PUBLIC UTILITIES COMMISSION
505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3298

November 28, 2022 GA2022-16WC

Joe Kennedy
Plant Manager
Walnut Creek Energy Park
911 Bixby Drive
City of Industry, CA 91745

SUBJECT: Audit report of Walnut Creek Energy Park

Mr. Kennedy:

On behalf of Electric Safety and Reliability Branch (ESRB) of the California Public Utilities Commission (CPUC), Saimon Islam and Richard Le of my staff conducted a power plant audit of Walnut Creek Energy Park from September 12, 2022, through September 16, 2022.

During the audit, my staff observed plant operations, inspected equipment, reviewed data, interviewed plant staff, and identified violations of General Order (GO) 167-B. A copy of the audit findings itemizing the violations is enclosed. Please advise me no later than December 28, 2022, by electronic or hard copy, of all corrective measures taken by Walnut Creek Energy Park to remedy and prevent the recurrence of such violations. Your response should include a Corrective Action Plan with a description and completion date of each action and measure completed.

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 Saimon Islam with a copy to me and the GO 167-B inbox GO167@cpuc.ca.gov by December 28, 2022.

If you have any questions concerning this audit, you can contact Saimon Islam at Saimon.Islam@cpuc.ca.gov or (213) 326-2600.

Sincerely,

Fadi Daye

Fadi Daye, P.E.
Program and Project Supervisor
Electric Safety and Reliability Branch
Safety and Enforcement Division
California Public Utilities Commission

Attachment: Findings

Cc: Lee Palmer, Director, Safety and Enforcement Division, CPUC
Nika Kjensli, Program Manager, ESRB, CPUC
Majed Ibrahim, Senior Utilities Engineer, ESRB, CPUC
Saimon Islam, Utilities Engineer, ESRB, CPUC

I. Findings Requiring Corrective Action

<u>Finding 1: ESRB staff witnessed damaged insulation</u>

GO 167-B, Appendix D, Maintenance Standard 9: Conduct of Maintenance states:

> *Maintenance is conducted in an effective and efficient manner, so equipment performance and material condition effectively support reliable plant operation.*

ESRB staff witnessed damaged insulation in some pipes. Damaged insulation can result in accelerated heat gain or loss and can result in corrosion under insulation.

<u>Finding 02: Missing NFPA (Fire diamond) sign on natural gas compressor room</u>

GO 167-B, Appendix E, Operation Standard 10: Environmental Regulatory Requirements states in part:

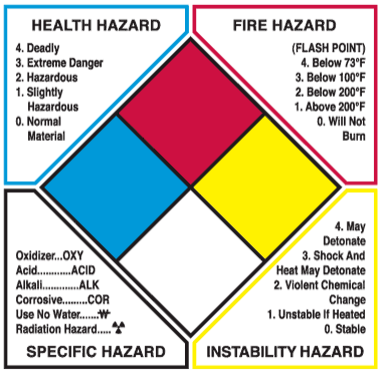
> *Environmental regulatory compliance is paramount in the operation of the generating asset.*

NFPA 704: 4.3 Location of Signs states:

> *Signs shall be in locations approved by the authority having jurisdiction and as a minimum shall be posted at the following locations:*
> *1) Two exterior walls or enclosures containing a means of access to a building or facility.*
> *2) Each access to a room or area.*
> *3) Each principal means of access to an exterior storage area."*

ESRB staff found a missing NFPA sign (the fire diamond) in the natural gas compressor room as indicated below. The numbers in the diamond are important to provide information related to hazards.

Missing NFPA sign (fire diamond)



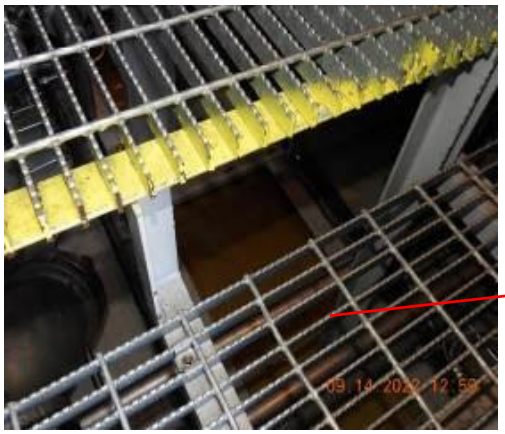
NFPA Fire diamond (For reference only)

