

With primary beam being delivered to the SeaQuest target downstream in the NM3 enclosure, Safety was concerned that the cooling water for NM3S will get tritiated, so a RAW system was needed. And NM3RAW was created.

So where is it?

The RAW Skid is in NM3 and the RAW Controller upstairs west of the relay racks.

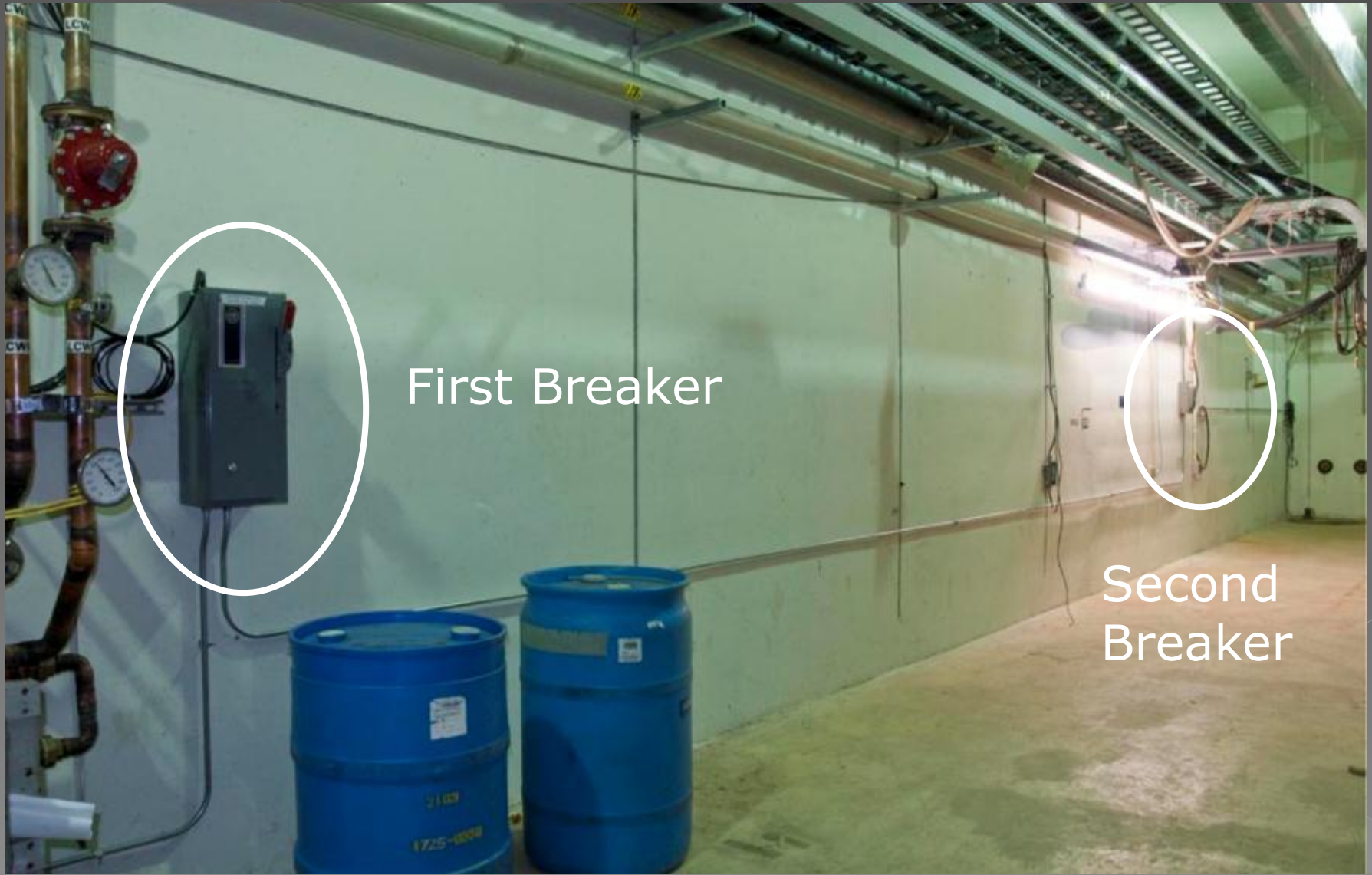
Here's the RAW skid looking upstream from the NM3 gate from gate



