

PUBLIC UTILITIES COMMISSION

505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3298



June 8, 2022

Keavy Ladner
Solar Operations Manager
Southern Power Co.
3535 Colonnade Parkway
Bin S-980-EC
Birmingham, AL 35243

SUBJECT: Generation Audit of Tranquillity Solar Facility - Audit Number GA2022-05TS

Dear Ms. Ladner:

On behalf of the Electric Safety and Reliability Branch (ESRB) of the California Public Utilities Commission (CPUC), Chris Lee, Stephen Lee, and Monica Hoskins of ESRB staff conducted a solar generation audit of Tranquillity Solar Facility from April 18 through April 22, 2022.

During the audit, ESRB observed plant operations, inspected equipment, reviewed data, interviewed plant staff, and identified potential violations of General Order (GO) 167-B. A copy of the audit findings itemizing the violations is attached. Please advise me by email no later than July 7, 2022, by providing electronic copy of all corrective actions and preventive measures taken and/or planned to be taken to resolve the violations.

Your response should include a Corrective Action Plan with a description and completion date of each action and measure completed. For any violations not corrected by July 6, 2022, please provide the projected completion dates to correct the violations and to achieve full compliance with GO 167-B.

Please submit your response to Chris Lee at chris.lee@cpuc.ca.gov. Please note that although Tranquillity Solar Facility has been given 30 days to respond, it has a continuing obligation to comply with all applicable GO 167-B requirements; therefore, the response period does not alter this continuing duty.

If you wish to make a claim of confidentiality covering any of the information in the report, you may submit a confidentiality request pursuant to Section 15.4 of GO 167-B, using the heading "General Order 167-B Confidentiality Claim". The request should be sent to Chris Lee with a copy to me by July 6, 2022.

Thank you for your courtesy and cooperation throughout the audit process. If you have any questions concerning this audit, please contact Chris Lee at chris.lee@cpuc.ca.gov or (415) 703-1323

Sincerely,

A handwritten signature in blue ink that reads "Banu Acimis".

Banu Acimis, P.E.
Program and Project Supervisor
Electric Safety and Reliability Branch

Safety and Enforcement Division
California Public Utilities Commission

Attachment: CPUC Audit Findings of Tranquillity Solar Facility

Cc: Lee Palmer, Director, Safety and Enforcement Division, CPUC
Nika Kjensli, Program Manager, ESRB, SED, CPUC
Rickey Tse, Senior Utilities Engineer (Supervisor), ESRB, SED, CPUC
Nathan Sarina, Senior Utilities Engineer (Supervisor), ESRB, SED, CPUC
Chris Lee, Utilities Engineer, ESRB, SED, CPUC
Stephen Lee, Utilities Engineer, ESRB, SED, CPUC
Monica Hoskins, Utilities Engineer, ESRB, SED, CPUC

**CPUC AUDIT FINDINGS OF
TRANQUILLITY SOLAR FACILITY
April 18 – 22, 2022**

I. Findings Requiring Corrective Action

Finding 1: The arc flash risk assessment is out-of-date.

General Order (GO) 167-B, Appendix E, Operation Standard (OS) 1: Safety states:

“The protection of life and limb for the work force is paramount. GAOs have a comprehensive safety program in place at each site. The company behavior ensures that personnel at all levels of the organization consider safety as the overriding priority. This is manifested in decisions and actions based on this priority. The work environment and the policies and procedures foster such a safety culture, and the attitudes and behaviors of personnel are consistent with the policies and procedures.”

National Fire Protection Association (NFPA) 70E, 2015 Edition, 130.5, Arc Flash Risk Assessment states in part:

“An arc flash risk assessment shall be performed and shall:

(2) Be updated when a major modification or renovation takes place. It shall be reviewed periodically, at intervals not to exceed 5 years, to account for changes in the electrical distribution system that could affect the results of the arc flash risk assessment.”

Applied High Voltage, Arc Flash Study, 2015, Tranquillity Solar Farm Station, Recommendation states in part:

“Due to the changing nature of the electric grid, it is recommended that the study be reviewed periodically, not to exceed five years, using up-to-date utility short circuit data. It is also recommended to update the study whenever there are changes in the solar farm that will affect the electrical system.”

ESRB reviewed two Arc Flash study reports conducted by Applied High Voltage in 2015 and by Westwood from 2015 to 2016 that recommended an arc flash study review every five years and when changes in the solar farm affect the Plant’s electrical system. As a result of these two arc flash studies, ESRB also observed several arc flash warning labels affixed on electrical equipment with arc flash risks and dated 2015 and 2016. The Plant has not updated its arc flash studies since the original two studies. Additionally, the Plant performed a major electrical modification to the facility when it installed a new Battery Energy Storage System (BESS). The Plant must perform an updated arc flash study to address the potential arc flash hazards introduced with the addition of the BESS and to comply with NFPA 70E requirements and contractor recommendations.

