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C-A WATER GROUP ALARM MANUAL

Dicom Alarm No: 810

Location: Bldg. 1005P

Systems: RHIC Cryo Cooling System

Pages 1 through 5

#	ALARM	RESET	STATUS	ALARM DESCRIPTION
<u>961</u>	<u>0</u>	<u>1</u>	<u>@</u>	<u>TOWER 7 COMMON – CRITICAL ALARM -</u>
961	2	3	SPARE	
961	4	5	SPARE	
961	6	7	SPARE	
961	8	9	SPARE	
961	F	C	SPARE	

Revision Date

December 2005

NODE: RC 24

ALARM CODE 810.0

RESTORE 810.1

LOCATION: BLDG. 1005P

**SYSTEM: TOWER 7 COMMON ALARM
(Comnalarm_TWR)**

**ACTION: DETERMINE WHICH SIGNAL IS IN ALARM AND TURN TO
ALARM RESPONSE SHEET FROM LIST BELOW**

<u>NODE</u>	<u>SIGNAL NAME</u>	<u>DESCRIPTION</u>	<u>PAGE NO.</u>
RC 24	TWRTEMP.SUP	Tower Water Supply Temp	810.0-1
RC 24	TWRPRES.SUP	Tower Water Supply Press	810.0-2
RC 24	TWRLVL	Tower Water Level	810.0-3
RC 24	TWRFLO	Tower Water Flow	810.0-4
RC 24	INTRLK INTRLK	Pump Restart	810.0-5

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ALARM RESPONSE SHEET – TOWER 7

<u>SIGNAL NAME</u>	<u>DESCRIPTION</u>	<u>ALARM LIMITS</u>
TWRTEMP.SUP.	Tower Water Supply Temp	(Hi/Lo) 90/40°f

High Temp.

- ACTION:**
1. Verify that water temperature is actually 90°F or more. If temp >90 inform cryo control room of High temp problem.
 2. All fans are in AUTO position and fans are running at high speed. at High speed. (check speed on top of tower)
 3. If fans are not at high speed, switch those fans to HAND position, FWD, High speed.
 4. As a last resort, overflow the basin (turn off chemical feed).
 5. Notes 1 & 3.

Low Temp

- Action:**
1. Verify temperature
 2. If running, Turn fan switches to OFF.
 3. Notes 1 & 3.

- NOTE:**
1. Record Actions Taken
 2. MCR = Main Control Room
 3. Call Mech Svcs from "Call In" list

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ALARM RESPONSE SHEET - TOWER 7

<u>SIGNAL NAME</u>	<u>DESCRIPTION</u>	<u>ALARM LIMITS</u>
TWRPRES.SUP	Tower Water Supply Pressure (≈45 psig = Normal)	(Lo) 25

Low Press**ACTION:** 1. Verify pressure

2. If 3 pumps are operating check for MAJOR leak
3. If flow is less than 5000 GPM with 3 pumps on, check discharge pressure at each running pump.
If one or more reads low (<40 PSI) screen or strainer may be plugged or slide gate is closed.
Advise CRYO control, start standby pump by putting in "AUTO" and shut off problem pump.
4. Notes 1 & 3.

High Press**Action:** 1. Verify pressure

2. Check for closed valve
3. If flow is zero, advise CRYO control that you are going to shut off pumps, than shut down pump.
4. Notes 1 & 3.

- NOTE:**
1. Record Actions Taken
 2. MCR = Main Control Room
 3. Call Mech Svcs from "Call In" list

ALARM RESPONSE SHEET - TOWER 7

<u>SIGNAL NAME</u>	<u>DESCRIPTION</u>	<u>ALARM LIMITS</u>
TWRLVL	Tower Water Level (21"-23"=Normal)	(Lo/LoLo) 15"/10"

- ACTION:**
1. Verify level is outside Lo limits
 - a) Pumps shut down @ $\leq 10''$.
 2. If level is $< 15''$ notify MCR that a low level condition exists and that they should monitor the system for possible automatic shutdown if level reaches $10''$.
 3. Inspect B1005P pump room compressor building & Refrigeration building for leaks.
 4. Add makeup by placing "makeup valve switch", located on the tan alarm indicator panel (East wall), in AUTO position. If inoperative, use MANUAL position of switch or open bypass valve (tagged as "Make-up" valve - located 8' up in the north east corner of pump building). Make-up water can be seen flowing from the 4" pipe behind the fiberglass door to the tower..
 5. Notes 1 & 3.

- NOTE:**
1. Record Actions Taken
 2. MCR = Main Control Room
 3. Call Mech Svcs from "Call In" list

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ALARM RESPONSE SHEET - TOWER 7

<u>SIGNAL NAME</u>	<u>DESCRIPTION</u>	<u>ALARM LIMITS</u>
TWRFLO	Tower Water Flow (≈3000 GPM each pump Normal)	(Lo/LoLo) 2500/1000

ACTION: 1. Verify flow

2. Check for closed valves if pressure is above 40 PSIG
3. Check for plugged screen, strainer or closed slide gate if pump discharge is < 40 PSIG.
4. Note 1 & 3.

- NOTE:**
1. Record Actions Taken
 2. MCR = Main Control Room
 3. Call Mech Svcs from "Call In" list

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810.0-5

ALARM RESPONSE SHEET - TOWER 7

<u>SIGNAL NAME</u>	<u>DESCRIPTION</u>	<u>ALARM LIMITS</u>
INTRLK_INTRLK	Pump Restart Trip	Auto Restart

ACTION: Alarm indicated that an “Auto Restart” sequence was initiated.

1. Even if pumps are ON – Press the PLC pump reset to clear the alarm.
2. No other action is necessary.
3. Note 1 (and 3 the next morning)

NOTE:

1. Record Actions Taken
2. MCR = Main Control Room
3. Call Mech Svcs from "Call In" list

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