Front view of the Skid



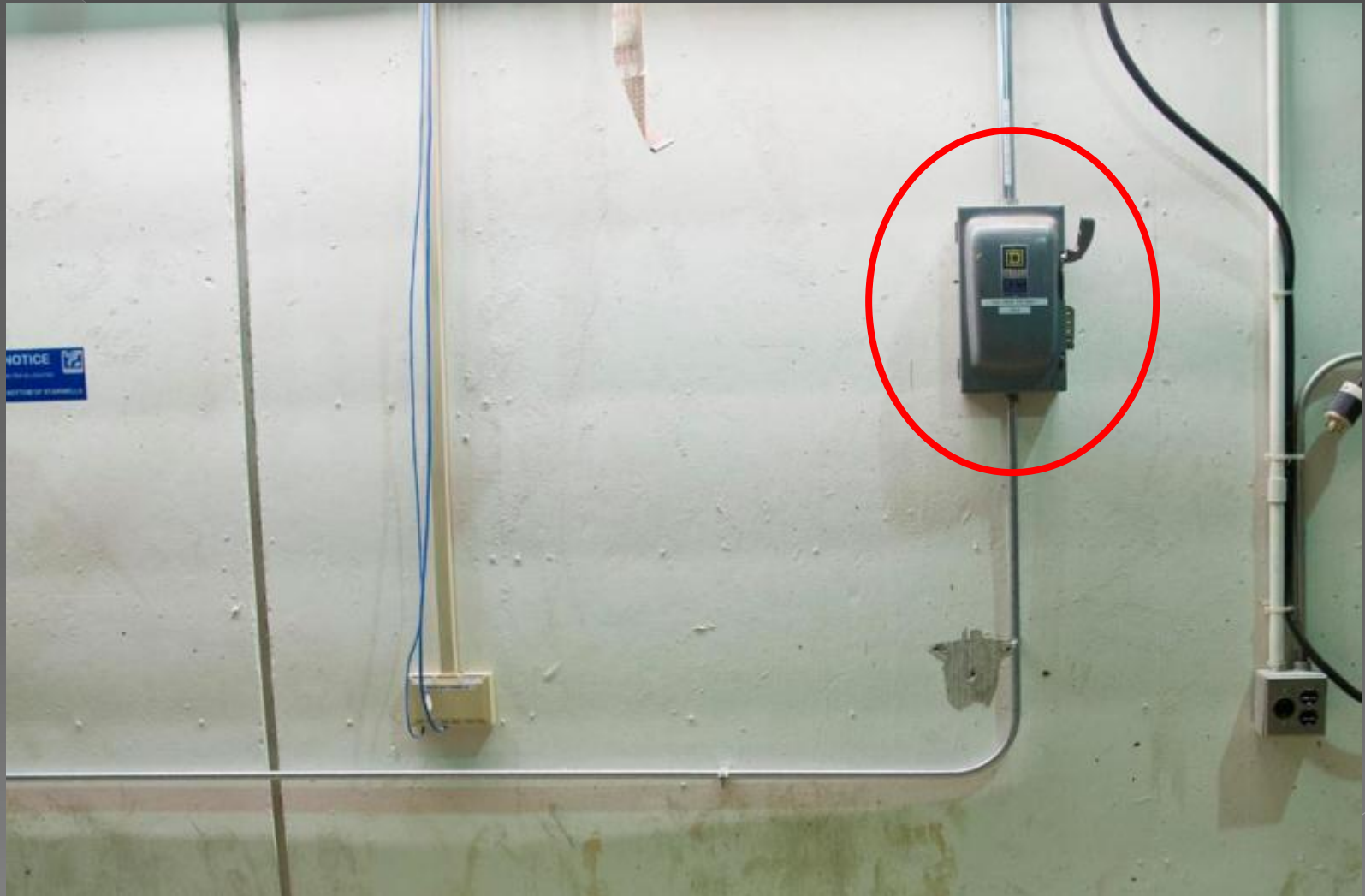
The NM3 RAW skid has 2 breaker downstairs.