Finding 2: Fasteners are loose or missing.

GO 167-B, Appendix D, Maintenance Standard (MS) 13: Equipment Performance and Materiel Condition states:

“Equipment performance and materiel condition support reliable plant operation. This is achieved using a strategy that includes methods to anticipate, prevent, identify, and promptly resolve equipment performance problems and degradation.”

ESRB identified loose and missing fasteners that secure panels on Inverter 41. Missing or loose fasteners reduce the strength of the mechanical connection between the panel to the inverter and may allow panels to separate from the inverter during high vibration or high winds. Inverters must be regularly inspected for any loose or missing hardware and any identified loose or missing hardware must be replaced. Additionally, ESRB identified a loose fastener on the cover for Feeder Breaker 52F1. Fasteners on breaker covers must be regularly inspected. Secure covers are essential for protection of the equipment and personnel.



Figure 1. Missing and loose fasteners on Inverter 41 panels.



Figure 2. Loose fastener on Feeder Breaker 52F1.

Finding 3: The Plant was late in completing instrument calibration.

GO 167-B, Appendix E, OS 4: Problem Resolution and Continuing Improvement states:

“The GAO values and fosters an environment of continuous improvement and timely and effective problem resolution.”

ESRB reviewed the facility instrumentation calibration records and identified calibration work orders for meters and metastations (meteorological weather stations) that were completed after their due date. See Table 1 for a full list of late calibrations. Instruments must be calibrated in a timely manner to ensure proper telemetry. The Plant must complete these late calibration work orders and identify and address the cause(s) of delays.

Table 1. Late Completion of Instrument Calibrations

Work Order	Due Date	Date of Completion	Type	Frequency Required	Status
WO 1186211	5/31/2021	None	PM Meter Calibration	Annual	Ready to Schedule
WO 1163735	10/31/2020	12/30/2020	PM Meter Calibration	Annual	Complete

WO 1032579	10/31/2019	11/20/2019	PM Meter Calibration	Annual	Complete
WO 1032577	6/30/2018	8/15/2018	PM Meter Calibration	Annual	Complete
WO 1032578	2/28/2017	6/29/2017	PM Meter Calibration	Annual	Complete
WO 1191909	1/31/2022	None	PM Metastation Maintenance	Monthly	Ready to Schedule
WO 1192329	2/28/2022	None	PM Metastation Maintenance	Monthly	Ready to Schedule
WO 1189404	8/31/2021	9/8/2021	PM Metastation Maintenance	Monthly	Complete
WO 1188718	7/31/2021	9/8/2021	PM Metastation Maintenance	Monthly	Complete
WO 1187691	6/30/2021	9/8/2021	PM Metastation Maintenance	Monthly	Complete
WO 1187284	5/31/2021	6/15/2021	PM Metastation Maintenance	Monthly	Complete
WO 1186446	4/30/2021	6/15/2021	PM Metastation Maintenance	Monthly	Complete
WO 1163195	9/30/2020	10/12/2020	PM Metastation Maintenance	Monthly	Complete
WO 1145029	5/31/2020	6/1/2020	PM Metastation Maintenance	Monthly	Complete
WO 1084109	2/3/2017	3/6/2017	PM Metastation Maintenance	Monthly	Complete
WO 1067208	1/9/2017	1/13/2017	PM Metastation Maintenance	Monthly	Complete
WO 1067201	12/8/2016	12/15/2016	PM Metastation Maintenance	Monthly	Complete
WO 1067146	12/8/2016	12/15/2016	PM Metastation Maintenance	Monthly	Complete
WO 1067164	12/8/2016	12/15/2016	PM Metastation Maintenance	Monthly	Complete
WO 1067218	12/8/2016	12/15/2016	PM Metastation Maintenance	Monthly	Complete

WO 1067203	11/7/2016	12/15/2016	PM Metastation Maintenance	Monthly	Complete
WO 1067150	11/7/2016	12/15/2016	PM Metastation Maintenance	Monthly	Complete
WO 1067170	11/7/2016	12/15/2016	PM Metastation Maintenance	Monthly	Complete
WO 1067224	11/7/2016	12/15/2016	PM Metastation Maintenance	Monthly	Complete
WO 1185611	1/31/2022	None	Pyranometer Calibration	Every 2 years	Scheduled

Finding 4: Plant personnel completed training courses after their due date.

