

PUBLIC UTILITIES COMMISSION

505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3298



May 31, 2023

Juan Ortiz
Wind Site Manager
Montezuma II Winds, LLC
6720 Birds Landing Rd
Birds Landing, CA 94512

SUBJECT: Generation Audit of Montezuma II Winds Energy Facility - Audit Number GA2023-08MW

Dear Mr. Ortiz:

On behalf of the Electric Safety and Reliability Branch (ESRB) of the California Public Utilities Commission (CPUC), Nika Kjensli, Stephen Lee, Banu Acimis, Calvin Choi, and Stephen Hur of ESRB staff conducted a generation audit of Montezuma II Winds Energy Facility from April 17 through April 20, 2023.

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 and observations is attached. Please advise me by email no later than June 28, 2023 by providing an electronic copy of all corrective actions and preventive measures taken and/or planned to be taken to resolve the violations and observations.

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, please provide the projected completion dates to correct the violations and to achieve full compliance with GO 167-B.

Please submit your response to Stephen Lee at Stephen.Lee@cpuc.ca.gov. Please note that although Montezuma II Winds 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 Stephen Lee with a copy to me and the GO 167 inbox GO167@cpuc.ca.gov by June 16, 2023.

Thank you for your courtesy and cooperation throughout the audit process. If you have any questions concerning this audit, please contact Stephen Lee at Stephen.Lee@cpuc.ca.gov or (916) 661-2353.

PUBLIC UTILITIES COMMISSION

505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3298



Sincerely,

A handwritten signature in blue ink, appearing to read "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 Generation Audit Findings

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
Stephen Lee, Senior Utilities Engineer (Specialist), ESRB, SED, CPUC
Calvin Choi, Senior Utilities Engineer (Specialist), ESRB, SED, CPUC
Stephen Hur, Utilities Engineer, ESRB, SED, CPUC

**CPUC AUDIT FINDINGS OF
MONTEZUMA II WINDS ENERGY FACILITY
APRIL 17 – APRIL 20, 2023**

I. Findings

Finding 1: The maps in the Plant’s Site-Specific Contractor and Visitor Orientation presentation require updates.

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.”

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

“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: [...]

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

The Plant’s Site-Specific Contractor and Visitor Orientation presentation contains inaccurate and outdated information. Specifically on Slide 4, the site map depicted North pointing to the South, and the map of the Operations and Maintenance (O&M) building showed fire extinguishers in locations that did not match their physical locations. The Plant must update the maps in its orientation presentation to provide accurate information which ensures contractors and visitors are not misled during on-site and off-site emergencies.

Finding 2: Washed-out and damaged perimeter fencing [REDACTED]

GO 167-B, Appendix E, OS 21: Plant Security states:

“To ensure safe and continued operations, each GAO provides a prudent level of security for the plant, its personnel, operating information and communications, stepping up security measures when necessary.”

Sections of the fencing [REDACTED] are washed-out and damaged. [REDACTED]

[REDACTED] The Plant must repair the fencing [REDACTED]



Figure 1: Washed out fencing [REDACTED]



Figure 2: Damaged and washed out fencing [REDACTED]

Finding 2: The colors on the breaker position indicator labels on the SF6 breakers are faded.

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 D, Maintenance Standard (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.”

GO 167-B, Appendix D, MS 4: Problem Resolution and Continuing Improvement states:

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

GO 167-B, Appendix D, MS 11: Plant Status and Configuration states:

“Station activities are effectively managed so plant status and configuration are maintained to support safe, reliable and efficient operation.”

The high voltage SF6 breaker position labels in the substation were discolored. The “OPEN” and “CLOSED” labels on the other SF6 breaker in the Montezuma I substation yard were colored green and red, respectively. Having the breaker positions colored and labeled ensures immediate positive verification of the breaker’s physical position without needing to open the breaker cabinet.



Figure 3: Faded “OPEN” and “CLOSED breaker labels (left), compared to another breaker’s labels in the Montezuma I substation (right).

Finding 4: The Plant is failing to complete its monthly Lock Out Tag Out (LOTO) clearance audits per its procedure.

GO 167-B, Appendix E, OS 12: Operations Conduct states in part:

“To ensure safety, and optimize plant availability, the GAO conducts operations systematically, professionally, and in accordance with approved policies and procedures. The GAO takes responsibility for personnel actions, assigns personnel to tasks for which they are trained, and requires personnel to follow plant and operation procedures and instructions while taking responsibility for safety. Among other things:

- A. All personnel follow approved policies and procedures. Procedures are current, and include a course of action to be employed when an adopted procedure is found to be deficient.”*

The Plant is not completing its monthly LOTO clearance audits per its Renewables In-Plant-Clearance Procedure, Revision 16. The procedure states [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] ESRB did not identify any evidence that these monthly LOTO clearance audits were being performed. The Plant must perform and document these audits to ensure all LOTOs are closed out and that each site employee is following the LOTO documentation procedures.

