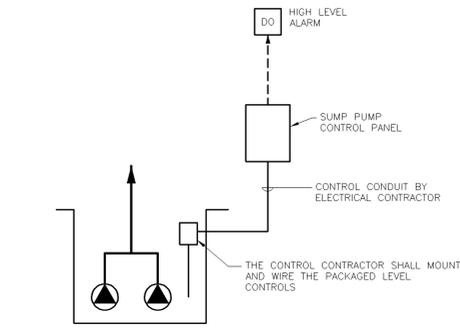


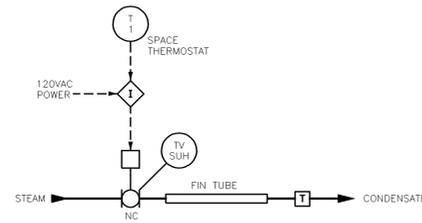
Date (mm-dd-yyyy)	Issued For	Rev.
07-31-2008	TITLE II DESIGN 90% REVIEW SUBMITTAL	E
08-25-2008	TITLE II DESIGN 100% OWNER REVIEW	F
02-19-2009	TITLE II CONSTRUCTION BID ISSUE	O



**C** SUMP PUMPS SP-3 & SP-4 CONTROL DIAGRAM  
NO SCALE

SEQUENCE OF OPERATION

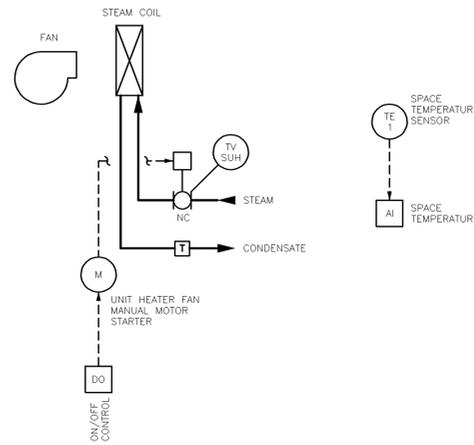
- A. THE PACKAGE CONTROL PANEL, PROVIDED BY THE PUMP MANUFACTURER, SHALL CYCLE THE PUMPS.
- B. THE BUILDING MANAGEMENT SYSTEM SHALL MONITOR THE SUMP HIGH LEVEL ALARM.



**B** STEAM FIN TUBE HEATING TYPICAL CONTROL DIAGRAM  
NO SCALE

SEQUENCE OF OPERATION

- A. THE SPACE THERMOSTAT (TC-1) SHALL CONTROL THE STEAM VALVE TO MAINTAIN A MINIMUM SPACE TEMPERATURE.



**A** STEAM UNIT HEATERS (SUH) TYPICAL CONTROL DIAGRAM  
NO SCALE

SEQUENCE OF OPERATION

- A. THE UNIT HEATER FAN SHALL BE CYCLED TO MAINTAIN A MINIMUM SPACE TEMPERATURE.
- B. THE STEAM COIL CONTROL VALVE SHALL OPEN WHEN THE FAN IS STARTED AND SHALL CLOSE WHEN THE FAN IS STOPPED.

This drawing has been prepared solely for the use of Brookhaven National Laboratory and there are no representations of any kind made by Giffels, Partnership to any party with whom Giffels, Partnership has not entered into a contract.

This drawing shall not be used for construction purposes until the seal and signature of the responsible registrant appears on the drawing and proper permit forms and related fees are transmitted by the Owner, Owner's Agent or Contractor to the Authority Having Jurisdiction.

JOB NO.	SHEET NO.	REVISION	DATE	ENCL.	APPROV.	QA
<p><b>BROOKHAVEN NATIONAL LABORATORY</b></p> <p>UNDER CONTRACT WITH <b>UNITED STATES DEPARTMENT OF ENERGY</b> PLANT ENGINEERING DIVISION UPTON, NEW YORK 11973</p>						
JOB TITLE CENTRAL CHILLED WATER FACILITY PHASE II			DWG. TITLE HVAC CONTROL DIAGRAMS			
LR/APPLIC. NEW	DATE	REV'D BY	ACCT. NO.	JOB NO.		
SCALE	NO SCALE	EA	BN	11705		
ESHD RISK LEVEL	APPR. BY	W HARRISON	BIDD. NO.	600		
PATH:			MH-603			

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