GO 167-B, Appendix E, OS 4: Problem Resolution and Continuing Improvement states:

“The GAO values and fosters an environment of continuous improvement and timely and effective problem resolution.”

ESRB reviewed the training records for the permanent onsite staff at the facility and identified training courses completed after their listed due dates. See Table 2 for complete list of late training courses. The Plant must identify and address the cause(s) of delays.

Table 2. Late Completion of Training Courses

Personnel	Course	Due Date	Completed On	Status
E. Smith	Electrical Safety / NFPA 70E – Arc Flash	2/28/2022	3/28/2022	Passed
	Electrical Safety - Grounding Awareness	2/28/2022	3/28/2022	Passed
	Cold Stress in Workplace	11/30/2021	1/3/2022	Passed
	Electric Safety – High Voltage	2/28/2022	3/28/2022	Passed
	Electrical Safety / NFPA 70E - Cal/OSHA	2/25/2022	3/28/2022	Passed
	Compressed Gas Safety	9/30/2021	10/19/2021	Passed
J. Carrington	MaxGen Job Hazard Analysis Policy	N/A	9/23/2019	Completed
	Industrial Ergonomics	9/30/2021	11/24/2021	Passed
M. Phillips	Electric Safety – High Voltage	2/28/2021	3/31/2021	Passed
	Electrical Safety / NFPA 70E – Arc Flash	2/28/2021	3/31/2021	Passed
	MaxGen Job Hazard Analysis Policy	N/A	8/31/2019	Completed
	Hazard Communication	3/31/2021	4/1/2021	Passed

	Electrical Safety / NFPA 70E - Cal/OSHA	2/28/2021	4/1/2021	Passed
	Industrial Ergonomics	9/30/2021	11/24/2021	Passed
	Fall Protection Awareness – Cal/OSHA	5/31/2021	6/14/2021	Passed

Finding 5: The eyewash station in the substation control room is expired.

GO 167-B, Appendix E, OS 1: Safety states:

“The protection of life and limb for the work force is paramount. GAOs have a comprehensive safety program in place at each site. The company behavior ensures that personnel at all levels of the organization consider safety as the overriding priority. This is manifested in decisions and actions based on this priority. The work environment and the policies and procedures foster such a safety culture, and the attitudes and behaviors of personnel are consistent with the policies and procedures.”

GO 167-B, Appendix E, OS 13: Routine Inspections states in part:

“Routine inspections by plant personnel ensure that all areas and critical parameters of plant operations are continually monitored, equipment is operating normally, and that routine maintenance is being performed. Results of data collection and monitoring of parameters during routine inspections are utilized to identify and resolve problems, to improve plant operations, and to identify the need for maintenance.”

ESRB noted that the eyewash station located next to the DC batteries in the substation control room had expired in February 2022. Expired eyewash solution may lose its effectiveness in the protection against chemical-related eye injuries in the event the eyewash needs to be used. The Plant must replace the expired eyewash station and include all eyewash stations in its routine inspections.



Figure 3. Expired eye wash station in the substation control room.

Finding 6: Substation hardware requires retorquing.

GO 167-B, Appendix D, MS 13: Equipment Performance and Materiel Condition states:

“Equipment performance and materiel condition support reliable plant operation. This is achieved using a strategy that includes methods to anticipate, prevent, identify, and promptly resolve equipment performance problems and degradation.”

ESRB identified several loose hardware on the substation structures and equipment. Several nuts on the foundation bolts and structures had shifted and were no longer in line with their torque marks. All substation hardware must be properly torqued and regularly maintained to ensure the integrity of structures and equipment.

