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SAFE WORK
PROCEDURE:

Doc No	SWP-COE-17		
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Liquid Nitrogen collection

1. Application to:

All personnel working on the Liquid Nitrogen collection from ELF tank.

2. Pre-requisite for collecting Liquid Nitrogen from ELF tank:

- 2.1. Must have attended the operation and safety training.
- 2.2. Must be fully understand the activity based risk assessment.
- 2.3. Must be physically fit.
- 2.4. Process must be carry out in COE's designated area which has good ventilation and disperse of N2 mist evaporated from LN2.

3. Hazards that may be present:

- 3.1. Cold burn/ frostbite to exposed body parts.
- 3.2. Damage to retina when eye contacted with LN2 spillage.
- 3.3. LN2 mist causes suffocation.

4. **Personal Protection Required:**

- 4.1. Cryogenic Apron, Gloves, face shield.
- 4.2. Cover shoe.

5. **Procedures:**

5.1. Collecting LN2 from ELF tank to Dewar container

- 5.1.1 Put on the appropriate PPE provided.
- Check the ELF tank for LN2 liquid level and check the connection of Liquid 5.1.2 withdrawal valve and flexible hose.
- 5.1.3 Place the Dewar on the flat ground/floor and ensure it is in firm standing position.
- 5.1.4 Turning on the Liquid withdrawal valve slowly to release LN2 from ELF tank.
- Do not open the LN2 Liquid withdrawal valve fully and adjust constantly to control 5.1.5 the flow.
- 5.1.6 If the N2 mist engulfs you, close the Liquid withdrawal valve immediately.
- 5.1.7 Turn off the Liquid withdrawal valve after you have filled the Dewar to your required level.
- 5.1.8 Return all the PPE to its original position and report to Lab Staff if any damage happens.

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5.2 Maintenance of the Liquid Nitrogen Dewar.

5.2.1 Make sure that there is no crack on the Dewar/container.

5.3 Specific Processes

5.3.1 There is NO specific process

6. Communication Frequency:

The Lab Supervisor shall arrange for this Safe Work Procedure to be communicated every once a year and as & when required.

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Approved by: <u>A/Prof E F Chor</u>