

## EE 492 – sdmay19-26

# 115kV / 34.5kV SOLAR POWER PLANT/SUBSTATION DESIGN PROJECT

## Week 9 Report

Monday (3/11/2019) – Sunday (3/17/2019)

Client: Black & Veatch

Advisor: Venkataramana Ajjarapu

Team Email: sdmay19-26@iastate.edu

### Team Members:

Katayi Katanga

Nur Shuazlan

Yao Cheah

Chufu Zhou

Tam Nguyen

### Weekly Summary:

This week, we had one meeting with our client, Black and Veatch. In our meeting with the client, we discussed the steps we used to work on the layout drawings and our thought about the voltage drop calculation. Then, we continued wrapping-up for the client.

### Summary of Client meeting:

- Nur did safety moment about Stroke AKA Brain Attack.
- Then, we discussed the steps we used for layout drawing.
- Then, we shared our thought about voltage drop calculation that we did from last semester.
  - There was something wrong about the values we used in calculation.
  - We need checking from the client.
- The team need to wrap-up all drawings and send them to the client before first day of Spring Break.

### Past Week Accomplishments:

#### **Katayi Katanga**

- Worked on AC Auxiliary, Collector One Line diagram, AC 1 diagram, Wiring diagram of the entire solar plant, Feeder 3 drawing, and Layout Drawing 6.

#### **Nur Shuazlan**

- Worked on AC 2 diagram, Breaker failure drawing, Layout Drawing 1, Feeder 1 drawing, Bank 1 AUX, and Distributed I/O Board.

#### **Yao Cheah**

- Worked on Installation Relay diagram, Primary Relay diagram, Back-up Protection diagram, Layout Drawing 3, Layout Drawing 4, and Layout Drawing 5.

#### **Chufu Zhou**

- Worked on Feeder 2 drawing, Bank 1 Annunciator, AC schematic, DC Auxiliary, ABS 10, and Feeder One Line diagram.

**Tam Nguyen**

- Worked on Layout Drawing 2, Wiring diagram of a single array, Substation key protection diagram, comm outside, comm rtu, ABS 13.

**Pending Issues:**

- Waiting for feedback from the client regarding the drawings.

**Plans For Next Week:**

**Katayi Katanga**

- Completed wrapping up AC Auxiliary, Collector One Line diagram, AC 1 diagram, Wiring diagram of the entire solar plant, Feeder 3 drawing, and Layout Drawing 6.

**Nur Shuazlan**

- Completed wrapping up AC 2 diagram, Breaker failure drawing, Layout Drawing 1, Feeder 1 drawing, Bank 1 AUX, and Distributed I/O Board.

**Yao Cheah**

- Completed wrapping up Installation Relay diagram, Primary Relay diagram, Back-up Protection diagram, Layout Drawing 3, Layout Drawing 4, and Layout Drawing 5.

**Chufu Zhou**

- Completed wrapping up Feeder 2 drawing, Bank 1 Annunciator, AC schematic, DC Auxiliary, ABS 10, and Feeder One Line diagram.

**Tam Nguyen**

- Completed wrapping up Layout Drawing 2, Wiring diagram of a single array, Substation key protection diagram, comm outside, comm rtu, ABS 13.

**Individual Contributions**

<b>Team Member</b>	<b>Individual Contributions</b>	<b>Hours</b>	<b>Cumulative Hours</b>
Katayi Katanga	Did research on: <ul style="list-style-type: none"> <li>- Project scope</li> </ul> Created/Performed: <ul style="list-style-type: none"> <li>- AutoCAD modification to the diagram</li> <li>- attended all meetings</li> </ul>	6	53
Nur Shuazlan	Did research on: <ul style="list-style-type: none"> <li>- Project scope</li> </ul> Created/Performed:	6	53

	<ul style="list-style-type: none"> <li>- AutoCAD modification to the diagram</li> <li>- attended all meetings</li> </ul>		
Yao Cheah (YJ)	<p>Did research on:</p> <ul style="list-style-type: none"> <li>- Project scope</li> </ul> <p>Created/Performed:</p> <ul style="list-style-type: none"> <li>- AutoCAD modification to the diagram</li> <li>- attended all meetings</li> </ul>	6	52
Tam Nguyen	<p>Did research on:</p> <ul style="list-style-type: none"> <li>- Project scope</li> </ul> <p>Created/Performed:</p> <ul style="list-style-type: none"> <li>- AutoCAD modification to the diagram</li> <li>- attended all meetings</li> <li>- Weekly reports.</li> </ul>	6	52
Chufu Zhou	<p>Did research on:</p> <ul style="list-style-type: none"> <li>- Project scope</li> </ul> <p>Created/Performed:</p> <ul style="list-style-type: none"> <li>- AutoCAD modification to the diagram</li> <li>- attended all meetings</li> </ul>	6	51

Team Hours: 30

Cumulative Team Hours: 261