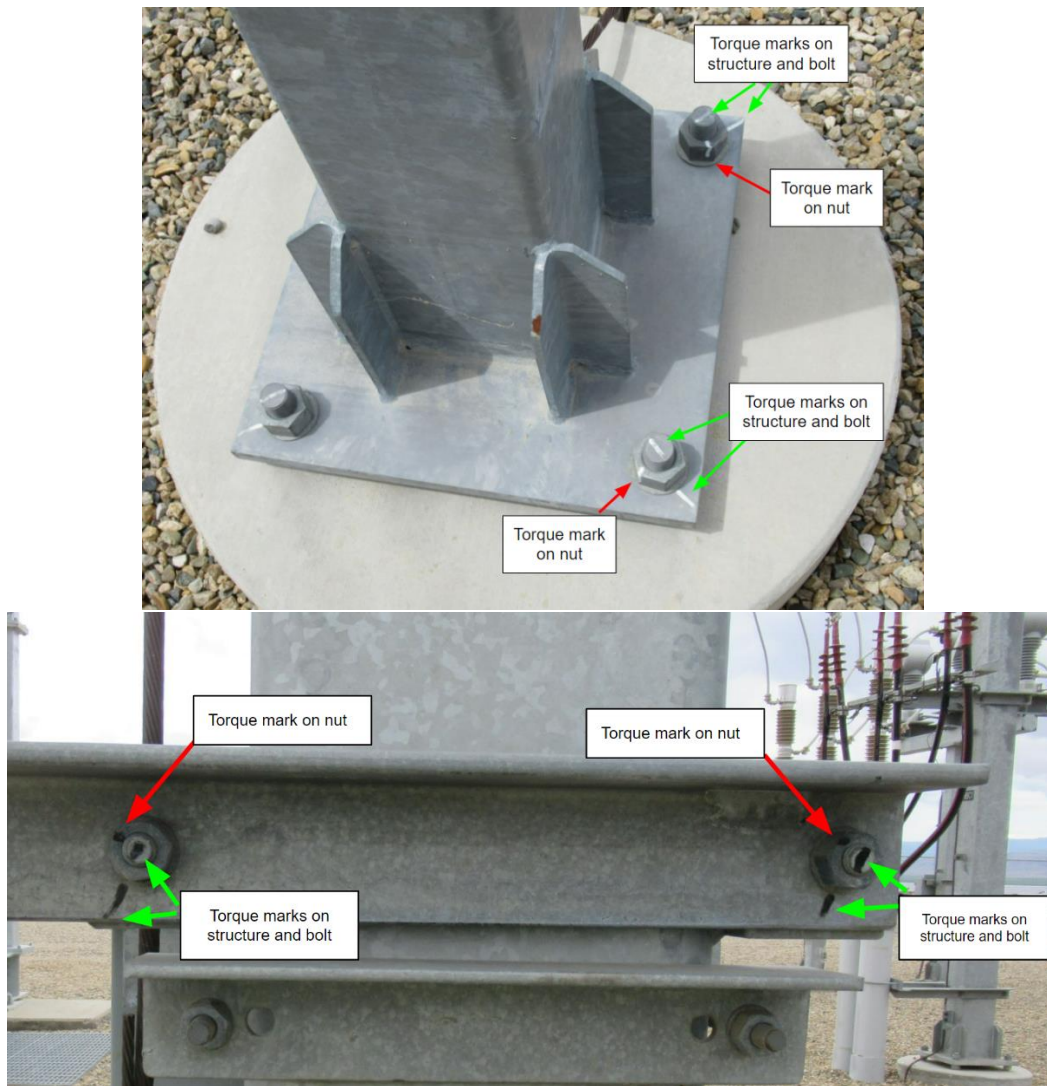


Figure 4. Foundation nuts (top) and nuts on a bracket (bottom) are not in line with torque marks.

Finding 7: Cable conduits in the substation control room need to be sealed.

GO 167-B, Appendix E, OS 1: Safety states:

“The protection of life and limb for the work force is paramount. GAOs have a comprehensive safety program in place at each site. The company behavior ensures that personnel at all levels of the organization consider safety as the overriding priority. This is manifested in decisions and actions based on this priority. The work environment and the policies and procedures foster such a safety culture, and the attitudes and behaviors of personnel are consistent with the policies and procedures.”

NFPA 70, 2020 Edition, Section 300.21, Spread of Fire or Products of Combustion states in part:

“Openings around electrical penetrations into or through fire-resistant-rated walls, partitions, floors, or ceilings shall be fire stopped using approved methods to maintain the fire resistance rating.”

ESRB identified three cable conduits near the eyewash station that penetrated through the bottom of the substation control room that were not sealed or closed off. Cable conduits must be sealed to prevent the potential spread of a fire and unwanted intrusion from things such as water, gases, debris, pests, and animals.



Figure 5. Unsealed cable conduits in the substation control room.

Finding 8: Absorbent socks in spill kits have been degraded.

GO 167-B, Appendix E, OS 10: Environmental Regulatory Requirements states:

“Environmental regulatory compliance is paramount in the operation of the generating asset. Each regulatory event is identified, reported and appropriate action taken to prevent recurrence.”

40 CFR 112 Appendix F, Section 1.8.1.2 Response Equipment Inspection states in part:

“Describe each type of response equipment, checking for the following: Response Equipment Checklist

1. Inventory (item and quantity);

2. *Storage location;*
3. *Accessibility (time to access and respond);*
4. *Operational status/condition;*
5. *Actual use/testing (last test date and frequency of testing); and*
6. *Shelf life (present age, expected replacement date)."*

ESRB inspected two spill kits at the Plant and observed that the absorbent socks have become porous, and the inside material had seeped out. To ensure the spill kits are in good working order, the Plant must inspect the condition of their contents, and keep track of the material shelf life and their expected replacement date.



