

DOCKETED

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Appendix 9

Temporary Closure Plan OP-112

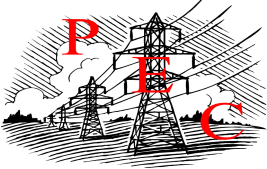

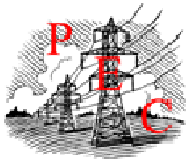
	PANOCHÉ ENERGY CENTER OPERATIONS MANUAL OPERATING PROCEDURES	
Number: <p style="text-align: center;">OP-112 (formerly TC-1)</p>	Subject: <p style="text-align: center;">Facility Temporary Closure Contingency Plan</p>	
Approved for use by: 	Current Issue: <p style="text-align: center;">Rev 1</p>	Issue Date: <p style="text-align: center;">Sept 2009</p>
<p style="text-align: center;">Page 1 of 14</p>	<p style="text-align: center;">Prepared by NAES Corporation</p>	

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TABLES

No table of figures entries found.

CHECKLISTS

None

DRAWINGS

Rev. Date

None

REFERENCES

Rev. Date

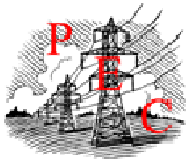
None

PLAN UPDATES

Description

Rev. Date

Roy Campbel (WG)	Initial Issuance	0	09/07/09
Barry Lajoie (NAES)	Updated to reflect current conditions	1	06/28/18

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1. Introduction

Unexpected temporary, or short-term cessation of operations, can result from a number of unforeseen circumstances. Conditions such as a lack of fuel, oversupply of electricity, mechanical failure, or other factors, may force units to be shut-down temporarily. Natural disasters such as earthquake or severe winter storms may also result in temporary shutdowns.

For short-term, unexpected temporary cessation of operations of periods less than 12 months that does not involve facility damage, Panoche Energy simple cycle generating facility would be maintained in an operational state until the unexpected condition or event ceases to restrict operations.

In order to ensure that public health and safety and the environment are protected in the event of an unplanned temporary facility closure, it is essential to have an on-site contingency plan established. This on-site contingency plan will be used to ensure that all health, safety, and environmental impacts are addressed according to local, state, and federal regulations.

2. Purpose

The purpose of this *Facility Temporary Closure Contingency Plan* is to provide general and specific instructions for safely shutting down power generating equipment, short-term lay-up of critical equipment, removal of hazardous materials from the site, and for short-term monitoring and security of the facility. Prior to facility commercial operations, this plan shall be submitted to the California Energy Commission (CEC) Compliance Program Manager (CPM) for approval. This Plan shall be kept at the site at all times.

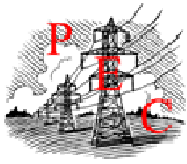
3. General Facility Identification Information

Facility Name

Panoche Energy Center

Owner

Panoche Energy Center LLC.
 48883 W. Panoche Rd.
 Firebaugh, CA 93622

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Operator

North American Energy Services (NAES)
48883 W. Panoche Rd.
Firebaugh, CA 93622

Physical Address

Panoche Energy Center
48883 W. Panoche Rd.
Firebaugh, CA 93622
Fresno County

Mailing Address

Panoche Energy Center.
48883 W. Panoche Rd.
Firebaugh, CA 93622

Other identifying information

EPA Facility ID#: CAL000336991

UIC # (injection well permit): CA1060001

SIC Code: 4911

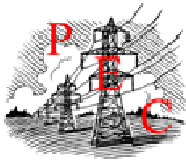
NAICS Code: 221112

Type of Business: Fossil Fuel Facility for Electrical Generation

Key contact(s)

Dave Fisher	Plant Manager	559-659-2270 x101	David.Fisher@neas.com
Jesse Gunnells	O&M Manager	559-659-2270 x102	Jesse.Gunnells@naes.com
Nikki Chatham	Administrator	559-659-2270 x100	Nikki.Chatham@naes.com
Barry Lajoie	Compliance Manager	559-659-2270 x103	Barry.lajoie@naes.com
Control Room		559-659-2529	

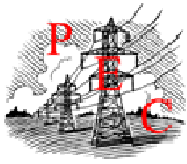
4. Plant Location and Setting

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Panoche Energy Center, LLC (PEC) is located at 48883 W. Panoche Rd. south west of the small cities of Firebaugh and Mendota near US Interstate 5 in Fresno County, CA. The facility is owned and managed by Power Plant Management Systems (PPMS). PEC is a high-efficiency, natural gas-fired, simple-cycle generating facility that receives gas from Pacific Gas and Electric (PG&E)'s high pressure pipeline and provides electricity back to PG&E customers through the western grid system. PEC consists of:

