SIEMENS energy

Mission report

KASOA Bulk Supply Point, Ghana

Théo Gomez

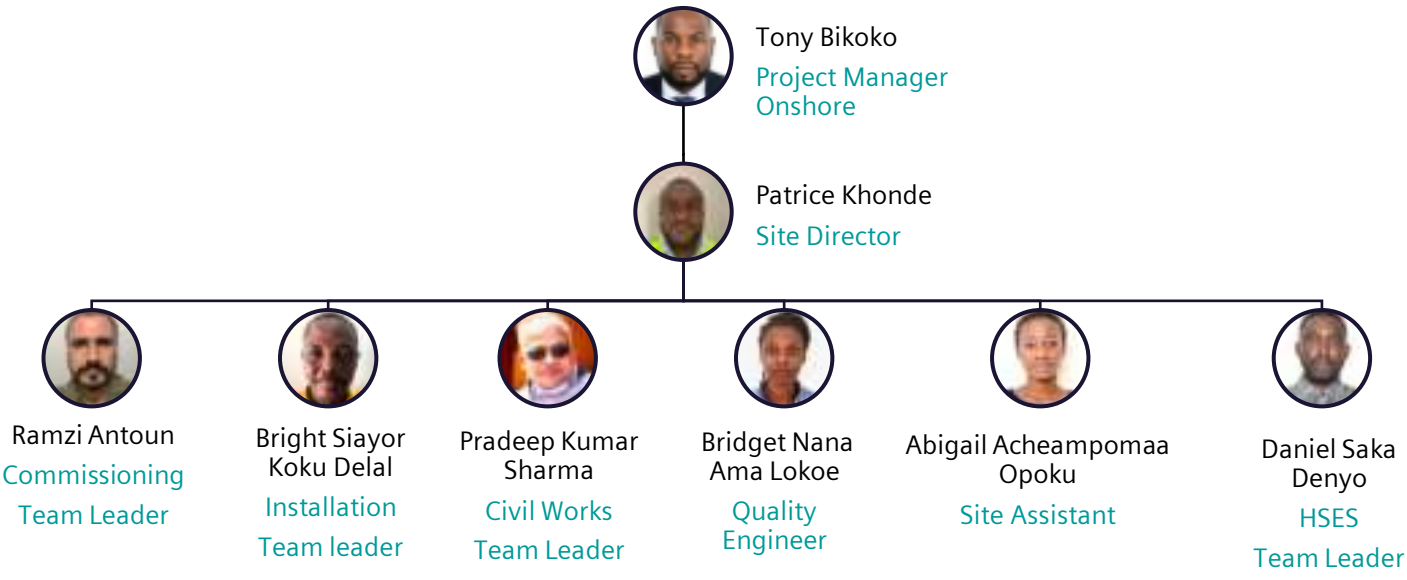
06/12/2021

Purpose of the document

The purpose of this document is to record all my activities and their results on the construction site from 25/10/2021 to 17/12/2021.

It will be sent to France each week and will remain accessible to everyone who needs information about my activities.

The following organization chart of the onshore team (reduced to people I work with) will help to understand the document.



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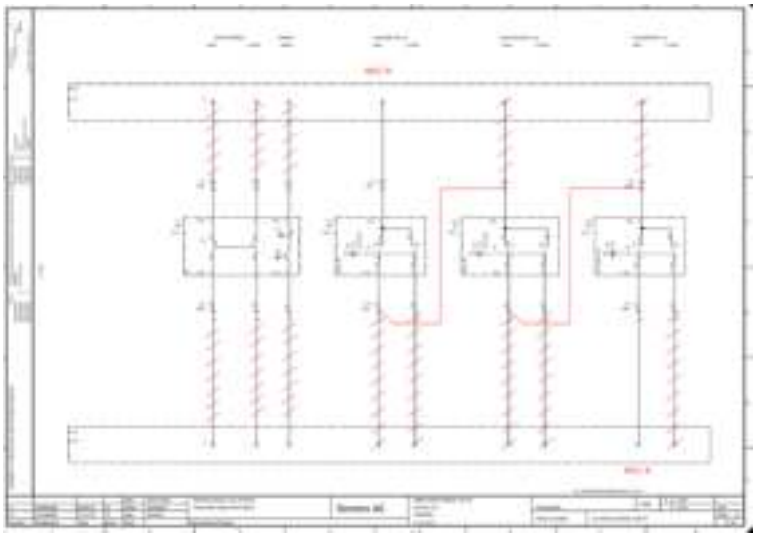
Week 1

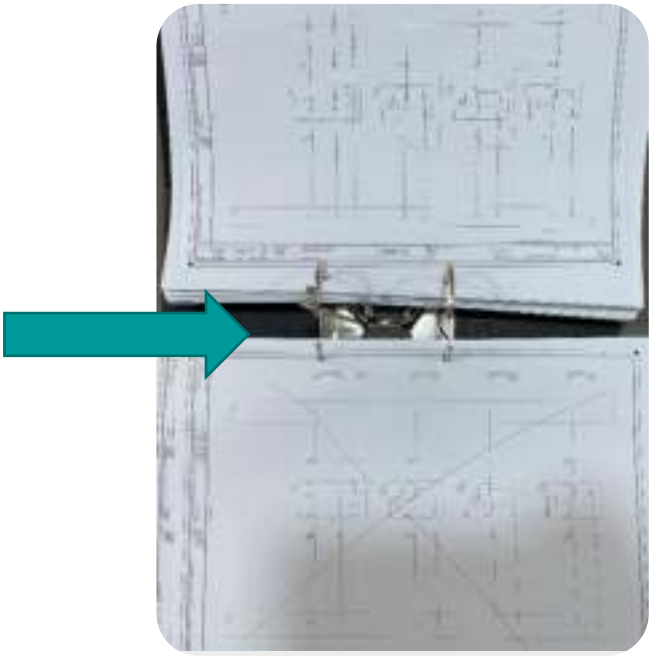
1. Red Marks

The goal of this task was to report all the red marks from site copy of drawing to the master copy so they can be given to the customer at the energization and sent a scan to France to add the red marks to the as built version. This task was initiated by Ramzi Antoun.