Figure 6. Spill kits adjacent to the Universal Waste Storage Area (left) and at the northwest corner of Block C (right).

Finding 9: Emergency Response Contractor information is out-of-date.

GO 167-B, Appendix E, OS 20: Preparedness for On-Site and Off-Site Emergencies states:

“The GAO plans for, prepares for, and responds to reasonably anticipated emergencies on and off the plant site, primarily to protect plant personnel and the public, and secondarily to minimize damage to maintain the reliability and availability of the plant. Among other things, the GAO:

- A. *Plans for the continuity of management and communications during emergencies, both within and outside the plant,*
- B. *Trains personnel in the emergency plan periodically, and*

C. Ensures provision of emergency information and materials to personnel.”

The Plant’s Spill Prevention Control and Countermeasure (SPCC) Plan¹ contained outdated emergency response contractor information. The Health, Safety and Environmental Manager for Pearce Renewables, the company responsible for operation and maintenance at the Plant, confirmed that Clean Harbors is its current emergency response contractor. The Plant must update its SPCC plan accordingly.

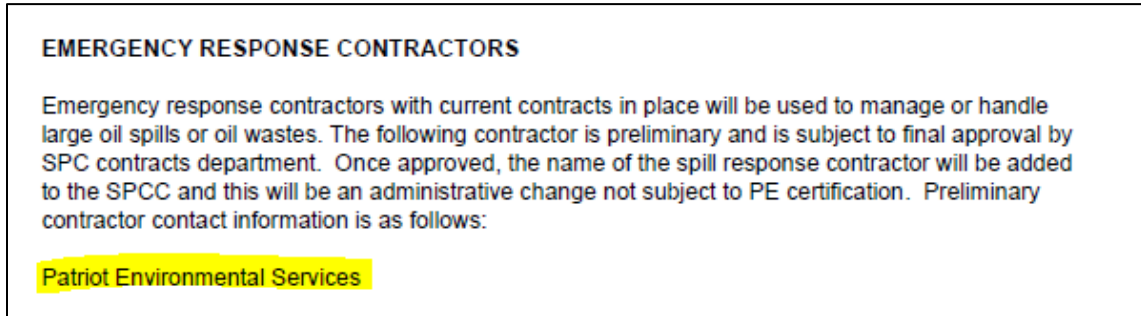


Figure 7. Excerpt from the Emergency Response Contractors section of the SPCC Plan.

Finding 10: Internal audit procedure is out-of-date and corrective action is incomplete.

GO 167-B, Appendix E, OS 4: Problem Resolution and Continuing Improvement states:

“The GAO values and fosters an environment of continuous improvement and timely and effective problem resolution.”

GO 167-B, Appendix D, MS 8: Maintenance Procedures and Documentation states in part:

“Maintenance procedures and documents are clear and technically accurate, provide appropriate direction, and are used to support safe and reliable plant operation. Procedures must be current to the actual methods being employed to accomplish the task and are comprehensive to ensure reliable energy delivery to the transmission grid.”

ESRB observed that the corrective action column was incomplete on the 2019 and 2020 internal audit inspection forms, as seen in Figure 8. The corrective action column can help differentiate between completed and outstanding work in the event of a staff turnover. During the audit, ESRB staff found evidence of rodent activity in the office. Plant staff identified this during the internal audits but did not record any corrective action.

ESRB reviewed the internal audit procedure² and found no identified frequency for the audit inspections. However, during our field audit, Pearce Renewables staff stated that the inspections occur annually. The Plant must update its procedures to reflect company practices.

¹ Spill Prevention Control and Countermeasure Plan, page 44 of 55.

² Pearce Renewables – EHS Audit/Inspection Policy and Procedures

CHECKLIST	COMPLIANCY			DETAILED EXPLANATION	CORRECTIVE ACTION
JOB SITE POSTINGS					
Any concerning wildlife inside the fence line, such as large animals, red ants, etc.)?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>	Coyotes have been seen inside the fence line.	
Is there evidence of any rodent activities which are causing operational issues, safety, or environmental hazards? If yes, to what extent?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>	Ongoing issue - Site Personal are working to abate as needed.	

Figure 8. Example of missing corrective action on internal audit form.

Finding 11: Two Job Hazard Analysis (JHA) forms were incomplete.

GO 167-B, Appendix D, MS 8: Maintenance Procedures and Documentation states:

“Maintenance procedures and documents are clear and technically accurate, provide appropriate direction, and are used to support safe and reliable plant operation. Procedures must be current to the actual methods being employed to accomplish the task and are comprehensive to ensure reliable energy delivery to the transmission grid.”

