508/LL803.  
No IC rating identified at 600V. 120/208V CDP Main breaker labeled at 42KAIC

**Question # 4:** Confirm what is the existing generator brand and the current emergency generating controls.

**Answer # 4:** Manufacturer is Caterpillar Generating Set:  
Model 300  
Serial # CAT000C9CNBP00389/375kVA/300kW  
Generator Serial #G5A06128

**Question # 5:** Please clarify if you require a padmount transformer or a substation transformer?

**Answer # 5:** Pad mount transformer required.

**Question # 6:** Section 26 12 19 is padmount transformer specification; it would include fusing and deadfront primary connections, but C227.4 for padmounts is not referenced.

**Answer # 6:** Item .8 should be added in Section 26 12 19-**1.1 Standards**. Revised section last item to read as follow: .8 "C227.4 for pad mount transformers".

**Question # 7:** The request is to include fans for this project on the 1000kVA transformer. Are you looking for Substation class with Fans (1000/1150kVA)?

**Answer # 7:** Specifications ask for Padmount transformer with fans. All installation for this transformer to be underground.

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BY SUBMISSION OF ITS TENDER, THE TENDERER CONFIRMS THAT IS HAS READ AND UNDERSTANDS THE  
REQUIREMENTS EXPRESSED IN ALL ADDENDA AND HAS INCLUDED ALL COSTS OF THESE REQUIREMENTS IN  
THE TOTAL TENDER AMOUNT.

ALL OTHER TERMS AND CONDITIONS REMAIN UNCHANGED.

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**Part 1 General**

**1.1 RELATED REQUIREMENTS**

- .1 This Section covers items common to Sections of Division 26. This Section supplement requirements of Division 1.

**1.2 REFERENCES**

- .1 CSA International
  - .1 CAN/CSA-C22.2 No.47-M90(R2007), Air-Cooled Transformers (Dry Type).
  - .2 CSA C9-02(R2007), Dry-Type Transformers.
  - .3 CAN/CSA-C802.2-06, Minimum Efficiency Values for Dry Type Transformers.
- .2 National Electrical Manufacturers Association (NEMA)

**1.3 ACTION AND INFORMATIONAL SUBMITTALS**

- .1 Submit in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Product Data:
  - .1 Submit manufacturer's instructions, printed product literature and data sheets for dry type transformers and include product characteristics, performance criteria, physical size, finish and limitations.

**1.4 CLOSEOUT SUBMITTALS**

- .1 Submit in accordance with Section 01 78 00 - Closeout Submittals.
- .2 Operation and Maintenance Data: submit operation and maintenance data for dry type transformers for incorporation into manual.

**1.5 DELIVERY, STORAGE AND HANDLING**

- .1 Deliver, store and handle materials in accordance with Section 01 61 00 - Common Product Requirements and with manufacturer's written instructions.
- .2 Delivery and Acceptance Requirements: deliver materials to site in original factory packaging, labelled with manufacturer's name and address.
- .3 Storage and Handling Requirements:
  - .1 Store materials off ground, indoors, in dry location, and in accordance with manufacturer's recommendations in clean, dry, well-ventilated area.
  - .2 Store and protect dry type transformers from nicks, scratches, and blemishes.
  - .3 Replace defective or damaged materials with new.

## **Part 2 Products**

### **2.1 DESIGN DESCRIPTION**

- .1 Design.
  - .1 Type: ANN.
  - .2 3 phase, kVA as indicated on drawings, 600V input, 120/208 V output, 60 Hz.
  - .3 Voltage taps: 2x2.5% FCAN and 2x2.5% FCBN.
  - .4 Insulation: Class 220, 150 degrees C temperature rise.
  - .5 Basic Impulse Level (BIL): standard.
  - .6 Hipot: standard.
  - .7 Average sound level: standard
  - .8 Impedance at 17 degrees C: standard
  - .9 Enclosure: NEMA, removable metal front panel c/w drip shield
  - .10 Mounting: floor or wall mounted as per manufacturer specifications.
  - .11 Finish: in accordance with Section 26 05 00 - Common Work Results for Electrical.
  - .12 Copper windings.
  - .13 Winding configuration to be star c/w ground.
  - .14 Harmonic Mitigating Phase Shifting transformer.
  - .15 K20-Rated Transformer.
  - .16 Voltage Regulation to be 4% or better.
  - .17 External Neoprene Anti-Vibration Isolators.
  - .18 Anti-condensation strip heater.
  - .19 Drive isolation transformer.

### **2.2 EQUIPMENT IDENTIFICATION**

- .1 Provide equipment identification in accordance with Section 26 05 00 - Common Work Results for Electrical.
- .2 Label size: 7.

## **Part 3 Execution**

### **3.1 EXAMINATION**

- .1 Verification of Conditions: verify that conditions of substrate previously installed under other Sections or Contracts are acceptable for dry type transformers installation in accordance with manufacturer's written instructions.
  - .1 Visually inspect substrate in presence of Departmental Representative.
  - .2 Inform Departmental Representative of unacceptable conditions immediately upon discovery.

- .3 Proceed with installation only after unacceptable conditions have been remedied and after receipt of written approval to proceed from Departmental Representative.

### **3.2 INSTALLATION**

- .1 Mount dry type transformers above 75 kVA on floor or as per manufacturer recommendations.
- .2 Ensure adequate clearance around transformer for ventilation.
- .3 Install transformers in level upright position.
- .4 Remove shipping supports only after transformer is installed and just before putting into service.
- .5 Loosen isolation pad bolts until no compression is visible.
- .6 Make primary and secondary connections in accordance with wiring diagram.
- .7 Energize transformers after installation is complete.
- .8 Make conduit entry into bottom 1/3 of transformer enclosure.
- .9 Outdoor transformers to be installed in ventilated enclosure NEMA 4X or Fiber Glass enclosure.
- .10 Install anti-vibration pads on housekeeping pad c/w corresponding clearances as per CEC.

### **3.3 CLEANING**

- .1 Progress Cleaning: clean in accordance with Section 01 74 11 - Cleaning.
  - .1 Leave Work area clean at end of each day.
- .2 Final Cleaning: upon completion remove surplus materials, rubbish, tools and equipment in accordance with Section 01 74 11 - Cleaning.

### **3.4 PROTECTION**

- .1 Protect installed products and components from damage during construction.
- .2 Repair damage to adjacent materials caused by dry type transformers installation.

**END OF SECTION**