Some of them was already compiles in pdf files and I just must sort, print, and replace them in the appropriate master copy volume as see on the following picture flow.

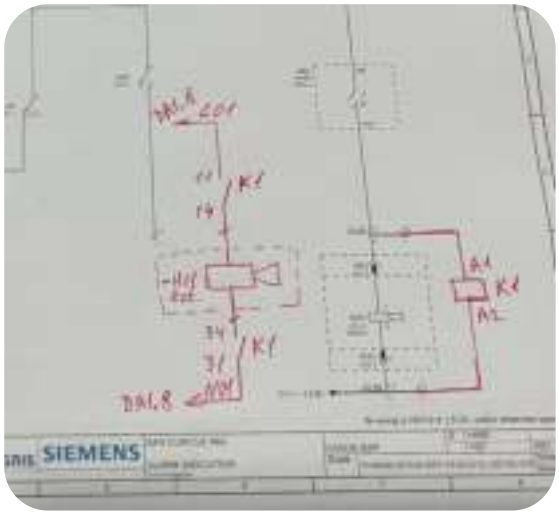


Existing red marks in pdf

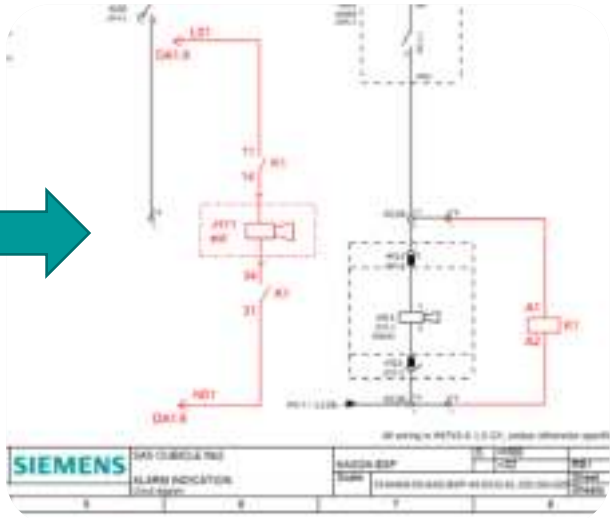


Printed red marks in master copy

I also had to draw some pdf from the site copy and print them to master copy.



Existing red marks in site copy



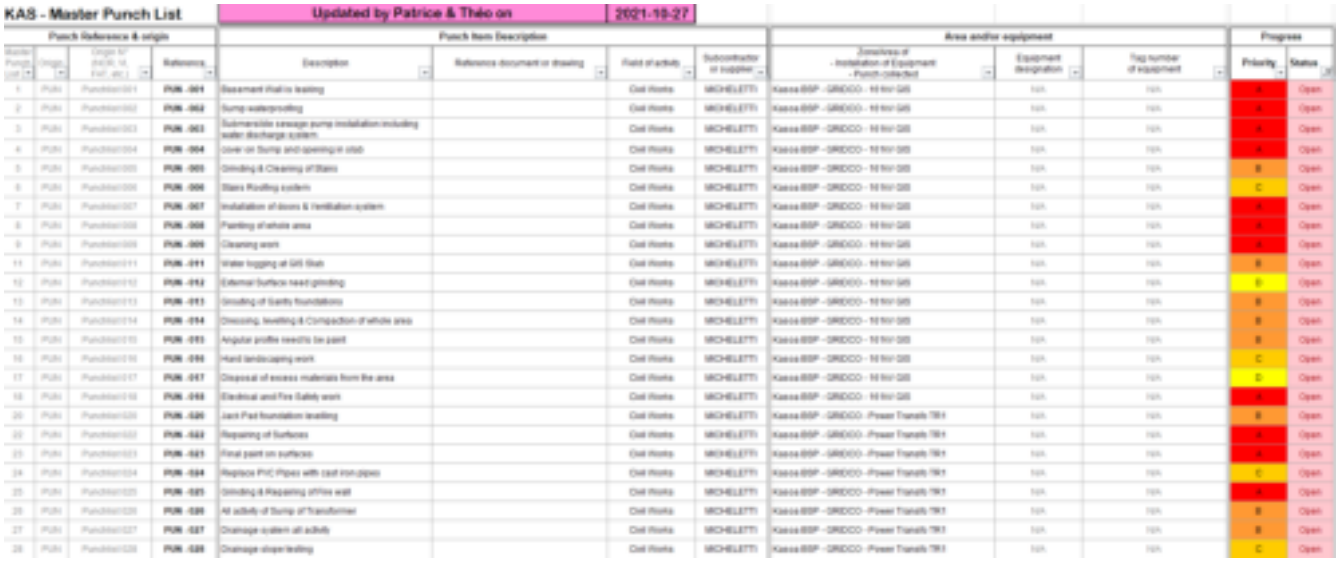
Drew red marks in pdf, ready to be print

2. Punch List

I worked on the punch list to add a priority key and we arranged 3 meetings with Patrice Khonde with the different supervisor to define the priority of the punch items that remained open.

