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**PROJECT MEMORANDUM  
SCE EL CASCO SYSTEM PROJECT**

**To:** Lynne Mosley, CPUC  
**From:** Vida Strong, Aspen Project Manager  
**Date:** November 24, 2009  
**Subject:** Report #15: November 15, 2009 – November 21, 2009

**CPUC ENVIRONMENTAL MONITORS (EM):** Lynn Stafford

CPUC EM, Lynn Stafford, was on site November 19<sup>th</sup> and 20<sup>th</sup>, 2009.

The SCE El Casco Project includes the following components:

- Construction of the new El Casco 220/115/12-kilovolt (kV) substation within the Norton Younglove Reserve, Riverside County, California;
- Replacement of approximately 15.4 miles of existing single-circuit 115 kV subtransmission lines with new, higher capacity single-circuit 115 kV subtransmission lines and replacement of support structures within existing SCE ROWs in the Cities of Banning and Beaumont and unincorporated Riverside County;
- Rebuilding 115 kV switchracks within Zanja and Banning Substations in the Cities of Yucaipa and Banning, San Bernardino and Riverside Counties, respectively;
- Installation of telecommunications equipment at the El Casco Substation and at SCE's existing Mill Creek Communication Site, San Bernardino County; and
- Installation of fiber optic cables within public streets and on existing SCE structures between the Cities of Redlands and Banning in San Bernardino and Riverside Counties, respectively.

The following compliance and construction activities occurred during the subject time period:

**EL CASCO SUBSTATION**

**Summary of Activity:**

The initial vegetation removal occurred at El Casco Substation site and at the new access road during the week beginning February 23<sup>rd</sup>, and was reported in Report #1.

On May 8, 2009, SCE submitted the Notice to Proceed (NTP) request for the construction of the El Casco Substation and associated HDD bore work and conduit installation under San Timoteo Creek, and construction of three adjacent towers. NTP #5 for the El Casco Substation NTP request was granted by CPUC on August 31, 2009. On October 1, SCE submitted a Variance Request to allow the installation of two water tanks and above ground water piping to facilitate watering activities at the El Casco Substation site. This request was approved by CPUC on October 9, 2009.

During the subject week, work occurred Monday through Saturday. During the following week, work will occur only Monday through Wednesday because of Thanksgiving Holiday.

By the subject week, rough grading of the new access road was completed. The new access road has been raised several feet above the original ground level. The material for the heightened road was hauled in from the over-excavation areas of the substation site. The notch in the center of the road will be filled with gravel, and may or may not be paved (see Figure 1).

Two areas within the footprint of the Substation site have been identified by geotech soil testing to have underlying unstable soil. The westernmost of the two has been over-excavated, and during the subject week was being lined with water resistant fabric and an underlying gravel blanket (see Figure 2). Material



from the site will be used as fill, and will be compacted to form a firm base for the substation foundation. A second over-excavation area further eastward was being excavated during the subject week (see Figure 3). Both areas are being dewatered continually.

Terracing of the hillside continued during the subject week. Geologists have determined there is a layer of clay within the hill that has approximately the same slope as the hillside. Building of the substation will require the removal of the toe of the slope. This removal may increase the likelihood of slippage of the material above the clay layer. A tension cable anchor system is being constructed on and into the hillside to put pressure on the clay layer and thereby prevent land slippage. Fourteen terraces will be constructed in stair step fashion on two prominent ridges of the hillside. There will be four terraces on the shorter ridge, and ten on another higher ridge. The face of each terrace will be fitted with one or more tie-back wailer structures that will provide anchors for several approximately 120 foot long cables per wailer placed in oblique bores dug into the hill. Each bore will have a concrete caisson at the bottom for the lower cable anchor. Each cable will then be tightened to create tension between the upper wailer tie-back and the lower caisson. The terrace will then be backfilled, and the operation moved to the next lower terrace. It is estimated that approximately two hundred anchors will be constructed in all.

During the subject week, construction of the anchor system on the third terrace on each of the two ridges continued.

During the subject week, the two SCE project field trailers recently placed on graded sites continued to be readied for occupancy (see Figure 4).

## **BANNING SUBSTATION**

### **Summary of Activity:**

The NTP for the Banning Substation work was granted by CPUC on August 13, 2009. MOD #1 to NTP #3 for additional work to be conducted at three existing transmission line poles located outside of the substation was approved by CPUC on August 26, 2009. On October 1, a Variance Request was submitted to allow alternate access into the Banning Substation. This request was approved by CPUC on October 15, 2009.

