

NPCF Weekly Snippet_2018

NPCF Week (7/1-7/7)

- No incident to report
- F&S continues PM work
- F&S Installing new weather station and tower fans vibration switches
- reduction in leak alarms after the insulation repairs
- Loading docs cleaning

NPCF Week(6/17-6/23)

- F&S started VFDs annual preventive maintenance, it will take a week or so to complete, this is will not impact critical equipment but will impact office and mechanical rooms ventilation.
- brought in an outside mechanical contractor to estimate the cost to preform boilers tune up to verify combustion safeties and boiler setting.

NPCF Week(6/10-6/16)

- Site experienced power event that impacted Feed A which caused Blue Waters and industry systems productions to reboot.
- Event was caused by lighting activities that impacted Ameren transmission lines.
- This event was not reported by the site power monitoring meters due to network filtering their email as spam, F&S has fixed the problem and reporting has been resumed
- Reviewed power feed to the industry system, found out that most of the racks power are not redundant.
- Resolved CRAH units alarm
- Working on to have an outside contract to tup up the boilers
- Continues to cycle pump to inject biocide to inhibit bacteria growth.
- Getting pricing form F&S to install PPC4

NPCF Week 23 (6/3-6/9)

- Multiple leaks detection alarms due to condensation of chilled water pipes, submitted work order to fix insulation.
- Wired 10 power drops for mForge
- Lost one power feed to mForge rack EE133 while installing panel PP1A dead cover, power was restored after 17 hours when it was discovered.

NPCF Week 22 (5/27-6/2)

- Humidity at Cray machines at 50 deg dew point, the CRAH are not producing any cooling due to low return air temperature.
- Made adjustment to fan setting in all CRAH, the fan was set to manual, I changed setting to return air and minimum speed of 60% for better efficiency and even pressure control.
- Building chilled water pressure is oscillating due controlling valves not in tune, will address with Bruce Mikos when he is back from leave.
- AHU 1,2,3 economizer not woking properly, had to take it off and switch to chilled water cooling to maintain temperature, will address with Bruce.

NPCF Week 21 (5/20-5/26)

- Experienced leak detection alarms due to condensation of exposed cold chilled-water piping.
- Area under floor tiles are dirty need clean up
- Working with Cray, made adjustment to chilled water pressure lowered to 10 psid (Typically is set to 15 psid)
- Turned off 6 CRAH units to conserve power and due to the data center floor temperature is low in the mid 60s
- Logged temperature on LSST 73, 74 rack due to switches high temperature

NPCF Week 20 (5/13-5/19)

- Low level activity at the data center
- Repowered SCP 5 and 6 from different sources

NPCF Week 19 (5/6-5/12)

- Assisted installing iForge racks blanking panels- all complete but one rack
- Per Jim, severs temperature is 15-20 below max.
- Electrician installed over protection devices for towers makeup valves
- Blue water refrigerant temperature was lowed to 57 degrees F.
- Ceased tower operation for the season, cooling is 100% from campus.
- Working May II cage

NPCF Week 17 (4/22-4/28)

- Towers are cycling more often on/off due to weather warming up.
- Sealed data center floor tile penetration to minimized air leakage, CRAH fans speed dropped from 100% to 75% saving energy
- General building cleaning.
- New tower controller is working well.
- Submitted new facility PM in CMMS.
- Tedra will be working with WireCrafter to order the cage.

NPCF Week 16 (4/15-4/21)

- Chilled water issues
 - per Luke, preliminary data shows the issues with chilled water is directly related to the XDP refrigerant temperature set point changes that was made recently not clogged strainers
 - Also early in the season, changes to the chilled water differential pressure set point change (dropped from 30 to 25) may have contributed.
 - The above 2 cause the XDP valve to operate at higher opening to maintain refrigerant temperature during transition.
 - Operating at higher valve opening is good not bad thing
 - But the nuisance alarms have be addressed
- Tower water treatment controller is up and running, it required to stop tower operation for 2 days.
 - All water treatment now under control
 - Reports of Weekly and monthly water treatment will be be generated.
 - This could be the last week for tower operation for the season.

NPCF Week 14 (4/1-4/7)

- Tower switched multiple time over the weekend, received complaints from Cray team.
- Assisted Blue Waters senior design team on their project.
- At the request of Cray personnels investigated causes of chilled water spikes and low flows (strainers issues)
- Switched all XDPs chilled water strainers to standby ones and F&S are cleaning all the ones that were in service.

NPCF Week 13 (3/25-3/31)

- Added AHU 2 on line
- Planing mForge cage procurement
- Planing for cage physical security requirement

NPCF Week 12 (3/18-3/24)

- Water treatment sample was sent to NALCO for the tower and heating loop weekly analysis .
- New Naclo water treatment controller was ordered.
- F&S-Fabricating rack blanking panel.
- Cooling Tower testing for higher temperature:
 - Increase the tower control temperature from 50 to 52
 - Added the forth chilled water pumps to reduce pumps power
 - The result was not favorable, as the the temperature of the chilled water increased the demand by the XDP for flow increased so much the pumps could not maintain the required differential pressure.
 - Reversed the changes to the original setting of 50 deg supply chilled water temp
 - Change the towers control point to 45 (50-5) to increase towers utilization and to reduce the import of chilled water from campus, this worked well.

NPCF Week 11 (3/11-3/17)

- Two hard drives failed on the security system (DVR-B)
- Continued to measure cold aisle temperature in the i/m forge.
 - Air supply temperatures is between 50 to 70 depending on the location and mixing with hot air.
 - Temperature at the top of rack around 74 degree.
- Need to fill all racks empty spaces with blanking panels.
- Also considering a cold aisle containment for i/m forge aisle.