First Breaker

Second Breaker

A better look at the second breaker.



One of the alarms for the NM3RAW system is make-up. Make-up means the expansion tank is low and water needs to be added. Water can NOT Be added to a RAW system without prior approval from the RSO. Contact the RSO and follow his instructions, normally he will have us contact a member of the Fluids group to come in and add water.

The expansion tank.



PD 553 DIGITAL STATUS

```
S53 DIGITAL STATUS                               ♦Pgm_Tools♦ AGG CONTRL
PARAM* *SA♦ X-A/D X=TIME Y=E:UQ02 E:UHT03 E:UVT04 I LI522A *RESET
*save BL-- Eng-U I= 0 I=-10 -10 -10 0 *ON
      r_EA AUTO F= 1 F= 10 10 10 4000 *OFF
.global .linac.. .booster ...mi... ..tev... ..sy... .p-bar.. .misc... collider

F:NMS3RAW NMS Raw System                       ♦See Alarm Log♦
♦More Info♦                                     ♦Ctrl-Menu♦
bit-15 ..... 0 bit-31 ..... 0 .....
bit-14 ..... 0 bit-30 ..... 0 .....< 5
bit-13 ..... 0 bit-29 ..... 0 .....< -
bit-12 ..... 0 bit-28 ..... 0 .....
Summation ALARM 0 bit-27 ..... 0 .....< 3
Return Temperature OKAY 1 bit-26 ..... 0 Local 5
Supply Temperature OKAY 1 bit-25 ..... 0 Alarm is
Raw Flow OKAY 1 bit-24 ..... 0 ACTIVE-OK
LCW Flow OKAY 1 bit-23 ..... 0 Speech is
bt-5 OKAY 1 bit-22 ..... 0 BYPASSED
Make-up ALARM 1 bit-21 ..... 0 Edit
Surge Tank Low OKAY 1 bit-20 ..... 0
Surge Tank High OKAY 1 bit-19 ..... 0
bit-1 ..... ON 1 bit-17 ..... 0
Pump #1 ON 1 bit-16 ..... 0
```

The Make-up alarm, you will need to contact the RSO.



Messages

PC 553 DIGITAL STATUS

```
S53 DIGITAL STATUS Pgm_Tools AGG CONTRL
PARAM* *SA* X-A/D X=TIME Y=Z:AARCI ,S:LH202U,Z BVAC ,B BL400M *RESET
*save ---- Eng-U I= 0 I= 0 , -6 , 1.0E-06, .6 *ON
One+ AUTO F= 240 F= 20 , 2 , 1.0E-08, .9 *OFF
.global .linac.. .booster ...mi... ..tev... ..sy... .p-bar.. .misc... collider

F:NM3RAW NM3 Raw System See Alarm Log
More Info Ctrl-Menu
bit-15 ..... 0 bit-31 ..... 0
bit-14 ..... 0 bit-30 ..... 0
bit-13 ..... 0 bit-29 ..... 0
bit-12 ..... 0 bit-28 ..... 0
Summation ALARM 0 bit-27 ..... 0
Return Temperature OKAY 1 bit-26 ..... 0
Supply Temperature OKAY 1 bit-25 ..... 0
Raw Flow ALARM 0 bit-24 ..... 0
LGM Flow OKAY 1 bit-23 ..... 0
bt-5 ..... OKAY 1 bit-22 ..... 0
Makeup OKAY 1 bit-21 ..... 0
Surge Tank Low OKAY 1 bit-20 ..... 0
Surge Tank High OKAY 1 bit-19 ..... 0
bit-1 ..... ON 1 bit-18 ..... 0
Pump #1 OFF 0 bit-17 ..... 0
bit-16 ..... 0
```