Trenching for and placement of electrical wiring occurred within the northern section of the substation during the subject reporting period. This area was previously unused by the substation and is being prepared to house the expansion of the substation required by the El Casco Systems Project. All work occurred within the perimeter fence of the existing substation. The preparatory work is nearing completion. The process of selecting a contractor for the installation of new electrical equipment is underway.

## **ZANJA SUBSTATION**

### **Summary of Activity:**

The NTP request was submitted to CPUC by SCE on June 19, 2009 for the Zanja Substation work. The pre-construction compliance submittals have been approved and the NTP is being prepared. On September 29, biological surveys were submitted for the Zanja Substation work. The CPUC EM has conducted the field validation of the biological surveys and submitted comments on this validation. SCE revised the survey report and associated NTP request to address questions and concerns raised during the validation visit.

On April 23, a Temporary Extra Workspace (TEWS) was issued by the CPUC EM for storage of fiber optic materials within the existing Zanja Substation, Yucaipa, San Bernardino County. SCE was notified that if they wish to continue to use the Zanja Substation for material storage beyond 60 days that a variance request needs to be approved by CPUC. The approved TEWS area has not been used to date; however, SCE has requested permanent use of the subject area during construction as part of their NTP request for the Zanja Substation.

## **MILL CREEK COMMUNICATION SITE**

### **Summary of Activity:**

The NTP request for the Mill Creek Communication Site was submitted to CPUC by SCE on June 19, 2009. The pre-construction compliance process is currently underway. Pending pre-construction compliance submittals for the Mill Creek element include: biological surveys, regulatory permit submittals, outstanding hydrology submittals, geotechnical investigation submittals, as well as visual mitigation submittals. Potential EIR Addendum materials for work not previously analyzed in the EIR are also outstanding.

## **FIBER OPTIC CABLE (FOC) INSTALLATION**

### **Summary of Activity:**

The NTP request for the entirety of the fiber optic work (not including the HDD bore) was submitted to CPUC by SCE on March 5, 2009. However, on May 15, SCE requested authorization from the CPUC to commence with construction of the underground fiber optic elements in the Cities of Banning and Beaumont. This separate NTP request was due to pending pavement rehabilitation work in this area by the City of Beaumont. The request was granted as NTP #2 by CPUC on May 22, 2009. NTP #4 for the remainder of construction of the fiber optic elements of the El Casco System Project was approved by CPUC on August 27, 2009. On September 30, a modification request to NTP #4 was submitted to allow tree trimming activities along the FOC work. NTP #4 Mod #1 was approved by CPUC on October 2. On October 1, SCE submitted a Variance Request to allow work on two shoo-fly segments. This request was approved by CPUC on October 15, 2009.

Construction within the Cities of Banning and Beaumont began on June 16 at the western end of the 5000-foot underground conduit system within Sun Lakes community, and was completed in early August. The construction activity consisted of installation of two 5-inch conduits within a thirty-six-inch deep trench excavated into First Street in Beaumont and Sun Lakes Boulevard (contiguous roadways) in Banning. Seven manholes, for cable pulling purposes, also were installed in five-foot deep excavations.

Installation of the FOC segment between the Mentone and Zanja Substations began on September 17, 2009. The pre-construction biological survey by NRC had been completed on September 2 and 3, 2009, and reported on September 4. The CPUC validation was conducted on September 9, and reported on September 10, 2009.

The report for the pre-construction clearance biological survey for the Maraschino Substation to Banning Substation segment of the FOC route was completed on November 12, 2009, and reported on November 16, 2009. The CPUC validation was given on November 18, 2009.

During the subject week, four types of construction activity occurred. These included tree-trimming in preparation for above ground FOC installation, above ground FOC route installation, above ground FOC installation on the Banning temporary shoo-fly, and underground conduit installation.

The Mowbray tree-trimming crew completed work for the FOC route during the subject week. Work during the subject week occurred in the City of Banning. Tree-trimming was also completed on Alessandro Road and Summit Drive. The work required traffic control. A biological monitor was with the crew at all times.

The SCE FOC crew worked on the main FOC Route Monday, Tuesday, and Saturday of the subject week. They completed above ground installation on the section adjacent to the Mentone Substation previously to be underground conduit before the discovery of an unmarked water line. They also ran the cable in the underground portion on Colton Road to Sapphire Avenue. They then continued installing framing arms and hardware on poles in the vicinity of Bryant Street and Avenue E. within the Zanja to Yucaipa segment.

