

CTRNet Standard Operating Procedure Procedure for Back-up Power			
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Prepared By:		Jean de Sousa-Hitzler		
	Signature	Name	Title	ddMmmyy
Approved By:		Peter Geary	CEO	09 Jan 08
	Signature	Name	Title	ddMmmyy
Approved By:				
	Signature	Name	Title	ddMmmyy

### REVISION HISTORY

SOP Number	Date Issued	Author (Initials)	Summary of Revisions
4.1.003 e1.0	09-01-2008	JdSh	Initial release

## 1.0 PURPOSE

Tumour banks or repositories are intended to store and manage the Human Biological Materials (HBMs) in their custody. Much of the equipment in the Tumour Bank is dependent on uninterrupted electrical power supply to maintain specimen integrity. In the event of a regular power supply failure, back-up power should be available. This SOP is intended to outline processes that should be in place to facilitate switching to back-up power supply.

## 2.0 SCOPE

This standard operating procedure (SOP) outlines elements and processes that should be in place to ensure that equipment that requires uninterrupted power supply is switched to back-up power.

### 3.0 REFERENCE TO OTHER POLICIES AND SOPS

1. CTRNet Policy: POL 004.001 Privacy and Security
2. CTRNet Policy: POL 007.001 Material and Information Handling Policy
3. CTRNet SOP 4.1.001 Physical Security at Tumour Bank Facilities

### 4.0 ROLES AND RESPONSIBILITY

The policy applies to all personnel from CTRNet member repositories that work at the repository site and are responsible for ensuring that there is uninterrupted power supply to equipment that requires it.

Tumour Bank Personnel	Responsibility/Role	Site Specific Personnel and Contact Information
Lab Technicians	Monitors and ensures uninterrupted power supply to sensitive equipment	
Bank Director	Ensures uninterrupted power supply to sensitive equipment	
Bank Manager/Coordinator	Ensures uninterrupted power supply to sensitive equipment	

### 5.0 MATERIALS, EQUIPMENT AND FORMS

The materials, equipment and forms listed in the following list are recommendations only and may be substituted by alternative/equivalent products more suitable for the site-specific task or procedure.

Materials and Equipment	Materials and Equipment (Site Specific)
Back-up power capacity	
Thermometers	
Back-up lighting	
Contact list for responsible personnel	
Alarm systems	
Power cables and emergency outlets	

### 6.0 DEFINITIONS

**Custodianship:** Responsibility for safe keeping of tissue samples and associated data and control of their use and eventual disposal in accordance with the terms of the consent given by the participant and as regulated by the Research Ethics Board.

Custodianship implies some rights to decide how the samples are used and by whom, and also responsibility for safeguarding the interests of donors.

**Human Biological Material:** All biological material of human origin, including organs, tissues, bodily fluids, teeth, hair and nails, and substances extracted from such material such as DNA and RNA.

**Primary Power Supply:** Electrical supply provided by power generation and distribution company in the region.

**Secondary or Back-up Supply:** Electrical power supplied by the on-site emergency electrical power supply.

**Safety:** Processes, procedures and technologies to ensure freedom from danger or harm.

**Storage:** Maintenance of specimens for future use.

## 7.0 PROCEDURES

Equipment that require back-up power to maintain appropriate operating conditions include: some lighting, refrigerators, freezers, incubators and computer network servers and security system and alarm monitors. When there is loss of primary power supply, personnel should be alerted and take appropriate action to restore power to such equipment with back-up power capacity until primary power is restored.

### 7.1 Back-up Power Supply Capacity - General

1. Have a power generation system in place to deal with loss of commercial power.
2. Keep a sufficient fuel supply for the emergency power generation system to ensure to provide emergency power for a minimum of 72 hours.
3. Protect electronic systems, computers, incubators, refrigerators and freezers by an uninterruptible power supply.
4. Back-up power equipment should be clearly visible and easily identified.
5. Have appropriate procedures in place to test the back-up power generation system for reliable function (as per manufacturer's instructions).

### 7.2 Electrical Power Supply – Monitoring and Response

1. Have alarm systems in place to alert personnel that primary power supply has been interrupted.

2. Have a 24-hour contact list posted in the lab with names of tumour bank personnel that are responsible for responding to the power emergency.
3. If the back-up system is not automated (switches automatically to back-up power) then make sure that the response team is appropriately trained to:
  - Start back-up generator to generate secondary power supply,
  - Identify and locate back-up power equipment,
  - Switch power cables to back-up power outlets, and
  - Avoid (if possible) opening of freezers and using sensitive equipment for the duration of the primary supply failure.

### 7.3 Secondary Power Supply – Testing

1. Periodically (as per institutional practice) test the emergency back-up power supply system and procedures to ensure that the system is operational.
2. Ensure back-up lighting for emergency situations is operational and adequate for emergency tasks.

## 8.0 APPLICABLE REFERENCES, REGULATIONS AND GUIDELINES

1. Tri-Council Policy Statement; Ethical Conduct for Research Involving Humans; Medical Research Council of Canada; Natural Sciences and Engineering Council of Canada; Social Sciences and Humanities Research Council of Canada, August 1998. <http://www.pre.ethics.gc.ca/english/policystatement/policystatement.cfm>
2. Best Practices for Repositories I. Collection, Storage and Retrieval of Human Biological Materials for Research. International Society for Biological and Environmental Repositories (ISBER). <http://www.isber.org>
3. US National Biospecimen Network Blueprint [http://www.ndoc.org/about\\_ndc/reports/NBN\\_comment.asp](http://www.ndoc.org/about_ndc/reports/NBN_comment.asp)

## 9.0 APPENDICES

None