

**DOCKETED**

<b>Docket Number:</b>	07-AFC-06C
<b>Project Title:</b>	Carlsbad Energy Center - Compliance
<b>TN #:</b>	231221
<b>Document Title:</b>	Noise Control Plan NOISE-3
<b>Description:</b>	Noise Control Plan for the Demolition of Encina Power Station
<b>Filer:</b>	Anwar Ali
<b>Organization:</b>	Carlsbad Energy Center LLC
<b>Submitter Role:</b>	Applicant
<b>Submission Date:</b>	12/13/2019 3:34:53 PM
<b>Docketed Date:</b>	12/13/2019



December 13, 2019

Mr. George Piantka  
Director Regulatory Environmental Service  
NRG Energy, Inc., West Region  
4600 Carlsbad Boulevard  
Carlsbad, California 92008

**SUBJECT: ENCINA POWER STATION/AMENDED CARLSBAD ENERGY  
CENTER PROJECT (07-AFC-06C) – APPROVAL OF DEMOLITION PLANS**

Dear Mr. Piantka:

In accordance with the Conditions of Certification, staff has reviewed and approved the following plans:

- Public Notification Process (**NOISE-1**);
- Noise Control Plan (**NOISE-3**);
- Storm Water Pollution Prevention Plan (**SOIL&WATER-1**);
- Non-Potable Water Use Plan (**SOIL&WATER-2**);
- Traffic Control Plan (**TRANS-1**); and
- Waste Management Plan (**WASTE-5**).

If you have any questions or concerns, please contact Anwar Ali, Compliance Project Manager, at (916) 654-5020, or by fax to (916) 654-3882, or via e-mail at [anwar.ali@energy.ca.gov](mailto:anwar.ali@energy.ca.gov).

Sincerely,

A handwritten signature in blue ink, appearing to read "Jonathan Fong".

Jonathan Fong  
Compliance Office Supervisor  
Siting, Transmission, and Environmental  
Protection Division



**NRG Encina Cabrillo I Power  
Operations, Inc.**

4600 Carlsbad Blvd.  
Carlsbad, CA 92008  
Phone: 760-268-4000  
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August 23, 2019

Mr. Anwar Ali, PhD  
Compliance Project Manager  
Docket No. 07-AFC-06C  
California Energy Commission  
1516 Ninth Street, MS2000  
Sacramento, CA 95814

**Subject: Encina Power Station (Cabrillo Power I LLC) Demolition  
Carlsbad Energy Center - Docket No. 07-AFC-06C  
Condition of Certification NOISE-3: Noise Control Program**

Dear Dr. Ali:

NRG Energy, Inc. (NRG/Project Owner) submits the attached revised Noise Control Program (NCP) on behalf of Cabrillo Power I LLC, owner of Encina Power Station (Encina), located at 4600 Carlsbad Boulevard, Carlsbad, California. This NCP is submitted in compliance with Condition of Certification NOISE-3 for the Amended Carlsbad Energy Center Project (CECP), Docket No. 07-AFC-06C. The CECP license includes requirements to decommission and demolish Encina. The attached NCP for the CECP documents the requirement applicable to Encina's demolition.

This NCP will be implemented during the below grade demolition, berm removal, and construction phases of work. Project Owner provides this submittal for your review and approval.

If you have any questions regarding this submittal, please contact George Piantka at (760) 707-6833.

Sincerely,

George L. Piantka, PE  
Sr. Director, Environmental Regulatory Services  
NRG Energy, Inc.

Enclosures: Noise Control Program for Amended NRG Cabrillo Power Operations  
San Diego County, California (07-AFC-06C), Prepared by NRG/Cabrillo Power I LLC

cc: File

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NOISE - 3

**Noise Control Program  
Demolition of Encina Power Station  
Project  
(07-AFC-06C)**

**San Diego County, California**

Prepared for

**Cabrillo Power I LLC**

4600 Carlsbad Boulevard  
Carlsbad, CA 92008

August 2019

**Prepared by NRG/Cabrillo Power I LLC**

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# Acronyms and Abbreviations

