

### 03.111 Electrolysis System Deactivation (03. ECLSS)

#### OBJECTIVE:

To perform a deactivation of the Solid Polymer Electrolysis (SPE) System.

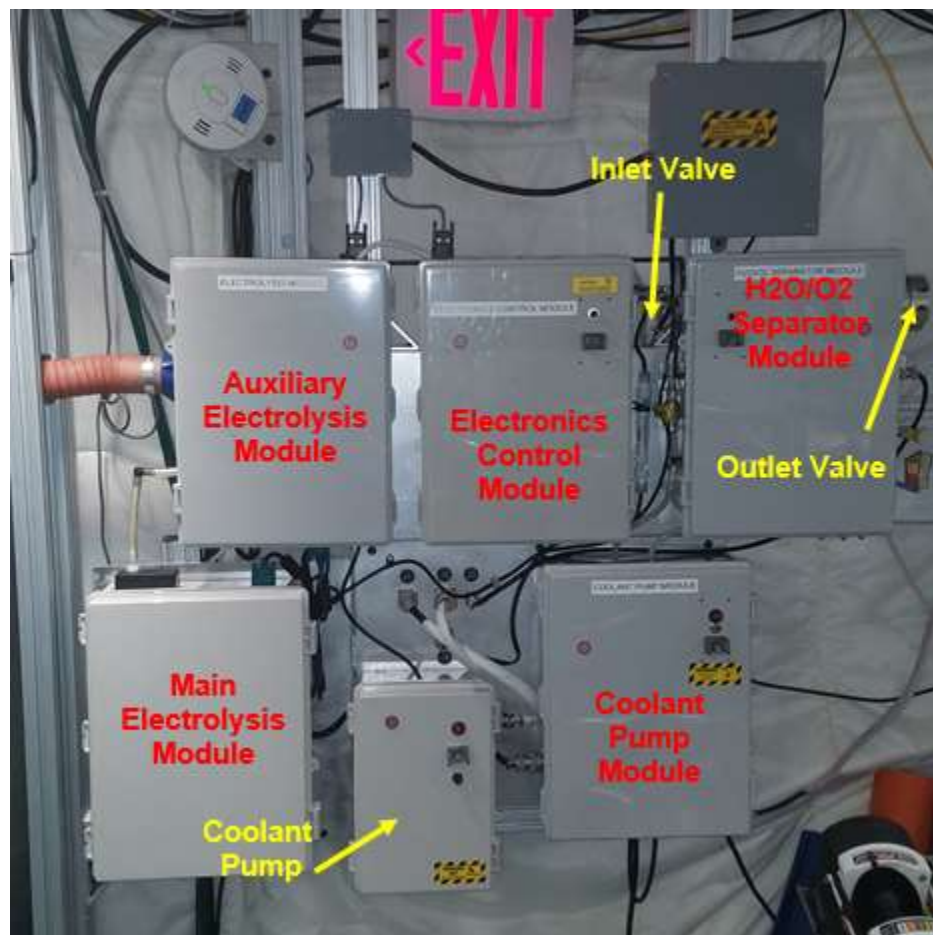
#### EQUIPMENT:

Portable anemometer  
PPE safety glasses  
PPE static wrist tether

#### NOTE

Power removal of the system must be performed in the correct sequence to ensure H<sub>2</sub>O does not enter the coolant water pump from the Auxiliary Electrolysis Module.

#### L2C 1. DEACTIVATE ELECTROLYSIS SYSTEM



**Figure 1:** Solid Polymer Electrolysis System

- 1.1 Don static wrist tether and attach to any unpainted metallic surface.
- 1.2 Don PPE safety glasses.

### 03.111 Electrolysis System Deactivation

(03. ECLSS)

- 1.3 Gather portable anemometer and take reading of exhaust flow to the right of the H<sub>2</sub>O/O<sub>2</sub> Separator Module (see Figure 1). Hold anemometer within an inch of the outlet valve, left of center, for 10 seconds to gather an accurate reading.
- 1.4 Call MCC to confirm O<sub>2</sub> exhaust flow on the right side of the outlet valve of the H<sub>2</sub>O/O<sub>2</sub> Separator Module is within expected range by reporting the flow with the portable anemometer.

Reading should be between 0.6 – 0.8 m/s.

- 1.5 Turn off portable anemometer.
- 1.6 Switch inlet valve located to the left of the H<sub>2</sub>O/O<sub>2</sub> Separator Module to “CLOSED”.

Confirm inlet water valve is perpendicular to hose.

- 1.7 Switch outlet valve located to the right of the H<sub>2</sub>O/O<sub>2</sub> Separator Module to “CLOSED”.

Confirm outlet water valve is perpendicular to hose.

- 1.8 Flip power switch of Coolant Pump Module to “OFF”.

Confirm Coolant Pump Module light is off.

- 1.9 Flip power switch of Electronics Control Module to “OFF”.

Confirm Electronics Control Module light is off.

- 1.10 Flip power switch of H<sub>2</sub>O/O<sub>2</sub> Separator Module to “OFF”.

Confirm H<sub>2</sub>O/O<sub>2</sub> Separator Module light is off.

- 1.11 Unlock both latches on Auxiliary Electrolysis Module and open door.

- 1.12 Turn coolant water valve (located on black tube behind the Auxiliary Electrolysis Canister) 90 degrees clockwise to “CLOSED”.

Confirm coolant water valve tabs are perpendicular to hose.

Confirm no more bubble formation.

- 1.13 Close Auxiliary Electrolysis Module door and lock both latches.

- 1.14 Flip power switch of Coolant Pump to “OFF”.

Confirm Coolant Pump light is off and motor stops humming.

- 1.15 Flip Main Pump Power switch on Water Recovery System (WRS) to “OFF”. (WRS is located next to the SPE System.)

### **03.111 Electrolysis System Deactivation**

(03. ECLSS)

Confirm WRS Main Pump Power light is off.

1.16 Flip power switch of power strip behind Electronics Control Module to “OFF”.

Confirm power strip light is off.

1.17 Doff PPE glasses.

1.18 Doff static wrist tether.

1.19 Stow all tools and PPE.