Finding 5: The electrical panel and disconnect clearance checklist item in the Plant’s Safety Inspection Checklist requires a unit of measure.

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. 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.”

GO 167-B, Appendix D, MS 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 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.”

The checklist item in the Plant’s [REDACTED] under item 29 CFR 1910 Subpart S – Electrical, General Requirements – [REDACTED]

[REDACTED]

██████████ A unit of measure, such as feet, after the number “3” is required to ensure the safety inspectors who complete these inspection checklists can properly confirm that safe clearances are being maintained in front of these electrical equipment.

Finding 6: The Plant’s Spill Prevention, Control, and Countermeasure (SPCC) Plan requires updates.

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 7: Operation Procedures and Documentation states in part:

“Procedures are current to the actual methods being employed to accomplish the task...”

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

“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: [...]

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

The Plant’s SPCC plan requires updates to the contact information and to the Plant’s documented practices. The current Emergency Notification Phone List states it was last undated in November 2010. ESRB notes that the phone number for the Primary Facility Emergency Coordinator is incorrect. Additionally, the contact information and contractor name for the current Spill Response Contractor is outdated. The Plant must correct this contact information.

ESRB also identified that the Plant conducts quarterly SPCC inspections; however, the current SPCC plan states that the Plant performs monthly SPCC inspections. The Plant must update the SPCC plan to reflect the actual spill inspection practices being used.

Finding 7: The Plant requires improvements to its practices for conducting quarterly emergency action plan drills.

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 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 E, OS 20: Preparedness for On-Site and Off-Site Emergencies states in part:

“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 is failing to perform and critique its quarterly emergency action plan drills based on the Plant’s current needs. [REDACTED]. ESRB did not identify any evidence that the Plant conducted or identified the need to perform a [REDACTED] drill [REDACTED]. Additionally, the Plant’s [REDACTED] procedure states that an [REDACTED] drill is required annually. ESRB did not find evidence that the Plant was performing these [REDACTED] drills.

Furthermore, the Plant’s documentation for these emergency drills also requires improvement. Emergency drills are scheduled in [REDACTED] however, the documentation lacks details such as what type of drill was performed, critiques on employee performance during these drills, and any noted deficiencies or required corrective actions. An evacuation drill evaluation/critique form exists, but the Plant is not utilizing the form. The Plant must perform a variety of drills based on different events that can occur during normal operation and the Plant must improve its documentation of such drills.

Finding 8: The Plant fails to follow industry requirements for categorizing wind turbines as confined spaces.

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 D, 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.”

The Plant currently only considers the Hub Rotors and the Blades as confined spaces. By definition¹, a confined space means a space that:

- (1) Is large enough and so configured that an employee can bodily enter and perform assigned work; and
- (2) Has limited or restricted means for entry or exit (for example, tanks, vessels, silos, storage bins, hoppers, vaults, and pits are spaces that may have limited means of entry.); and
- (3) Is not designed for continuous employee occupancy.

Furthermore, a permit-required confined space means a confined space that has **one or more** of the following characteristics:

- (1) Contains or has a potential to contain a hazardous atmosphere;
- (2) Contains a material that has the potential for engulfing an entrant;
- (3) Has an internal configuration such that an entrant could be trapped or asphyxiated by inwardly converging walls or by a floor which slopes downward and tapers to a smaller cross-section; or
- (4) Contains any other recognized serious safety or health hazard.

ESRB staff finds that the [REDACTED] Procedure does not reflect the purpose and intention of OSHA regulations in determining a Confined Space and Permit Required Confined Space. The procedure must adopt and implement all applicable safety regulations and recommendations to address, reduce, and eliminate any possible workplace hazards related to wind turbine generator (WTG)-specific safety situations. The [REDACTED] Procedure does not classify the nacelle, basement, and tower sections as designated confined spaces under the justification that these three spaces are designed for continuous employee occupancy. This justification contradicts general industrial safety practices. Most industrial confined spaces are not necessarily designed for continuous human occupancy but configured so that an employee can bodily enter and perform assigned work. Like any other industrial confined spaces, nacelle, basement, and tower sections are designed and configured for accommodating equipment, operation, and maintenance activities. The nacelle, basement, and tower sections are intended for these purposes and not for employee occupancy. Thus, these spaces meet all three criteria for the OSHA definition of a confined space and must be classified as such. Furthermore,