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Amended CECP	Amended Carlsbad Energy Center Project
Cal-OSHA	California Occupational Safety & Health Administration
CCR	California Code of Regulations
CEC	California Energy Commission
CFR	Code of Federal Regulations
COC	Conditions of Certification
dB	Decibel
dBA	A-weighted Decibel
EPS	Encina Power Station
NCP	Noise Control Program
NCTD	North County Transit District
OSHA	Occupational Safety and Health Administration
Project Owner	Carlsbad Energy Center LLC
PTA	Petition to Amend
SDG&E	San Diego Gas and Electric
TWA	Time weighted average

# Introduction

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Cabrillo Power I LLC (“Project Owner”) has prepared this Noise Control Program (NCP) for the demolition of the Encina Power Station (Phase IV) as a continuation of the Amended Carlsbad Energy Center Project (“Amended CECP” or “Project”) in San Diego County, California. This NCP is applicable to the activities associated with the Petition to Amend (PTA), as submitted by the Project Owner in September 2014. This NCP has been prepared in accordance with Condition of Certification (COC) NOISE-3 in the California Energy Commission’s (CEC’s) Amended CECP Final Commission Decision (07-AFC-06C; July 2015).

The purpose of this NCP is to identify all mitigation, monitoring, and compliance measures related to noise sources to ensure compliance with COC NOISE-3. This NCP has been prepared to address Phase II activities, which includes the demolition of the Encina Power Station.

An NCP was submitted in September 2014 for CECP Phase I demolition/removal activities for Tanks 5, 6, and 7, in support of the relevant COCs adopted by the CEC in its June 2012 Final Decision (07-AFC-06C). The NCP was updated in July 2015 for Amended CECP Phase I demolition of Tanks 1, 2, and 4, and as needed soil remediation in the tank basins in support of the COCs proposed by the CEC in the June 2015 Amended CECP Presiding Member’s Proposed Decision (07-AFC-06C). After CEC Compliance Project Manager approval, CECP Phase I activities commenced in February 2014 and Amended CECP Phase I activities commenced in July 2015. Another NCP was submitted in November 2015 to allow for compliance of Noise-3 during site preparation, construction and commissioning of the Amended CECP as modified by the PTA

## 1.1 Plan Overview

This NCP identifies potential demolition noise sources, discusses noise exposure control and hearing conservation, and applies to all onsite personnel during the demolition of Encina Power Station. This NCP is intended to reduce employee exposure to high noise levels during demolition activities and also to comply with applicable Occupational Safety and Health Administration (OSHA) and California (Cal-OSHA) standards. Guidelines will be implemented in accordance with California Code of Regulations (CCR), Title 8, General Industry Safety Orders, Article 105, (Sections 5095-5100 and Appendixes A-F) and Code of Federal Regulations (CFR) 29 CFR 1910.95, Occupational Noise Exposure.

## 1.2 Project Background

The Amended CECP was constructed to meet the electrical resource needs for the San Diego County Region as identified by the California Independent System Operator, the CEC, the California Public Utilities Commission, and San Diego Gas and Electric (SDG&E). This includes contributing electricity to reserves that will ensure a reliable energy supply and local and regional electrical transmission grid support in San Diego County and the southern California region. The construction and operation of the Amended CECP requires that the now retired Encina Power Station be demolished.

## 1.3 Project Location

The Encina Power Station site is located in Carlsbad, San Diego County, California (Figure 1 and 2). The site address is 4600 Carlsbad Boulevard, Carlsbad, California 92008. The Amended CECP site is located on a portion of the approximately 95-acre Encina Power Station property located in Township 12 South, Range 4 West, Section 7, in San Diego County. The Amended CECP site is located within the northeastern portion of the existing EPS property, and is bordered to the east by Interstate 5, to the south by the SDG&E maintenance yard and Cannon Substation, to the west by the Pacific Ocean, and to the north by the Agua Hedionda Lagoon. The Amended CECP site is bisected by the North County Transit District (NCTD) railroad right-of-way that runs north and south through the Encina Power Station. The predominant land use in the

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vicinity of the site is industrial. Residential, commercial, agricultural, and open space land uses are also situated nearby.