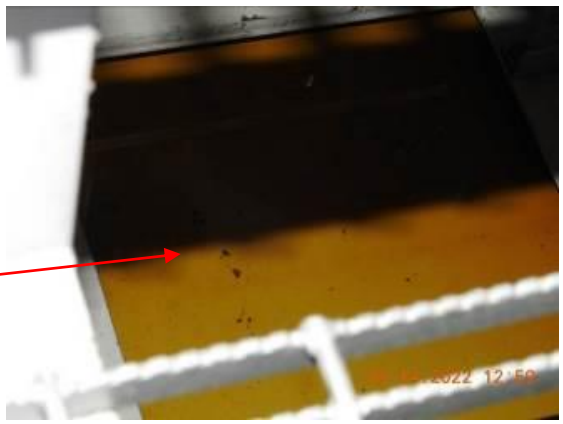
<u>Finding 3: ESRB staff witnessed leakage from pipes and other equipment in different areas of the plant.</u>

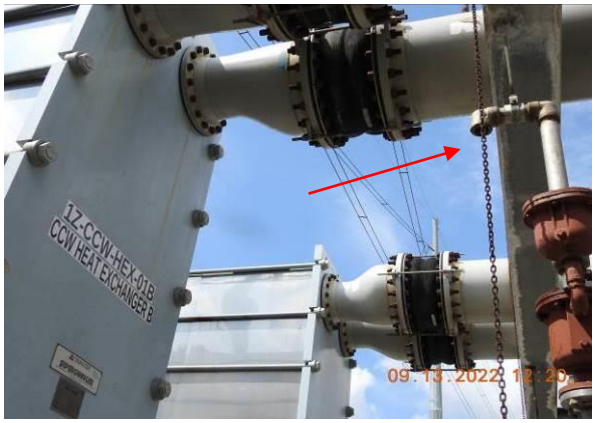
GO 167-B, Appendix D, Maintenance Standard 9: Conduct of Maintenance states:

> *Maintenance is conducted in an effective and efficient manner, so equipment performance and material condition effectively support reliable plant operation.*

ESRB staff witnessed lube oil leaking near fuel gas compressor throws for all the 3 units, in the turbine unit and some weeping near fuel gas compressor-B suction unit valve#2. Leaking lube oils are an indication of a lack of maintenance and standing lube oil can result in different hazards. ESRB staff also observed minor water leak from a pipe joint in CCW heat exchanger B.







<u>Finding No. 4: ERSB staff witnessed improper storage.</u>

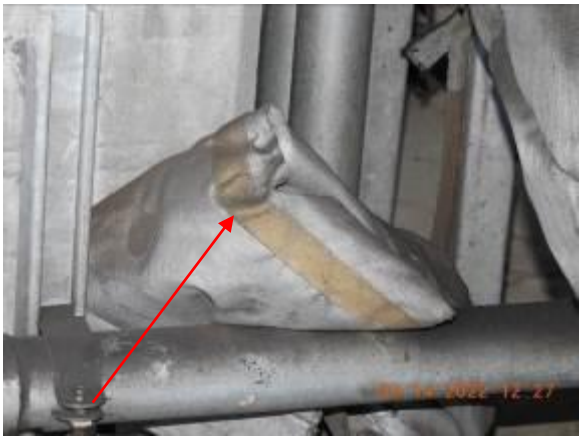
GO 167-B, Appendix D, Maintenance Standard 9: Conduct of Maintenance, states:

> *Maintenance is conducted in an effective and efficient manner, so equipment performance and materiel condition effectively support reliable plant operation.*

GO 167-B, Appendix E, Operation Standard 8: Plant Status and Configuration states:

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

ESRB staff witnessed unused pipe joints and filters. The plant should ensure that its staff stores tools and equipment back in their proper place after each use. ESRB staff also observed loose insulation covers in several areas of the plant, and some lights inside the turbine unit access compartment that were out of order. There were flanges, pipe joints inside the PPE cabinet which is an indiaction of improper storage.



09.14.2022 12:26

09.15.2022 11:21

PPE
CABINET
Rubbermaid
09.13.2022 12:35

09.13.2022 12:35

<u>Finding No. 5: ERSB staff witnessed several defective gauges</u>

GO 167-B, Appendix D, Maintenance Standard 9: Conduct of Maintenance, states:

> *Maintenance is conducted in an effective and efficient manner, so equipment performance and materiel condition effectively support reliable plant operation.*

ERSB staff found numerous illegible gauges. Also, there was a defective gauge and few gauges had water inside because of having not a proper seal. Gauges are important for proper operation as they indicate different readings such as pressure, temperature etc.