¹ [California Code of Regulations, Title 8, Section 5157. Permit-Required Confined Spaces.](#)

all three spaces have one or more hazardous characteristics listed in the permit-required confined space of the procedure. The WTG spaces have very limited or restricted means of entry or exit, which pose a potential hazard to employees regardless of the characteristics of occupancy. Montezuma Wind must correct the [REDACTED] confined spaces classification, including the flowchart [REDACTED], to reclassify the nacelle, basement, tower sections as confined spaces.

Regarding Permit Required Confined Spaces, all WTG sections – nacelle, basement, tower sections, hub rotor, and blades – must be classified as permit-required confined spaces, as all spaces meet the criteria listed in the Procedure [REDACTED] except in instances where the WTG section meets the space condition [REDACTED] for non-permit required confined spaces. Management must implement an updated procedure to control access to confined spaces for the protection of employees and contractors from potential hazards.

Finding 9: The Plant is failing to review and update its [REDACTED] procedures.

GO 167-B, Appendix E, OS 21: Plant Security states:

“To ensure safe and continued operations, each GAO provides a prudent level of security for the plant, its personnel, operating information and communications, stepping up security measures when necessary.”

ESRB identified that the [REDACTED] teams are not reviewing [REDACTED] documents per their procedures. For example, one procedure states [REDACTED]

[REDACTED] ESRB found that the following procedures exceeded their maximum respective review periods:

- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]

Following the audit, the Plant provided reviewed and updated versions of these procedures. The Plant must continue to review its relevant [REDACTED] procedures to ensure all information is current and to maintain compliance with North American Electric Reliability Corporation (NERC) [REDACTED] requirements.

II. Observations

The following observations were noted on the facilities impacting the Montezuma I Wind facility, which is a wind facility with less than 50 MW of net generating capacity and outside the original scope of ESRB's audit. Concerns related to the operation and maintenance of these facilities still exist, and ESRB recommends the observations be addressed.

Observation 1: The equipment labeling on the Montezuma I substation's two grounding transformers is illegible.

The equipment labels for grounding transformers GT-1 and GT-2 in the Montezuma I substation are illegible. Proper equipment labelling is essential to ensure personnel are operating or servicing the correct equipment.