- A nominal 400-megawatt (MW) simple-cycle generating facility, using four (4) natural gas-fired combustion turbines and associated infrastructure;
- A 230-kilovolt (kV) switchyard;
- Water for operation of the facility (i.e., cooling tower make-up, NOx water injection, domestic, etc.) is supplied from two on-site water wells;
- A package treatment plant that includes ultra-filtration (UF) and reverse osmosis (RO) processes raw water NOx water inject and domestic use (restrooms and kitchen). Domestic water is not consumed by humans.
- A small chlorination unit provides treated water potable water for domestic use (non-potable);
- A storm water detention pond (approx.. 1.5 acres) receives runoff from the common non-industrial areas;
- Cooling Tower blowdown and Water Treatment Building RO reject are treated by an Enhanced Wastewater System (EWS). Product water from the EWS is returned to the Cooling Tower while wastewater from the EWS is sent to the wastewater injection system for disposal.
- A waste water injection system including two high pressure wastewater injection wells and four deep underground injection wells;
- A package treatment/leach system for sanitary wastes;

The project site is located on approximately 16 acres in Section 5, Township 15S, Range 13E Mount Diablo base and meridian, adjacent to the Starwood Power Project (06-AFC-10) and the

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PG&E Panoche Substation. The site location is shown in Figure 1. The assessor's parcel # is APN 027-060-78S.

5. Communication with Responsible Authorities

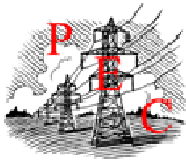
In the event of an unplanned temporary closure of the PEC facility, PPMS shall notify the CEC, as well as other responsible agencies, by telephone, fax, or e-mail, within 24 hours. PPMS will direct plant staff to take all necessary steps to implement this Facility Temporary Closure Contingency Plan for the specified duration. PPMS shall keep the CEC informed of the circumstances and expected duration of the closure.

If PPMS determines that an unplanned temporary closure of the facility is likely to be permanent or for duration of more than 12 months, a closure plan consistent with the requirements of a long-term planned closure shall be developed. For purposes of this Facility Temporary Closure Contingency Plan, only periods of site closure of less than 12 months duration are addressed.

6. Equipment Shutdown and De-Energization, <= 90 days

For periods of facility closure of up to 90 days duration with no damage to facility, plant staff will take the following non-inclusive steps to safely shutdown and de-energize facility power generating equipment:

- Back feed electrical power will be maintained to the facility to ensure power to critical control equipment, circulating water systems, communication, and security systems.
- Fuel gas systems will be isolated to the facility and all in plant systems de-pressurized.
- Gas Turbine generators will be prepared for lay-up per GE procedure GEK 112166.
- Cooling systems will be circulated once/week by plant staff. Chemistry of water cooling systems will be maintained during the 90 day period of facility closure.
- Waste water treatment equipment will be drained, flushed, and placed in normal short-term lay-up condition. Wastes from this cleaning will be handled in accordance with the PEC Waste Management Plan.
- Small pumps, fans, and motors will be cycled weekly by plant personnel to maintain operability. Gas Turbines will motored weekly.
- Chemical inventories will be minimized and any unused chemicals not required for short term chemistry control will be removed from the site.
- PEC operations staffing is expected to remain at normal operating levels during this period.
- Potable water system remains in service.

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7. Equipment Shutdown and De-Energization, greater than 90 days

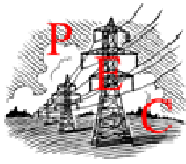
For periods of facility closure of greater than 90 days and less than 12 months duration with no damage to facility, PEC will take the following non-inclusive steps to safely shutdown and de-energize facility power generating equipment and prepare for short-term lay-up:

- Back feed electrical power will be maintained to the facility to ensure power to critical control equipment, communication, and security systems.
- Fuel gas systems will be isolated to the facility and all in plant systems de-pressurized.
- Gas Turbine generators will be prepared for lay-up per GE procedure GEK 112166.
- All condensate water, feed water, and water treatment systems will be fully isolated, drained, and placed in short term lay-up conditions as recommended by equipment manufacturers.
- Cooling systems will be fully isolated, drained, and placed in short-term lay-up conditions per manufacturer recommendations.
- Waste water treatment equipment will be drained, flushed, and placed in normal short-term lay-up condition. Wastes from this cleaning will be handled in accordance with the PEC Waste Management Plan.
- Large motors will be electrically dehumidified per manufacturer recommendations.
- Small pumps will be drained and flushed. Waste from this cleaning process will be handled in accordance with the facility's Waste Management Plan.
- Ammonia, sulfuric acid, sodium hypochlorite, all waste water treatment chemicals, water treatment chemicals, and cooling tower chemistry control chemicals will remain in the tanks and will be removed from site if closure lasts more than 90 days.
- All transformers and gas turbines will remain full of mineral/lubricating oil and monitored on a daily basis for leaks.
- PEC staffing will adjust accordingly within applicable owner's agreement for planned facility closure.
- Potable water system remains in service.