ESRB identified two job hazard analysis forms with missing work order numbers. In the first instance, the technician(s) filled out the JHA for an offline inverter before the work order was created, which the Plant said was not an uncommon practice. The site supervisor completed the form during the CPUC audit, on 4/21/2022, as shown in the first photo below. In the second instance, the technician conducting the battery inspection failed to complete the form. During the CPUC audit, the technician completed the form. The Plant must implement a review process to verify JHA forms are completed prior to closing out work orders.

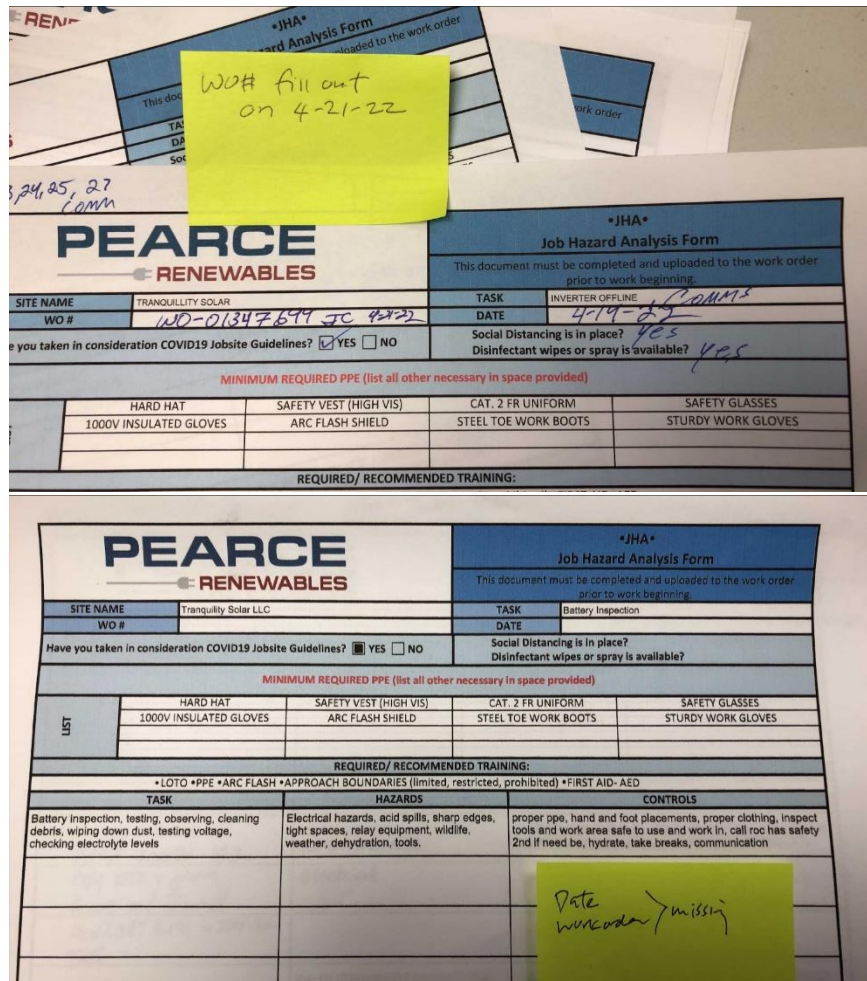


Figure 9. JHA forms that were incomplete.

Finding 12: The Plant is not keeping pace with replacement of deteriorating signs.

GO 167-B, Appendix E, OS 1: Safety states in part:

“The protection of life and limb for the work force is paramount. GAOs have a comprehensive safety program in place at each site.”

GO 167-B, Appendix E, OS 4: Problem Resolution and Continuing Improvement states:

“The GAO values and fosters an environment of continuous improvement and timely and effective problem resolution.”

ESRB observed several fading and deteriorating signs (“High Voltage”, “Danger”, “Warning” placards and posted signs). High Voltage, warning, and danger signs help inform employees as well as visitors and contract workers who may be unfamiliar with the nature of the equipment about their inherent dangers.



Figure 10. Fading signs on Circuit Breaker 52F1 (left) and 52F3 (right) in the substation.



Figure 11. Fading signs on Inverter 41 (left) and fading and peeling signs on the medium voltage transformer (right) for the inverter.



Figure 12. Fading sign on the auxiliary transformer (Aux 52) in the substation.



Figure 13. Fading “Danger High Voltage” sign at the B Block, on the south side fence.

Finding 13: Emergency Action Plan is missing the secondary muster point location.