<u>Finding No. 6: ERSB staff witnessed several illegible flowmeters</u>

GO 167-B, Appendix D, Maintenance Standard 9: Conduct of Maintenance, states:

> *Maintenance is conducted in an effective and efficient manner, so equipment performance and materiel condition effectively support reliable plant operation.*

GO 167-B, Appendix D, Maintenance Standard 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…*

ERSB staff found several flowmeters illegible in the evaporative cooler tank because of algae growth inside the flowmeters.

<u>Finding No. 7: ESRB staff observed corrosion across the plant equipment which can result in equipment failure</u>

GO 167-B, Appendix D, Maintenance Standard 9: Conduct of Maintenance, states:

> *Maintenance is conducted in an effective and efficient manner, so equipment performance and materiel condition effectively support reliable plant operation.*

GO 167-B, Appendix E, Operation Standard 27: Flow Assisted Corrosion, states in part:

> *…GAO has a flow-assisted corrosion program, which identifies vulnerable equipment, provides for regular testing of that equipment, and responds appropriately to prevent high energy pipe failures.*

ESRB staff observed minor corrosion across some non-potable water pipe's joints and near CCW Heat Exchanger. Corrosion can be detrimental for equipment and the plant must take corrective actions against corrosion before it becomes a major issue.

II. Documents Reviewed

ESRB Staff reviewed the following records and documents:
(** documents were not provided during the time the audit was conducted**)

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) (last 3 years)
	8	OSHA Form 300 (Injury Log) in last 4 years
	9	OSHA Form 301 (Incident Report) in last 4 years
	10	List of all CPUC Reportable Incidents (last 5 years)
	11	Root Cause Analysis of all Reportable Incidents (if any)
	12	Fire Sprinklers Test Report (last 3 years)
	13	Insurance Report / Loss Prevention / Risk Survey (last 3 years)
	14	Lockout / Tagout Procedure (last 3 revisions, if applicable)
	15	Arc flash Analysis
	16	Confined Space Entry Procedure
	17	Plant Physical Security and Cyber Security Procedures and Records
	18	Fire Protection System Inspection Record
Training	19	Safety Training Records*
	20	Skill-related Training Records*
	21	Certifications for Welders, Forklift & Crane Operators*
	22	Hazmat Training and Record*
Contractor	23	Latest list of Qualified Contractors*
	24	Contractor Selection / Qualification Procedure
	25	Contractor Certification Records
	26	Contractor Monitoring Program
Regulatory	27	Daily CEMS Calibration Records
	28	Air Permit
	29	Water Permit
	30	Spill Prevention Control Plan (SPCC)
	31	CalARP Risk Management Plan (RMP)
O&M	32	Daily Round Sheets / Checklists
	33	Feedwater Grab-sample Test Records

	34	Water Chemistry Manual
	35	Logbook**
	36	List of Open/Backlogged Work Orders*
	37	List of Closed/Retired Work Orders (last 4 quarters)*
	38	Work Order Management Procedure (last 3 revisions, if applicable)
	39	Computerized Maintenance Management System (Demonstration Onsite)**
	40	All Root Cause Analyses (if any)
Gas Turbine	41	Borescope Inspection Reports (last 2 years)
	42	Maintenance & Inspection Procedures (or Related Documents) (last 3 revisions, if applicable)
	43	Intercooler Inspection Reports
	44	Combustors Inspection (CI) Reports
	45	Hot Gas Path (HGI) Inspection Reports
	46	Bearing Lube Oil Analysis Reports
	47	DC Lube Oil Pump Test Records
Main Plant Compressor(s)	48	Inspection Procedures and Records
Document	49	P&IDs*
	50	Vendor Manuals*
Spare Parts	51	Spare Parts Inventory List
	52	Shelf-life Assessment Report
Management	53	Employee Performance Review Procedures and Verifications
	54	Organizational Chart
Generator	70	Bearing Lube Oil Analysis
	71	Maintenance & Inspection Procedures (or related documents)
	72	Polarization Test Records
Transformer	73	Hot Spots / IR Inspection Reports
	74	Oil Analysis Reports
Cathodic Protection	75	Procedures and Inspection Records
Air Cooled Condenser System	76	Cooling Fans & Motors Inspection Records
	77	Cooling Tower Structural Integrity Assessment
	78	Circulating Water Pumps Maintenance Records
Instrumentation	79	Instrument Calibration Procedures and Records
Test Equipment	80	Calibration Procedures and Records
Emission Control Equipment (SCR, Ammonia, NOx, CO)	81	Maintenance & Inspection Procedures and Records
Internal Audit	82	Internal Audit Procedures and all Records

* Provide data in a searchable format such as a searchable PDF, Word Document, Excel Spreadsheet, etc.
** These items may be provided on-site by the first day of the audit.