

DOCKETED	
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Project Title:	Carlsbad Energy Center - Compliance
TN #:	237511
Document Title:	Nest Monitoring Plan- BIO-8
Description:	CEC-Approved American Peregrine Falcon Nest Monitoring Plan, in accordance with BIO-8 (Mitigation Management to Avoid Harassment or Harm).
Filer:	Anwar Ali
Organization:	Carlsbad Energy Center LLC
Submitter Role:	Commission Staff
Submission Date:	4/21/2021 10:59:32 AM
Docketed Date:	4/21/2021



April 20, 2021

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

**ENCINA POWER STATION/AMENDED CARLSBAD ENERGY CENTER
PROJECT (07-AFC-06C) – APPROVAL OF NEST MONITORING PLAN**

Dear Mr. Piantka:

In accordance with Condition of Certification **BIO-8** (Mitigation Management to Avoid Harassment or Harm), staff has reviewed and approved the Nest Monitoring Plan for the demolition of the Encina Power Station.

If you have any questions or concerns, please contact Anwar Ali, Compliance Project Manager, at (916) 698-7498, or via e-mail at anwar.ali@energy.ca.gov.

Sincerely,

Elizabeth Huber

Elizabeth Huber
Manager, Compliance, Monitoring, and
Enforcement Office
Siting, Transmission, and Environmental
Protection Division

BIO-8

Nest Monitoring Plan Encina Power Station Demolition

(07-AFC-06C)

San Diego County, California

Prepared for

Cabrillo Power I LLC

4600 Carlsbad Boulevard
Carlsbad, CA 92008

April 2021

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Acronyms and Abbreviations

BCC	Birds of Conservation Concern
BRMIMP	Biological Resources Mitigation Implementation and Monitoring Plan
CDF	California Department of Forestry
CDFW	California Department of Fish and Wildlife
CEC	California Energy Commission
COC	Condition of Certification
CPM	Compliance Project Manager
EPS	Encina Power Station
ESA	Environmentally Sensitive Area
FP	Fully Protected
MBTA	Migratory Bird Treaty Act
MCR	Monthly Compliance Report
NMP	Nest Monitoring Plan
S	Sensitive
USFWS	United States Fish and Wildlife Service
WEAP	Worker Environmental Awareness Program

Purpose and Background

Cabrillo Power I, LLC (Project Owner and subsidiary of NRG Energy, Inc. [NRG]) has prepared this Nest Monitoring Plan (NMP) for the demolition of the Encina Power Station (EPS or Project) in San Diego County, California. This NMP has been prepared and is in conformance with the California Energy Commission's (CEC) Conditions of Certification (COC) BIO-8.

The purpose of this NMP is to identify mitigation, monitoring, and compliance measures related to the nesting American peregrine falcon (*Falco peregrinus anatum*; United States Fish and Wildlife Service [USFWS] Birds of Conservation Concern [BCC]; California Department of Fish and Wildlife [CDFW] Fully Protected [FP]; California Department of Forestry [CDF] Sensitive [S]) pair, which are located on the eastern side of the EPS. The active nest was identified on April 3, 2021 and a 100-foot Environmentally Sensitive Area (ESA) buffer was established around the nest. Subsequently, notification was submitted to the CEC Compliance Project Manager (CPM), which is included Appendix A.

1.1 Overview

This NMP summarizes proposed demolition-activities and nest monitoring that will occur within the American peregrine falcon ESA. The NMP is being implemented to ensure that the Project is completed in a manner that avoids impacts to the American peregrine falcons by appropriate compliance with COCs and permits conditions, as applicable. The Project Owner will ensure the EPS will adhere to the COCs and permit conditions, as applicable.

This NMP includes the following primary components:

- Biological Resources COCs, including BIO-8;
- A description of EPS demolition activities;
- Nest survey protocols;
- Nest management;
- Applicable reporting for biological resources.

1.2 Conditions of Certification

Table 1-1 provides a list of the Biological Resource COCs applicable to the EPS.