The SCE FOC crew worked on the Banning shoo-fly Wednesday and Thursday of the subject week. They conducted live relocation of the shoo-fly at both the western Sunset Avenue end and at the eastern end on the Morongo Reservation east of Bluff Street.

The PAR underground conduit crew worked on Thursday and Friday during the subject week. The crew placed the final asphalt over the trench at the corner of Date Avenue and Bryant Street within the Zanja to Yucaipa segment, and then repaired a pothole at the Maraschino Substation on the corner of Fourth Street and Viele Avenue in Beaumont.

## **115 kV SUB-TRANSMISSION LINE REPLACEMENT**

### **Summary of Activity:**

The NTP request for the 115 kV sub-transmission work was submitted to CPUC by SCE on March 3, 2009. The pre-construction compliance process is currently underway. Pending pre-construction compliance submittals for the sub-transmission element include: regulatory permit submittals, and outstanding hydrology, geotechnical, visual and biological survey submittals.

The report on the methods, results, and conclusions of the Pre-NTP Survey for Biological Resources on Segment 2 of the proposed Subtransmission Cable Route was submitted to SCE by NRC on July 27, 2009. This report has been field validated by the CPUC EM.

On September 22, 2009 SCE submitted a Variance Request for several geotechnical and hydrological Mitigation Measures related to the 115 kV Subtransmission Line Element. Variance #5 was partially approved by CPUC on October 23. The approval was conditioned that the analysis of the effect of installation of a large numbers of new poles that was not anticipated in the original EIR be reviewed and approved by CPUC. CPUC requested information from SCE regarding pole number and placements, as well as associated impacts, by construction segment. SCE provided an information package November 3, 2009, which is currently under review.

## **CONSTRUCTION YARDS & OTHER WORKSPACE NEEDS**

Variance Request #1 for a laydown yard immediately south of SCE's existing Maraschino Substation in the City of Beaumont, Riverside County, was requested on April 1 and approved by CPUC on April 16, 2009. Construction of the laydown yard began on May 28 and was completed by June 12, 2009. The yard is currently being used for the storage of materials, including transmission towers.

No requests for additional construction yards or other workspace needs have been submitted to date.

## **ENVIRONMENTAL COMPLIANCE**

- Biological, cultural resource, paleontological, and other mitigation monitoring was conducted by NRC, LSA, and Paleo Solutions consultant field monitors at both the El Casco Substation and the FOC work areas. In addition, SCE provided air quality monitoring at the El Casco Substation site. Monitors representing pertinent environmental issues were present with each construction crew at all times during construction. No environmental monitors were present at the Banning Substation site, because all work was contained within the substation and no environmental issues were involved.
- Equipment was continually checked for air pollution control compliance and drip pans were placed where necessary to contain leakages.
- Dust control was maintained throughout the El Casco Substation and access road sites, including the eastern access road to the top of the hill where terracing and tie-back installation occurred (see Figure 5). At least three water trucks are onsite, including one large one. The two recently installed water pipeline/tower systems are in operation and able to keep up with water demands.
- A concrete truck wash-out basin has been established on the top of the hill where terracing is occurring. Other smaller temporary basins are being established as necessary.
- The contractor at the El Casco Substation has established several dewatering operations at the two over-excavation pits within the Substation site. Temporary pumps and a mobile storage tank are in place and in operation. SCE plans to continue the dewatering operation in this area until the pits are lined with fabric and gravel blanket and refilled and compacted. The contractor has filled the inner well containing one of the dewatering pumps with gravel to prevent entrapment of animals during the subject week.

