



## MECHANICAL/ELECTRICAL ADDENDUM

**ME-01**

Architect:	N/A	Date:	April 7, 2015
Project:	Environment Canada Module 5 VRF System	Project No.:	13-110

This addendum forms part of the contract documents and amends the original bidding requirements, drawings and specifications noted below.

### 1.0 GENERAL CONDITIONS

Refer to Specification No. 01 11 55

Replace Paragraph 4 (Scheduling), Sentence 2 :

2. "In order to minimize disruption to on-going work in the laboratories, the majority of the work is envisioned to be performed in phases during pre-planned shutdown intervals and will entail both regular and off-hour work. A major one week duration shutdown is to be planned for lab 159 and 165 in order to permit uninterrupted implementation of the HVAC above the labs as well as other new associated equipment and distribution in the lab vicinity. Regular hour and off hour work will be allowed to occur unimpeded during this period. Additional two or three day weekend intervals involving purely off-hour work may be scheduled as deemed necessary in order to accommodate full completion of the work as well. All of these planned phases are to be established in the overall construction schedule above"

To read :

2. The majority of the work may be performed during a two week planned shutdown window plus bordering weekends above labs 165 and 159 simultaneously. Regular and off hour work (if required) will be allowed to occur unimpeded during this period above labs 165 and 159 during this shutdown. Substantial completion of the M5 VRF system is expected to occur by the end of this scheduled period, including both hook-up and operational commissioning for existing lab 154 and 155 VRF fan coils. A complete operational VRF system is to be in place with basic equipment functional commissioning and rough lab air balancing finalized by the end of the shutdown. Protection of equipment inside the labs from falling objects and tools from the catwalk space above will be required as well during this period. "

### 2.0 MECHANICAL

#### 2.1 DRAWINGS

.1 Refer to Drawing No. M-100

1. UNDER COMMISSIONING, REVISE ITEM 1.1 TO: "MECHANICAL CONTRACTOR HAS OVERALL RESPONSIBILITY..."
2. UNDER COMMISSIONING, REVISE ITEM 3.1.1 TO: MECHANICAL ENGINEER SHALL "OVERSEE THE COMMISSIONING PROCESS...". PLANNING, ORGANIZING AND IMPLEMENTATION BY CONTRACTOR.
3. UNDER COMMISSIONING, REVISE ITEM 3.1.2 TO: MECHANICAL ENGINEER SHALL "REVIEW THE COMMISSIONING PLAN...". PREPARATION OF COMMISSIONING PLAN BY CONTRACTOR.

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4. UNDER COMMISSIONING, DELETE ITEM 3.1.3.
5. UNDER COMMISSIONING, ITEM 3.5 INTEGRATED SYSTEM TESTING SHALL INCLUDE ALL RELEVANT LAB OPERATING MODES.
6. UNDER COMMISSIONING, ITEM 3.6 O&M TRAINING IS BY CONTRACTOR.

.2 Refer to Drawing No. M-200

1. ROOM 159: DISCONNECT AND REMOVE THREE (3) THERMOSTATS FROM EXISTING LAB AND OFFICE SPACE.

.3 Refer to Drawing No. M-300

1. DELETE NOTE #1 IN ITS ENTIRETY. NEW AIR SAMPING (AIR-GENUITY) WORK SHALL BE PERFORMED UNDER SEPARATE OR FUTURE CONTRACT.

.4 Refer to Drawing No. M-400

1. EXACT LOCATION OF EQUIPMENT ON MEZZANINE TO BE COORDINATED BY CONTRACTOR ONSITE. PROVIDE SKETCH IN ADVANCE OF INSTALLATION.
2. PROVIDE UNISTRUT SUPPORT FRAME FOR HSU-1 ABOVE EXISTING DUCT ON MEZZANINE FLOOR AS REQUIRED TO SUIT LAYOUT.
3. DISCONNECT AND RECONNECT CONTROL WIRING FOR EXISTING 10HP DANFOSS VFD WITHIN 2 M OF EXISTING LOCATION ON MEZZANINE TO PERMIT INSTALLATION OF MECHANICAL EQUIPMENT.

.5 Refer to Drawing No. M-500

1. REVISE EQUIPMENT INVENTORY NUMBERS AS FOLLOWS:

OLD	NEW
SACV-513 (LAB 159)	SACV-521
SACV-514 (LAB 165)	SACV-522
GECV-18 (LAB 159)	GECV-517
GECV-19 (LAB 165)	GECV-518
FCL-1	DC-5 (DRYCOOLER)



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P-1	P-127
P-2A	P-128
P-2B	P-129
ET-1	ET-16

2. REVISE EXHAUST AIR CONTROL VALVES TO MINIMUM AIRFLOW 50CFM (23.7 L/S). REVISE MODEL NUMBER TO EXVA212L-AMEHZ-PSL.
3. ALL LABELING AND TAGGING FOR NEW EQUIPMENT, SERVICES AND DISTRIBUTION TO BE DONE IN ACCORDANCE WITH ENVIRONMENT CANADA LABELING SPECIFICATIONS.

.6 Refer to Drawing No. M-600

1. VALUES REFERRED TO AS “(ADJ.)” SHALL BE USER-ADJUSTABLE VIA BMS FRONT END. ROOM TEMPERATURE SETPOINTS SHALL BE USER-ADJUSTABLE FROM THE ROOM THERMOSTATS, WHICH SHALL BE PASSWORD-PROTECTED. PURGE MODE SHALL BE MANUALLY INITIATED VIA BMS SYSTEM UNTIL AIR SAMPLING IS COMPLETED.

.7 Refer to Drawing No. M-700

2. DELETE PARAGRAPH #20 IN IT ENTIRETY. DELETE EXHAUST FAN UPGRADE, INCLUDING NEW MOTOR AND VFD.
3. FOR PARAGRAPH #21, DELETE REQUIREMENT (A) TO DISCONNECT & RE-CONNECT CONTROL POINTS FOR EXHAUST FAN.
4. FOR PARAGRAPH #22, AIR BALANCER TO TAKE READINGS AS DESCRIBED UPON COMPLETION OF WORK; READINGS AFTER FAN UPGRADE NOT REQUIRED.

### 3.0 ELECTRICAL

#### **3.1 DRAWINGS**

.1 Refer to Drawing No. E-100

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**1. DELETE EXHAUST FAN UPGRADE IN ITS ENTIRETY.**

**.2 Refer to Drawing No. E-200**

1. DISCONNECT AND RELOCATE EXISTING 10HP DANFOSS VFD WITHIN 2 M OF EXISTING LOCATION ON MEZZANINE TO PERMIT INSTALLATION OF MECHANICAL EQUIPMENT.
2. REVISE EQUIPMENT INVENTORY NUMBERS AS FOLLOWS:

OLD	NEW
FCL-1	DC-5 (DRYCOOLER
P-1	P-127
P-2A	P-128
P-2B	P-129

**3. PROVIDE ELECTRICAL EQUIPMENT INVENTORY NUMBERS AS FOLLOWS**

EQUIPMENT	DISCONNECT
FC-159A	DS-536
FC-159	DS-535
FC-165A/B	DS-538
FC-165	DS-537
P-128 (P-2A)	DS-540
P-129 (P-2B)	DS-541
P-127 (P-1)	DS-539
HSU-1	DS-542
DC-5 (FCL-1)	DC-543

4. ALL LABELING AND TAGGING FOR NEW EQUIPMENT, SERVICES AND DISTRIBUTION TO BE DONE IN ACCORDANCE WITH ENVIRONMENT CANADA LABELING SPECIFICATIONS.

**END OF ADDENDUM ME-01**