Table 1-1. Conditions of Certification for Biological Resources

COC #	Condition of Certification
BIO-1	Designated Biologist Qualifications
BIO-2	Designated Biologist Duties
BIO-3	Biological Monitor Qualifications
BIO-4	Designated Biologist and Biological Monitor Authority
BIO-5	Worker Environmental Awareness Program (WEAP)
BIO-6	Biological Resources Mitigation Implementation and Monitoring Plan (BRMIMP)
BIO-7	Impact Avoidance Mitigation Features

Table 1-1. Conditions of Certification for Biological Resources

COC #	Condition of Certification
BIO-8	Mitigation Management to Avoid Harassment or Harm

1.2.1 Condition of Certification BIO-8

As stated in BIO-8, the project owner shall implement the following measures to manage its construction site (and related facilities) in a manner to avoid or minimize impacts to local biological resources:

- 1) Install temporary fencing and provide wildlife escape ramps for construction areas that contain steep-walled holes or trenches if outside an approved, permanent exclusionary fence. The temporary fence shall be hardware cloth or similar material that is approved by USFWS and CDFW;
- 2) Ensure that all food-related trash is disposed of in closed containers and removed at least once a week;
- 3) Prohibit feeding of wildlife by staff and subcontractors;
- 4) Prohibit non-security-related firearms or weapons on site;
- 5) Prohibit pets on site;
- 6) Avoid work between March 1 and August 15 to avoid impacts to birds protected under the Migratory Bird Treaty Act.
 - a) If this is not feasible, a survey shall be conducted for nesting birds within the project area.
 - b) Should an active nest be discovered, the Designated Biologist or biological monitor shall establish an appropriate buffer zone (in which construction activities are not allowed) to avoid disturbance in the vicinity of the nest.
 - i) Construction activities shall not commence until the Designated Biologist or biological monitor has determined that the nestlings have fledged or that construction activities will not affect adults or newly fledged young; or
 - ii) The Designated Biologist or biological monitor shall develop a monitoring plan that permits the activity to continue in the vicinity of the nest while monitoring nesting activities to ensure that the nesting birds are not disturbed.
- 7) Report all inadvertent deaths of sensitive species to the biological monitor, who will notify CDFW and USFWS, as appropriate; and
- 8) Minimize use of rodenticides and herbicides in the project area.

Verification: All mitigation measures and their implementation methods shall be included in the BRMIMP. Implementation of the measures shall be reported in the monthly compliance report by the Designated Biologist. Within 30 days after completion of project construction, the project owner shall provide to the CPM, for review and approval, a written construction termination report identifying how biological resource measures have been completed.

Demolition Overview

The following sections provide an overview of work that is being proposed within the American peregrine falcon ESA. The nest is located 150' above the building interior basement (elevation 0') and 133' above the exterior grade on the east side of the EPS building.

2.1 Interior Manual Work

EPS interior manual work is a critical task for demolition. Although this work occurs within the ESA, it is occurring inside a building, below a 4" concrete roof and behind the 10" concrete exterior wall opposite Units 1-3. Specifics about the interior work are provided below:

- Unit 3 Asbestos Abatement: this work is in the final stages of completion and primarily consists of a HEPA-vacuuming and water washdown within the already constructed containment that utilizes the 10" thick concrete exterior wall along Column H on the east side. This work is planned for all elevations.
- Lead-based paint removal and associated gut out of basement elevation in Unit 3. This work is performed at elevation 0' (basement floor) and is supported by skid steers removing equipment once torch-cut to free the equipment from the pedestals.
- Column line 15, Columns H to D transite removal from elevation 140' down to elevation 34' (operating floor): this work will be performed from inside the structure using manual methods; no crane work or exterior equipment will be used to access this wall.
- Presumed electrical cabinet asbestos removal within Unit 4: this work entails identifying and manually removing electrical cabinets with presumed asbestos wiring. This work is on all levels and floors of Unit 4.
- Maintenance and monitoring of water hose through Units 3 and 4 tunnel to the control building on the east side of the boiler house (elevation 17').
- General access and walking through the structure at operating floor (elevation 34'), mezzanine floor (elevation 17'6") and basement floor (elevation 0').

