SERVICE VISIT REPORT

Customer Information	
Company Name:	Gainesville Renewable Energy Center
City , State / Province	Gainesville, Florida
Customer Contact(s):	Steve Marsh, Michael Buonsignore, Matthew Humphries, Tony Christopher
Customer PO Number:	Site: USFL - 52001

Valmet Information	
Valmet Service Rep:	Sean Callahan
Dates of visit:	May 19th – 25th
Area Service Manager:	Ranjit Maharajan
Area Sales Manager:	Mark Goodson / Clark Conley

Job Number: Site: USFL - 52001	**Job Type:** **Service**

Safety Observations:
Brought all PPE with me: hard hat, steel toe safety shoes, safety glasses. Signed in / out daily

Customer (Operations) expectations from this visit:

Download to the RTAC in the Substation to have a redundant link just like the other RTACs

MS Patches

Work on cleaning up the alarm summary

Work on a list of Valmet related tasks

Work accomplished during the visit:

Friday May 19th

Drove to site in the morning

First task to work on was the Microsoft patches to protect against the WannaCry virus. This is applicable to any machine running Windows. The process controllers do not run Windows; they are running Linux. The procedure takes between 30 minutes and an hour for the install on the "Administrator" login. A couple stations can be installed at the same time but limited because the bat file has prompted questions to continue.
The procedure calls for running the bat file on an Administrator login, reboot, re-run the bat file, and reboot. The patches were installed on:

EAS
IAS

A1O6
A1O7
ACM1
AB01

In the afternoon the redundant link to the RTAC was downloaded. I logged onto the main and reserve stations for AP04 to monitor this download. Before the download a connection attempt can be seen continuously connecting on one of the stations. After the download this continuous connection attempt has stopped. The link for the substation is AL44. The first "4" of this link tells what station the link resides on (AP04). The second "4" of the link name tells that it is the 4th link on that station. The Valmet side has a "Main" and "Reserve" ACN to have redundant links. It was would that the substation side of the link in the RTAC only had one node. Once the redundant node was downloaded to the RTAC, we swapped control on the ACN sides a couple times and monitored the status of the links to check for errors.

Saturday May 20th

Continued to work on the installation of the Microsoft Patches. I installed one at a time in the operator room and also on the historian collection to reduce the amount of stations being occupied and also to still have data being collected for trending. The stations patched on Saturday were:

A1O1
A1O2
A1O3
A1O3
A1O4
A1O5
AH01_m
AH01_r

Asked to Bypass the 900 Second timer on the Bottom Ash valves. This was done by forcing a "1" or true value to the Release to Open. Wrote in the log book the valves that had a force put in them.

Sunday May 21st

Removed the forces in the bottom ash values.

FWH-HS-1142-30BY Removed 3 Bypasses. Had been in since 2/16

CNS-FIC-1150-30BY Removed Bypass 3. Had been in since 2/16

SBS-PAL-1045-10 SCR Air Press Low
SBS-XA-1043-01 SCR Air Comp Alarm
SBS-XA-1044-01 SCR Air Dryer Alarm
*Took away the invert on all three.

AL41_ALIVE_WD2 North PDC WatchDog
Disabled the alarm until trouble shooting Watch Dog communications. The watchdog is set up on the Valmet side to take the input signal, inverse this (1 in -> 0 Out), and pass the value back to RTAC. The RTAC side was set up to take the signal and pass this signal back. Looking at the values coming in the time stamp has not changed, meaning the RTAC side is not passing the signal back.

AW01 A1-SWI07 Port 2 SNMP Port Fault Alarm
AW01 A1-SWI07 Port 3 SNMP Port Fault Alarm
*These were set up to have a printer connected to port 2 and port 3, but no printer is connected into these ports. Resetting these ports to the default state cleared the alarms.