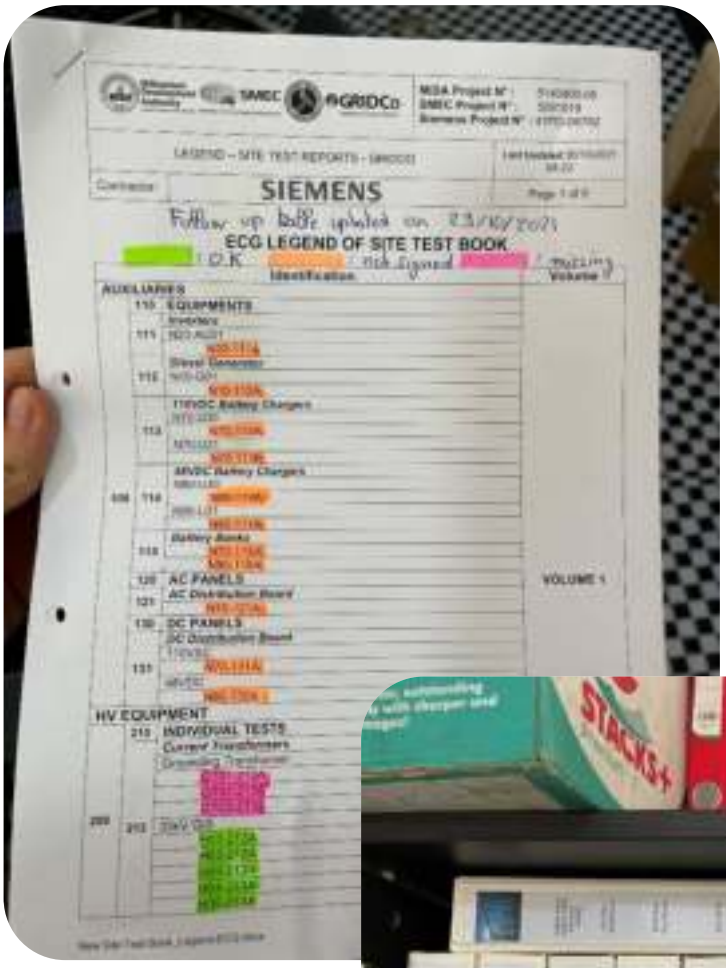
I also added filters on each column so we can sort punch items, very useful to see quickly which items needs attention.

To better understand the meaning of the priority key I have updated the rules for Master Punch List.



3. Test Books

Before the energization of the ECG part, Ramzi ask me to gather, check, and make a clear site copy of all the test reports about ECG. I've first made a follow up table (transformed in legend after) and then divide the reports by 14 volumes and arrange the new books with a new legend and cover.



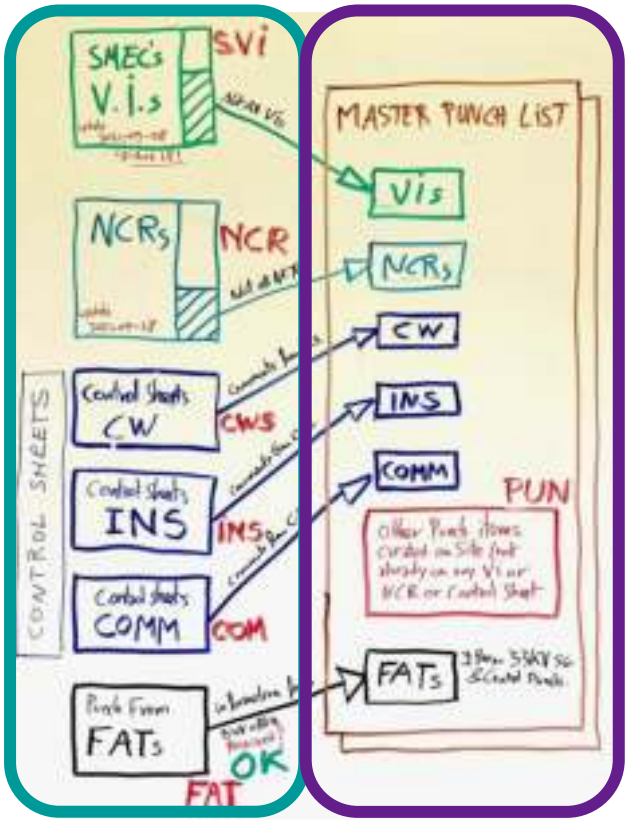
Test Book legend & follow up table

Final site test books

Week 2

1. Punch List

First, we had a meeting with Bridget and Patrice to define scope of work on the punch list for Bridget and me.
I will be in charge to follow the punch list and update it to make sure items are correctly done and closed. Bridget will send me new items (NCR, SVI, ...) and write officials document to close items.



We did a review with Patrice and Tony of the A priority list given by the supervisors to shorten it so we can focus only on critical points which can delay GRIDCo energization.

So, I started to add new items in the list like the new NCR about the wrong position of the SVC reactor and made a list of closed ones for Bridget to deliver to SMEC for signature.

I also set up a weekly meeting with Patrice, Bridget, and supervisors to follow up on the punch list.