Interior work is not anticipated to cause significant distress to the American peregrine falcon nest, because it is buffered with concrete walls and roofs. In addition, this work has been ongoing since demolition resumed on July 9, 2020. While this work was occurring, the American falcon pair continued to use the area, copulation, and lay eggs on the eastern side of the EPS building.

2.2 Exterior Work

EPS exterior work that will occur within the ESA buffer includes the following:

- In accordance with our asbestos abatement work, periodic inspections are needed to check the integrity of the critical (poly containment) on the roof of Unit 3 and perform maintenance, if necessary. The inspections are manually performed and any anticipated maintenance would be performed manually as well. All areas that need to be inspected and maintained are on the west side of the breaching ductwork with access provided through the buildings existing stairs, which the nest is located on the eastern side. There is a visual barrier between both sides, as shown in Appendix A, Photos 1-2.
- Stack Demolition: This work is being performed on the concrete stack that is 37' off the face of Column line H between Columns 17 and 20. This work is scheduled to progress down to approximately 50' above exterior grade elevation and is currently at 275' above grade, leaving

approximately 225' left to be demolished using the top-down method by Pullman that has been progressing since the middle of March 2021.

- Maintenance and monitoring of water hose through Units 3 and 4 tunnel to the control building on the east side of the boiler house (elevation 17').
- General access and walking through the structure at operating Truck traffic, roadway sweeping as a storm-water pollution prevention plan (SWPPP) best management practice (BMPs), dust control roadway wetting and general foot traffic along the east roadway (adjacent to the building and stack) is scheduled to be ongoing at elevation 17' (exterior grade).

Some of the proposed exterior work has the potential to impact the American peregrine falcon nest, primarily through visual impacts and auditory impacts to a lesser extent. As previously noted, the American falcon pair has continued to use the area, copulate, and lay eggs on the eastern side of the EPS building during active demolition activities, including stack demolition activities. This pair appears to be urban adapted considering their continued use of the site during ongoing demolition activities. The largest risk would most likely occur when stack demolition reaches the same elevation as the nest, which is at 133'. Biological monitoring would be recommended at increased frequencies (daily), especially when stack demolition reaches 185'. American peregrine falcons have a 29-32-day incubation period and a 35-42-day nestling period¹. The nestling period would presumably be the riskiest because young chicks can get startled and prematurely depart from the nest, which almost certainly would result in loss. Another mitigation strategy would be to achieve an elevation of stack demolition below the nest elevation to reduce impacts. Approximately 10-15' of the stack can be demolished in a single day. If incubation started on April 3, 2021 (at least four eggs were observed and American peregrine falcon clutches contain 2-5 eggs¹), then eggs would hatch between May 2-5, 2021. This means in approximately 10 working days, the stack would be at nest level (using the more conservative estimate of 10' per day). If the demolition contractor were to continue with stack demolition from April 12-30, 2021, they would be below the nest prior to the eggs hatching. It would be beneficial for stack demolition to proceed on 6-day work weeks to accelerate the schedule and further reduce impacts on the nest. This strategy would be preferred because it would greatly reduce impacts on the nestlings because demolition would not be occurring at nest level.

Biological monitoring, by CEC-approved Biological Monitors, will occur on a daily basis while stack demolition is occurring and the nest remains active. Daily biological monitoring will not be required for interior work or work that occurs outside of the ESA. In addition, adaptive measures will be implemented based on how the nestling(s) respond, post hatching, to any outstanding work associated with the stack demolition. There is an option to leave the last section of stack demolition, approximately the remaining 53', if any distress is observed in the nestlings.

If nest predation occurs, which is a possibly because great horned owls (*Bubo virginianus*) and common ravens (*Corvus corax*) use the site, the schedule would return to as previously planned. Evidence of predation was included in the 2020 MCRs.

¹ https://www.allaboutbirds.org/guide/Peregrine_Falcon/lifehistory

Nest Monitoring Protocol

The Nest Monitoring Protocol is designed to ensure compliance with the Biological Resources COCs, California Fish and Game Code (Sections 3503, 3503.5, 3511 and 3513), and the federal Migratory Bird Treaty Act (MBTA) for nesting birds during demolition-related activities. The goals of the NMP are to: 1) provide protection for the American peregrine falcon nest during demolition per BIO-8; 2) monitor the American peregrine falcon nest on a daily basis during stack demolition; 3) report nest monitoring observations to the CPM; and 4) implement any adaptive management as needed, such as increasing buffer zones as needed if nesting birds are being adversely affected by demolition-related activities.