GO 167-B, Appendix E, MS 1: Safety states in part:

“The protection of life and limb for the work force is paramount. The company behavior ensures that individuals at all levels of the organization consider safety as the overriding priority. This is manifested in decisions and actions based on this priority. The work environment, and the policies and procedures foster such a safety culture, and the attitudes and behaviors of individuals are consistent with the policies and procedures.”

ESRB observed that the Emergency Action Plan does not identify the secondary muster point, as seen in Figure 14. Both muster points must be identified so all plant staff and visitors are aware in case of an emergency. The Plant needs to update the Emergency Action Plan to include the current secondary muster point, so all parties are prepared in case of an emergency and evacuation.

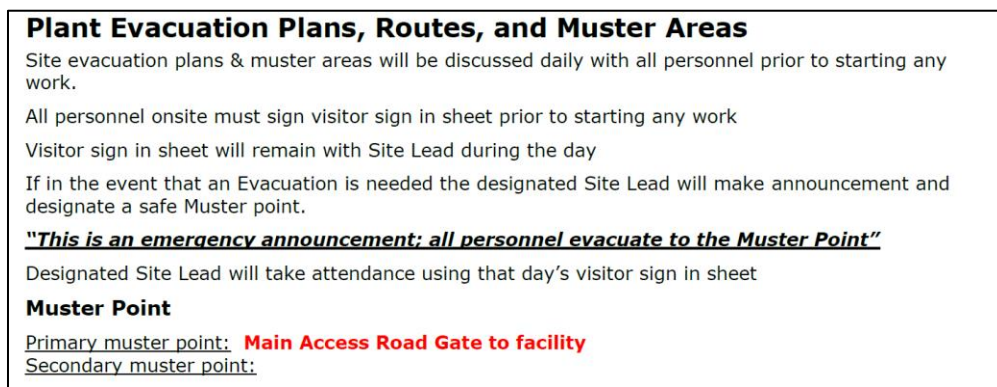


Figure 14. Emergency Action Plan with missing secondary muster point location.

Finding 14: The Plant is missing a written up-to-date Evacuation Plan.

GO 167-B, Appendix E, OS 7: Operations Procedures and Documentation states in part:

“Operation procedures and documents are clear and technically accurate, provide appropriate direction, and are used to support safe and reliable plant operation. Procedures are current to the actual methods being employed to accomplish the task and are comprehensive to ensure reliable energy delivery to the transmission grid.”

ESRB reviewed the Emergency Access Plan and discussed the evacuation procedure with the Tranquillity staff. ESRB found that the Plant has no written record of evacuation plan details in the event of an emergency. The Emergency Access Plan notes the emergency message that would be announced but does not detail the methods of communication the plant would use. During our field audit, the Tranquillity staff explained that cell phone service is inconsistent in some sections of the plant, and because of this, the site lead is always aware of the location of everyone onsite.

However, while this is verbally understood among the Tranquillity staff, it is not documented or included in the Emergency Access Plan. An up-to-date evacuation plan ensures that everyone on site is aware of the steps to take in case of an emergency, especially if someone is unreachable by cell phone (the Plant’s primary method of communication). Additionally, a written plan can provide someone unfamiliar with the plant the necessary information for evacuation during an emergency. Tranquillity must provide a written Evacuation Plan that includes the methods of reliable communication that plant staff would use during an emergency, including the steps that would be taken if a person was in a poor reception area.

Finding 15: ESRB observed general housekeeping issues.

GO 167-B, Appendix E, OS 3: Operations Management and Leadership states:

“Operations management establishes high standards of performance and aligns the operations organization to effectively implement and control operations activities.”

ESRB observed strings and a broken zip tie around conductors in the substation. In addition, ESRB observed an attached foreign object at Generator Step-Up (GSU) Transformer 2. At the time of the audit, the Plant did not have knowledge of what the object was.



Figure 15. Broken zip tie on a feeder conductor on the GSU 1 side.



Figure 16. Strings wrapped around feeder conductors on the GSU 1 side.



Figure 17. An unidentified foreign object taped to GSU 2.

II. Observations and Recommendations

Observation 1: Thermographic surveys on the main substation GSUs are not listed as a required task in the annual substation GSU PM.

ESRB reviewed the substation GSU Annual Preventative Maintenance (PM) instructions and identified that the instruction does not specifically prescribe thermographic inspection. Thermographic or infrared inspections are only listed as one of three options used to inspect bolted electrical connections for high resistance, rather than being listed as a standalone task. Performing thermographic inspections as a separate task within this PM (i.e., include thermographic inspections as Step A.10) would ensure that thermographic inspections are completed during the annual PM in accordance with the GSU OEM’s annual infrared inspections requirement.