Bridget *Théo*

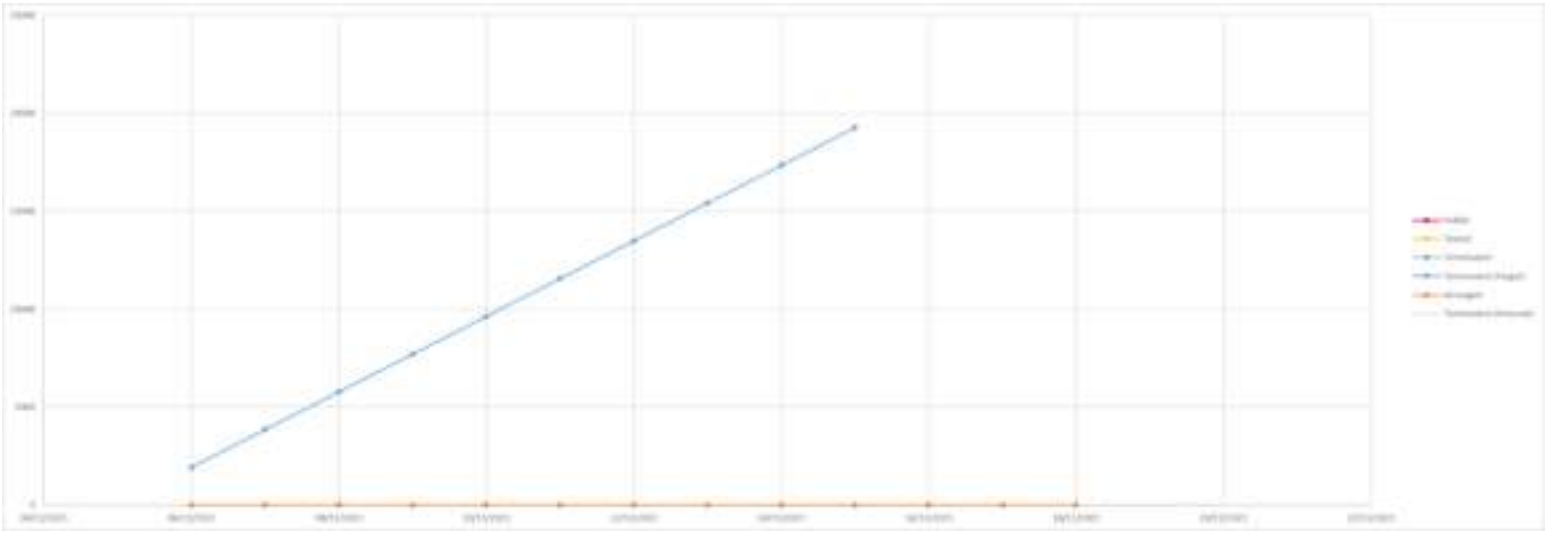
2. GIS Cable Work

Patrice put me in charge of the reporting of all cables work in the GIS area because it's become a critical point because of Wilkins.

I prepared a progress report table, which we are going to feed with daily data (starting on Monday 08/11/2021). There are different indicators in this table:

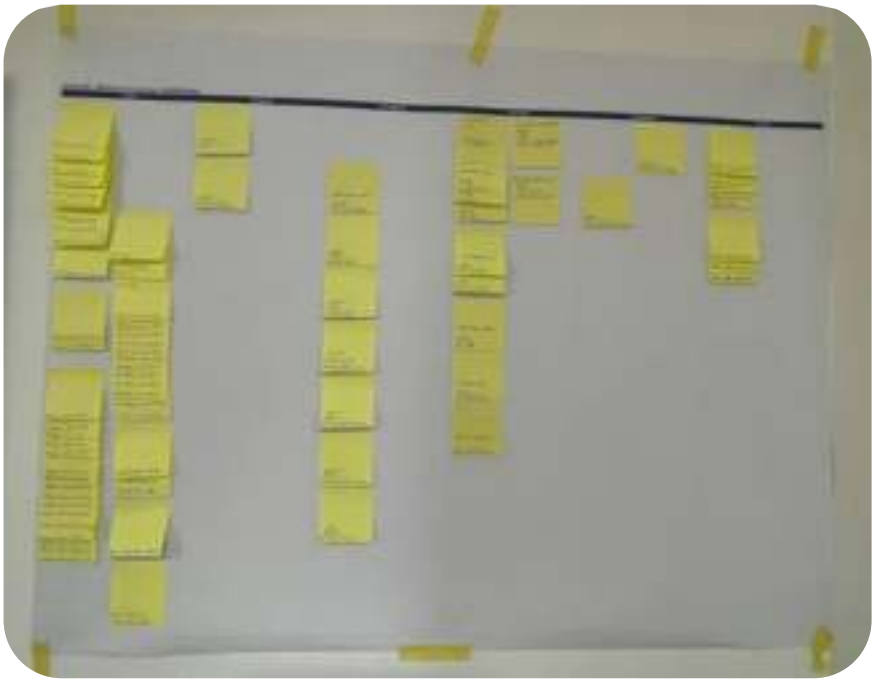
- Proportion of pulled cables for each bay/panel
- Proportion of arranged cables for each bay/panel
- Proportion of tested wires for each bay/panel
- Proportion of terminated wires for each bay/panel
- Proportion of the daily target

	06/11/2021				07/11/2021				08/11/2021				09/11/2021				10/11/2021			
	Pulled	Arranged	Tested	Terminated	Pulled	Arranged	Tested	Terminated	Pulled	Arranged	Tested	Terminated	Pulled	Arranged	Tested	Terminated	Pulled	Arranged	Tested	Terminated
E01A LCC	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
E01A GIS	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
E01B LCC	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
E01B GIS	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
E01C LCC	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
E01C GIS	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
E02A LCC	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
E02A GIS	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
E02B LCC	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
E02B GIS	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
E02C LCC	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
E02C GIS	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
E03A LCC	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
E03A GIS	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
E03B LCC	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
E03B GIS	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
E03C LCC	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
E03C GIS	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
E04A LCC	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
E04A GIS	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
E04B LCC	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
E04B GIS	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
E04C LCC	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
E04C GIS	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Total	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Daily Target				0%				0%				0%				0%				0%