3.1 Designated Biologist

The Project Owner has assigned Melissa Fowler of High Country Consulting (HCC) as the Designated Biologist for the EPS. The CEC Compliance Project Manager (CPM) has approved Ms. Fowler to serve as the Designated Biologist. As required, Ms. Fowler has the following minimum qualifications:

- A bachelor's degree in biological sciences, zoology, botany, ecology, or a closely related field;
- Three years of experience in field biology or current certification of a nationally recognized biological society such as the Ecological Society of America or The Wildlife Society; and
- At least one year of field experience with biological resources found in or near the Project area.

3.2 Biological Monitor(s)

The Project Owner has submitted the résumés, including references and contact information, for each Biological Monitor to the CPM for approval. Each résumé demonstrates that the proposed Biological Monitor has the appropriate education and experience to accomplish the assigned biological resource tasks. If additional Biological Monitors are needed, resumes will be submitted to the CEC CPM.

3.3 Nest Monitoring

In accordance with BIO-8, the Designated Biologist or Biological Monitor will monitor the nest within the ESA either daily or at least once per week (depending on if interior or exterior work is being conducted), to determine whether birds are being disturbed. If signs of disturbance or distress are observed, the Designated Biologist or Biological Monitor will immediately implement adaptive measures to reduce disturbance in coordination with the CPM. These measures could include, but are not limited to, increasing buffer size, halting disruptive demolition activities in the vicinity of the nest until fledging is confirmed, or placement of visual screens or sound dampening structures between the nest and demolition activity. In addition, the Designated Biologist or Biological Monitor will monitor the nest(s) until he or she determines that nestlings have fledged and dispersed, or the nest is no longer active (i.e., predated).

The following BMPs will be incorporated during nest monitoring:

- Nest monitoring will be conducted using binoculars and spotting scopes whenever possible to avoid drawing attention to a nest and to avoid flushing the adult off the nest;
- The Designated Biologist or Biological Monitors will evaluate whether the adult is sitting on the nest and will work to avoid startling and/or flushing the adult off the nest;

- Since the nest is located at 133' above ground level, the only way to determine the status of the eggs (i.e. incubating, hatched, or predated) is to conduct a binocular survey from a manlift. The Designated Biologist or Biological Monitor will be taken up in a manlift by a qualified operator. The binocular survey should be conducted from at least 50' from the nest. The binocular survey will be brief (approximately 5 minutes or less) in a manlift if the nest status cannot be determined from ground level;
- The Designated Biologist or Biological Monitor will document their observations before or after inspecting the nest rather than at the nest site.

Nest Management

When an active nest is located within the EPS site, the protocol outlined below is implemented.

4.1 ESA Delineations

ESA buffers are established in accordance with BIO-8. Since the American peregrine falcon is a special-status species, a 100-foot ESA was used to protect the nest and prevent nest abandonment. The ESA buffer has been delineated with red flagging tape, spray paint, and signage. The signage includes the Designated Biologist's contact information for site personnel. In addition, contractors were informed about the active nest ESA on April 3rd to prevent inadvertent disturbance and daily reminders are given during daily tail-gate meetings.

4.2 ESA Adjustments

Buffer adjustments can be made by the Designated Biologist in coordination with the CPM. These measures could include, but are not limited to, decreasing buffer size, increasing buffer size, halting disruptive construction activities in the vicinity of the nest until fledging is confirmed, nest monitoring while potentially disruptive activities are being conducted adjacent to the buffer zone, or placement of visual screens or sound dampening structures between the nest and construction activity. All nest monitoring observations will be documented in Biological Resources Compliance Monitoring Logs.

The following criteria will be monitored and used as a guideline for when to stop work:

- Flushing the adults from the nest;
- Auditory distress calls;
- Dive-bombing; and
- Additional stress on eggs from the adults excessively shifting. However, this last criterion can only be monitored from a manlift. A manlift is used for short binocular nest inspections, which are conducted at a minimum for 50' from the nest.