- The contractor at El Casco Substation is using access roads south of the substation site to reach the top of the hill within the substation site with vehicles, equipment, concrete trucks, and water trucks. These are pre-existing roads. There will be no disturbance of natural habitat off the roads.
- Security is now on duty at the entrance gate twenty-four hours, seven days per week.
- Variance #6 to enable a Portable Fuel Tank installation at the El Casco Substation site was approved on October 27, 2009. The design and proposed placement of the tank ensure protection from diesel spill. CPUC determined that no further biological and cultural resource surveys were necessary because of prior surveys in the area. The tank will not be installed until construction fuel needs are greater than at present.
- On Monday three weeks prior, an accident occurred between a Project scraper operated by CatTrac , the El Casco Substation contractor, and a private vehicle. The CPUC has requested the police report and the contractor’s report. SCE has not yet supplied these documents.
- On Monday of the subject week, one of the monitors from Paleo Solutions discovered a fossil tooth along a recently bulldozed access road on the eastern ridge of the hillside being terraced (see Figure 6). This was the first of several fossils recovered during the subject week. Most have been found in one of the over-excavation pits at the toe of the same ridge (see Figure 7). The fossils found so far include, but are not limited to, horse/camel, sloth, birds (see Figure 8), and rodent teeth. The fossils are within the San Timoteo Formation and thought to be between 1.3 and 4 million years old. Approximately three paleontological monitors were on site all week. All excavation activity, especially in the areas containing the San Timoteo Formation, was continually monitored. Also material samples were collected from the terrace excavations and from all areas where fossils have been discovered. These samples were then processed by wet screening to uncover small and difficult to detect fossil material (see Figure 9). These activities will continue as long as construction activity uncovers material within the fossiliferous San Timoteo Formation. When fossils were discovered, each area was immediately roped off, with construction activity temporarily diverted to other areas, while the paleontologists packaged and removed the fossils. One day during the subject week, the paleontology team stayed on site until 1800 hours after dark in order to make a cast of an ungulate leg bone in order to not delay start up of construction activity the following day. All parties, including the monitors, SCE staff, and the contractor worked together to facilitate the recovery of fossils, and to minimize construction delay. CPUC/Aspen personnel were informed shortly after the initial find. The San Timoteo Formation is known to be particularly rich in significant fossil resources from the medial Pleistocene and the later Pliocene epochs. This formation, found throughout the San Timoteo Badlands, spans three of the four most recent North American Land Mammal “ages”. No other terrestrial sequence in North America records relatively continuous deposition over this interval of time. It is expected that fossil discovery and removal will continue for some time at the site. To date, the monitoring of construction activities and treatment of fossil discoveries have followed the El Casco Paleontological Treatment Plan.

Table 1 provides a summary of the Non-Compliance Reports (NCRs) and Project Memorandum (PM), and other incidents (i.e., spills, etc.) for the SCE El Casco System Project.

**TABLE 1**  
**NCRs, PROJECT MEMORANDUM, & OTHER INCIDENTS**

(Updated 11-24-09)

<b>Type</b>	<b>Date Issued</b>	<b>Description</b>
PM #1	03/16/09	Failure to comply with Mitigation Measure B-18 before, during and after vegetation clearing at the El Casco Substation site. Construction equipment went outside of approved Project boundaries.
	8/21/09	A SCE internal noncompliance at the Banning Substation was issued for mobilization of the site before environmental training and biological pre-construction sweep were conducted.
PM #2	8/27/09	The initiation of construction activity before CPUC authorization and validation of the biological survey at the site of the NTP #3, MOD #1 pole work in Banning.

**NOTICE TO PROCEED (NTP) SUMMARY**

Table 2 summarizes the NTPs submitted, reviewed, and issued to date for the SCE El Casco System Project.

**TABLE 2**  
**NOTICES TO PROCEED**  
 (Updated 11-24-09)

<b>NTP #</b>	<b>Date Requested</b>	<b>Date Issued</b>	<b>Description</b>
#1	02/20/09	02/23/09	Vegetation clearing activities at the future El Casco Substation Site located in the Norton Younglove Reserve Area in Riverside County.
#2	05/15/09	05/22/09	Construction of the underground fiber optic elements of the El Casco System Project in the Cities of Banning and Beaumont.
#3	04/10/09	08/13/09	Banning Substation
#3 Mod #1	08/21/09	08/26/09	Modify work within Banning Substation and add work at 3 existing transmission poles located outside of the substation.
#4	03/05/09	8/27/09	Fiber optic cable installation, remaining (see NTP #2).
#4 Mod #1	09/30/09	10/02/09	Tree trimming.
#5	05/08/09	8/27/09	El Casco Substation construction.
	03/03/09	Under Review <sup>1</sup>	115 kV Sub-transmission lines replacement.
	06/19/09	Under Review <sup>1</sup>	Zanja Substation
	06/19/09	Under Review <sup>1</sup>	Mill Creek Communication Site

1. Compliance submittals pending.

**VARIANCE & TEWS REQUEST SUMMARY**

Tables 3 and 4 summarize the Variance and Temporary Extra Workspace (TEWS) Requests submitted, reviewed, and issued to date for the SCE El Casco System Project, respectively.

