

Change in Controlled Environment Emergency Planning Worksheet

The Change in Controlled Environment Emergency Planning Worksheet provides a structured framework for assessing risks to temperature-sensitive assets. It evaluates property valuations, technical redundancies, and emergency protocols to mitigate the risk of material loss during environmental failures. This tool ensures that necessary controls and response plans are documented to maintain operational stability.

Company/Organization Name: Date:

Location Name or Address:

Perishable Property Values	Response
What is the value of perishable property on site, such as refrigerated, frozen, incubator, fermenter, or bioreactor contents?	
What is the total value of electrically powered units on site?	
What is the maximum value of any single electrically powered unit?	
What is the maximum value of any single non-powered unit?	

Comments:

Perishable Property Loss Potential	Response
What is the critical thaw/heat temperature of the contents?	
If the controlled environment is compromised, how long would it take the stored items to decay? Days, hours, minutes?	
What could be the financial loss to the business in the event of a change in controlled environment?	

Comments:

Perishable Property Risk Management Controls	Response
For all controlled environments, is there at least N+1 redundancy in place?	
Is all temperature-controlled or environmentally sensitive property monitored by an alarm programmed to activate if temperatures fall below or rise above the setpoint for the controlled condition?	
Is the alarm operational at all times?	
Is the alarm monitored by a secure central station? If not, how is 24-hour coverage provided?	
Does the alarm generate a text message or phone call (email not acceptable)?	
Does the alarm transmit to a call list of at least five persons?	
Does the alarm continue to notify the call list personnel until the alarm is acknowledged?	
For liquid nitrogen filled units, are both temperature and low nitrogen alarms provided?	
For liquid nitrogen filled units, is there an autofill system?	

Comments:

Frequency of scheduled alarm maintenance and testing:	Response
Are backup power units installed to provide a minimum six-hour power supply to all temperature-sensitive property? Indicate the features of the backup power units: • Non-electric • Automatic • Self-starting • Subject to annual load testing	
If backup power is provided by diesel generators, are formal contracts in place for emergency fuel delivery?	
If this unit is lost, is spare capacity available in another temperature-controlled unit within the critical thaw or heat time?	
For units requiring emergency cooling, is backup refrigerant available? If yes, how much additional time of protection does it provide?	
Are any critical equipment parameters monitored by remote alarms, including the following? • Incubators • Scientific animal housing • Bioreactor pH • Bioreactor dissolved oxygen levels • Bioreactor stirring or agitation • Bioreactor dissolved solids • Bioreactor cell density • Bioreactor gas pressure	
Is there a planned preventive maintenance program in place for all temperature-controlled or controlled-environment units, associated supporting infrastructure, and alarm systems?	
Comments:	
Emergency Response Plan	Response
Is there a documented, emergency response action plan specific to controlled environments?	
Does the plan include provisions for spare storage capacity, recordkeeping of relocated materials, and timelines for completing specified actions?	
Is the plan practiced at least annually to ensure rapid and effective intervention by trained personnel in the event of building support system failure and resulting temperature emergencies?	
Can an engineering response be made within the critical thaw time?	
Are spare parts for any critical equipment or monitoring systems identified and on hand?	
Comments:	
Action Items	Time Frame
Comments:	