

## **EE 492 WEEKLY REPORT # 4**

3/5/2020 – 3/12/2020

Group number: Sdmay20-14

Project title: 115kV /34.5kV Solar Power Plant & Substation Design Project

Client &/Advisor: Black and Veatch / Venkataramana Ajjarapu

Team Members/Role: (Roles are rotated on an as needed basis) Jake Ciccola (Scribe / Client communications), Ethan Curnutte (Chief engineer), Ada Lupa (Test engineer), Blake Danek (Meeting facilitator), Michael Lortz (Design engineer), Bashir Mohamed (Test engineer)

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### **Weekly Summary:**

**Past Week Accomplishments:** As a group we worked on:

- **Member 1: Jake Ciccola**
  - Created and sent out the agenda to client
  - Helped research information to fill out excel sheet calculations
- **Member 2: Ethan Curnutte**
  - Set up excel calculations for the grounding sheet
  - Filled in information and made switches in the equations per client request
- **Member 3: Blake Danek**
  - Continued working on excel sheet with bus calculations. Fixed equations and values to get results within our limits.
- **Member 4: Ada Lupa**
  - Finished calculations for the grounding and spacing
  - Filled out the calculations excel sheet
  - Sent out and wrote the meeting minutes
- **Member 5: Michael Lortz**
  - Finalized one line diagrams per client request on Auto-CAD
  - Started working on ground grid layout in Auto-CAD
- **Member 6: Bashir Mohamed**
  - Reviewed calculated parameters for bus grounding
  - Started working on bus calculation by figuring out formulas

### **Pending Issues:**

Fix excel spreadsheet using client feedback

**Individual Contributions:** (Total hours only reflect hours accumulated from weekly reports)

<b>Team Member</b>	<b>Contribution</b>	<b>Weekly Hours</b>	<b>Total Hours</b>
Ethan Curnutte	-Created excel document for the calculations of the ground grid -Went through each variable and found ones we needed and also updated values according to clients requests	5.5	43
Ada Lupa	-Solved for the Ks, Ki, Es, and more on the excel sheet. -Updated the soil resistivity using equations to get a whole number value rather than a percent -Uploaded Report to website.	6	42.5
Jake Ciccola	-Created new agenda for client -Helped create peer evaluation presentation -Researched information for excel sheet	5	43.5
Blake Danek	Computed bus calculations given IEEE example. Changed inputted values to maintain within standards.	5	42.5
Michael Lortz	-Refined CAD drawings per Black and Veatch standards. -Added dimensions and created new naming scheme for all equipment	6	44
Bashir Mohamed	_Reviewed important factors for selecting a bus conductor parameters. _Reviewed IEEE guide for bus design in air insulated substations. _ I was not able to record my weekly hours(42)	5	42

**Plans For The Upcoming Week:**

- **Member 1: Jake Ciccola**
  - Finish excel sheet using any other provided information from client
  - Finish peer evaluation presentation
- **Member 2: Ethan Curnutte**
  - Finish calculations for the ground grid
  - Start looking into bus calculations for substation
- **Member 3: Blake Danek**
  - Make revisions to calculations if necessary.
  - Finish peer evaluation presentation
- **Member 4: Ada Lupa**
  - Finish the peer evaluation
  - Finish the bus calculations
- **Member 5: Michael Lortz**
  - Implement grounding grid into CAD drawings
  - Work on peer review
- **Member 6: Bashir Mohamed**
  - Work on finishing peer review.
  - Incorporate updates to bus calculation.