## 1.4 Project Description

The Amended CECP has been divided into four phases as follows:

- **Phase I** – Above grade demolition/removal activities for Tanks 1, 2, 4, 5, 6, and 7 including soil remediation in the tank basins as needed, and berm removal between Tanks 4 and 5, 5 and 6, and 6 and 7. This phase includes below grade demolition, soil disturbance and excavations associated with berm removal and soil remediation activities. Above grade demolition and removal of Tanks 5, 6, and 7 is being accomplished under the existing CEC License for CECP.
- **Phase II** – Site preparation, construction, commissioning and operation of the Amended CECP as modified by the PTA.
- **Phase III** – Retirement and decommissioning of the Encina Power Station facility.
- **Phase IV** – Demolition of the Encina Power Station facility. Phase IV specifically excludes below grade demolition and site remediation, which will be accomplished under the authority of San Diego County Environmental Health Department (site remediation) and the City of Carlsbad (redevelopment of the Amended CECP site for future use) subsequent to the completion of Phase IV.

Demolition equipment will be typical of demolition work and will include excavation equipment (such as track hoes, front-end loaders and backhoes), off-road forklifts, man-lifts, small diesel generators, delivery trucks, 10-wheel dump trucks, semi-tractor trailer trucks, cranes, and demolition crew support trucks. Oversized loads will be transported on multiple axel trucks with escort vehicles. The average demolition workforce is expected to range in size from 50-100 workers at any one time, with a peak of 125 workers. Demolition activities are anticipated to occur over an approximately 27-month period.

This NCP has been prepared to address Encina Power Station Activities activities and contractors will be required to acknowledge NCP requirements as part of their procurement process.



## SECTION 2

# Definitions of Acoustical Terms

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The below is a list of definitions of acoustical terms.

**A-weighted** network is a scale incorporated in sound level measuring instruments that most nearly approximates the response of the human ear.

**Action level** is an 8-hour time-weighted average of 85 decibels measured on the A-scale, slow response, or equivalently, a dose of 50 percent of the permissible dose.

**Audiogram** is a chart, graph or table resulting from an audiometric test showing an individual's hearing threshold level as a function of frequency.

**Baseline audiogram** is the audiogram against which future audiograms are compared.

**Decibel (dB)** is a unit of measurement of sound level.

**Hearing Conservation Program** is a noise program required by Cal-OSHA for all employees exposed to greater than 85 dB as an 8-hour time weighted average (TWA).

**Noise dosimeter** is an instrument that integrates a function of sound pressure over a period of time in such a manner that it directly indicates a noise dose.

**Noise reduction rating** is the number of decibels by which the hearing protective device will reduce the noise level.

**Permissible exposure limit** is the allowable exposure for compliance with OSHA requirements.

**Sound level meter** is an instrument for the measurement of sound level.

**Standard threshold shift** is a change in hearing threshold relative to the baseline audiogram of an average of 10 dB or more at 2,000, 3,000, or 4,000 hertz in either ear.

**Time weighted average** is the sound level which, if constant over an 8-hour exposure, would result in the same noise dose as is measured.

# Responsibilities

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## 3.1 Construction Safety Supervisor

The Construction Safety Supervisor is responsible for the development and implementation of this NCP, and will provide daily oversight and management, including ensuring the following:

- Proper monitoring and audiometric testing is performed by qualified personnel
- Proper hearing protection devices are identified and used
- Engineering controls are implemented when feasible
- High noise areas are properly posted
- Accurate records are reviewed and maintained
- All personnel working in hazardous noise areas are properly trained
- Appropriate action is taken to correct any deficiencies

## 3.2 Subcontractors

Demolition subcontractors are expected to follow the requirements of CCR, Title 8, General Industry Safety Orders, Article 105, (Sections 5095-5100 and Appendixes A-F) for the applicable industry category that applies to their work activity and industry classification. Although subcontractors performing demolition activities are exempt from provisions of Sections 5097 through 5100 of CCR Title 8, General Industry Safety Orders, Article 105, all demolition subcontractors at the Encina Power Station site are expected to comply with the following requirements:

- Provide employees and visitors with access to hearing protection devices in noise-hazardous areas where the 8-hour TWA could exceed 85 A-weighted decibels (dBA).
- Enforce the use of hearing protection or implement engineering controls to reduce noise exposure when personnel are exposed or potentially exposed to noise in excess of 90 dBA as an 8-hour TWA.
- Assist the Construction Safety Supervisor in identifying any high hazard equipment used onsite that produces noise in excess of 115 dBA.