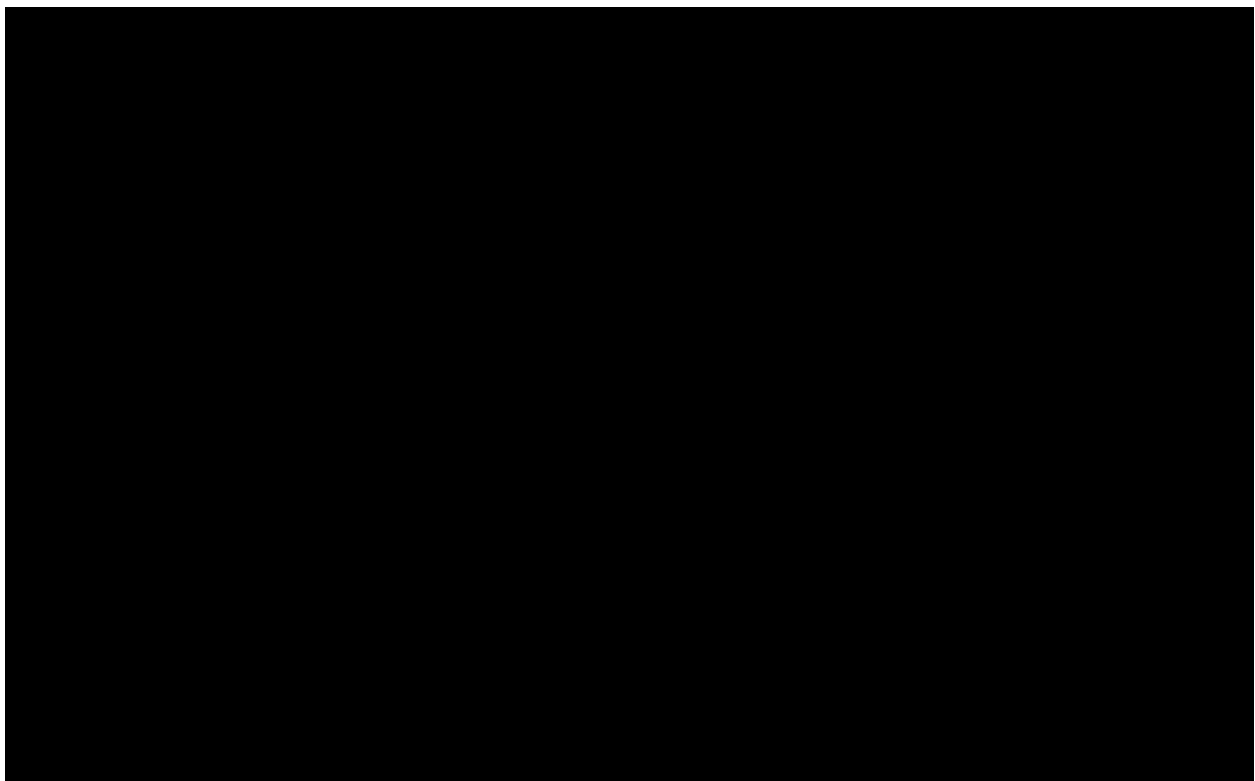


Figure 4: Missing equipment labels on the GT-1 (left) and GT-2 (right) grounding transformers.

Observation 2: The propane tanks for the Montezuma I substation's backup generator lack proper labeling and are corroded.

The "NO SMOKING OR OPEN FLAME" sign on the propane tank in the Montezuma I Winds substation is illegible. The tank is also not equipped with an NFPA 704 placard or a Hazard Communication Standard pictogram. Additionally, ESRB observed excessive corrosion on one of the propane tank's hemispherical end cap.

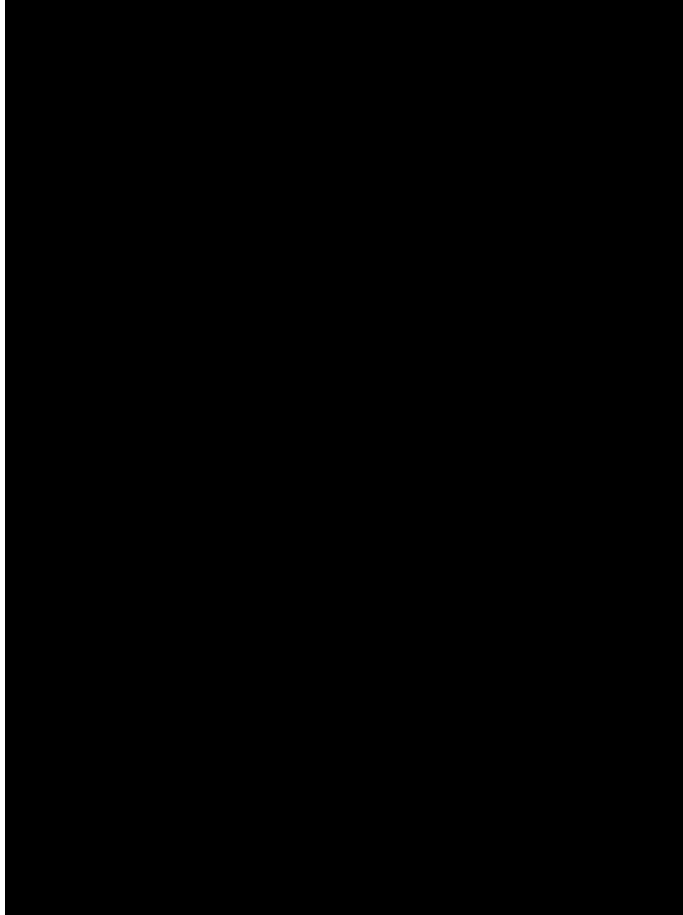


Figure 5: Missing warning signs on the propane tanks.

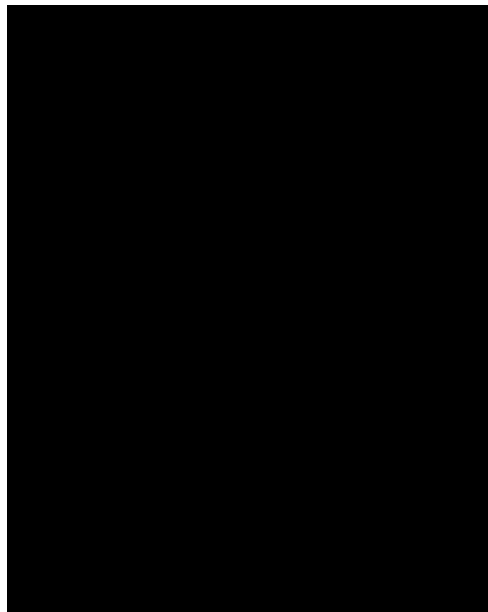


Figure 6: Excessive corrosion on the propane tank's end cap.