Instructions	<p>Substation GSU Maintenance/Inspection:</p> <ol style="list-style-type: none"> 1. Run the cooling fans and check the fan motor drain holes are open/clear. 2. Externally clean the transformer lightning arrestors, pressure relief valve, oil tank, conservator tank, cooling fans, and radiators. <p>Transformers, Liquid-Filled:</p> <p>A. Visual and Mechanical Inspection: NETA 7.2.2 A(1,2,3,5,8,9,10,11,13)</p> <ol style="list-style-type: none"> 1. Inspect physical and mechanical condition. 2. Inspect anchorage, alignment, and grounding. 3. Verify presence of PCB labeling. 4. Clean bushings and control cabinets. 5. Inspect bolted electrical connections for high resistance using one or more of the following methods: <ol style="list-style-type: none"> a) Use of a low-resistance ohmmeter. b) Verify tightness of accessible bolted electrical connections by calibrated torque-wrench. c) Perform a thermographic survey under load.
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Figure 18. An excerpt from the Substation GSU Annual Maintenance/Inspection Instructions.

YEARLY	<ol style="list-style-type: none"> 1. Elaborate oil tests for average temperature below 80° C. *** 2. Carry out an infrared inspection, this is done to locate possible hot points due to loose connections, broken porcelain, etc. 3. Inspect the cable terminals at the interrupters and clean this area. 4. Inspect to see if there is any deformation or if the cables of the transformer are near to the ground parts.
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Figure 19. An excerpt from the Substation GSU OEM Manual yearly maintenance tasks.

Observation 2: The desiccant on the main substation GSU 1 needs to be monitored or replaced.

ESRB observed that the desiccant color on GSU 1 was red, but the color on GSU 2 was blue. The red desiccant indicates that it has absorbed moisture and needs to be replaced. The Plant should inspect and/or consult with experts to either monitor or replace the desiccant.



Figure 20. GSU 1 desiccant (left) and GSU 2 desiccant (right).

III. Documents Reviewed

ESRB reviewed the following records and documents:

Category	Reference #	CPUC-Requested Documents
Safety	1	Orientation Program for Visitors and Contractors
Safety	2	Evacuation Procedure
Safety	3	Evacuation Map and Plant Layout
Safety	5	Hazmat Handling Procedure
Safety	6	SDS for All Hazardous Chemicals
Safety	7	Injury & Illness Prevention Plan (IIPP) (last 3 years)
Safety	8	OSHA Form 300 (Injury Log) in last 4 years
Safety	12	Fire Protection System Inspection Record (last 3 years)
Safety	13	Insurance Report / Loss Prevention / Risk Survey (last 3 years)
Safety	14	Lockout / Tagout Procedure
Safety	15	Arc flash Analysis
Safety	16	Confined Space Entry Procedure
Safety	17	Plant Physical Security and Cyber Security Procedures and Records
Training	18	Safety Training Records
Training	19	Skill-related Training Records
Training	21	Hazmat Training and Record
Contractor	22	Latest list of Qualified Contractors
Contractor	23	Contractor Selection / Qualification Procedure
Contractor	24	Contractor Certification Records
Contractor	25	Contractor Safety Program Procedure and Training Records
Contractor	27	Spill Prevention Control Plan (SPCC)
O&M	29	Daily Round Sheets / Checklists
O&M	31	List of Open/Backlogged Work Orders
O&M	32	List of Closed/Retired Work Orders (last 4 quarters)
O&M	33	Work Order Management Procedure
O&M	34	Computerized Maintenance Management System (Demonstration On-site)
O&M	35	All Root Cause Analyses
O&M	36	Maintenance & Inspection Procedures, or Related Documents
O&M	37	SCADA system (Demonstration On-site)
O&M	38	Maintenance and Inspection Records for Solar Inverters
O&M	39	Maintenance and Inspection Records for Solar Trackers
O&M	40	Maintenance and Inspection Records for Solar Arrays/Collectors/Solar
O&M	42	Maintenance and Inspection Records for Switchgear/breaker/relays
O&M	43	Maintenance and Inspection Records for Electrical System
O&M	44	Maintenance and Inspection Records for Main Transformers
O&M	45	Maintenance and Inspection Records for Switchyard & Transmission
O&M	46	Maintenance and Inspection Records for other equipment
Documents	47	P&IDs

Documents	48	Vendor Manuals
Documents	49	Solar Farm Equipment Design Data
Documents	50	Procedure Compliance Policy
Spare Parts	51	Spare Parts Inventory List
Management	53	Organizational Chart
Instrumentation	54	Instrument Calibration Procedures and Records
Test Equipment	55	Measuring & Testing Equipment List
Test Equipment	56	Test Equipment Calibration Procedures and Records
Internal Audit	57	Internal Audit Procedures and all Records