**TABLE 3**  
**VARIANCE REQUESTS**  
 (Updated 11-24-09)

<b>Variance #</b>	<b>Date Requested</b>	<b>Date Issued</b>	<b>Description</b>
#1	04/01/09	04/16/09	Usage of an empty fenced lot immediately south of SCE's existing Maraschino Substation, Beaumont, Riverside County, as a laydown yard to support Project construction.
#2	10/01/09	10/09/09	Placement of two water tanks and above ground pipe to feed water needs at the El Casco Substation site.
#3	09/30/09	10/15/09	FOC Temporary Circuitry: Banning and Calimesa Shoo Flies.
#4	09/30/09	10/15/09	Alternate Access to the Banning Substation from John Street.
#5	09/22/09	10/23/09	SCE has asserted within the variance request that several Geo & Hydro Mitigation Measures should not be required for the 115 kV Subtransmission Line Element.
#6	10/23/09	10/27/09	Installation of a Portable Fuel Tank at the El Casco Substation site.
#7	10/27/09	10/29/09	Project Description change from underground to overhead installation for fiber optics circuitry along Colton Avenue in the vicinity of the Mentone Substation.
#8	10/29/09	10/29/09	Removal of five Fremont cottonwood trees that are impacted by the construction of the access road to the El Casco Substation site.

**TABLE 4**  
**TEMPORARY EXTRA WORK SPACE REQUESTS**  
 (Updated 11-24-09)

<b>TEWS #</b>	<b>Date Requested</b>	<b>Date Issued</b>	<b>Description</b>
#1	04/17/09	04/23/09	Fiber Optic material storage at the pre-existing Zanja Substation, Yucaipa, San Bernardino County
#2	07/20/09		Staging area in a vacant lot north of First Street and west of Highland Springs Road.

## PROJECT PHOTOS



**Figure 1:** Rough grading of the new access road to the El Casco Substation has been completed. The notch in the center of the road will be filled with gravel. The photograph faces westward.



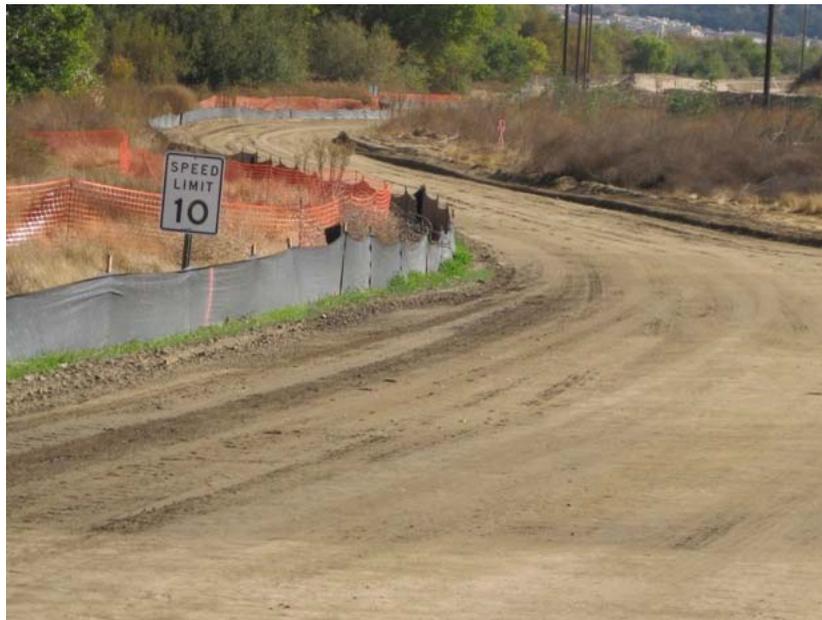
**Figure 2:** The westernmost over-excavated area of the El Casco Substation site is being lined with water resistant fabric and an underlying gravel blanket. Material from the site will be used as fill and will be compacted to form a firm base for the substation foundation. The photograph faces northward.



**Figure 3:** A second over-excavation area further eastward was being excavated during the subject week. The photograph faces northeastward.



**Figure 4:** During the subject week, the two SCE project field trailers recently placed on graded sites continued to be readied for occupancy. The equipment yard has been moved out of the over-excavated area to an area further south. The photograph faces northwestward.



**Figure 5:** Dust control continued to be maintained throughout the El Casco Substation and access road sites. The ten miles per hour speed limit is being enforced. The photograph faces eastward along the original access road.



**Figure 6:** Most fossils have been found in the easternmost over-excavation pit at the toe of the eastern ridge being terraced. The photograph faces southward.



**Figure 7:** Fossils found so far include this probable bird bone. Significant fossils are being catalogued and sent to a museum for further analysis.



**Figure 8:** Material samples were collected from the terrace excavations and from all areas where fossils have been discovered. These samples were then processed by wet screening to uncover small and difficult to detect fossil material. The two washing basins are in the middle distance. Screens are stacked on the right. Collecting buckets are in the foreground.