Observation 3: The breaker position label and breaker operation counter are illegible.

The counter that counts the number of breaker operations on Feeder Breaker 52-F2 is illegible. Additionally, the breaker position indicator on the top of the panel is faded, which makes confirming the breaker's position difficult.



Figure 7: Illegible counter (middle) and faded breaker position indicator (top).

Observation 4: The DC battery rack in the substation control room was not grounded with a physical bonding wire.

ESRB observed that the metal rack that held the DC batteries in the Montezuma I control room was not bonded to ground with a physical bonding wire. In the Montezuma II control room, the DC battery rack had a physical bonding wire that connected to the substation's ground grid. Grounding metal structures such as cabinets, racks, or enclosures is necessary to reduce electric shock hazards in the event the metal becomes unintendedly energized. The Plant must verify that the as-built construction of the Montezuma I DC battery rack meets the originally engineered grounding requirements.

III. List of Documents Reviewed

Category	Reference #	CPUC-Requested Documents
Safety	1	Orientation Program for Visitors and Contractors
	2	Evacuation Procedure
	3	Evacuation Map and Plant Layout
	4	Evacuation Drill Report & Critique (last 3 years)
	5	Hazmat Handling Procedure
	6	MSDS for All Hazardous Chemicals
	7	Injury & Illness Prevention Plan (IIPP)
	8	OSHA Form 300 (Injury Log) in the last 4 years
	9	OSHA Form 301 (Incident Report) in the last 4 years
	10	List of all CPUC Reportable Incidents (last 5 years)
	11	Root Cause Analysis of all Reportable Incidents or Major Equipment Failures
	12	Fire Protection System Test Reports and Inspection Records (last 3 years)
	13	Insurance Report / Loss Prevention / Risk Survey
	14	Lockout / Tagout Procedure, In Plant Clearance Procedures
	15	Arc Flash Analysis
	16	Confined Space Entry Procedure
	17	Plant Physical and Cyber Security Procedures
	18	Work at Height Procedure and Climb Certifications
	19	Emergency Preparedness and Response Plan
Training	20	Safety Training Records
	21	Skill-related Training Records
	22	List of in-house or outside vendors that the Plant utilizes for technicians needing climbing and rescue certification
	23	Certifications for Welders, Forklift & Crane Operators

	24	Hazmat Training and Records
Contractor	25	Latest list of Qualified Contractors
	26	Contractor Selection / Qualification Procedure
	27	Contractor Certification Records
	28	Contractor Monitoring Program
Regulatory	29	Air Permit (if applicable)
	30	Water Permit (if applicable)
	31	Spill Prevention Control Plan (SPCC)
	32	CalARP Risk Management Plan (RMP)
O&M	33	Daily Round Sheets / Checklists
	34	Logbook
	35	List of all Open/Backlogged Work Orders
	36	List of Closed/Retired Work Orders
	37	Work Order Management Procedure
	38	Computerized Maintenance Management System (Demonstration Onsite)
	39	Standard Operating Procedures
	40	Vibration Analysis Reports
	41	Transformer Oil and Turbine Bearing Oil Analysis Reports
	42	Substation inspection records
	43	Test and inspection records of high voltage equipment
	44	Maintenance & Inspection Procedures for wind turbines
	45	Maintenance & Inspection Procedures for generators
	46	Maintenance & Inspection Procedures for transformers
	47	Maintenance & Inspection Procedures for gearboxes
	48	Maintenance & Inspection Procedures for other equipment
	49	Maintenance & Inspection Records for wind turbines

	50	Maintenance & Inspection Records for generators
	51	Maintenance & Inspection Records for transformers
	52	Maintenance & Inspection Records for gearboxes
	53	Maintenance & Inspection Records for other equipment
	54	SCADA System (Demonstration on-site)
Documents	55	P&IDs and Electrical Single-Line Diagrams
	56	Turbine design data
	57	Vendor Manuals
Spare Parts	58	Spare Parts Inventory List
	59	Shelf-life Assessment Report
Management	60	Employee Performance Review Procedures and Verifications
	61	Organizational Chart
Instrumentation	62	Instrument Calibration Procedures and Records
Test Equipment	63	Calibration Procedures and Records
Internal Audit	64	Internal audit reports