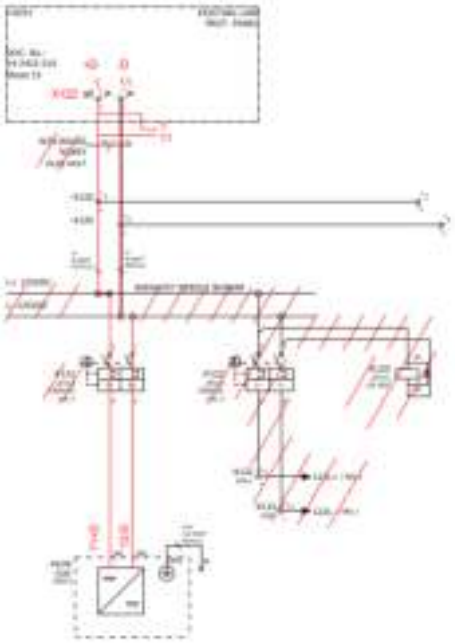
I'll use those data to make prediction to have a date for the end of the cable work and make a planning with Ramzi.

3. Others



I helped Ramzi to make a Kanban board of commissioning activities because it's become too difficult to use a Gant planning with no real date because of the delay on the cable work activity.

When I have free time, I continue to draw red marks as I explained in the Week 1 section. I have done 7 pages of the "KASOA 1 - MALLAM OHL – LINE PROTECTION PANEL CIRCUIT DIAGRAMS" drawing.



Week 3

1. Punch List

We organized our first meeting to close items; we focused on "A" priority and identified 9 of them which can be closed. 4 out of these 9 (INS – 170, INS – 171, INS – 172, FAT – 198) needs SMEC verification to be closed and Bridget will organize it.

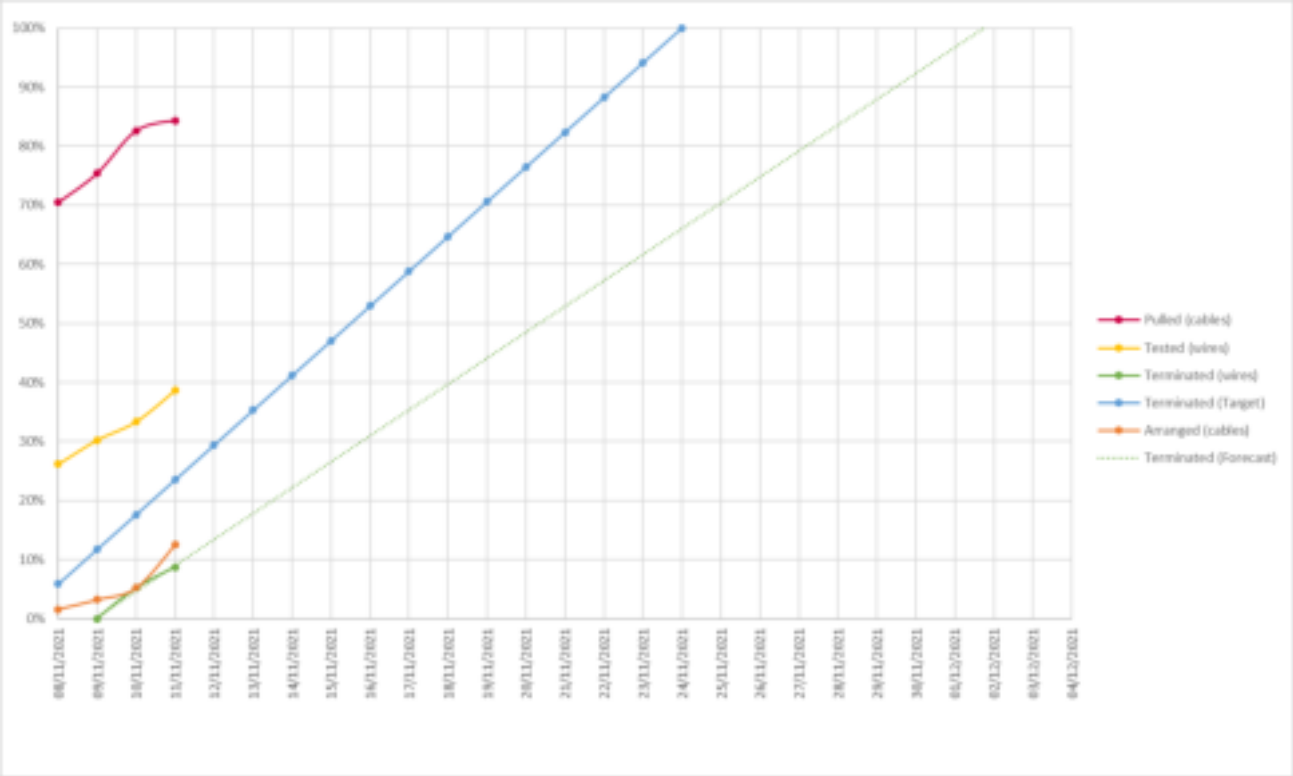
Beside I also updated the punch list with 21 NCR and 10 SMEC verbal instructions.

2. GIS Cable Work

We started to record daily progress of cable GIS area but it's difficult to have data in real time, some of them still take 2 days to come.

	Pulled (cables)	Arranged (cables)	Tested (wires)	Terminated (wires)	Daily Target (Terminated wires)
08/11/2021	70%	2%	26%	0%	6%
09/11/2021	75%	3%	30%	0%	12%
10/11/2021	83%	5%	33%	5%	18%
11/11/2021	84%	13%	39%	9%	24%
12/11/2021					29%
13/11/2021					35%
14/11/2021					41%
15/11/2021					47%
16/11/2021					53%
17/11/2021					59%
18/11/2021					65%
19/11/2021					71%
20/11/2021					76%
21/11/2021					82%
22/11/2021					88%
23/11/2021					94%
24/11/2021					100%

I use these data to plot charts and see the difference between the target and the forecast.