Reporting

The following subsections review reporting methods that are applicable to the NMP.

5.1 Biological Resources Compliance Monitoring Log

A Biological Resources Compliance Monitoring Log will be completed by the Designated Biologist and/or Biological Monitor(s) for each biological monitoring event. The Biological Resources Compliance Monitoring Log will include the date, duration of monitoring event, weather conditions, a summary of observations, items requiring action/follow-up, a list of observed species, and representative photographs.

5.2 Wildlife Observation Forms

Wildlife Observation Forms (WOF) are used to document injured and/or dead wildlife species. WOFs are used by the Designated Biologist and/or Biological Monitor(s) to document onsite observations and will be included in the Monthly Compliance Reports (MCRs).

5.3 Monthly Compliance Reports

The Designated Biologist will submit MCRs to the CPM, which will include copies of all written reports and summaries that document demolition activities that have the potential to affect biological resources. As applicable, each MCR will include a summary of the monthly monitoring period for biological resources, Biological Resources Compliance Monitoring Logs, and WOFs.

References

California Department of Fish and Wildlife (CDFW). 2021. Special Animals List. California Natural Diversity Database (CNDDDB). California Department of Fish and Wildlife. Sacramento, CA.

California Energy Commission (CEC). 2015. Carlsbad Amendments Final Commission Decision. Docket Number 07-AFC-06. August.

Cornell Lab of Ornithology. 2021. Peregrine Falcon. Available online at:
https://www.allaboutbirds.org/guide/Peregrine_Falcon/lifehistory

Appendix A

Initial CEC CPM Notification

April 3, 2021

To: Mr. Anwar Ali
Compliance Project Manager
California Energy Commission
1516 9th Street
Sacramento, CA 95814
Anwar.ali@energy.ca.gov

Subject: BIO-8 Mitigation Management to Avoid Harassment or Harm

Dear: Mr. Anwar Ali,

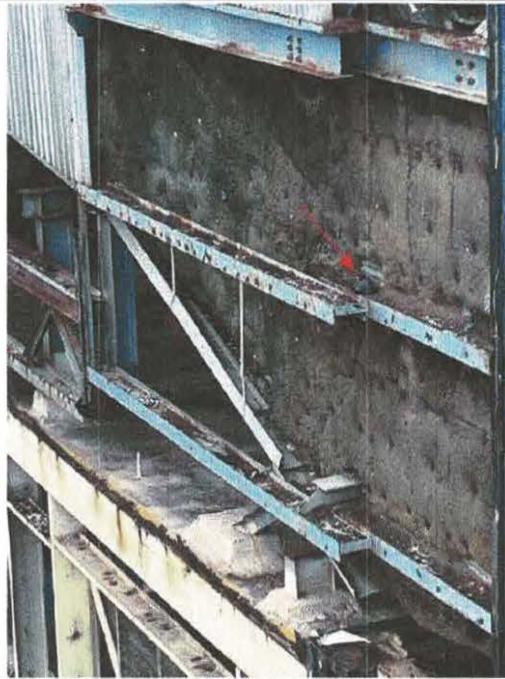
On April 3, 2021, an American peregrine falcon (*Falco peregrinus anatum*; United States Fish and Wildlife Service [USFWS] Birds of Conservation Concern [BCC]; California Department of Fish and Wildlife [CDFW] Fully Protected [FP]; California Department of Forestry [CDF] Sensitive [S]) nest with eggs was identified at the Encina Power Station (EPS), on the eastern side of the building (see Photos 1-2). A 100-foot Environmentally Sensitive Area (ESA) buffer was established around the nest. All demolition-related activities were ceased within the buffer, in accordance with the provisions of the California Energy Commission (CEC) Condition of Certification (COC) BIO-8. Since this is a special-status species, consultation and concurrence from the CEC Compliance Manager (CPM) is being requested.