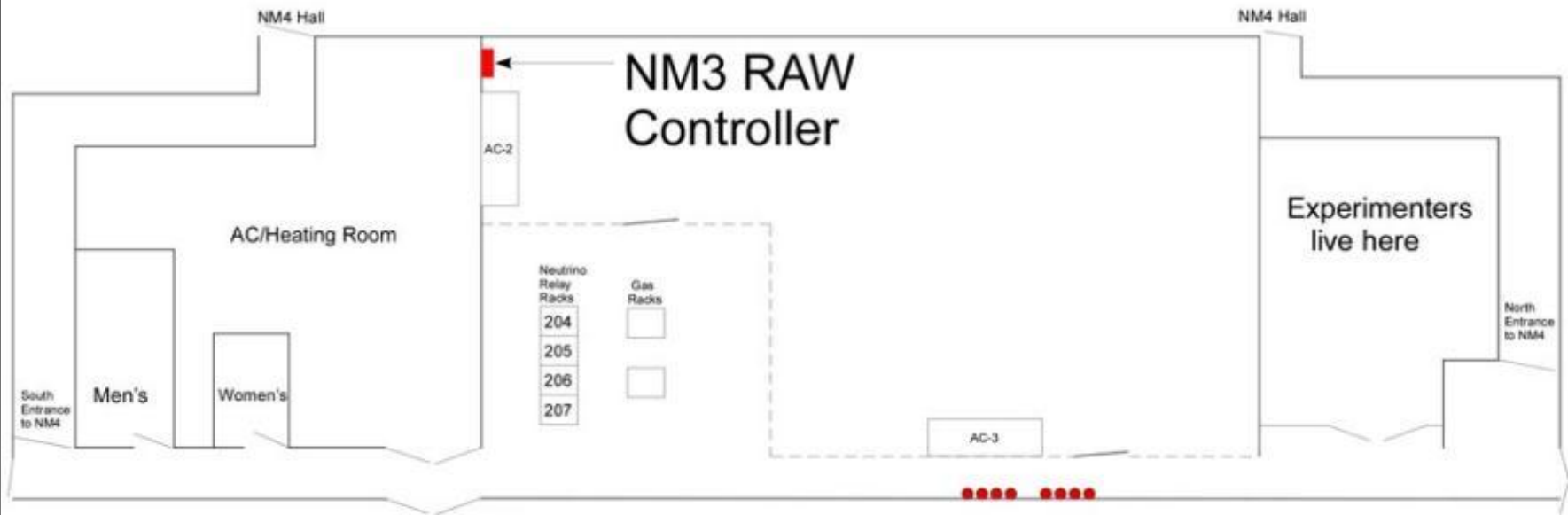
RAW Flow and Pump#1 are in alarm. We need to turn the RAW System back on

Messages

Where is the Red RAW controller? I'll give you a clue, it's located upstairs in the south end of the SeaQuest (KTev) Service building, west of the relay racks in the old computer area against the south wall. That Help? No? Well, here are some pictures that will help you find it.

Here's where the RAW Controller is hiding

SeaQuest Service Building



At SeaQuest there are a few Accelerator Division relay racks. They are located on the main level, on the south end of the building, north of the wash rooms.