The target of 15/11/2021 as been delay to the 24/11/2021 but at the current termination speed the forecast show us the date of the 01/12/2021.

3. Others

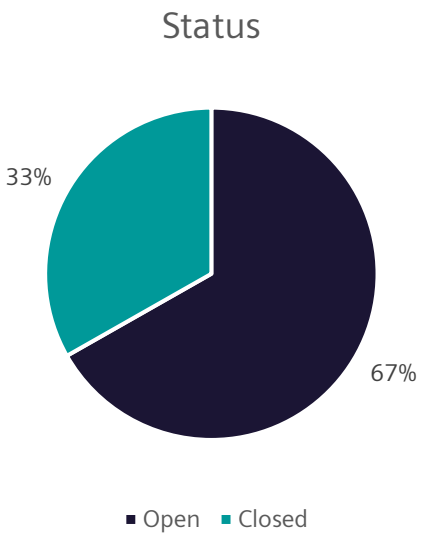
I have made clarification about the cable pit issue for Sylvain, and I wait for the water in the tunnel to be pump so I can go and draw red-mark for the cables support so Sylvain can order the good number of cables cleat single ES118-130.

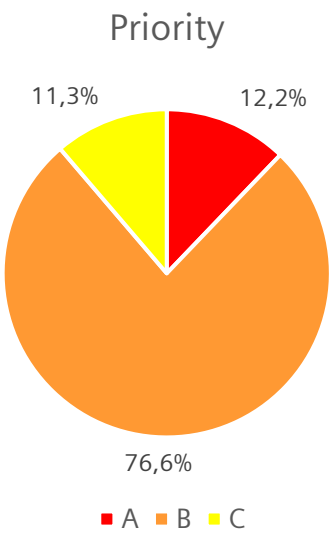
Week 4

1. Punch List

We decided to add a target date key in the follow up table, it will facilitate the review in our meeting so we can focus on the following target date to make sure we will meet the deadline.

I also updated the statistics page of the table to monitor the progress of those punch items.



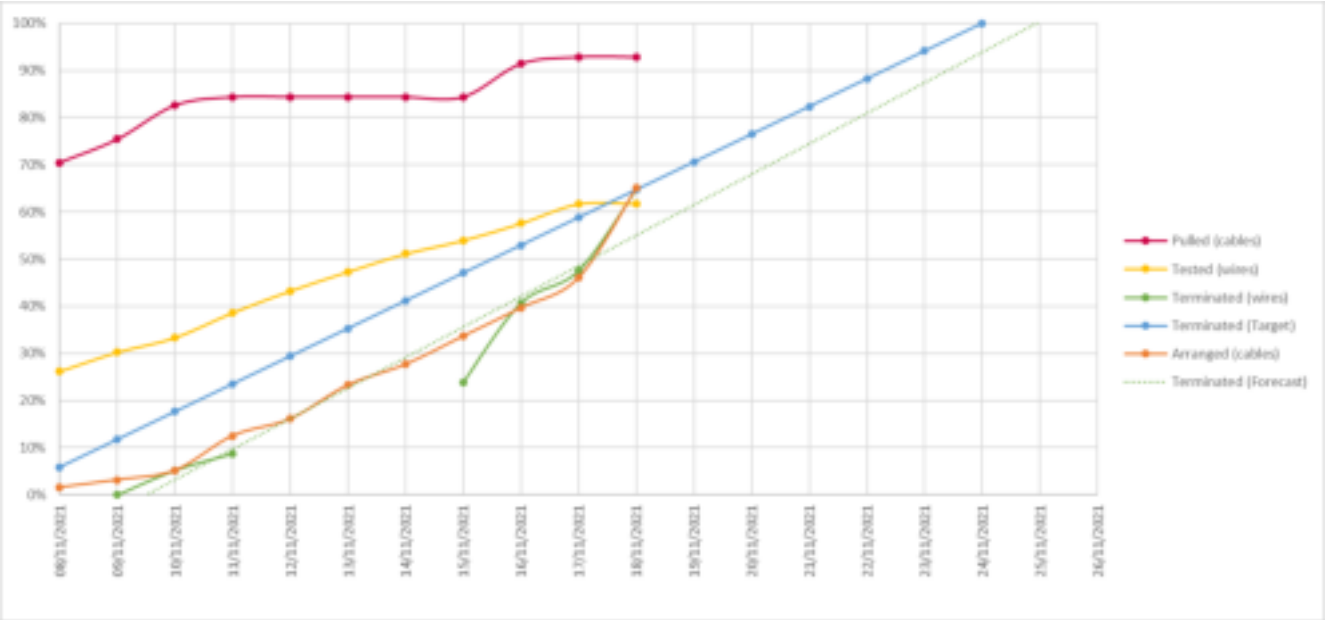


Pradeep send me is CW punch list each week so I can update the master punch list with the new input and closed items which has been done.