American peregrine falcons have a 29-32-day incubation period and nestling period of 35-42 days¹. This pair is urban-adapted and nesting behaviors have been documented for the past two years at the EPS and included in the Monthly Compliance Reports (MCRs). This could equate to a 74-day delay in the stack demolition schedule, assuming all the eggs have been laid and incubation started on April 3, 2021. In addition, since the American peregrine falcon pair copulated and laid eggs during stack demolition, we are requesting concurrence for having this activity continue (even though it is located within the 100' buffer). A Nest Monitoring Plan (NMP) will also be developed in accordance with BIO-8. NRG seeks review and as possible, concurrence from the CEC that stack demolition may proceed on the basis of the American peregrine falcon pairs' adaptation to the ongoing demolition activity. The ability to continue to proceed, if approved, will be evaluated during the implementation of the NMP.

If you have any additional questions, please contact me at your earliest convenience.

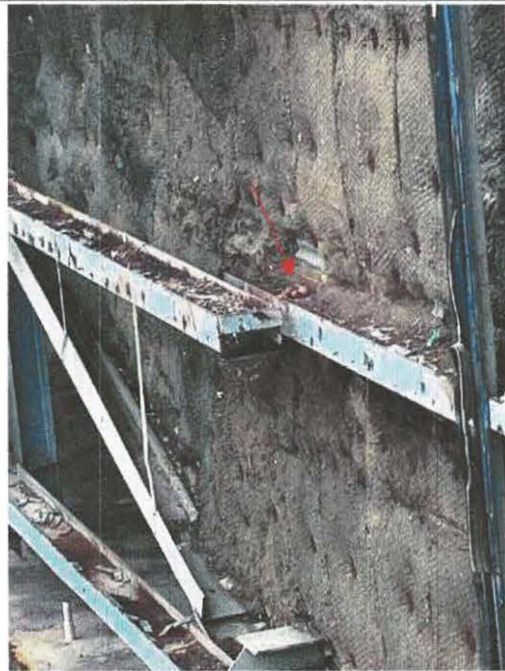
¹ https://www.allaboutbirds.org/guide/Peregrine_Falcon/lifehistory

Photo 1



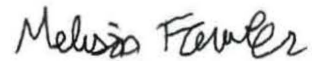
Location	AEC site	Description	An American peregrine falcon was observed sitting on a nest (red arrow).
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Photo 2



Location	EPS site	Description	American peregrine falcon eggs were observed (red arrow).
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Sincerely,



Melissa Fowler, M.S.