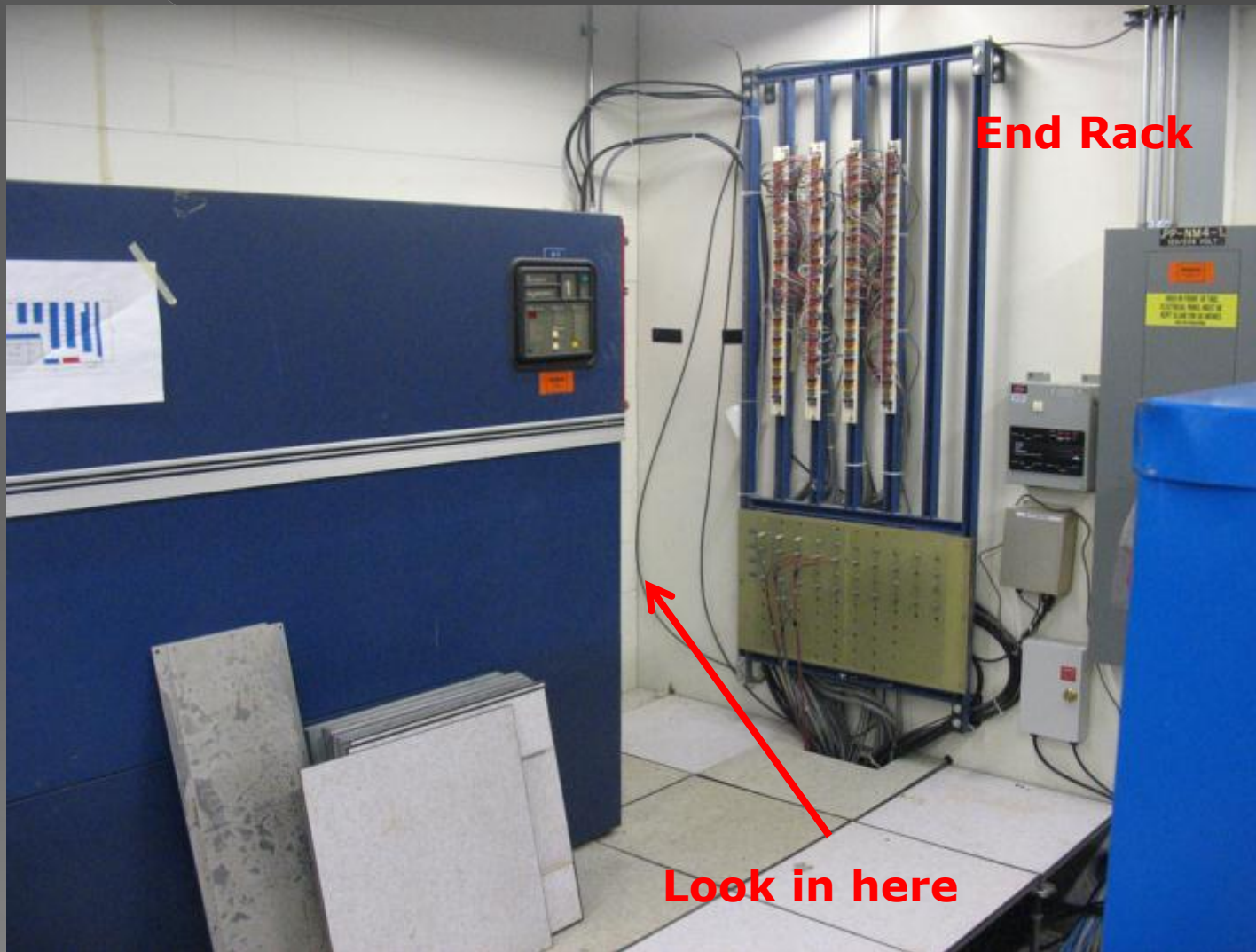
On the other side of these racks is CAMAC crate \$6E and console CLX120



Once you find the racks you are almost there, walk between the racks.