2. GIS Cable Work

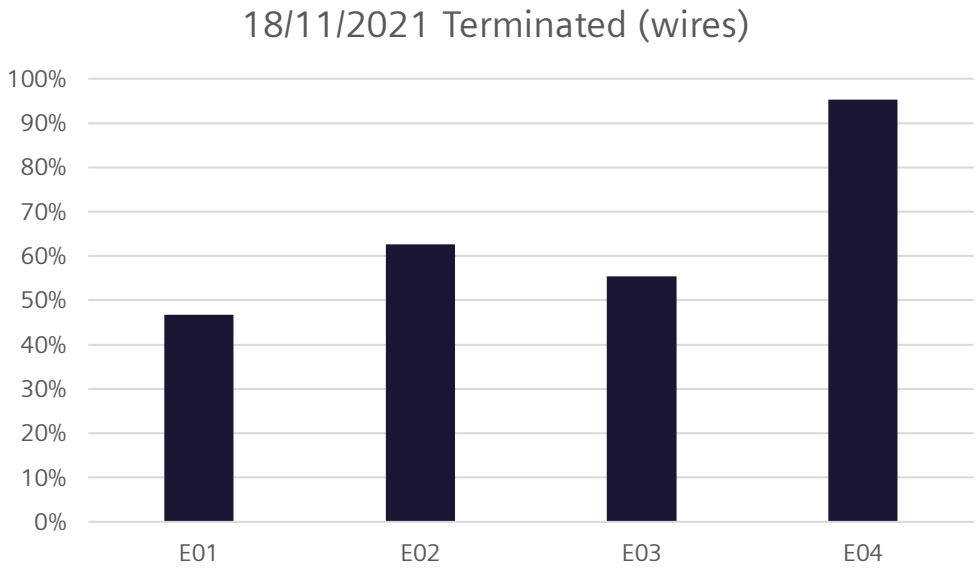
Wilkins started to connect cables to LCC side which increased the speed and we may meet the 24th November target if they keep going like this.

We also ask them to focus on E04 and E03 so the commissioning team can start working on those two as soon as they finish.



The new forecast show that we will reach 100% on 25-11-2021, 1 day after the target.

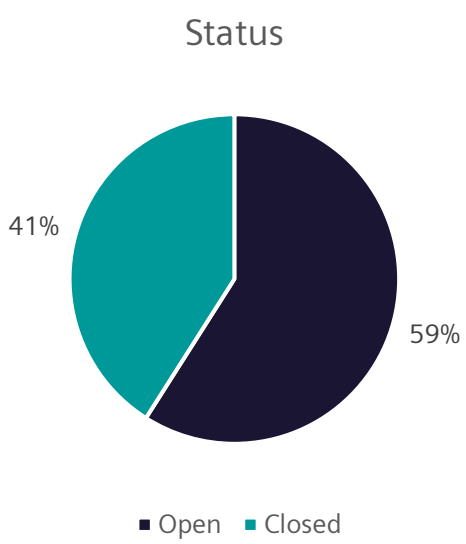
But E04 will be completely terminated before Sunday (21-11-2021) and the commissioning team will start working on them next week.

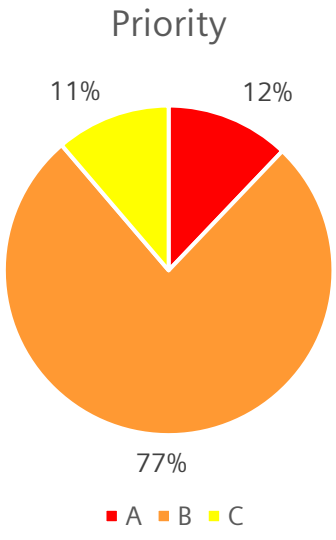


Week 5

1. Punch List

After the update in our weekly meeting, we moved from 33% to 50% of closed items.





Next week we will focus on the remaining point of ECG to prepare the hand over.

2. Others

I printed new labels for the GIS cables with wrong labels.

New labels from Brady printer

I also updated and prepared (windows update, drivers update, identification stickers, ...) ECG's maintenance laptop to be ready to install softwares next week.

I sent pictures to Grenoble of the GIS cable work.

Week 6

1. GIS Ladders

I have found an issue about maintenance ladders on the GIS, some of them do not touch the foundation hence cannot be bolted/connected to the foundation. Some also interfere with steel covers for cable trenches around the GIS Area.

We wrote an NCR (NCR 444) with Bridget, and we start to follow the resolution with Bright.

2. HV Cables Supports

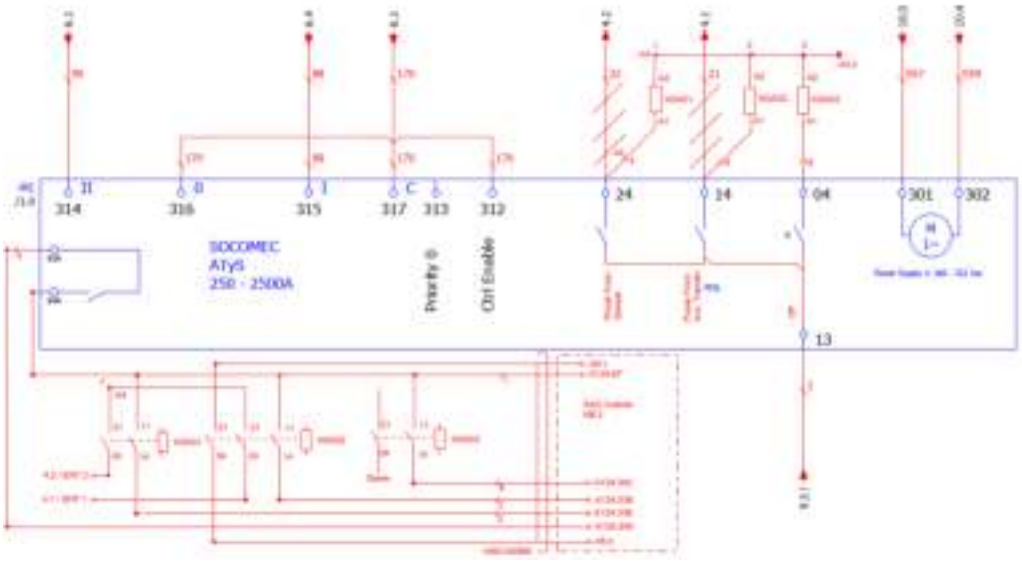
I have been in both tunnels to prepare red marks of HV Cables Supports Installation.