ACH-HS-1004-01 ACS-Feeder 1
ACH-HS-1005-01 ACS-Feeder 2
ACS-RTF-1002 ACS Rotary Airlock OVL Trip
*The alarms for these points were turned off since it is not in use

FGR-FIC-1603-30 Removed the Bypass 3. Transmitter was replaced

Monday May 22nd

On the Feed Water page for drum temperature, the Inner and Outer were not matching with the tag description. The tag description was changed to match what the graphic showed.

Tuesday May 23rd

Alarm Cleanup:

BLR-TI-1005-20D
BLR-TI-1005-20J
*Bed temperature was forced to 1530 Degrees. This was set back to normal by removing the force on block 1CC0A

FWH-TI-1126-20D
*Changed the alarming delta to 40 Degrees. This was 25 Degrees and from the trending showed that the temperature difference was over above 25 degrees.

INFO_BACKUP
Spend time looking over the INFO system and researching where this alarm point comes from. I found in scheduled tasks where an INFO_Backup point should be defined. I read through the manual and defined this in scheduled tasks then ran the script and saw INFO_Backup turn true.

I requested a new anti-virus license in the morning and got a reply from Finland in the afternoon. I registered the new license file for anti-virus. This license is valid for 10 years.

Silo Level Control Logic (FIC-SIC-1009-01)
I talked with the operators and Steve about the Silo Level Control. I didn't find any difference in the silo level control itself, but Tony had found a discrepancy in the speed control loop. We compared this loop between the left (FIC-SIC-1008-01) and right side (FIC-SIC-1009-01). The right side did not have the output ramp turned on. The trend for both showed more oscillation on the right side than the left side. After reviewing with operation, we turned the right side's output ramp on. This will lower the oscillation of the controller.

Wednesday May 24th

Modified the Bottom Ash logic to have the Bypass work. This was then tested out. By pressing the bypass button on the graphic, the 900 second timer and interlocks are overridden and the bottom ash valves are able to manually open them. This bypass is in place for 900 seconds. The following logic pages were modified to accomplish this by moving where the bypass signal comes in to an "OR" gate after the 900 second timer on the release to open logic:

AHS-FBV-1001-30L
AHS-FBV-1002-30L
AHS-FBV-1003-30L
AHS-FBV-1004-30L
AHS-FBV-1005-30L
AHS-FBV-1006-30L

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AHS-FBV-1007-30L
AHS-FBV-1008-30L
AHS-FBV-1009-30L
AHS-FBV-1010-30L
AHS-FBV-1011-30L
AHS-FBV-1012-30L

The following module had a block changed from Delay to Pulse:

AHS-BYP-1001 #5pls Block

Spent some time researching condition monitoring web interface. The field device and condition monitoring resides in the ACM1 ACN. The condition monitoring then sends a web reporter out where any station can open an internet explorer and type in the IP address of the ACM1 box. The condition monitoring HTML link shows a structure of the loops. A couple months ago this web interface had stopped working. This could have coincided with looking for a place to put a WSUS server for MS Patches or a power failure. This is now working again.

S.H. Metal Temperatures re-downloaded the historian modules. Trending resumed.

Talked with operation about A1O3 desktop screen and was found not be a problem

The IO fault that is seen in the alarm summary "IO Disturbance" comes in when there is an external fault on that channel. Locally at the card, the channel will be lite red, showing that an external fault is present.

FWH-LIH-1183-40 was asked if this was a trip to the turbine. After looking through the logic and seeing where the references go to, it was determined that this is not a trip to the turbine and was only an alarm. Looking at similar High levels, the other ones were not set up to alarm. It was decided to have this set up the same way and the alarming was disabled. The high high will bring in the alarm.

Thursday May 25th

What value did your services provide to the customer?

Alarm cleanup

MS Patches

Cleaned up Valmet related items

Future Work: Customer responsibility-

Create a list of items that want to be looked at and able to improve

Create a list of points coming from Siemens that want to be added to the historian and also create FO points for them

Future Work: Valmet responsibility-

Create a narrative of the IO disturbance alarms

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