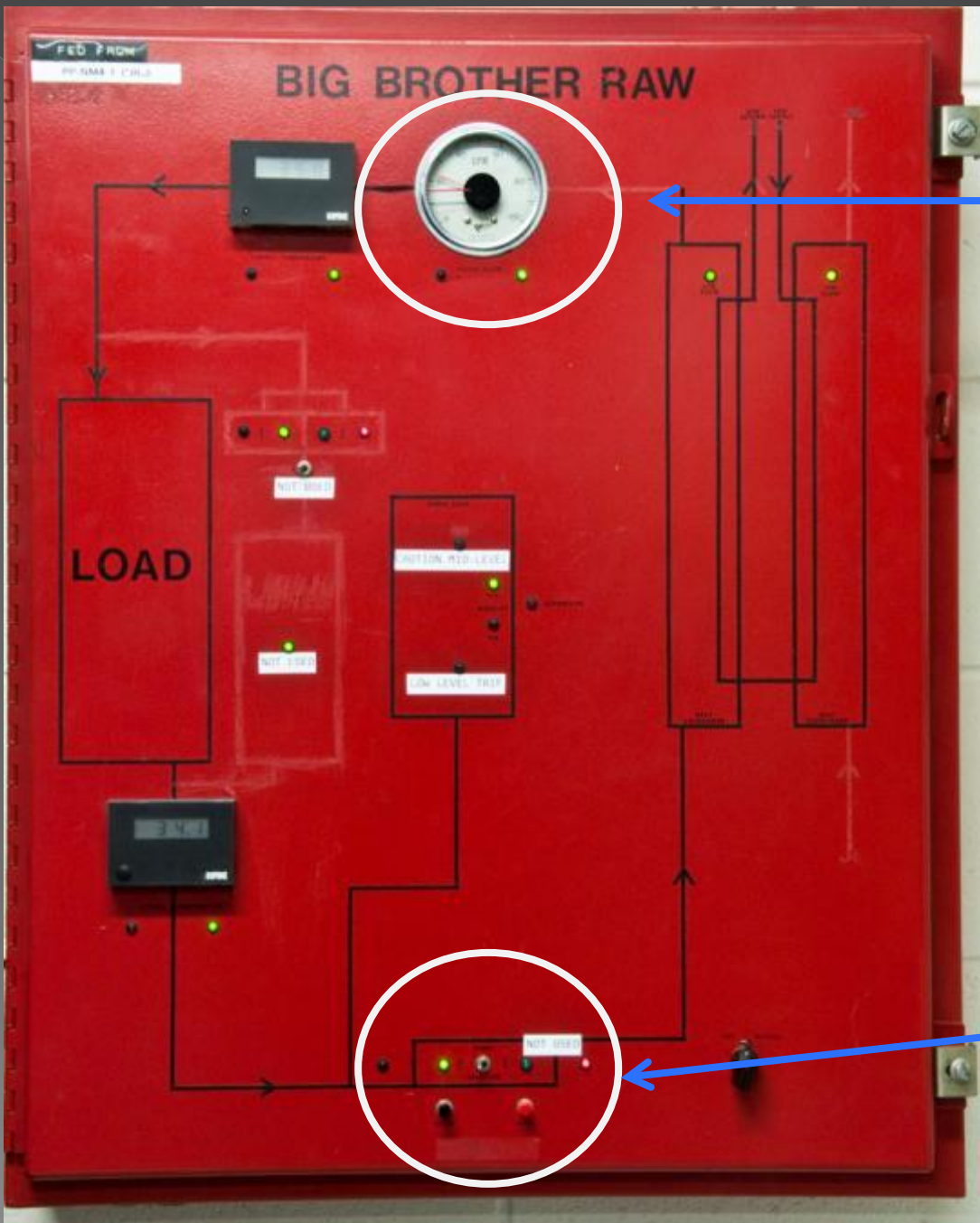
You will see an old fenced off computer area, enter and towards your left



You see a cable end rack on the wall and to the left

There it is, you found it!





And you can see that it's off, no flow.