## SECTION 4

# Noise Control Program

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All employers are required to control employee exposure to occupational noise levels of 85 dBA and above, by implementing a hearing conservation program that meets the requirements of the OSHA Occupational Noise Exposure standard, 29 CFR 1910.95 and Cal-OSHA 8CCR Section 5095. A noise assessment/survey may be conducted by the employer's Safety Manager or designee based on potential to emit noise above 85 dBA and also considering the frequency and duration of the task.

Occupational noise control measures include:

- Areas or equipment emitting noise at or above 90 dBA shall be evaluated to determine feasible engineering controls. When engineering controls are not feasible, administrative controls can be developed and appropriate hearing protection will be provided.
- In areas or near equipment emitting noise levels at or above 85 dBA, hearing protection must be worn.
- Employees exposed to 85 dBA or a noise dose of 50 percent must participate in the Hearing Conservation Program including initial and annual (as required) audiograms.
- The employer's Safety Manager will evaluate appropriate controls measures and work practices for employees who have experienced a standard threshold shift in their hearing.
- Employees who are exposed at or above the action level of 85 dBA are required to complete the noise training.
- Hearing protection will be maintained in a clean and reliable condition, inspected prior to use and after any occurrence to identify any deterioration or damage, and damaged or deteriorated hearing protection repaired or discarded.
- In work areas where actual or potential high noise levels are present at any time, hearing protection must be worn by employees working or walking through the area.
- Areas where tasks requiring hearing protection are taking place may become hearing protection required areas as long as that specific task is taking place.
- High noise areas requiring hearing protection should be posted or employees must be informed of the requirements in an equivalent manner and a copy of the OSHA standard 29 CFR 1910.95 shall be posted in the workplace.

## 4.1 Survey and Monitoring Program

Noise assessments/surveys will be conducted whenever noise levels have the potential to exceed 85 dBA as an 8-hour TWA, and/or when evaluating the adequacy of engineering controls and personal protective equipment. A monitoring program will be implemented when survey results indicate that any employee's exposure may equal or exceed an 8-hour TWA of 85 dBA. An example Noise Monitoring Form is included as Appendix A. The monitoring requirement shall be met by either area monitoring or personal monitoring that is representative of the employee's exposure. Results must be documented and employees exposed to noise levels at or above an 8-hour TWA of 85 dBA will be notified.

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## 4.2 Permissible Exposure Limit

Engineering or administrative controls will be implemented when personnel are subjected to noise levels that may exceed the permissible exposure limit of 90 dBA as an 8-hour TWA. If such controls fail to reduce harmful noise levels below 90 dBA as an 8-hour TWA, personal protective equipment will be provided and used to reduce noise levels to within permissible levels. Under no circumstances will employees be exposed to continuous or intermittent noise in excess of 115 dBA, nor will any employee be exposed to impact noise in excess of a 140 dB peak.

## 4.3 Additional Engineering and Administrative Controls

### 4.3.1 Engineering Controls

Engineering controls will be the primary means of reducing noise levels, however, when engineering controls are not feasible or cannot reduce levels to within the permissible limit, hearing protection will be worn. The following engineering controls may be used:

- Relocate operations from an enclosed environment to the outdoors, provided the relocation complies with environmental noise limits
- Install/repair mufflers or exhaust systems on equipment
- Install sound-deadening material to isolate process

### 4.3.2 Administrative Controls

Administrative controls will be used when any operation is deemed to present a hazardous noise level and engineering controls have been demonstrated to be unfeasible or do not reduce the noise levels the necessary amount. The following administrative controls may be used:

- Assignment of personnel to shifts with lower noise exposures
- Limit employee's noise exposure based on duration
- As determined by monitoring, proper signage will be prominently posted in areas where there a high noise hazard exists

## 4.4 Hearing Conservation Program

As part of this NCP, all personnel exposed to noise equal to or greater than 85 dBA as an 8-hour TWA (action level) will be enrolled in a required Cal-OSHA-Hearing Conservation Program (29 CFR 1910.95) unless otherwise allowed under California Code of Regulations noted in Section 3.2 above. This program includes audiometric exams or hearing tests, and training.

### 4.4.1 Audiometric Testing

Audiometric testing will be available to all employees whose exposures equal or exceed an 8-hour TWA of 85 dBA. A physician or technician will administer pure tone audiometric tests (air condition) for each ear. Minimum test frequencies are 500, 1,000, 2,000, 3,000, 4,000 and 6,000 hertz. Testing will be in accordance with OSHA (1910.95). Baseline testing within 6 months of initial exposure to the threshold limit and annual testing will be provided.

