

OCDEM, Churchill Hospital, Oxford OX3 7LE
www.ocdem.ox.ac.uk

OCDEM, Churchill Hospital, Oxford OX3 7LE

Head of Department: Prof Fredrik Karpe
DSO: Sandy Humphreys
BSO: Prof Patrik Rorsman

SOP number: OCDEM I 4

Effective date: 1st April 2011
Updated: 6th September 2016
Version: 1.5
Supersedes: 1.4

Power Failure and Freezers within OCDEM: Action to be taken in the event of a power failure expected to last more than four hours

Within OCDEM there are a variety of freezers ranging from -20 to -86°C, all housing specimens which need to be kept within a limited temperature range. These freezers are of differing ages and efficiencies and each user should try to ascertain the temperature drop per hour in the event of a power failure.

Typically a New Brunswick Ultra low temperature freezer which is less than 10 years old and set to -80°C will drop to approximately -60°C in six hours if at least two thirds full. This will drop to -20°C in 24 hours. These temperatures will only be maintained if the doors are not opened.

Most -20°C freezers will stay below 0°C if the doors are not opened for approximately 16-24 hours and full of samples.

Maintained electrical supply

There are several areas within OCDEM that are on the maintained supply (Churchill emergency power supply); all the sockets are red. All groups must have an up to date procedure for the logistics required to relocate freezers to an area with a maintained supply. See Appendix 1 for details of areas within OCDEM with a maintained supply.

Unexpected power failure

All expected power interruptions should be notified to OCDEM before they occur. This is not always the case.

If there is an unexpected power failure within OCDEM the reason and estimated length of the failure needs to be discovered. The Oxford University Hospitals NHS Trust Estates department are most likely to have this information. If the reason for the power failure is 'off site' it might take them a while to discover and disseminate this information. The General Enquiry number for Estates is extension 25431.

Do not open fridge or freezer doors under any circumstances if you wish to maintain the temperature.

Duration of power failure

If a power failure is likely to last no longer than four hours it would be an inappropriate use of time relocating freezers to a maintained supply.

For a power failure likely to last more than four hours, freezers with specimens that require a critical temperature to be maintained should be relocated. If the power failure is likely to last over night; as many freezers as possible will need to be relocated to a maintained supply. There are several very long extension leads available for this purpose.

Weekend and Holiday Failures

All Groups that store Relevant Material as defined by the Human Tissue Act have an alarm system attached to their freezers that will notify users via either an SMS text or via the hospital switchboard.

Emergency telephone numbers should be posted in every laboratory.

It is the individual Group's responsibility to maintain the integrity of their specimens, they must not expect other groups to start relocating all their freezers for them, but it will be expected that help should be extended to others. Each Group is large enough to have at least one or two people available to provide help in an emergency.

Appendix 1

Areas within OCDEM that have a maintained power supply:

Group	Room	Maintained supply?
DTU	No longer have any freezer space in the department.	
Oxlip		
	Lilac Freezer Morgue, F41	Yes, all sockets
	Lab F40	No
DRL (McCarthy)		
	Lab, F25	2 sockets only, used for -80° freezers
DRL (Gloyn)		
	Lab, F12	No
	Cold room, F14	Yes
DRL(Rorsman)		
	Labs	None in any labs
Shared		
	Cold Room, F24	No
	Yellow Freezer Morgue, F18	No
	Centrifuge Room, F22	No
	Instrument Room, F21	No
	Fuchsia Room, F39	No
	Tissue Culture Room, F45	No
	Freezer room, F13 – to be converted to 4°C	Yes
	Freezer Morgue, F17	No
AEU		
	Main Lab	Random sockets
	Tissue Culture Room	No
	Equipment Room	Random sockets
	Freezer Morgue	All sockets
	PCR/sequencing/radioactive lab	Random sockets
CRU		
	Lab, G32/	No
	Office, G18A	No
	Clinical Room B, G18	No
	Clinical Room C, G19	No
	Clinical Room D, G20	No
	Clinical Room E, G21	No

Power Failure and Freezers within OCDEM – SOP I4:			Update history	
Version	Date	Reason for update	Updated/reviewed by :	Date next review due
1	April 2008	New SOP	Author: SMH	August 2010
1.1	10 Dec 2008	Changes to safety personnel	SMH	Dec 2010
1.2	1 Apr 2011	Change to Head of Safety and minor text changes in ‘Weekend and Holiday Failures’	SMH	April 2013
1.3	03 Jun 2013	Department Header Changed, updated appendix 1 – maintained supply column	SMH	June 2015
1.4	12 July 2015	Updated Head of Department	SMH	July 2017
1.5	06/09/2016	Removal of DTU from lab space – freezer space re-allocated; no other changes	SMH	Sep 2018