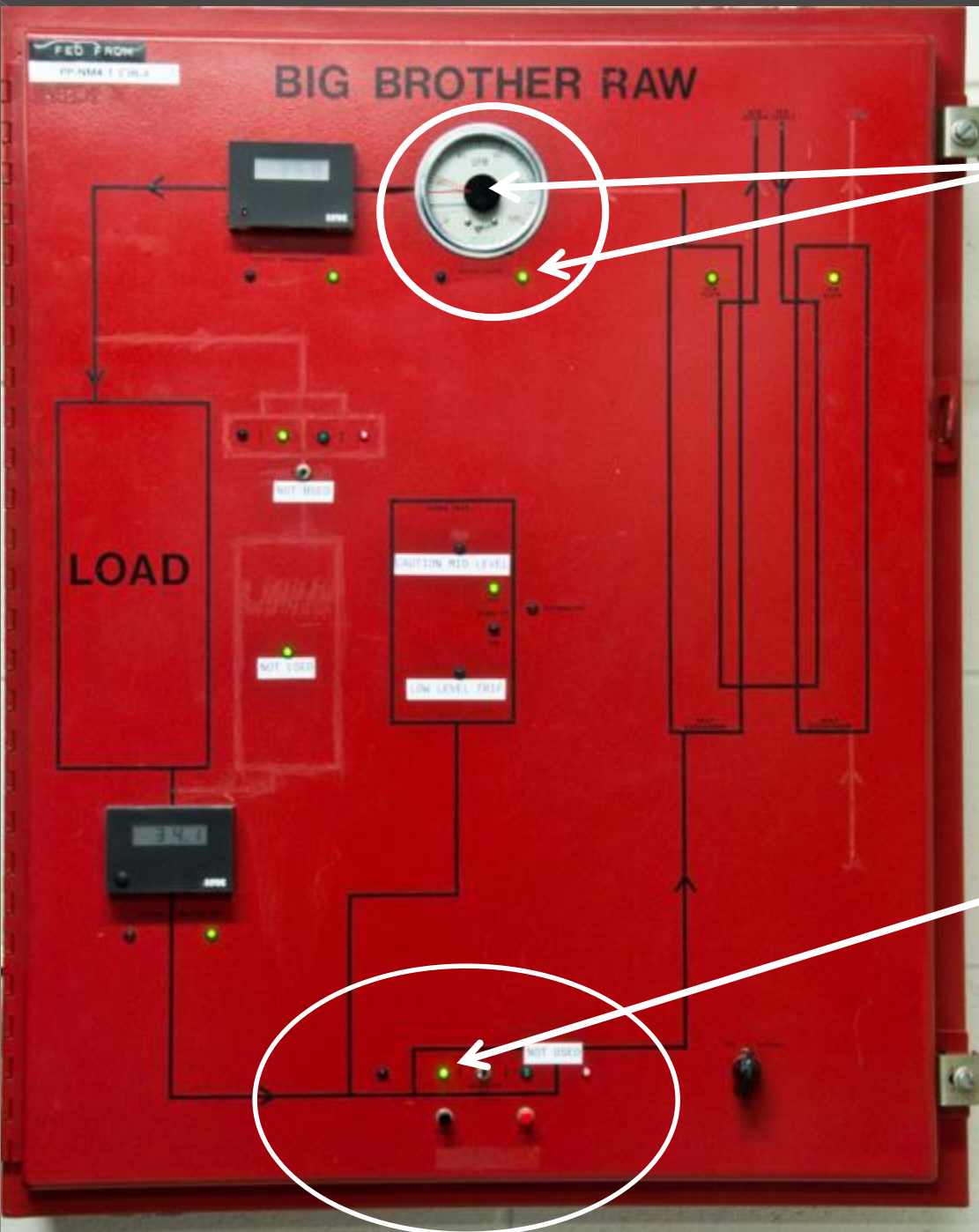


The Flow LED is red, no flow.

But, before start the system up, here's some important things to know.

The System is off, see gauge and the red LED is lite. To turn on, press the Black start button and watch the gauge to see the flow go above the line and FLOW Led is green.





It's on, see the gauge is good and green LED

The pump LED is green

PD S53 DIGITAL STATUS

S53 DIGITAL STATUS ♦Pgm_Tools♦ AGG CONTRL
PARAM* *SA♦ X-A/D X=TIME Y=E:UQ02 E:UHT03 E:UVT04 I LI522A *RESET
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r_EA AUTO F= 1 F= 10 10 10 4000 *OFF
.global. .linac. .booster ...mi... .tev. .sy. .p-bar. .misc. collider

F:NM3RAW NM3 Raw System ♦See Alarm Log♦

♦More Info♦

♦Ctrl-Menu♦

bit-15	0	bit-31	0
bit-14	0	bit-30	0
bit-13	0	bit-29	0
bit-12	0	bit-28	0
	ALARM	bit-27	0
Summation	OKAY	bit-26	0
Return Temperature	OKAY	bit-25	0
Supply Temperature	OKAY	bit-24	0
Raw Flow	OKAY	bit-23	0
LCM Flow	OKAY	bit-22	0
bt-5	OKAY	bit-21	0
Makeup	OKAY	bit-20	0
Surge Tank Low	OKAY	bit-19	0
Surge Tank High	OKAY	bit-18	0
bit-1	ON	bit-17	0
Pump #1	ON	bit-16	0

Messages

It's good to go!

da End, stay cool