### 4.4.2 Training Program

Employees who are exposed to noise at or above an 8-hour TWA of 85 dBA will receive the training required by this program.

At a minimum, the following topics will be included in the training program:

- Site-specific noise hazards
- Effect of noise on hearing
- Engineering controls being used onsite
- Purpose of hearing protectors, the advantages, disadvantages, and attenuation of various types, and instruction on selection, fitting, use and care
- Practical (hands-on) training in fitting and use of the hearing protection in use at the site
- Purpose of audiometric testing and an explanation of the test procedures

The training program will be repeated and documented annually for each onsite employee and included in the Hearing Conservation Program. Information provided in the training program will be updated to be consistent with changes in protective equipment, work processes and/or activities.

#### **4.4.3 Access to Information and Training Materials**

Copies of Cal/-SHA standards and related OSHA informational materials for the Hearing Conservation Program (29 CFR1910.95) will be available to affected employees or their representatives.

**Appendix A**  
**Noise Monitoring Form**

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# NOISE MONITORING FORM

DATE \_\_\_\_\_

## PART I

JOB DESCRIPTION: \_\_\_\_\_

JOB SITE LOCATION: \_\_\_\_\_

## PART II

AREA SAMPLE: \_\_\_ PERSONAL SAMPLE: \_\_\_\_\_ NUMBER OF WORKERS EXPOSED: \_\_\_\_\_

HEARING PROTECTION IN USE? \_\_\_\_\_ YES \_\_\_\_\_ NO IF YES, NRR \_\_\_\_\_

RUN TIME: \_\_\_\_\_ SOUND LEVEL: \_\_\_\_\_ DB(A) PEAK LEVEL: \_\_\_\_\_ DB(A) OL-TIME: \_\_\_\_\_

HTL-AVG: \_\_\_\_\_ dB(A) LTL-AVG: \_\_\_\_\_ dB(A)

HTL-TWA: \_\_\_\_\_ dB(A) LTL-TWA: \_\_\_\_\_ dB(A)

HTL-DOSE: \_\_\_\_\_ % LTL DOSE: \_\_\_\_\_ %

SAMPLED BY: \_\_\_\_\_ TITLE: \_\_\_\_\_ DATE: \_\_\_\_\_

## PART III

NOISE MEASURING INSTRUMENT NAME: \_\_\_\_\_ SERIAL NO. \_\_\_\_\_

CALIBRATING INSTRUMENT NAME: \_\_\_\_\_ SERIAL NO. \_\_\_\_\_

BEFORE SURVEY CHECK/CALIBRATION:  OK TIME \_\_\_\_\_  AM AT \_\_\_\_\_ dB CODE \_\_\_\_\_  
 NOT OK  PM

AFTER SURVEY CHECK/CALIBRATION:  OK TIME \_\_\_\_\_  AM AT \_\_\_\_\_ dB CODE \_\_\_\_\_  
 NOT OK  PM

CALIBRATED BY: \_\_\_\_\_ TITLE: \_\_\_\_\_ DATE: \_\_\_\_\_

## NOTES:

1. The noise measuring instrument must be set in the "run" mode to obtain the above data.
2. LTL-TWA readings >85 dB(A) shall require compliance with hearing conservation requirements.
3. HTL-TWA readings >90 dB(A) shall require implementation of engineering controls.
4. Parts I and II will be used to update the Health Database.
5. The original copy of this form shall be maintained by Project Document Control while onsite and corporate ES&H per Records Retention procedures.
6. CODE – an encoded number which identifies the internal switch setting (refer to Instrument Instruction Manual).
7. OL-Time is the length of time the noise equaled or exceeded 115 dB(A)



- LEGEND
- Amended DECP Project Site
  - Parking and Staging
  - CA City Limits





**FIGURE 1**  
**Vicinity Map**  
*Amended Carlsbad Energy Center Project*

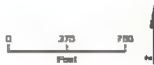
Prepared by NRG/Cabrillo Power I LLC





LEGEND  
 Amended CECP site boundary  
 Encina Power Station Site

Aerial Imagery Source: Google Earth Pro, 2015



**Figure 2**  
**Project Location Map**  
*Amended Carlsbad Energy Center Project*

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