These pictures helped Sylvain to write the NCR 114 about Cable cleats.

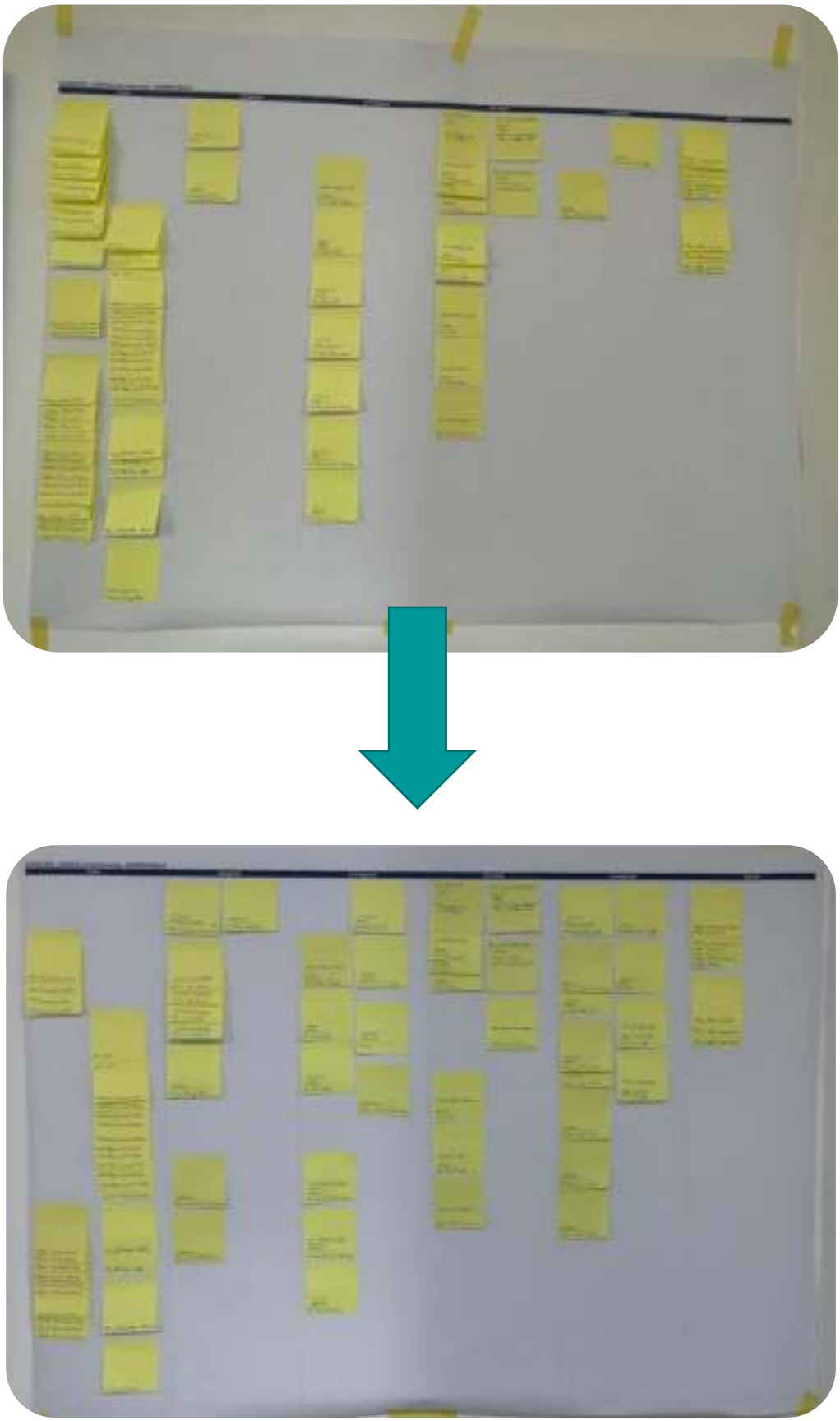
These pictures will also help to write feedback on Hilti Solution.

3. Others

I drew red marks of the Genset.



We update the commissioning Kanban with Ramzi.



Week 7

1. GIS Ladders

I followed and closed the NCR 444. By aligning the ladders vertically holes can be bolt in the ground.

2. ECG site drawings

I printed all the redmarks I drew during my stay at Kasoa and separate drawings from ECG to make master copies to hand-over to the customer.

I also splitted the legend between ECG and Gridco.

3. Others

I followed the anchoring of GIS Base Support and rust removing on surge arrester.

I did the hand-over to Bridget for the punch-list.

Appendix

01. ECG_C&P_&_DCS_Red_Marks.pdf
02. ECG_Telecom_by_ABB-Red_Marks.pdf
03. Updated 29-11-2021 Master Punch List.xlsx
04. KAS - QMP - Updated rules for Master Punch List - 2021-10-28.docx
05. New Site Test Book_Legend-ECG.docx
06. Kas_BSP_ECG_SiteTestBook_Cover.pptx
07. GIS Cables Follow Up 23-11-2021.xlsx
08. 5140400-05-KAS-BSP-A5-GRD-EL-DD-DG-153.pdf
09. ECG 2216737 CC2 ARM V400 50HZ 400A R02 (FR)_Red_marks.pdf
10. ECG 2224067 AS5 CM2+CP3-13 400A 50-60HZ 24VDC (FR)_Red_marks.pdf
11. NCR114.pdf
12. KAS - NCR 444-Ladder Modifications on GIS Equipment- O.pdf
13. Site Drawings_Master Copy_Legend.xlsx