8. Removal of Hazardous Materials

Procedures for handling hazardous materials and hazardous wastes within 90 days and for duration of facility closure up to 12 months are included in the facility's Waste Management Plan. PEC will manage removal of all required substances through approved and licensed vendors.

Depending on the expected duration of the temporary cessation of operations, chemicals may be drained from storage tanks and other equipment. Refer to the facility's current Hazardous Material Business Plan (HMBP) and Safety Data Sheet binders for list of chemicals used at the PEC facility.

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For closures of more than 90 days, PEC shall remove all hazardous materials and hazardous wastes from the PEC facility. Tank cleaning of all chemical storage tanks will also be accomplished through approved, licensed vendors. Once the tanks are drained and cleaned, all openings will be sealed and power isolated using the PEC Lock-out/Tag-out procedure. All tanks will be inspected every three months, and a log kept of the inspections. At the end of closure period, all tanks used for hazardous materials storage will be inspected to meet new tank requirements of CCR Title 213, Article 3 or Article 6.

For hazardous materials decontamination, cleanup, and removal services, PEC will utilize only approved, licensed vendors.

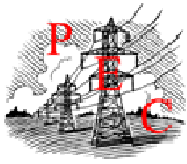
9. Site Security

For periods of facility closure of less than 90 days, PEC will maintain staffing levels and conduct routine shift rotations as per the agreed terms of owner's Facility Operations & Maintenance Agreement, Inc. PEC personnel will act as facility security 24 hours per day, seven days per week and will manage site security in accordance with the Site Security Plan.

For periods of site closure that extend past 90 days durations but are less than 12 months, PEC will maintain a work force necessary to meet the security requirements of Site Security Plan. This includes routine site walk downs, management of security camera and intrusion detection systems, and physical security of plant equipment. It is expected that staffing levels for this type of site security will be adjusted with agreement through owner and PEC.

10. Routine Monitoring

In addition to the physical security monitoring of the PEC site, PEC staff will conduct routine monitoring of power generating equipment, circulating water systems, chemistry controls, lay-up status, and storm water drainage systems during the short-term facility closure period. The facility will be under 24-hour recorded surveillance and all normal, operating security procedures will be observed by PEC staff. Storm water detention pond monitoring will be in accordance with the General requirements of the State of California for industrial sites-weekly inspections of all tanks, storm water drainage systems, buildings, and equipment will be performed and recorded by PEC staff. During the short-term closure period, PEC staff will comply with all equipment manufacturers' repair and record keeping requirements. Any spill release reporting and investigative requirements, release response and corrective action requirements will be reported in

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accordance with the Hazardous Materials Business Plan, Cal-ARP Risk Management Plan, CA Health and Safety code Chapter 6.7, and the California Code of Regulations Chapter 16.

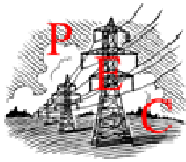
11. Warranties and Insurance

The Project Owner, PPMS, provides All Risk Boiler Machinery and Property Insurance for the PEC facility, including fire and earthquake coverage and the policies are renewed annually.

As of June 2018, all warranties on combustion turbines and major facility equipment have expired. Future changes to warranties will be provided as updates to this Plan.

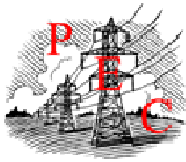
12. Temporary Closure Contingency Plan Revisions

The current revision date and the revision number are given on the Title Page and in the footer on all pages of this document. Electronic copies shall be similarly dated and numbered. Please note that this Facility Temporary Closure Contingency Plan is a controlled document.

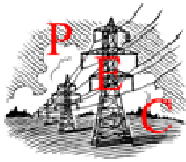
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Appendix 1 - Procedure for Shutdown/Startup and Checkout of the CEMS system.

Appendix 2 – Procedure for GEK 112166 Preservation/Depreservation of a LMS 100 gas turbine

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Appendix 1
 From the CISCO Maintenance Manual

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3.0 SYSTEM SHUTDOWN/START-UP/CHECKOUT

Note: This section is **not** intended to supplant the services of a trained CiSCO Field Service Technician whose presence on initial start-up/checkout is highly recommended. Rather, the intent of this section is to assist customer personnel on system start-up/checkout after periods of downtime subsequent to successful system start-up/checkout at installation. It presupposes that there are no equipment problems and that correct installation has been verified.