Designated Biologist/Senior Biologist

Certified Ecologist, Ecological Society of America

Encina Power Station

4600 Carlsbad Boulevard

Carlsbad, CA 92008

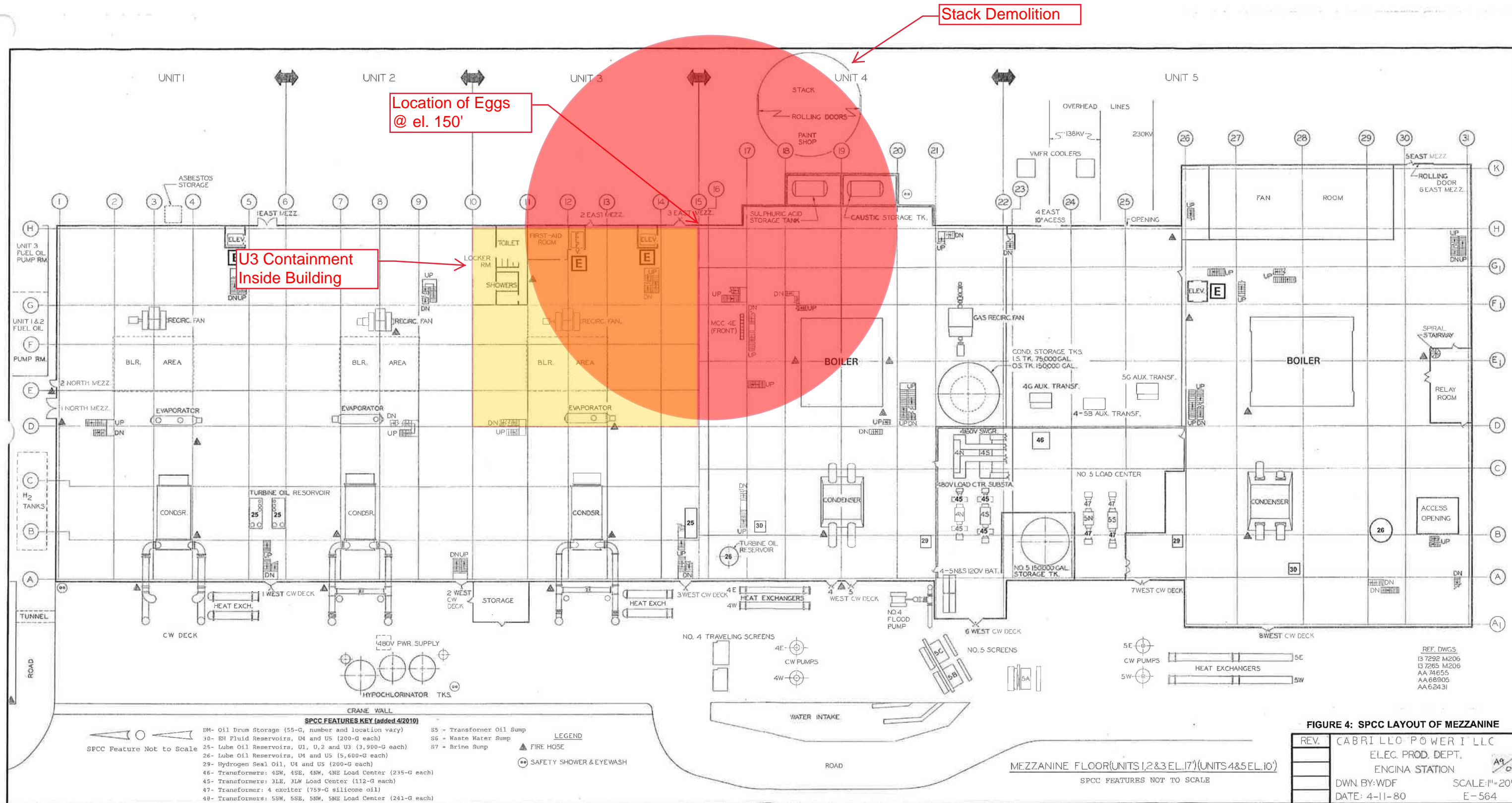
Cell (714) 768-1173

melissa.n.fowler@gmail.com

cc: George Piantka, Sr. Director, Environmental, NRG Energy

Tim Sisk, Sr. Manager, Environmental, NRG Energy

Appendix B
Environmentally Sensitive Area
Schematic



Location of Eggs
@ el. 150'

Stack Demolition

U3 Containment
Inside Building

- SPCC FEATURES KEY (added 4/2010)**
- DM - Oil Drum Storage (55-G, number and location vary)
 - 30 - EH Fluid Reservoirs, U4 and U5 (200-G each)
 - 25 - Lube Oil Reservoirs, U1, U, 2 and U3 (3,900-G each)
 - 26 - Lube Oil Reservoirs, U4 and U5 (5,600-G each)
 - 29 - Hydrogen Seal Oil, U4 and U5 (200-G each)
 - 46 - Transformers: 45W, 45B, 45M, 45E Load Center (235-G each)
 - 45 - Transformers: 3LE, 3LM Load Center (112-G each)
 - 47 - Transformer: 4 exciter (759-G silicone oil)
 - 48 - Transformers: 55W, 55E, 55M, 55E Load Center (241-G each)

- LEGEND**
- 85 - Transformer Oil Sump
 - 86 - Waste Water Sump
 - 87 - Brine Sump
 - ▲ FIRE HOSE
 - ☼ SAFETY SHOWER & EYEWASH

FIGURE 4: SPCC LAYOUT OF MEZZANINE

REV.	CABRI LLO POWER I LLC
	ELEC. PROD. DEPT.
	ENCINA STATION
	DWN BY:WDF
	DATE: 4-11-80

MEZZANINE FLOOR(UNITS 1,2&3 EL.17')(UNITS 4&5 EL.10')

SPCC FEATURES NOT TO SCALE

REF. DWGS.
I37292 M206
I37265 M206
AA74655
AA68905
AA62431

SCALE: 1"=20'
E-564