3.1 GENERAL

To shut down the system, the following steps should be taken:

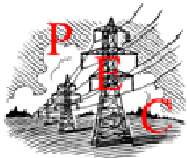
1. Estimate the internal shelter temperature expected during the shut down period. The allowable shelter inside storage temperature range is -13°F to 105°F (-25°C to 40°C). If this range will not be exceeded, the A/C and heater unit(s) can be disabled during the shut down period, otherwise they must be left "ON".
2. Shut off all circuit breakers (if Step 1 above allows).
3. Disconnect the HSL at each end and insert plugs to prevent samples from entering the system.
4. Plug open ports on the sample probe.
5. Drain any condensate from the system. Specifically, the refrigeration unit should be drained of all visible water. In order to pump any residual water out of the drain pump, the drain pump should be operated for approximately one (1) minute with no water input.
6. Shut off Instrument Air.
7. Close the gas cylinder shut off valve on all gas cylinders.

3.2 START-UP

In starting up a CEMS, it is important to remember **not** to start sampling until the sample conditioning portions of the sample handling systems (HSL and refrigerated cold-water bath) are temperature stabilized so that condensate is not drawn through the analyzers. **Other precautions and warnings are shown in this manual and must be observed to prevent damage, provide satisfactory performance and comply with CiSCO warranty conditions.**

3.2.1 CEMS Shelter Power on Sequence

Each CEMS shelter is equipped with a Main Power Distribution Panel (MPDP). The MPDP provides power to loads in the CEMS shelter and stack mounted equipment. The sequence shown in the following table should be followed when bringing a "cold" CEMS shelter on-line.

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CEMS POWER UP SEQUENCE	MPDP
1. Make sure "ALL" breakers are turned "OFF" before initiating the initial CEMS power up sequence.	—
2. Turn "ON" the main breakers.	1/3/5
3. Turn "ON" the circuit breakers for the building lights and to power the utility outlets PB1, PB2, PB8, PB9, PB10.	7,9,12,27
4. Make certain that the sample pumps are disconnected (unplugged) from their respective AC outlets PB5 (stack), PB6 (SCR Inlet), PB3 (analyzer vacuum pumps).	—
5. Disconnect (unplug) all remaining equipment from their respective AC outlets.	—
6. Turn "ON" the circuit breakers to start heating the sample lines (Stack, SCR Inlet).	11/13/15 20/22/24
7. Turn "ON" the circuit breakers for the air conditioner/heater. Do not proceed to Step 8 until the room climate control is functioning and the temperature is in the 75° to 90°F (24° to 32°C) range (HVAC1, HVAC2).	14/16/18 17/19/21
8. Plug equipment units into PB7. Turn "ON" circuit breaker to PB7.	10
9. Verify that the DAHS system is supplied with customer supplied 120Vac UPS power.	—
10. To allow for temperature stabilization, a minimum of four hours should elapse before completing system startup, after Steps 1 through 9 have been successfully accomplished.	—
11. After the temperatures have stabilized, the CEMS shelter can be fully brought on-line. This will include taking most of the following steps: <ul style="list-style-type: none"> • Turn on calibration gasses at gas cylinder valves. • Connect (plug in) the sample pumps to their respective AC outlets PB5, PB6, PB3. Turn "ON" the sample pumps. • Adjust flow valves to obtain typical settings shown in the Operations section. • Turn "ON" the balance of the equipment as required, i.e., PB11, PB4, PS1. 	8,23 UPS 1,2

All system parameters should be normal. Calibration fail alarms will be cleared upon successful completion of a calibration sequence. No other system alarms should be present.

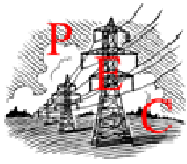
3.3 CHECKOUT

The standard procedure for checkout of a CEMS involves verifying that all system indicators are correct and that accurate signals exist at the PLC registers and the DAHS.

A list of system operational indicators and a space to record the optimal set point of each is included in the Operations Section (4.3) of this manual. All system indicators should be checked for proper settings. Analog and digital signals can be verified after successful completion of a system calibration by loop checking the CEMS to plant interface signals. See System Calibration Section for information on calibrating this system.

All system alarms should be exercised by simulating the alarm condition to ensure that a system fault is generated. The procedures for performing this function are found in the Maintenance Appendix.

Using the timing diagram in the System Drawings Section and the program found in the Process Control Section, functional operation of solenoid valves, signal conditioning and analysis should be verified for proper operation. After these checkout steps have been taken, the operator can be very confident in the operation of the system and the validity of the analysis.

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Appendix 2
GE Procedure